DR-TSE-230

Information Required:

Clarify power plant design and the proposed equipment which will be used for the BSPP.

- If the California ISO design is the preferred option, submit a complete electrical one-line diagram (or resubmit Figure 2-9 in a larger legible scale) of the proposed BSPP switchyard showing all equipment for all new generators interconnection with the switchyard along with their respective sizes and/or ratings as follows:

  i. Any bus duct connectors or overhead conductors or cables, 18 kV switchgears, buses, breakers, and disconnect switches on the low side of each generator step-up transformer (GSU).

  ii. The GSU and short overhead conductors and/or cables from the GSU to the switchyard with the configuration for the switchyard buses, breakers, disconnect switches on the 115 kV and 500 kV side, along with the proposed tie-line, transmission outlet from the switchyard.

- If the California ISO option is not the preferred option, please contact the California ISO with the proposed design and resubmit the required equipment data for the Phase I and Phase" Interconnection Studies.

Response:

In the Phase I Cluster Study the California Independent System Operator (CAISO) studied the interconnection of the four power generating units at the BSPP to the 500-kilovolt (kV) bus at the Southern California Edison (SCE) Colorado River substation. The interconnection study modeled the BSPP assuming that each of the 18-kV generator voltages was stepped up to 115 kV using two winding transformers. The 115-kV output from the transformers was then collected in groups of two and stepped up again using two more winding transformers to 500 kV. The output of the two 500-kV transformers was then combined on site. A single-circuit 500-kV transmission line brought the output from the Project to the 500-kV bus at the Colorado River substation.

A new proposal has been developed for the interconnection of the four generators at the BSPP to the 500-kV bus at the Colorado River substation. The new proposed approach will be physically different but electrically the same as the interconnection studied in the Phase I Cluster Study. The new interconnection will be accomplished by stepping up each of the 18-kV generator voltages to 230 kV using two winding transformers. The output of the 230-kV transformers will be collected in groups of two and placed on a 230-kV transmission line. This will create a double circuit 230-kV transmission line from the BSPP plant site to the 230-kV bus at the Colorado River substation. The 230-kV bus at the Colorado River substation would then be connected to the 500-kV bus at the Colorado River substation using two winding transformers.

The CAISO studied the original interconnection using the equivalent impedance of two step-up transformers (one at 18/115 kV and another at 115/500 kV) and a 500-kV transmission line. The new interconnection uses two step-up transformers (one at 18/230 kV and the other at 230/500 kV) and a double-circuit 230-kV transmission line. The equivalent impedance of the new interconnection can be

designed to match the impedance of the originally proposed interconnection. Thus, this change would have no effect on the output of the system studies.

DR-TSE-231

Information Required:

Provide the Phase I Interconnect Study Report. Based on the commercial operation year system conditions, the Study should analyze the system impacts with and without the project during summer peak, summer off-peak, and spring system conditions, which will demonstrate conformance or non-conformance with the utility reliability and planning criteria with the following provisions:

a) Identify major assumptions in the base cases including major imports to the system, major generation and load in the area system and queue generation.

b) Power Flow analyses for N-O, important N-1 and critical N-2 contingency conditions and provide a list of criteria violations in a table showing the loadings before and after adding the new generation.

c) Short circuit studies.

d) Analyze system for Transient Stability and Post-transient voltage conditions under critical N-1 and N-2 contingencies, and provide related plots, switching data and a list for voltage violations in the studies.

e) Reactive power deficiency analysis.

f) Provide a list of contingencies evaluated for each analysis.

g) List mitigation measures considered and those selected for a" criteria violations.

h) Provide electronic copies of*.sav and *.drw PSLF files, if applicable.

i) Provide legible power flow diagrams (MW, % loading & P. U. voltage) for base cases with and without the project. Power flow diagrams must also be provided for a" N-O, N-1 and N-2 studies where overloads or voltage violations appear.

Response:

The requested information will be provided separately under confidential cover.