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August 29, 2007

Advice 3068-E-A

(Pacific Gas and Electric Company ID U 39 E)

Public Utilities Commission of the State of California

Subject: Supplement: Revisions to Electric Rate Schedule NEM – Net Energy Metering Service and the Associated Application and Interconnection Agreement Forms

Pacific Gas and Electric Company (PG&E) hereby submits for filing revisions to its electric tariffs. The affected tariff sheets are listed on the enclosed Attachment I.

This supplemental filing supersedes Advice 3068-E.

Purpose

The purpose of this filing is to simplify the tariff related paperwork for the interconnection of customers with solar and/or wind generators of 30 Kilowatts (kW) or less taking service under Electric Rate Schedule NEM – *Net Energy Metering Service* by making the following four changes:

- 1) Changing the criteria for distinguishing between the simplified interconnection process for residential and small commercial customers with systems 10kW or less, and that for all other customers, to a criteria based solely on whether the customer's solar or wind generator is 30kW or less, regardless of customer class;
- 2) Eliminating the existing application form (79-854) and interconnection agreement (79-994) for the "30kW or less" customers and replacing it with a single new form (79-1101);
- 3) Adding provisions currently in the interconnection agreement to the NEM tariff so a customer who takes over an existing NEM account (so called, "Change of Party" customer) does not have to submit a new interconnection agreement. This will also apply to the handling of homes in solar subdivisions, where the developer/contractor establishes the interconnection, so that the customer who buys the home will not have to re-submit the paperwork; and

- 4) Modifying the forms currently used for customers with generators larger than 10kW, 79-974 and 79-978, to reflect that the simplified process now applies to all NEM customers with a solar and/or wind generator 30kW or less.

Background

When the California Legislature first established solar and wind net metering in 1998, the program was limited to residential and small commercial customer systems sized up to 10 kW. When, in 2001, the Legislature temporarily expanded the program to cover all customer classes with systems up to 1 MW, the distinction between the “standard” and “expanded” NEM application forms and processes was developed to help distinguish between the permanent and temporary portions of the program. When the Legislature made the expansion permanent in 2002, this structure was maintained.

Recently, PG&E, in reviewing its interconnection processes, realized that almost all – ninety-six (96) percent – of its NEM interconnections are under 30kW. PG&E believes most of its customers could benefit from a simpler interconnection process and that simplification can be accomplished with no reduction in system safety or reliability. From a technical viewpoint, it is logical to base the “standard” and “expanded” distinction solely on generator size, not customer class, since generator size is the factor that most accurately reflects the amount of engineering review that is necessary to determine the possible impact of a generator on the distribution system. PG&E believes that the 30kW or less threshold will permit continued review of the effect of customer generation on PG&E’s distribution system, while offering a majority of PG&E’s NEM interconnections a streamlined and customer-friendly application process.

In addition to applying the simpler interconnection process to almost all solar customers, PG&E has worked with solar contractors and customers to revise the interconnection documents themselves in order to better facilitate the interconnection process by reducing the amount of administrative work necessary for both the customer and for PG&E. By replacing Forms 79-854 and 79-994 with the single form 79-1101 (Attachment 1), PG&E is able to significantly reduce the amount of paperwork required from customers.

Finally, by making the “Change of Party” process essentially paperless, establishing NEM service for new customers at sites with generators previously approved by PG&E becomes considerably simpler. This process improvement has significant implications for residential new construction, where an increasing number of housing developers are adding solar to new homes.

Tariff Revisions

PG&E proposes changing the following filed tariffs to support the creation of a simplified application process for NEM customers interconnecting solar and/or wind electric generating facilities of 30kW and less.

Revisions to Schedule NEM - PG&E proposes to add the following language to the "Applicability" section of Electric Rate Schedule NEM:

A Customer who owns, rents or leases a premises that includes solar and/or wind turbine electrical generating facilities, or a hybrid of both with a capacity of 30kW or less, that were previously approved by PG&E for NEM interconnection prior to the Customer moving in and/or taking electric service with PG&E (Change of party Customer) will take service on this tariff as long as the requirements of this section are met. To be eligible, the Change of party Customer must: 1) ensure that the generating facility is compliant with all applicable safety and performance standards as delineated in PG&E's Electric Rule 21 and other applicable tariffs; 2) keep in force the amount of property, commercial general liability and/or personal liability insurance the Change of party Customer has in place at the time they initiate service on this tariff; 3) understand that PG&E may from time to time release to California Energy Commission and/or the California Public Utilities Commission, information regarding the Change of party Customer's facility, including Change of party Customer's name and Generating Facility location, capacity and operational characteristics.

Change of party Customers making any modification to previously approved PG&E NEM solar and/or wind turbine electrical generating facilities are not eligible for this provision and must complete the interconnection process in Special Condition 3 of this tariff.

Change of party Customers also must agree to comply with all rules and requirements of PG&E's Net Energy Metering tariffs.

When the builder/developer of a subdivision sells a new home during the NEM application process, after the builder/developer completes the Net Energy Metering Application and Interconnection Agreement for Customers with Solar and/or Wind Generating Facilities of 30kW or Less (Form #79-1101) and otherwise meets all of PG&E's requirements for the NEM project, but prior to PG&E providing final written approval for Parallel Operation on Schedule NEM, PG&E may treat the new home owner/Customer as a Change of party Customer, as defined above.

