



Electric Sample Form No. 79-847
Transmission Load Operating Agreement

Sheet 1

**Please Refer to Attached
Sample Form**



TRANSMISSION LOAD OPERATING AGREEMENT

DISTRIBUTION

- XXXX
- XXXX
- XXXX
- XXXX
- _____

REFERENCE

THIS LOAD OPERATING AGREEMENT (the “Agreement”) is effective as of the date last executed by the parties hereto by and between PACIFIC GAS AND ELECTRIC COMPANY (“PG&E”), a California corporation, and _____ (“Load Entity”) a _____. PG&E and the Load Entity are sometimes referred to collectively as the “parties” and individually as the “party.”

RECITALS

A. PG&E and the Load Entity have made arrangements under PG&E’s tariffs for an interconnection and power deliveries between the PG&E Transmission System and the Load Entity’s substation facility with the designated name of, _____, located at _____ (the “Interconnection Facility.”)

B. Among other things, this Load Operating Agreement obligates the Load Entity to operate its Substation in a safe and prudent manner.

C. As part of this obligation, it is important that the Load Entity stay in close contact with PG&E system operators.

D. This Agreement sets up operating responsibilities and associated procedures for communications between the Load Entity and PG&E’s Grid Control Center (GCC). The Agreement also establishes procedures for safe work on electric systems and routine test procedures.

† Information collected on this form is used in accordance with PG&E’s Privacy Policy. The Privacy Policy is available at pge.com/privacy.

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AGREEMENT

THEREFORE, in consideration of the rights and responsibilities set forth herein, the parties agree as follows:

1. DEFINITIONS

When underlined, the following terms shall have the following meanings:

“Clearance Point” -- The points that isolate equipment from possible sources of energy.

“California Independent System Operator (CAISO)” --The CAISO has operational control over most of the PG&E electric transmission grid operating at voltages of 60 kV and above. The jurisdiction of the CAISO includes control of operations involving customer loads that are directly connected to the CAISO controlled grid as described in the CAISO Tariff and any written agreements between the Load Entity or Transmission Entity and the CAISO. Under the CAISO’s control and instruction, PG&E will continue to serve as the primary point of contact for Load Entities and will communicate and coordinate with the CAISO as specified in CAISO protocols, operating procedures and tariffs.

“Grid Control Center (GCC)” -- PG&E’s GCC has operational jurisdiction over the Load Entity’s Substation. The GCC is staffed 24 hours a day.

“Emergency” -- An abnormal condition or situation that adversely affects, or potentially may adversely affect, PG&E’s Electric System Integrity.

“Interconnection Facilities” -- All apparatus installed to interconnect and deliver power between the PG&E system and the Load Entity’s substation. Interconnection Facilities include, but are not limited to, connection, transformation, switching, metering, and communications equipment, as well as any necessary additions, modifications and reinforcements to the PG&E system necessitated as a result of interconnecting the Load



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Entity's Facility to the PG&E system. Interconnection Facilities also include control and safety equipment to protect (1) the PG&E system and its customers from faults occurring at the Load Entity's Facility and substation, and (2) the Load Entity's Facility and substation from faults occurring on the PG&E system or on the system of others to which the PG&E system is directly or indirectly connected.

"Non-Test" -- A procedure used in connection with work on a live line or near an energized circuit. In a Non-Test, PG&E will require that the Load Entity contact the GCC before re-energizing a circuit following an automatic trip.

"PG&E Electric System Integrity" -- The state of operation of PG&E's electric system in a manner that is deemed to minimize the risk of injury to persons and/or property and enable PG&E to provide adequate and reliable electric service to its customers.

2. TERM OF AGREEMENT

This Agreement shall be binding upon execution by both parties. It shall terminate thirty days after the date on which the Load Entity's substation facility ceases to be interconnected to the PG&E electric system. This Agreement may also be terminated by mutual written consent of the parties.

3. RESPONSIBILITY AND AUTHORITY

3.1 The Load Entity understands and agrees that it must satisfy the applicable interconnection requirements described in the PG&E Transmission Interconnection Handbook (or its successor available on PGE.com) before the Load Entity's Substation can operate in parallel with the PG&E system.

3.2 It is the responsibility of the Load Entity to implement the operating guidelines contained in this Agreement. The Load Entity shall ensure



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that its operating personnel are familiar with the procedures and guidelines in this Agreement.

