

WHITMAN LAKE HYDROELECTRIC PROJECT

Project Summary

Burke Electric was successful in the award of 3 separate contracts for Ketchikan Public Utilities on the Whitman Lake Hydroelectric project. Burke Electric is the Turbine Generator Equipment Supply contractor, Turbine/Generator Installation Contractor, and the Electrical Subcontractor for the construction of the powerhouse building. Whitman Lake is a new hydro project with two horizontal Francis turbines totaling 4.7 MW. CFME is a sub-consultant to Burke Electric providing electrical design, turbine coordination, quality control and testing/commissioning services. Construction started in March 2013 and Completed August of



Equipment and Systems Overview

- 2(TWO) Francis turbines totaling 4.7 MW,
- Medium Voltage Switchgear
- Low Voltage Switchgear

Offeror Role

Subcontractor

Owner Information

Ketchikan Public Utilities
Jennifer Holstrom, *Project Manager*
jenniferh@city.ketchikan.ak.us
907-228-4733
2930 Tongass Avenue,
Ketchikan, Alaska 99901

Contract Amount & Type

12-06 (Supply) \$2,800,000.00,
12-56 (T/G Installation) \$1,200,000.00,
12-29 (Building Electrical) 1,700,000.00

Customer Information

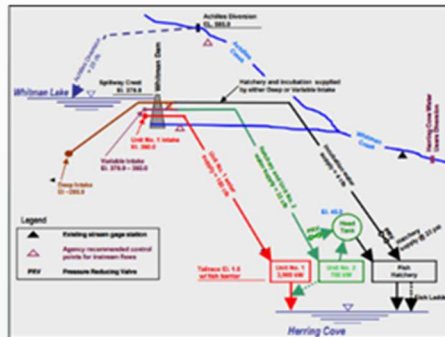
Dawson Construction
2424 138th Ave SE
Bellevue, WA 98005
(206) 599-9488

Project Start and Finish Dates

3/1/2013—8/1/2014

Project Location

Ketchikan, AK



Burke Electric Scope

Scope of work included 35kV substation/switchyard including structures, switch, main transformer, ground grid, all underground conduit, all control wiring to powerhouse PLC's, all MV cable to power house switchgear and station service transformer. Station service power including transformers and 480V and 120/208V panels. 125V DC battery plant including all power connections to equipment and control panels. Hydraulic power unit including 480V motors, control, field instrumentation to control panel, and control wiring back to unit control cabinets. Basler excitation cabinets for both units. This includes medium voltage transformers, DC power connections, all associated field wiring to instrumentation, and all wiring to unit control PCL cabinets. 480V power connections from the MCC's to the bridge crane. Start-up, commissioning. All systems and controls were checked by Burke Supervision as an engineer.

Problems Encountered and Solutions Executed

Slight Issues during testing. Slight internal damage through wicket gates and runner due to a nut that had been left in the pipe by another trade. The nut caused some minor internal damage. Burke worked closely with HATCH to resolve the issue through replacing the damaged parts. There was also a vibration and sound anomaly associated with the second generator, currently thought to be relatively harmless in regards to the function of the generator, which was resolved under warranty.

Burke Electric Project Personnel

Aaron Carpenter, General Foreman
Dominic Burke, Project Manager
Katie Morton, Safety Manager