PG&E also proposes to amend the sub-schedules in Electric Rate Schedule NEM to reflect the revised 30kW limit for customers utilizing this streamlined application process.

Revision to Form 79-854 – This filing eliminates Form 79-854 – *Interconnection Agreement for Net Energy Metering for Residential and Small Commercial Solar or*

Wind Electric Generating Facilities of 10 Kilowatts or Less. This form will be replaced by a single document, Form 79-1101.

Revision to Form 79-994 – This filing eliminates Form 79-994 – *Application for Interconnecting Residential or Small Commercial Net Energy Metering (NEM) Customers with Solar or Wind Electric Generating Facilities of 10 Kilowatts or Less.* This form will be replaced by a single document, Form 79-1101.

This filing amends the following forms to reflect the revised 30kW limit for customers utilizing this streamlined application process:

Revisions to Form 79-974 - PG&E proposes to amend the following language in Form 79-974 – *Generating Facility Interconnection Application*:

“A simpler, shorter form is also available from PG&E for Net Energy Metering Generating Facilities with a nameplate rating less than 10kW.” (Form 79-994)

So that it reads:

“A simpler, shorter form is also available from PG&E for Net Energy Metering Customers with Solar and/or Wind Electric Generating Facilities up to 30kW.” (Form 79-1101)

Revisions to Form 79-978 - The title of this form shall be changed as follows, to reflect the revised guidelines for the streamlined application process.

PG&E proposes to amend the title of Form 79-978:

Interconnection Agreement for Net Energy Metering of Solar or Wind Electric Generating Facilities of 1,000 Kilowatts or less, other than Residential or Small Commercial Facilities of 10 Kilowatts or Less

So that it reads:

Interconnection Agreement for Net Energy Metering of Solar or Wind Electric Generating Facilities of 1,000 Kilowatts or less, other than Facilities of 30 Kilowatts or less

Protests

Anyone wishing to protest this filing may do so by letter sent via U.S. mail, by facsimile or electronically, any of which must be received no later than **September 18, 2007**, which is 20 days after the date of this filing. Protests should be mailed to:

CPUC Energy Division
Tariff Files, Room 4005
DMS Branch
505 Van Ness Avenue
San Francisco, California 94102

Facsimile: (415) 703-2200
E-mail: ijnj@cpuc.ca.gov and mas@cpuc.ca.gov

Copies of protests also should be mailed to the attention of the Director, Energy Division, Room 4004, at the address shown above.

The protest also should be sent via U.S. mail (and by facsimile and electronically, if possible) to PG&E at the address shown below on the same date it is mailed or delivered to the Commission:

Brian K. Cherry
Vice President, Regulatory Relations
Pacific Gas and Electric Company
77 Beale Street, Mail Code B10C
P.O. Box 770000
San Francisco, California 94177

Facsimile: (415) 973-7226
E-mail: PGETariffs@pge.com

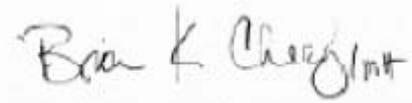
Effective Date

PG&E requests that this advice filing become effective on regular notice, **October 1, 2007**.

Notice

In accordance with General Order 96-V, Section 4, a copy of this advice letter is being sent electronically and via U.S. mail to parties shown on the attached list. Address changes to the General Order 96-B service list should be directed to Rose de la Torre at (415) 973-4716. Advice letter filings can also be accessed electronically at:

<http://www.pge.com/tariffs>

A handwritten signature in black ink that reads "Brian K. Cheyette". The signature is written in a cursive style and is centered on the page.

Vice President, Regulatory Relations

Attachments

cc: Service List

CALIFORNIA PUBLIC UTILITIES COMMISSION

ADVICE LETTER FILING SUMMARY ENERGY UTILITY

MUST BE COMPLETED BY UTILITY (Attach additional pages as needed)

Company name/CPUC Utility No. **Pacific Gas and Electric Company (ID U39 M)**

Utility type:

ELC GAS
 PLC HEAT WATER

Contact Person: Megan Hughes

Phone #: (415) 973-1877

E-mail: mehr@pge.com

EXPLANATION OF UTILITY TYPE

ELC = Electric GAS = Gas
PLC = Pipeline HEAT = Heat WATER = Water

(Date Filed/ Received Stamp by CPUC)

Advice Letter (AL) #: 3086-E-A

Tier: 2

Subject of AL: Supplement: Revisions to Electric Rate Schedule NEM – Net Energy Metering Service and the Associated Application and Interconnection Agreement Forms

Keywords (choose from CPUC listing): Demand Side Management

AL filing type: Monthly Quarterly Annual One-Time Other _____

If AL filed in compliance with a Commission order, indicate relevant Decision/Resolution #:

Does AL replace a withdrawn or rejected AL? If so, identify the prior AL: No

Summarize differences between the AL and the prior withdrawn or rejected AL¹: _____

Is AL requesting confidential treatment? If so, what information is the utility seeking confidential treatment for: No

Confidential information will be made available to those who have executed a nondisclosure agreement: Yes No

Name(s) and contact information of the person(s) who will provide the nondisclosure agreement and access to the confidential information:

Resolution Required? Yes No

Requested effective date: October 1, 2007

No. of tariff sheets: 12

Estimated system annual revenue effect (%): N/A

Estimated system average rate effect (%): N/A

When rates are affected by AL, include attachment in AL showing average rate effects on customer classes (residential, small commercial, large C/I, agricultural, lighting).