- 3.3 The GCC is authorized to disconnect the Load Entity from the PG&E electric system if the Load Entity fails to meet the requirements set forth in this Agreement. Prior to PG&E disconnecting the Load Entity, PG&E shall provide written notice to the Load Entity detailing the Load Entity's failure to adhere to such requirements and provide the Load Entity thirty (30) days to correct such deficiency. PG&E reserves the right to immediately disconnect the Load Entity should such deficiencies, as determined by PG&E, cause immediate or imminent hazards to the safety of the Public or PG&E's employees.
- 3.4 The Load Entity understands that the voltage of PG&E's electric transmission system is not regulated and may vary widely. The voltage levels will fluctuate depending on system operation and system conditions. In accordance with the PG&E Transmission Interconnection Handbook, the Load Entity shall install and maintain the necessary equipment to maintain proper power factor and voltage at the point of interconnection.
- 3.5 Power factor correction is the responsibility of the Load Entity. When the Load Entity is receiving power from the PG&E system, metered power factors outside acceptable ranges may result in additional charges, as specified in PG&E's tariffs and operating standards which are consistent with CAISO requirements (loads in CAISO Controlled Grid "shall maintain reactive flow at grid interface points within a specified power factor band of 0.97 lag to 0.99 lead.").
- 3.6 If PG&E provides assistance in the operation or maintenance of the Load Entity's Substation without a written agreement, PG&E assumes no liability for any loss or damage, direct, indirect or consequential, arising from or related to any services PG&E may provide. PG&E reserves the right to charge the Load Entity for all such services.

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4. **OPERATION OF INTERCONNECTION FACILITIES AND SUBSTATION**
- 4.1 The Load Entity shall maintain operating communications with the GCC. The operating communications shall include, but not be limited to, system connection or separation, scheduled and unscheduled shutdowns, and equipment clearances.
- 4.2 All oral operating communications shall be conducted through the GCC. The Load Entity agrees to maintain direct phone service so that PG&E can give instructions to the Load Entity or its designated operator.
- 4.3 The Load Entity agrees to notify the GCC of the following:
- a. The current names and 24-hour phone numbers of the personnel responsible for operating and maintaining the Load Entity's Substation.
 - b. Any Emergency situation, or any request that PG&E de-energize a portion of the system under its control.
 - c. Any changes in the mechanical or electric condition of the Load Entity's Substation that may affect the reliability of the Load Entity's service or the PG&E electric system.
 - d. Immediately upon discovery, any miss operation or inoperable condition of a PG&E-required interconnection relay, circuit breaker, or other protective device.
 - e. Immediately upon discovery, any operation of a PG&E-required interconnection relay, circuit breaker, or other protective device. Relay targets that caused the circuit breaker or protective device to operate.
 - f. Plans to manually connect or separate from the PG&E system and the times of actual manual connections and separations. Emergency separations shall be reported as soon as conditions permit.



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- 4.4 Under normal conditions, the Load Entity shall give as much advance notice as possible (a minimum of 168 hours if connected to 230 kV or 120 hours if connected to 115 kV or below is requested) to the GCC when planning to perform work that may affect PG&E's electric system. At a minimum, the notice shall include:
- a. Nature of the work to be performed.
 - b. Date and time work will begin.
 - c. Date and time work will be completed.
 - d. Apparatus to be cleared and the Clearance Points required.
 - e. Name and telephone number of the person in charge of the work.
 - f. Whether or not protective grounds will be installed.
- 4.5 If the Load Entity wishes to perform work on its own facilities which would normally be energized by PG&E-controlled source(s) of energy, the Load Entity may request that PG&E open, lock and tag PG&E's associated disconnect device to isolate the Load Entity's facilities from PG&E source(s) of energy. PG&E will also establish the disconnect device(s) as an open Clearance Point(s) and install "Man on Line" tags (see PG&E's General Operating Instructions)
- 4.6 PG&E assumes no responsibility for equipment energized by the Load Entity's substation or by any other means. The Load Entity agrees that any work it performs is at its own risk. The Load Entity shall take all necessary steps to ensure that work is conducted in compliance with all applicable federal, state and local laws and regulations and in a manner that does not endanger the safety of persons or equipment.
- 4.7 The Load Entity must open its interconnection disconnect switch if PG&E requests a Clearance Point. A qualified PG&E employee will observe that the switch is open, lock it open with a PG&E lock, and attach a filled-out "Man-on-Line" tag to indicate it is a Clearance Point.
- 4.8 In an Emergency, the Load Entity agrees to expeditiously open the interconnection disconnect switch upon notification from the GCC.



