

Transmission System Design

Transmission System Design: Appendix B (h) (2) (B)

Information required:

Provide a physical layout drawing showing distinctly (in a larger scale) the selected route (along any road or land) of the proposed 230 kV overhead and underground interconnection line including Right of Way (ROW) width(s) between the proposed Quail Brush Generation Project (QBP) 230 kV switchyard and the proposed SDG&E 230 kV switchyard. Describe whether the ROW would be through private and/or public lands.

Response:

The generation tie-line (gen tie) is provided in Attachment G Exhibit 1, Ampirical Solutions, LLC (Ampirical) Drawing No. QB-Planview Sheet 1 of 1, Quail Brush 230kV Transmission Line Plan View. The drawing depicts the 230 kV overhead and underground lines including the associated right-of-way (ROW) widths. The ROW for the 230 kV gen tie and the transmission line 230 kV loop lines are located on private lands.

Transmission System Design: Appendix B (b) (2) (C)

Information required:

Resubmit Tangent Pole design diagram (Figure 2.5-1) for the 230 kV generator overhead tie line showing ground clearance from the lowest conductor, height of the pole above and below ground and the ground conductor, if any with its size. Also include design diagrams of dead-end pole or structures for the overhead tie line at each end showing configuration of insulators and conductors with their respective position measurements on the pole including their heights. Include the proposed underground 230 kV single core UG cable line termination on the dead-end pole with their configuration, size, type and ampere rating. Submit details of the proposed UG cable tie line.

Submit a complete electrical one-line diagram (or resubmit Figure 2.5-2 with missing elements or sizes/ratings) of the proposed QBP 230 kV switchyard showing all equipment for all 11 generator units interconnection with the switchyard along with their respective sizes and/or ratings as follows: i) Any bus duct connectors or overhead conductors or cables, 13.8 kV switchgear, buses, breakers & disconnect switches on the low side of 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 230 kV side, along with the proposed tie line transmission outlet from the switchyard.

Provide a one-line electrical diagram showing the proposed SDG&E 230 kV switchyard with the transmission outlets along with the configuration for buses, breakers, disconnect switches, and their respective sizes and/or ratings. Also provide a physical layout drawing.

Response:

The design diagram for all transmission pole structures providing required dimensions and wire sizes are provided in Attachment G, Exhibit 2, Ampirical Drawings (Framing: A-D-BF2-S-230;

Framing: SDJ-V-DEP-S-230; Framing: S3DJ-DEP-S-230; 230kV Transmission Riser Pole). Each structure has been identified with a unique tag number on the Transmission Line Drawing and is specifically referenced by a tag number on the appropriate Ampirical Drawing.

The gen tie utilizes underground circuit for a short distance. It will use 230 kV solid dielectric LDPE or XLPE cable 400 mm square aluminum conductor rated for 400 amperes in the duct banks configuration shown on the Plan and Profile Drawings presented in Attachment G, Exhibit 3, Ampirical Plan and Profile Drawing No. QB230-PP, Sheets 1 and 2. As requested, these exhibits show sags and ground clearances for both the gen tie and transmission line 230 kV loop lines.

The Electrical One Line Diagram provided in the AFC is superseded by Exhibit 4, Key One Line Diagram, which shows appropriate ratings of all components including the 11 generator units, non-segregated phase buses between 13.8 kV switchgear and GSU transformer, 230 kV circuit breaker and disconnect switches, and the gen tie leaving the plant switchyard (conductors fully defined for overhead (ACSR), and the underground solid dielectric cable).

The SDG&E 230 kV switchyard one line diagram is also shown on Exhibit 4, Key One Line Diagram with all components fully defined. The SDG&E 230 kV Switchyard Physical Arrangements Drawing is included as Exhibit 5. A typical section view of the 230 kV SDG&E Switchyard is presented in Attachment G, Exhibit 6, San Diego Gas & Electric Company Sketch 3.

Transmission System Design: Appendix B (b) (2) (E)

Information required:

Submit proof of payment with a study plan for the signed Large Generator Interconnection Study Process Agreement (LGISPA) with the California ISO, dated April 16, 2010.

Response:

Proof of payment is provided in Attachment G, Exhibit 7.

Transmission System Design: Appendix B (i)(3)

Information required:

Indicate when the Phase II System Impact Study for the San Diego area Cluster 2 projects (including QBP) is expected to be completed by the California ISO.

Response:

The Phase II Interconnection Study Report for the Quail Brush Generation Project was issued by the CAISO on August 24, 2011. Copies of the Phase II Individual Project Report were filed with the CEC Docket Office on October 13, 2011.