Tariff schedules affected: Electric Rate Schedule NEM and Sample Forms 79-974, 79-978, and 79-1101

Service affected and changes proposed¹: N/A

Pending advice letters that revise the same tariff sheets: N/A

Protests, dispositions, and all other correspondence regarding this AL are due no later than 20 days after the date of this filing, unless otherwise authorized by the Commission, and shall be sent to:

CPUC, Energy Division

Tariff Files, Room 4005

DMS Branch

505 Van Ness Ave.,

San Francisco, CA 94102

jnj@cpuc.ca.gov and mas@cpuc.ca.gov

Pacific Gas and Electric Company

Attn: Brian K. Cherry

Vice President, Regulatory Relations

77 Beale Street, Mail Code B10C

P.O. Box 770000

San Francisco, CA 94177

E-mail: PGETariffs@pge.com

**ATTACHMENT 1
Advice 3068-E-A**

Cal P.U.C. Sheet No.	Title of Sheet	Cancelling Cal P.U.C. Sheet No.
26524-E	Schedule NEM--Net Energy Metering Service	26428-E
26525-E	Schedule NEM (Cont.)	26429-E
26526-E	Schedule NEM (Cont.)	26430-E
26527-E	Schedule NEM (Cont.)	26431-E
26528-E	Sample Form 79-974--Generating Facility Interconnection Application	26432-E
26529-E	Sample Form 79-978--Interconnection Agreement for Net Energy Metering of Solar or Wind Electric Generating Facilities 1,000 Kilowatts or less, other than Residential or Small Commercial Facilities of 30 kW or less	26433-E
26530-E	Sample Form 79-1101--Net Energy Metering Application and Interconnection Agreement for Customers with Solar and/or Wind Electric Generating Facilities of 30 Kilowatts or Less	26434-E
26540-E	Table of Contents -- Rate Schedules	26204-E
26541-E	Table of Contents -- Sample Forms	26480-E
26542-E	Table of Contents -- Sample Forms	26371-E
26543-E	Table of Contents -- Sample Forms	26264-E
26544-E	Table of Contents -- Title Page	26481-E



SCHEDULE NEM—NET ENERGY METERING SERVICE

APPLICABILITY: This net energy-metering schedule is applicable to a customer who uses a solar or wind turbine electrical generating facility, or a hybrid system of both, with a capacity of not more than 1,000 kilowatts that is located on the customer's owned, leased, or rented premises, is interconnected and operates in parallel with PG&E's transmission and distribution systems, including wind energy co-metering customers as defined in California Public Utilities Code Section 2827.8, and is intended primarily to offset part or all of the customer's own electrical requirements (hereinafter "eligible customer-generator" or "customer"). Certain incremental billing and metering costs set forth in this schedule that are related to net energy metering are applicable to Energy Service Providers (ESPs) serving eligible customer-generators.

This service is not applicable to a Direct Access (DA) customer where the customer's ESP does not offer a net energy metering tariff. In addition, if an eligible customer-generator participates in direct transactions with an ESP that does not provide distribution service for the direct transactions, the ESP, and not PG&E, is obligated to provide net energy metering to the customer.

This rate schedule is available on a first-come, first-served basis to customers that provide PG&E with: (a) a completed Net Energy Metering Application including all supporting documents and required payments; AND (b) a completed signed Net Energy Metering Interconnection Agreement; AND (c) evidence of the customer's final inspection clearance from the governmental authority having jurisdiction over the generating facility; until such time as the total rated generating capacity used by eligible customer-generators exceeds two and one-half (2.5) percent of PG&E's aggregate customer peak demand.

Customers seeking generator interconnections in portions of San Francisco and Oakland where PG&E has a network grid must contact PG&E about generation export limitations.

Schedule NEM applies also to specified net energy metering eligible (NEM-eligible) generators in a generating facility comprised of multiple NEM- and non-NEM-eligible generators, served through the same Point of Common Coupling (PCC), where the NEM-eligible generating capacity is not more than 1 MW. Such facilities will be referred to as Multiple Tariff Facilities, and any group of generators within such a facility that is subject to the same tariff provisions for billing and metering purposes will be referred to as a Constituent Generator Group. In order to be eligible for this rate schedule in a Multiple Tariff Facility, the customer-generator must meet all the requirements of Special Condition 6 for the schedule NEM-eligible generator, and must also meet any other applicable tariffs.

Due to the complexity of Multiple Tariff Facilities NEM generating facilities interconnecting under the provisions of Special Condition 6 may require additional review and/or interconnection facilities and other equipment, and may incur interconnection costs, as provided for in electric Rule 21.

(L)

(Continued)



SCHEDULE NEM—NET ENERGY METERING SERVICE
(Continued)

APPLICABILITY:
(Cont'd.)

A Customer who owns, rents or leases a premises that includes solar and/or wind turbine electrical generating facilities, or a hybrid of both with a capacity of 30kW or less, that were previously approved by PG&E for NEM interconnection prior to the Customer moving in and/or taking electric service with PG&E (Change of party Customer) will take service on this tariff as long as the requirements of this section are met. To be eligible, the Change of party Customer must: 1) ensure that the generating facility is compliant with all applicable safety and performance standards as delineated in PG&E's Electric Rule 21 and other applicable tariffs; 2) keep in force the amount of property, commercial general liability and/or personal liability insurance the Change of party Customer has in place at the time they initiate service on this tariff; 3) understand that PG&E may from time to time release to California Energy Commission and/or the California Public Utilities Commission, information regarding the Change of party Customer's facility, including Change of party Customer's name and Generating Facility location, capacity and operational characteristics.

