

McNary Substation - Additional 500kV Transformer

This project will install a new transformer comprised of three single phase 476 MVA transformers at McNary Substation. The project also includes the installation of a new power circuit breaker to accommodate the connection of bank 2, a new line terminal in bay 18 and three current limiting reactors.

Currently, the McNary Substation has one 500/230 kV transformer (a bank of three single phase units and a spare). The existing transformer has experienced increased loadings in recent years. Since 2006, the transformer loading during late spring and early summer has gone from 540 MVA to 1160 MVA. Recent technical studies now require the addition of the second transformer. The addition of the second transformer will:

- Prevent thermal overload of first transformer with all lines in service;
- Prevent thermal overload of first transformer for loss of a single transmission line;
- Prevent thermal overload of the 115 kV transmission line in the Franklin area;
- Prevent transient voltage dip violations on PAC's system in the Wallula area for loss of first transformer;
- Allow BPA and PAC to interconnect more renewable generation on the sub grid in the McNary area; and
- Prevent generation restrictions at the McNary and Ice Harbor Hydro projects following an outage of the first transformer or a thermal overload of the first transformer.