CALIFORNIA ISO

California Independent
System Operator

June 27, 2005

DOCKET
04-AFC-1
DATE JUN 27 2005
RECD. JUN 27 2005

Mr. John Vardanian
Generator Interconnection Services
Pacific Gas and Electric Company
Mail Code: N7L, Room 775
245 Market Street
San Francisco, CA 94105

Subject: **San Francisco Electric Reliability Power Project**
Final Interconnection Approval

Dear Mr. Vardanian:

The California ISO (Cal-ISO) has reviewed the Feasibility/Updating Facility Study II (F/UFS) report for the San Francisco Electric Reliability Power Project (SFERPP) conducted by Pacific Gas and Electric Company (PG&E) at the request of the City and County of San Francisco (CCSF) dated June 8, 2005. The Cal-ISO had previously reviewed an Updating Facility Study Report and granted final interconnection approval in a letter dated May 28, 2004 for the original site. The project was originally proposed to be sited within Mirant's Potrero Power Plant property, but will now be sited about 0.3 miles south near Illinois and 25th streets in San Francisco. Therefore, an updated F/UFS was conducted to more accurately reflect the costs and work scope required to connect the three CTG configuration for the SFERPP to Potrero Substation for this new proposed project site.

CCSF proposes to interconnect a new gas turbine generating facility to PG&E's Potrero 115 kV Switchyard. The proposed project will consist of three LM6000 combustion turbine generator units (CTGs) rated 50.5 MW each. The net output of the proposed project will be 145.1 MW. The on-line date of the proposed project is June 2007. A Facilities Study Report for the SFERPP was issued March 19, 2004 for the original site. In January of 2005, CCSF proposed a new site and interconnection plan for the SFERPP. The new site is approximately 0.3 miles away from the original site and the proposed new interconnection to PG&E's transmission grid will be via two new 115 kV underground generation tie lines. Each of the two new 115 kV underground lines is capable of transmitting the full 145.1 MW of SFERPP to PG&E's transmission grid. The original proposed generation tie lines were overhead. Both the Cal-ISO and PG&E agreed that a Feasibility Study was needed to determine if routing two redundant underground 115 kV circuits into Potrero Substation from the new SFERPP site would be feasible. It has been determined that the routing from the new project site is feasible and the required interconnection facilities were identified within the F/UFS and illustrated in the following diagram.

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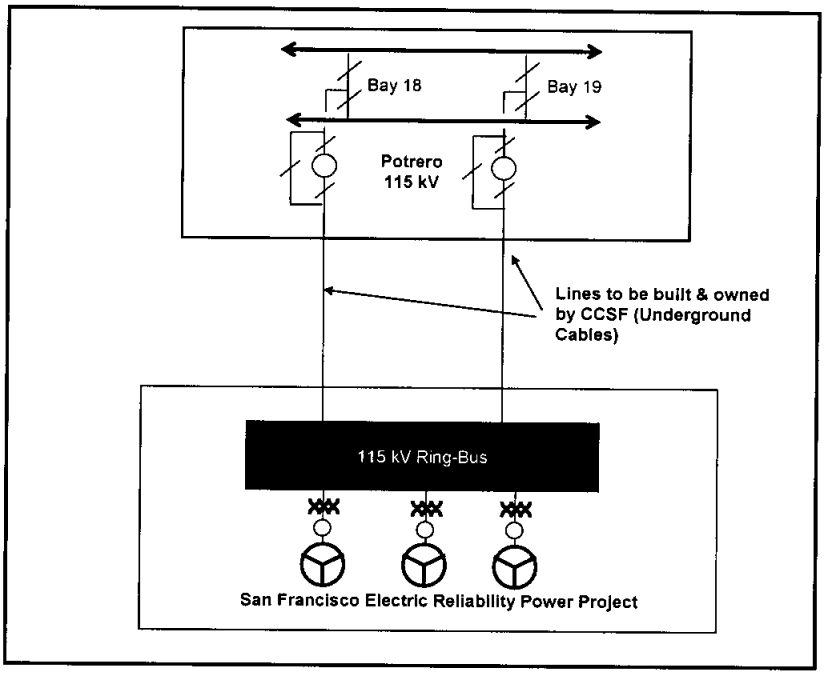

PG&E conducted the F/UFS using the following assumptions:

1. The maximum total output from the SFERPP is 151.5 MW from 3 LM6000 gas turbines. The expected total plant load is 6.4 MW. The maximum net output to the grid is 145.1 MW.
2. The expected on-line date is June 2007.
3. Each generator will have a step-up transformer. Each transformer is a three phase transformer, 13.8/115 kV grounded wye, rated 40/45/60 MVA @ 55/65 degree C temperature rise. The impedance is 10 - 12 % @ 40 MVA base.

The F/UFS determined that routing the two underground 115 kV circuits into Potrero Substation from the new SFERPP site is feasible.

A System Impact Study (SIS) was previously performed for this project. It was agreed to by PG&E, the Cal-ISO and CCSF that the change in site location would not change the results of the previous SIS and therefore a new SIS would not be required. Detailed information related to the previous SIS was included in our letter granting final interconnection approval dated May 28, 2004 and is therefore not repeated in this letter.

The previous SIS results for the SFERPP identified no adverse system impacts without the addition of Mirant's higher-queued Potrero Unit 7 Project. If Potrero 7 were built in the future, substantial network upgrades would be required and the CCSF would be responsible for the cost of mitigating the system impacts caused by its lower-queued SFERPP, based on the Cal-ISO Tariff Amendment 39 New Generator Interconnection Policy.

Direct Assignment facilities determined within the F/UFS and required for interconnecting the proposed project as related to the substation work is described below.

- At Potrero Switchyard Bus Section E, use two spare bay positions Bay 18 and Bay 19 to create two 115 kV line breaker positions.
- Install two new 115 kV dead-end structures for the two in-coming underground cables by CCSF.
- Install 115 kV underground cable riser support structures for UG potheads. Install surge arrestors on same structures.
- Install new underground conduits and fiber optic cable between the new Potrero Switchyard control building and SFERPP control building.
- Install new meters, protective relays, instrumentation and controls, and SCADA.

Network Upgrade facilities determined within the F/UFS and required for interconnecting the proposed project as related to substation work is described below.

- Install a new control building with a battery room, batteries, and charger.
- Install four (4) 115 kV bus selector air switches on existing structures.
- Modify the existing SFRAS to accommodate the new project.
- Install telecom equipment for EMS telemetry and SCADA.

The transmission line evaluation determined there would not be additional direct assignment transmission line work needed to interconnect the SFERPP.

CCSF will engineer, procure, construct, own, and maintain its project facility and the 115 kV underground generator tie lines.

Cal-ISO Approval for Interconnection

Based on the results of the F/UFS, the Cal-ISO reaffirms it's previous findings in it's letter dated May 28, 2004 in granting final interconnection approval to connect the SFERPP to the Cal-ISO controlled grid.

Should you have any questions about the review of this study, please call Larry Tobias at (916) 608-5763 (Ltobias@caiso.com) or me at (916) 351-4464 (jmiller@caiso.com).

Sincerely,

Original signed by

Jeffrey Miller
Regional Transmission Manager

cc:

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