Change of party Customers making any modification to previously approved PG&E NEM solar and/or wind turbine electrical generating facilities are not eligible for this provision and must complete the interconnection process in Special Condition 3 of this tariff.

Change of party Customers also must agree to comply with all rules and requirements of PG&E's Net Energy Metering tariffs.

When the builder/developer of a subdivision sells a new home during the NEM application process, after the builder/developer completes the Net Energy Metering Application and Interconnection Agreement for Customers with Solar and/or Wind Generating Facilities of 30kW or Less (Form #79-1101) and otherwise meets all of PG&E's requirements for the NEM project, but prior to PG&E providing final written approval for Parallel Operation on Schedule NEM, PG&E may treat the new home owner/Customer as a Change of party Customer, as defined above.

TERRITORY:

The entire territory served.

(N)

(N)
(L)

(Continued)



SCHEDULE NEM—NET ENERGY METERING SERVICE
(Continued)

RATES:

All rates charged under this schedule will be in accordance with the eligible customer-generator's otherwise-applicable metered rate schedule (OAS). An eligible customer-generator served under this schedule is responsible for all charges from its OAS including monthly minimum charges, customer charges, meter charges, facilities charges, demand charges and surcharges. The "Average Rate Limiter" for general service OAS's and all other demand charges will be based on the demand in kilowatts as measured only on the energy being consumed by the customer from PG&E. The power factor, when it applies on the OAS, will be based on the average power factor over the past 12 billing months of operation prior to starting on NEM. Customer-generators without 12 billing months of power factor history, will have their power factor estimated based on the nature of the connected facilities and their hours of operation. Power factor will be subsequently applied to the customer-generator's bill until the customer-generator demonstrates to PG&E's satisfaction that adequate correction had been provided. PG&E will continue to monitor and review the power factor and if warranted, change the power factor correction on the customer-generator's bills. Charges for energy (kWh) supplied by PG&E will be based on the net metered usage in accordance with Billing (Special Condition 2, below).

Customer-generators eligible for service under this schedule are exempt from the requirements of Schedule S—Standby Service except Multiple Tariff Facilities interconnected under the terms of Special Condition 6, may be subject to the requirements of Schedule S.

The charges and credits for Multiple Tariff Facilities taking service on this rate schedule under the provisions of Special Condition 6, will be calculated using the OAS identified by the customer-generator in its application for interconnection and its interconnection agreement with PG&E or as subsequently changed by the customer-generator in accordance with PG&E's electric Rule 12.

Customer-generators with Multiple Tariff Facilities with existing NEM, NEMBIO and/or NEMFC eligible generators interconnecting additional generators, will receive a bill true-up prior to taking service under Special Condition 6. This ensures that all NEM accounts have the same Relevant Period, as defined in Special Condition 2, going forward.

SUB-SCHEDULES:

Eligible customer-generators will be placed on the appropriate sub-schedule as described below:

1. NEMS – For Small Customer (as defined in Rule 1) customer-generators taking service with solar and/or wind generating facilities, the combined total of which is not more than 30 kW. (T)
2. NEMEXP – For Small Customer (as defined in Rule 1) customer-generators with solar generating facilities and/or wind generating facilities 50 kW or less, the combined total of which is greater than 30 kW. (T)
3. NEMEXPM – For all other commercial, industrial customer-generators, and agricultural customers billed monthly under Special Condition 2 with solar generating facilities and/or wind generating facilities 50 kW or less, the combined total of which is greater than 30 kW. (T)
4. NEMW – For customer-generators with only wind generating facilities greater than 50 kW billed monthly under Special Condition 5 of this tariff.
5. NEMMT – For customer-generators taking service as a Multiple Tariff Facility under Special Condition 6 of this tariff.

(Continued)



SCHEDULE NEM—NET ENERGY METERING SERVICE
(Continued)

SPECIAL
CONDITIONS:
(Cont'd.)

3. INTERCONNECTION: Prior to receiving approval for Parallel Operation, the customer-generator must submit a completed PG&E application form and interconnection agreement as follows:

RATE OPTION	APPLICATION	INTERCONNECTION AGREEMENT	
NEMS	<i>Net Energy Metering Application and Interconnection Agreement for Customers with Solar and/or Wind Electric Generating Facilities of 30 Kilowatts or less</i>		(T) (T)
	(Form 79-1101)		
NEMEXP	<i>Generating Facility Interconnection Application, (Form 79-974)</i>	<i>Interconnection Agreement for Net Energy Metering of Solar or Wind Electric Generating Facilities of 1,000 Kilowatts or Less, other than Facilities of 30 Kilowatts or Less (Form 79-978)</i>	(T)
	<i>Expanded Net Energy Metering (NEM) Supplemental Application Form (Form 79-998)</i>		
NEMEXPM	(same as for NEMEXP)	(same as for NEMEXP)	
NEMW (Wind Energy Co-Metering – See Special Condition 5)	(same as for NEMEXP)	(same as for NEMEXP)	
NEMMT (Multiple Tariff Facilities – See Special Condition 6)	(same as for NEMEXP)	<i>Generating Facility Interconnection Agreement (Multiple Tariff) (Form 79-1069)</i>	

(Continued)



Pacific Gas and Electric Company
San Francisco, California

Cancelling

Revised
Revised

Cal. P.U.C. Sheet No.
Cal. P.U.C. Sheet No.