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- 4.9 Under normal conditions, PG&E will give advance notice of plans to perform work, which will affect the Load Entity's access to the PG&E system. PG&E reserves the right to charge the Load Entity the additional cost for work performed during times other than normal business hours (Non-Holidays, Monday through Friday, 8:00 A.M. to 5:00 P.M.) when the schedule of such work is negotiable, as determined by PG&E. PG&E will provide the Load Entity with an estimate of the additional cost and if the Load Entity still desires the work to be performed during non-normal business hours and PG&E does perform the work, PG&E shall charge the Load Entity the actual costs of the work, the amount of which shall not exceed the cost estimate.
- 4.10 Under Emergency conditions, the GCC may without notice and at anytime interrupt service to the Load Entity's Facility if a situation exists which may adversely affect PG&E Electric System Integrity or upon any emergency request that PG&E de-energize a portion of the system under its control.
- 4.11. The Load Entity may be subject to rotating outages unless an Optional Binding Mandatory Curtailment (OBMC) Agreement is in place or they have applied and meet the requirements for Essential Use Customer Status. The Load Entity is responsible for curtailing usage/demand subject to orders from the GCC when rotating outages occur. A specific rotating outage block number will be assigned. The Load Entity has 30 minutes to comply with the GCC rotating outage request or be subject to PG&E Electric Rule 14 noncompliance penalties.
- 4.12. If necessary for the safe and reliable operation of the PG&E electric grid, the Load Entity and PG&E may incorporate herein as an attachment, "Other Operating Instructions."



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5. OTHER COMMUNICATIONS

The facility operator shall notify the GCC of the following:

- 5.1 Any replacement, modification or removal of any interconnection facilities (e.g., transformer, breaker, disconnect, relays, remedial action equipment, etc.).
- 5.2 Results of three-year or four-year bench tests on all PG&E-required relays.
- 5.3 Results of six-year or eight-year tests on interconnection circuit breakers and transformers.
- 5.4 Any relay operations and the targets of the relay that caused the facility to separate, if applicable.
- 5.5 The time of all separations from and reconnections to the PG&E system.
- 5.6 The time of the change in operating status (i.e., opened or closed) of any voltage control device.
- 5.7 Whenever any live line work is being performed and, in addition, whenever such work causes any trouble.

The facility operator shall ensure that any reported time readings are accurate, and maintain their accuracy compared to a reliable time standard.

6. MAINTENANCE OF INTERCONNECTION EQUIPMENT OWNED BY THE LOAD ENTITY

- 6.1 The Load Entity agrees to maintain all PG&E-required Interconnection Facilities' devices in service, with relay settings as recorded on PG&E's "Relay Test Report". Proposed changes in relay settings must be submitted in writing to PG&E for approval. Any modification of the existing interconnection or protection scheme requires PG&E's prior written approval.



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6.2 PG&E required Interconnection Facilities owned by the Load Entity shall be periodically tested and maintained at the manufacturer’s accepted specifications, but at least every four years, by qualified personnel. Copies of equipment test reports shall be forwarded to PG&E for review.

7. EQUIPMENT OWNED BY THE LOAD ENTITY FOR RELIABILITY, OPERABILITY OR PARALLEL OPERATION.

This provision applies where the Load Entity is interconnected to the PG&E transmission system.

In the interest of safety, all customers must notify PG&E before operating ANY generation sources capable of parallel operation, or operating equipment that maintains current reliability or operability of PG&E’s electrical system, which are interconnected to the Load Entity’s substation, the Load Entity’s electrical system, or the PG&E electrical system. The Load Entity agrees to comply with the requirements identified in the PG&E Transmission Interconnection Handbook for all such equipment and generation sources capable of parallel operation with PG&E’s electrical system. Generators that are capable of operating in parallel must be reviewed and approved by PG&E prior to operation, and require a generator interconnect agreement.

Standby Generator (not capable of operating in parallel)

Please check the appropriate line:

- The Load Entity has installed a standby generator.
- The Load Entity does not have and does not plan to install a standby generator.
- Load entity will notify PG&E if there are plans to install a standby generator in the future.



