

## CALIFORNIA ENERGY COMMISSION

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August 13, 2008

Mr. Rich Weiss  
2737 Arbuckle Street  
Houston, Texas 77055

<b>DOCKET</b> 06-AFC-10C
DATE <u>AUG 13 2008</u>
RECD. <u>AUG 13 2008</u>

**RE: VERIFICATION CHANGE TO STARWOOD POWER PROJECT CONDITION  
OF CERTIFICATION TSE-5**

Dear Mr Weiss,

Per your request, Energy Commission staff has reviewed the Starwood Power Project petition to change the verification for Condition of Certification, TSE-5. In its review, staff found that the proper information was submitted, is complete and retains the intentions of the condition to protect the transmission system.

Sincerely,

A handwritten signature in black ink, appearing to read "Chris Davis".

Chris Davis  
Compliance Project Manager  
California Energy Commission  
1516 Ninth Street, MS 2000  
Sacramento, CA 95814  
916-654-4842

cc: Amy Gramlich  
URS  
1615 Murray Canyon Road, Suite 1000  
San Diego, CA 92108

Enclosures

PETITION TO CHANGE CONDITIONS OF CERTIFICATION  
TSE-5  
STARWOOD POWER PROJECT  
(06-AFC-10)  
July 14, 2007

REQUEST

The Starwood Power-Midway, LLC (SPM) is seeking approval to modify the FCD condition TSE-5 as it covers work that will be performed by PG&E for the installation of the interconnection in the PG&E substation. Specifically, PG&E is responsible for the all facilities starting with the "A" frame takeoff on Midway property and through the PG&E substation.

BACKGROUND

The 120MW project was certified by the CEC on January 16, 2008. Construction of the interconnection facilities by PG&E is expected to start in the fall of 2008. The project is located adjacent to the PG&E substation on West Panoche road in Firebaugh, CA.

ANALYSIS AND RECOMMENDATION

At the time the FCD was agreed to it was unclear that this was the PG&E scope of work. TSE-5 should be modified to acknowledge that a confirming letter from PG&E satisfies the design standards, calculations, and LORS for the PG&E scope.

REVISIONS TO EXISTING CONDITIONS OF CERTIFICATION  
TSE-5

1. The existing Panoche Substation will require upgrade and rearrangement to accommodate the addition of the APP.
  - a. Install a tap interconnection at the CalPeak Panoche generator tie-line.
  - b. Reconductor the CalPeak Panoche generator tin-line between CB142 and CalPeak Panoche and CB 162 at Panoche Substation with 954 kcmil aluminum conductor or conductor with higher rating.
  - c. Rearrange or rebuild the Panoche-Shindler 115 kV Number 1 and Number 2 lines to accommodate crossing the new tap line.
  - d. Protection requirements will consist of fully redundant, three terminal, double -pilot current differential schemes.
2. The SPP will be connected to the Panoche Substation via a single 115kV transmission line approximately 1000 feet long and 954 kcmil aluminum conductor or conductor with higher rating.
3. The power plant outlet line shall meet or exceed the electrical, civil, and structural requirements of the California Public Utilities Commission General Order 95 of National Electric Safety Code (NESC); Title 8 of the California Code of Regulations; articles 35, 36 and 37 of the High-Voltage Electric Safety Orders; California ISO Standards; National Electric Code (NEC); and related industry standards.
4. Breakers and busses in the power plant switchyard and other switchyards, where applicable, shall be sized to comply with short-circuit analysis.

5. Outlet crossings and line parallels with the transmission and distribution facilities shall be coordinated with the transmission line owner and comply with industry standards.
6. The project conductors shall be sized to accommodate the full output from the project.
7. Termination facilities shall comply with PG&E interconnection standards.
8. The project owner shall provide the CPM:
  - a. The final Detailed Facility Study including a description of the facility upgrades, operational mitigation measures, and/or special protection system sequencing and timing, if applicable.
  - b. Executed project owner and California ISO interconnection agreement.
9. A request for minor changes to the facilities described in this condition may be allowed if the project informs the CBO and CPM and receives approval for the proposed change. A detailed description of the proposed change and complete engineering, environmental, and economic rationale for the change shall accompany the request. Construction involving changed equipment or substation configurations shall not begin without prior written approval of the changes by the CBO and the CPM.

Verification: At least 60 days prior to the start of construction of transmission facilities (or a lesser number of days mutually agreed to by the project owner and CBO), the project owner shall submit the following to the CBO for approval.

1. The project owner shall submit a letter from PG&E confirming that PG&E will build the facilities identified in TSE-5 starting with the point of interconnection, the conductor tie into the "A" frame takeoff on Midway property, through the PG&E substation in accordance with PG&E standards.
2. The project owner shall submit design drawings, specifications and calculations conforming with California Public Utilities Commission General Order 95 of National Electric Safety Code (NESC); Title 8 of the California Code of Regulations; articles 35, 36 and 37 of the High-Voltage Electric Safety Orders; California ISO Standards; National Electric Code (NEC); and related industry standards, for the poles/towers, foundations, anchor bolts, conductors, grounding systems, and major switchyard equipment for facilities installed by the owner and not PG&E.
3. For each element of the transmission facilities identified above and installed by the owner and not PG&E the submittal package to the CBO shall contain the design criteria, a discussion of the calculation method(s), a sample calculation based on worst case conditions, and a statement signed and sealed by the registered engineer in charge, or other acceptable alternative verification, that the transmission element(s) will conform with California Public Utilities Commission General Order 95 of National Electric Safety Code (NESC); Title 8 of the California Code of Regulations; articles 35, 36 and 37 of the High-Voltage Electric Safety

Orders; California ISO Standards; National Electric Code (NEC); and related industry standards.

4. The project owner shall submit electrical one-line diagrams signed and sealed by the registered professional electrical engineer in charge, a route map, an engineering description of the equipment, and the configurations covered by requirements 1 through 9 in Conditions of Certification TSE-5 above and installed by the owner and not PG&E.
5. The final Detailed Facility Study, including a description of facility upgrades, operational mitigation measures, and/or special protective system sequencing and timing, if applicable, shall be provided concurrently to the CPM.
6. At least 60 days prior to the construction of transmission facilities, the project owner shall inform the CBO and the CPM of any impending changes that may not conform to the facilities described in this condition, and shall request approval to implement such changes.



**Pacific Gas and  
Electric Company**

Generator Interconnection Services

July 21, 2008

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Subject: PG&E Letter for Starwood-Midway TSE-5

Dear Mr. Weiss:

At your request, the following is a summation of the work planned by PG&E as part of the Starwood-Midway generation project. Note that the work to be performed by PG&E is on facilities owned and operated by PG&E; construction will be subject to PG&E's standards and will comply with state laws, ordinances, and standards applicable to this work.

As stated in the Facility Study, dated November 3, 2006, Starwood Power Midway will interconnect two (2) 60 MW gas fired generators to the PG&E system on the 115kV Bus at Panoche substation. Section 4 of the study states that:

- PG&E will provide the tapping interconnection.
- The existing interconnection from the Peaker to the 115 kV bus will be upgraded by PG&E in order to accommodate the Project and the Peaker.
- PG&E will install conduit and pull box for new fiberoptic cable to Starwood. We will furnish and terminate fiberoptic cable between Panoche and Starwood. PG&E will trench and install conduit and pull box within PG&E's substation property. (Starwood will install conduit on Applicant's property.)

Further detail concerning the construction of these facilities for the CEC is available in the Facility Study, of which you have the copy.

Please call if we can assist further.

Sincerely,

Barbara Madrid  
Senior Project Manager  
Pacific Gas & Electric