26528-E
26432-E

PACIFIC GAS AND ELECTRIC COMPANY

GENERATING FACILITY INTERCONNECTION APPLICATION
FORM NO. 79-974 (REV 08/07)
(ATTACHED)

(T)

Advice Letter No. 3068-E-A
Decision No.

Issued by
Brian K. Cherry
Vice President
Regulatory Relations

Date Filed August 29, 2007
Effective October 1, 2007
Resolution No. _____

107081

Part 1 – Introduction and Overview

- A. Applicability:** This Generating Facility Interconnection Application (Application) is used to request the interconnection of a Generating Facility to Pacific Gas and Electric Company's (PG&E) Distribution System (over which the California Public Utilities Commission (CPUC) has jurisdiction). Refer to PG&E's Rule 21 to determine the specific requirements for interconnecting a Generating Facility. Capitalized terms used in this Application, and not otherwise defined herein, shall have the same meanings as defined in PG&E's Rule 21 and Rule 1.

Except as noted in the next paragraph, this Application may be used for any Generating Facility to be operated by, or for, a Customer and/or Producer to supplement or serve part or all of its electric energy requirements that would otherwise be provided by PG&E, including "distributed generation", "cogeneration," emergency, backup, and standby generation, and Net Energy Metered Generating Facilities. A simpler, shorter form is also available from PG&E for Net Energy Metering Customers with Solar and/or Wind Electric Generating Facilities less than 30kW (Form 79-1101). This form is available upon request by telephoning 415-972-5676 or on PG&E's website at <http://www.pge.com/gen>. While Customers operating Generating Facilities isolated from PG&E's Distribution System are not obligated to enter into an Interconnection Agreement with PG&E, parts of this Application will still need to be completed to satisfy PG&E's notice requirements for operating an isolated Generating Facility as specified in the California Health and Safety Code Section 119085 (b).

This Application may not be used to apply for interconnecting Generating Facilities used to participate in transactions where all, or a portion of, the electrical output of the Generating Facility is scheduled with the California Independent System Operator. Such transactions are subject to the jurisdiction of the Federal Energy Regulatory Commission (FERC) and require a different application available from PG&E.

This Application is not applicable for incentives and/or rebates offered by the Energy Resources Conservation and Development Commission ("CEC") or the CPUC. Please contact those agencies directly or on their respective websites (www.energy.state.ca.us and www.cpuc.ca.gov).

Guidelines and Steps for Interconnection: This Application must be completed and sent to PG&E along with the additional information indicated in Part 1, Section C below to initiate PG&E's interconnection review of the proposed Generating Facility. An Initial Review fee of \$800 (payable by check or money order to PG&E must accompany the Applications except those Applications for isolated Generating Facilities and Net Energy Metering Generating Facilities. Supplemental Review and Interconnection Study fees may be required for large capacity and/or more complex Generating Facility Interconnections; see PG&E's Rule 21, Section C.1.b. & c. for more information regarding interconnection of a generator to PG&E's Distribution System. Please refer to the California Energy Commission's website: http://www.energy.ca.gov/distgen/interconnection/guide_book.html.

This document is only an Application. Upon acceptance of the Generating Facilities, PG&E will prepare an Interconnection Agreement for execution by the "Producer," the party that will be responsible for the Generating Facility. PG&E may also require an inspection and testing of the Generating Facility and installation of any related Interconnection Facilities prior to giving the Producer written authorization to operate in parallel. **Unauthorized Parallel Operation may be dangerous and may result in injury to persons and/or may cause damage to equipment and/or property for which a Producer/Customer may be liable!**

Please note, other approvals may need to be acquired, and/or other agreements may need to be formed with PG&E or regulatory agencies, such as the Air Quality Management Districts and local governmental building and planning commissions prior to operating a Generating Facility. PG&E's authorization to operate in parallel does not satisfy the need for an Applicant to acquire such other approvals.

- B. Required Documents:** Four (4) copies of this Application and each of the following documents **are required to be submitted** before this application will be processed. Drawings must conform to accepted engineering standards and must be legible. 11"x17" drawings are preferred.
1. A **Single-line drawing** showing the electrical relationship and descriptions of the significant electrical components such as the primary switchgear, secondary switchboard, protective relays, transformers, generators, circuit breakers, with operating voltages, capacities, and protective functions of the Generating Facility, the Customer's loads, and the interconnection with PG&E's Distribution System. Please show the location of all required net generation electric output meter(s) and the A.C. manual operated disconnect switch on the single line drawing.
 2. **Site plans and diagrams** showing the physical relationship of the significant electrical components of the Generating Facility such as generators, transformers, primary switchgear/secondary switchboard, and control panels, the Customer's loads and the interconnection with PG&E's Distribution System. Please show the location of all required net generation electric output meter(s) and the A.C. manual operated disconnect switch on the site plans.
 3. If **transformers** are used to interconnect the Generating Facility with PG&E's Distribution System, please provide transformer nameplate information (voltages, capacity, winding arrangements, connections, impedance, et cetera).
 4. If a **transfer switch** or scheme is used to interconnect the Generating Facility with PG&E Distribution System, please provide component descriptions, capacity ratings, and a technical description of how the transfer scheme is intended to operate.
 5. If **protective relays** are used to control the interconnection, provide protection diagrams or elementary drawings showing relay wiring and connections, proposed relay settings, and a description of how the protection scheme is intended to function.
 6. An Initial Review fee check or money order in the amount of \$800, if applicable, made out to PG&E referencing the electric account number and "Initial Interconnection Review Fee."

