



# BONNEVILLE POWERHOUSE II POTENTIAL TRANSFORMER UPGRADE PROJECT

## Project Summary

This Contract is to provide 1,200 ampere 15kV isophase bus tapped off of the existing main unit generator isophase bus in the Bonneville Second Powerhouse at four locations, four sets of 15kV potential transformer cubicles with potential transformers and wiring, wiring to the existing GSU transformer control boards and main unit generator control boards, and rewiring inside the control boards to move the breaker synchronizing signals from the high side of the GSU transformer to the low side of the GSU transformer. This includes field verification of control board wiring and preparation of wiring diagrams. Wiring diagram changes for one set

of control boards is included in the contract drawings. Work includes preparation of wiring diagram changes to the other seven sets of control boards based on the Government's revisions to the first set of control boards. Also included is removal and disposal of an existing abandoned switchgear HSQ1 and two spare 750kVA 13.8kV/480V delta/delta transformers all of which are sitting in the galley awaiting removal.

## Burke Electric Scope

- Perform electrical interconnection of the new transformers to the existing switchyard equipment
- Perform factory and field testing
- Perform bus duct and cable tray supports and concrete work
- Commission and provide training for the excitation systems
- Work with isophase manufacturer to design cabinets and all associated tie in Iso-phase bus
- Design/install bus supports and transitions to PT cubicles
- Demo existing Iso-phase back to allow for new cubicle installation
- Test and commission Iso-phase bus, PT's and new system as a whole

## Problems Encountered and Solutions Executed

Flexible Iso-Phase Bus Connectors arrived with manufacturing defects. Corrective Action involved working with Techbnibus, the Manufacturer, to re-manufacture replacement connectors and expedite delivery to the job site for field welding and installation to maintain construction schedule.

## Burke Electric Project Personnel

Jeff Teigen, General Foreman  
Mark Undseth, Project Manager  
Dominic Burke, COO  
Katie Morton, Safety Manager



## Equipment and Systems Overview

- GE EX2100 Exciters
- Potential Transformers and Auxiliaries
- Excitation System
- Wiring, cable, and raceway
- Interconnection to switchyard equipment
- Factory and Field Testing
- Bus Duct and Cable Tray Support
- Lead and asbestos abatement (subcontracted)

## Offeror Role

Prime Contractor

## Owner/Client Information

Tom Tullai, USACE  
Tom.tullai@usace.army.mil  
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PO BOX 70  
Cascade Locks, OR 97014-0070

## Contract Amount & Type

\$1,415,661—firm fixed price  
W9127N-14-C 61 -0037

## Project Start and Finish Dates

11/1/2014—3/12/2017

## Project Location

Bonneville Resident Office I  
84 Exit 40  
Cascade Locks, OR 97014-0070