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Line Selector Switches

If the line serving the Load Entity's substation is out of service due to line outages or planned maintenance, then service to the Load Entity may also be interrupted. Please refer to PG&E Electric Rule 14, Shortage of Supply and Interruption of Delivery. Where PG&E or the Load Entity has installed line selector switches for reliability, maintenance or operability they will be operated in compliance with Sections 3 and 4 in this Agreement.

8. REFERENCES

The following reference materials are available for use by the Load Entity and its operating personnel. Copies may be requested from the GCC:

- 8.1 **PG&E Utility Standard: TD-1466P-02--** This document establishes PG&E's responsibilities and operating instructions for personnel involved in the operation, maintenance, and construction of its electric power generation, and transmission systems.
- 8.2 **PG&E Utility Standard: TD-1403S** -- A document describing approved PG&E clearance procedures and instructions for obtaining clearances.
- 8.3 **PG&E Transmission Interconnection Handbook**
- 8.4 **Electric Rules 2, and 14**

9. GENERAL PROVISIONS

- 9.1 Choice of Laws: This Agreement shall be governed by and construed in accordance with the laws of the State of California, excluding any choice of law rules that direct the application of the laws of another jurisdiction.
- 9.2 Modification: This Agreement may be amended or modified only by a written instrument signed by the authorized representatives of both the parties.



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- 9.3 Captions: Captions are included herein for ease of reference only. The captions are not intended to affect the meaning of the contents or scope of this Agreement.
- 9.4 Non-waiver: Failure by either party to enforce any right or obligation with respect to any matter arising in connection with this Agreement shall not constitute a waiver as to that matter or any other matter.
- 9.5 Interpretation: This Agreement is not intended to modify any PG&E or ISO tariff or rule filed with the California Public Utilities Commission or Federal Energy Regulatory Commission. In case of conflict between this Agreement and any PG&E or ISO tariff or rule, the tariff or rule shall govern. This agreement represents the entire understanding between the parties hereto relating to the operation of the Load Entity's substation, and supersedes any and all prior proposals or agreements, whether written or oral, that may exist between the parties. Where there is conflict or inconsistency with the express terms in this Agreement and any documents referenced by this Agreement excluding the above referenced PG&E and ISO tariffs, the terms of this Agreement shall supersede such conflicting terms.
- 9.6 **DISPUTE RESOLUTION: IF A DISPUTE ARISES OUT OF OR RELATING TO THIS AGREEMENT, OR THE BREACH THEREOF, AND IF SAID DISPUTE CANNOT BE SETTLED THROUGH DIRECT DISCUSSIONS, THE PARTIES AGREE TO THE FIRST ENDEAVOR IN GOOD FAITH TO SETTLE THE DISPUTE IN AN AMICABLE MANNER WITHIN THIRTY (30) DAYS OF SUBMISSION TO MEDIATION UNDER THE MEDIATION RULES OF THE AMERICAN ARBITRATION ASSOCIATION BEFORE SEEKING RECOURSE IN A JUDICIAL FORUM. THE MEDIATION SHALL BE INITIATED BY THE WRITTEN REQUEST OF EITHER PARTY AND SHALL BE COMMENCED WITHIN FIFTEEN (15) DAYS OF RECEIPT OF SUCH NOTICE. THE PARTIES SHALL SHARE EQUALLY IN ANY EXPENSES INCURRED AS A RESULT OF THE MEDIATION.**



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10. NAME AND ADDRESS OF KEY PERSONNEL:

The Transmission Load Entity: _____

Phone: _____
 Alternate Phone: _____
 Fax: _____
 Email: _____

Designated PG&E
 GCC: _____

Phone: _____
 Fax: _____

A party may change or supplement the addresses above by written notice to the other party. The Load Entity agrees to keep the GCC informed of any change in its notice address.

11. CPUC AUTHORITY

This Agreement shall at all times be subject to such changes or modifications by the Public Utilities Commission of the State of California as said Commission may, from time to time, direct in the exercise of its jurisdiction.



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12. SIGNATURES

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed by their duly authorized representatives, and it is effective as of the last date set forth below.

Customer/Company
Authorized by (Print)
Signature
Title
Date

PACIFIC GAS AND ELECTRIC COMPANY

Authorized by (Print)
Signature
Title
Date