Part 1 Cont'd – Introduction and Overview

C. Mailing Instructions, Assistance: When this application has been completed it may be printed and mailed, along with the required attachments to:

Pacific Gas and Electric Company
Attn: Manager, Generation Interconnection Services
P.O. Box 770000
Mail Code N7L
San Francisco, California, 94177

Alternatively, you may contact PG&E at (415) 972-5676 or e-mail at gen@pge.com

Part 2 – Identifying the Generating Facility's Location and Responsible Parties

Project Name:	Date Received:	Generating Facility ID:	Application Expiration Date (Refer to Part 2, Section E)

(For PG&E Use Only)

A. Customer Electric Account Information (What electric service will the Generating Facility be interconnected for parallel operation with PG&E? For aggregated electric accounts (under NEMBIO, dairy operations only) provide the primary and all associated accounts/meter information)

Name shown on PG&E service account	Electric Account Number	Electric Badge (Meter) Number

NOTE: Customer Electric account must match the customer's utility bill account information.

Meter Location Street Address	City	State	Zip

Customer Electric Account Contact Information (Who is the customer contact for progress updates and/or additional information?)

Contact Person	Company Name		
Phone	Fax	E-mail	
Mailing Address	City	State	Zip

B. Project Contact Information (Who is the project manager for this Generating Facility?)

Project Contact Person (Optional)	Company Name		
Phone	Fax	E-mail	
Mailing Address	City	State	Zip

B.1. Will the Generating Facility be owned by a (third) party other than the name appearing on the PG&E service account in A. above (please check)? Yes No

Part 2 Cont'd – Identifying the Generating Facility's Location and Responsible Parties

C.1. Customer - Generating Facility Interconnection Agreement (“GFIA”) or Customer Generation Agreement (“CGA”) (for 3rd Party Generator on Premises) Information (Please identify the party that will execute the applicable agreement.) This Section is not applicable to Net Energy Metering (NEM) Applicants because PG&E and the Customer, not the 3rd Party if any, must enter into the Net Energy Metering Interconnection Agreement.

Company Name to be entered on GFIA/CGA	Legal Title of Company to be entered on GFIA/CGA
Person Executing the GFIA/CGA	Title of Person Executing the GFIA/CGA

Mailing Address	Phone	E-Mail

C.2. 3rd Party Owner – GFIA Information (Please identify the Party, if known, that will execute the GFIA). This Section is not applicable to Net Energy Metering (NEM) Applicants because PG&E and the Customer, not the 3rd Party if any, must enter into the Net Energy Metering Interconnection Agreement.

Company Name to be entered on GFIA/CGA	Legal Title of Company to be entered on GFIA/CGA
Person Executing the GFIA	Title of Person Executing GFIA
Mailing Address	Phone
E-Mail	E-Mail

D. Operating Date (What date is this Generating Facility expected to begin operation?)

E. Expiration Date* (The date the status of this Application is changed to “withdrawn” by PG&E?)

- **The information submitted in this Application will remain active and valid for a period of 12 months from the date the Application was accepted by PG&E as a “completed” Application. If the project has not been interconnected, or that reasonable proof the project is going forward has not been submitted to PG&E by that time, the Application will be considered “withdrawn” and removed from the queue. To the extent that the Initial Review, Supplemental Review, or Detailed Interconnection Study fees have been paid to and the corresponding reviews/study completed by PG&E, Applicant will only be entitled to a return of one-half of the Initial Review fee of \$400. All other fees will be forfeited.**

Part 2 Cont'd – Electing Interconnection Cost Responsibilities

F. Estimated Versus Actual Cost Responsibility

Under Rule 21 Applicants can elect estimated or actual costs for (1) detailed interconnection studies, and/or (2) Interconnection Facilities and distribution system modifications. This election must be made at the time of application submission. Under both cost options, an estimate is prepared. If the Applicant elects the actual cost option, there will be a true-up after the completion of the work. If actual costs exceed the original estimated amounts, Applicant will be responsible for costs above the estimated amounts. Conversely, if actual costs are less than the original estimated amounts, PG&E will refund the difference.

Applicants seeking interconnection under PG&E's Net Energy Metering tariffs are not responsible for Initial Review, Supplemental Review and Detailed Interconnection Study fees, nor for distribution system modifications' costs.

Selection of detailed interconnection study cost responsibility* (Non-NEM only):

Estimated Cost

Actual Cost

Selection of Interconnection Facilities and distribution system modifications' (if applicable) cost responsibility*:

Estimated Cost

Actual Cost

* **Note:** If no selections are made, estimated cost responsibility will apply.

Part 3 - Describing the Generating Facility and Host Customer's Electrical Facilities

A. (MP&I)	Indicate the operating mode of the Generating Facility	operating mode options: ___1 ___2 ___3 (Choose one)
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Instructions and Notes

Choose from the following operating mode options:

1. **Parallel Operation:** The Generating Facility will interconnect and operate "in parallel" with PG&E's Distribution System for more than one (1) second.
2. **Momentary Parallel Operation (MP):** The Generating Facility will interconnect and operate on a "momentary parallel" basis with PG&E's Distribution System for a duration of one (1) second or less through transfer switches or operating schemes specifically designed and engineered for such operation.
3. **Isolated Operation (I):** The Generating Facility will be "isolated" and prevented from becoming interconnected with PG&E's Distribution System through a transfer switch or operating scheme specifically designed and engineered for such operation.

Part 3 – Cont’d - Describing the Generating Facility and Host Customer’s Electrical Facilities

If the answer is operating mode option 1, “parallel operation,” please supply all of the information requested for the Generating Facility. Be sure to supply adequate information including diagrams and written descriptions regarding the protective relays that will be used to detect faults or abnormal operating conditions on PG&E’s Distribution System.

If the answer is operating mode option 2, “momentary parallel operation,” only questions A, E and F of this Part 3 and questions A, B, E, F, I, L, M, N, and S of Part 4 need be answered. Be sure, however, to supply adequate information including diagrams and written descriptions regarding the switching device or scheme that will be used to limit the parallel operation period to one second or less. Please also describe the back up or protective device and controls that will trip the Generating Facility should the transfer switch or scheme not complete the transfer in one second or less.

If the answer is operating mode option 3, “Isolated Operation,” only questions A, E, and F of this Part 3 and questions A, B, F, and S of Part 4 need be answered. Be sure, however, to supply adequate information including diagrams and written descriptions regarding the isolating switching device or scheme that will be used to prevent the Generating Facility from operating in parallel with PG&E’s Distribution System.

B.

*Parallel
Operation
Applications
Only*

If the Answer to Section A above was operating mode option 1, please indicate the type of agreement that is being requested with this Application. If operating mode option 2 or 3 was selected, please skip to questions E and F.

If agreement options 2, 3, 5, 7, 8, 9, or 10 to this Section B are chosen, please provide an estimate of the maximum kW the Generating Facility is expected to export to PG&E’s Distribution System. If PG&E determines that the amount of power to be exported is significant in relation to the capacity available on its Distribution System, it may request additional information, including time of delivery or seasonal kW/kWh estimates.

agreement options:

 1 2 3 4 5
 6 7 8 9 10
 (Choose all that apply)

_____ Maximum kW

Instructions and Notes

Sample agreements are available from PG&E for review. Choose from the following ten (10) agreement options:

Customer Owned Generating Facility (non-NEM)

1. **A Generating Facility Interconnection Agreement** that provides for parallel operation of the Generating Facility, but does not provide for exporting power to PG&E’s Distribution System. This non-export agreement, however does allow the occasional and uncompensated export of energy to PG&E’s Distribution System for less than 2 seconds in duration.
2. **A “Qualifying Facility” Power Purchase Agreement** that provides for parallel operation of the Generating Facility, and exporting energy to PG&E’s Distribution System for sale to PG&E. This option is available only to “Qualifying Facilities” with a total Nameplate Capacity of 100 kW or less. See Question F for the definition of a Qualifying Facility. (This type of agreement has not yet been developed by PG&E or approved by the CPUC. Check with PG&E for availability).
3. **A Generating Facility Interconnection Export Addendum** that provides for parallel operation of the Generating Facility and the occasional, continuous, non-compensated, export of inverter-based technology solar and wind energy, 1 MW or less to PG&E’s Distribution System. Continuous export is export greater than 60 seconds in duration. This addendum must be executed in concert with Agreement 1.

Third Party Owned Generating Facility (non-NEM)

4. **A Generating Facility Interconnection Agreement** that provides for parallel operation of the 3rd Party owned Generating Facility, but does not provide for exporting energy to PG&E’s Distribution System.
5. **A “Qualifying Facility” Power Purchase Agreement** that provides for parallel operation of the 3rd Party owned Generating Facility, and exporting energy to PG&E’s Distribution System for sale to PG&E. This option is available only to “Qualifying Facilities” with a total Nameplate Capacity of 100 kW or less. See Question F for the definition of a Qualifying Facility. (This type of agreement has not yet been developed by PG&E or approved by the CPUC. Check with PG&E for availability).
6. **A Customer Generation Agreement** that defines the relationship between the Customer whose name appears on PG&E’s electric service account. This agreement must be executed in addition agreements 4 and 5.

Part 3 Cont'd - Describing the Generating Facility and Host Customer's Electrical Facilities

Net Energy Metering Generating Facility

If you wish to have your Generating Facility participate on one of PG&E's Net Energy Metering tariffs, following your bi-directional meter installation, your meter and disconnect switch must be installed in a safe PG&E accessible location and remain unobstructed by plants, structures, locked gates or pets. Meter and disconnect switch access must be maintained at all times for your safety and PG&E's electrical system safety. Additionally, unencumbered access is required for meter reading, system maintenance, and operations. Any animals owned by the customer, for example pet dogs, should be kept clear from these areas to avoid hindering PG&E service personnel from completing their work.

Are there any meter access issues? Please check all that apply to avoid interconnection delays.

- Dog, or other animals at Residence
- Locked Gate
- Shrubs or Bushes
- Other (please explain) _____

7. **A Net Energy Metering Agreement: Solar and Wind**, that provides for parallel operation of the Generating Facility, and exporting energy to PG&E's Distribution System for credit under the terms of PG&E's Net Energy Metering tariffs for solar or wind Generating Facilities of 1MW or less, other than Generating Facilities of 30 kW or less. This agreement also requires submittal of an expanded net energy metered supplemental application. This option is available only to eligible Generating Facilities as defined in PG&E's Net Energy Metering tariffs.

8. **A Net Energy Metering Agreement: Bio-Gas**, that provides for parallel operation of the Generating Facility, and exporting energy to PG&E's Distribution System for credit under the terms of PG&E's Net Energy Metering tariffs for qualifying bio-gas digester Generating Facilities. This option is available only to eligible Generating Facilities as defined in PG&E's Net Energy Metering tariffs

9. **A Net Energy Metering Agreement: Fuel Cell**, that provides for parallel operation of the Generating Facility, and exporting energy to PG&E's Distribution System for credit under the terms of PG&E's Net Energy Metering tariffs for fuel-cell Generating Facilities. This option is available only to eligible Generating Facilities as defined in PG&E's Net Energy Metering tariffs

10. **Multiple Tariff Generating Facility Agreement**, that provides for the parallel operation of a Generating Facility that utilizes generators eligible for service under NEM or other applicable Net Energy Metering tariffs that are electrically connected behind the same Point of Common Coupling with generators not eligible to receive service under the NEM tariff.

11. **Other, please describe:** _____

<p>C. <i>Parallel Operation Applications Only</i></p>	<p>If the answer to Section B above was agreement option 1 or 4, please indicate the protection option that will be used to prevent energy from being exported to PG&E's Distribution System.</p> <p>If protection option 3 to this Section C is selected, please provide the continuous current rating of the host Customer facility's service entrance equipment (service panel rating):</p> <p>If Protection Option 4 to this Section C is selected, please provide the minimum load of the host Customer facility:</p>	<p>Protection Option: <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 (Choose one)</p> <p>_____ Amps</p> <p>_____ kW</p>
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Part 3 Cont'd - Describing the Generating Facility and Host Customer's Electrical Facilities

Instructions and Notes

Refer to PG&E's Rule 21, Section I.2., for additional information as to how to answer this question. If the Generating Facility will never export power to PG&E's Distribution System, a simpler, lower cost, protection scheme may be used to control the interface between the Generating Facility and PG&E's Distribution System. Choose from the following four options:

1. A reverse-power protection device will be installed to measure any export of power and trip the Generating Facility or open an intertie breaker to isolate the Generating Facility if limits are exceeded.
2. An under-power protection device will be installed to measure the inflow of power and trip or reduce the output of the Generating Facility if limits are not maintained.
3. The Generating Facility Interconnection Facility equipment has been certified as Non-Islanding and the incidental export of power will be limited by the design of the interconnection. If this option is to be used, the continuous ampere rating of the service entrance equipment (service panel rating) that is used by the host Customer facility must be stated in the space provided above.
4. The Gross Nameplate Rating of the Generating Facility will not exceed 50% of the host Customer facility's minimum electrical load. If this option is to be used, the minimum load of the host Customer facility must be stated in the space provided above.

Note: With the approval of PG&E, a Producer that wishes to retain the option to export power from a Generating Facility to PG&E's Distribution System may use a different protection scheme that provides for the detection of faults and other abnormal operating conditions.

<p>D.</p> <p><i>Parallel Operation Applications Only</i></p>	<p>What is the maximum 3-phase fault current that will be contributed by the Generating Facility to a 3-phase fault at the Point of Common Coupling (PCC)? (If the Generating Facility is single phase in design, please provide the contribution for a line-to-line fault.)</p> <p>Please indicate the short circuit interrupting rating of the host Customer facility's service panel:</p>	<p>_____</p> <p>Amps</p> <p>_____</p> <p>Amps</p>
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Instructions and Notes

Refer to PG&E's Rule 21 Sections D.4.a. and I.3.g. for significance and additional information. To determine this value, any transformers and/or significant lengths of interconnecting conductor used between each of the Generators (if there are more than one) that make up the Generating Facility and the PCC must be taken into account. The details, impedance, and arrangement of such transformers and interconnecting conductors should be shown on the single-line diagram that is provided. Consult an electrical engineer or the equipment supplier if assistance is needed in answering this question.

It is expected that most Applicants will want to reserve the flexibility to operate any or all of their Generators in parallel. If the design of the proposed Generating Facility limits the amount of generation that may be interconnected at any time to PG&E's Distribution System, please describe the assumptions used in calculating the maximum fault current contribution value.

<p>E.</p> <p>(MP&I)</p>	<p>Please indicate how this Generating Facility will be operated.</p>	<p><input type="checkbox"/>_1 <input type="checkbox"/>_2 <input type="checkbox"/>_3 <input type="checkbox"/>_4 <input type="checkbox"/>_5 <input type="checkbox"/>_6</p> <p>(Please choose all options that may apply.)</p>
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Choose from the following six operation options:

1. **Combined Heat and Power or Cogeneration** – Where the operation of the Generating Facility will produce thermal energy for a process other than generating electricity.
2. **Peak Shaving/Demand Management** – Where the Generating Facility will be operated primarily to reduce electrical demands of the host Customer facility during PG&E's "peak pricing periods".
3. **Primary Power Source** – Where the Generating Facility will be used as the primary source of electric power and power supplied by PG&E to the host Customer's loads will be required for supplemental, standby, or backup power purposes only.
4. **Standby / Emergency / Backup** – Where the Generating Facility will normally be operated only when PG&E's electric service is not available.
5. **Net Energy Metering** – Where the Generating Facility qualifies and receives service under PG&E's Net Energy Metering tariffs. For applicants for the Net Energy Metering of a solar and/or wind generating facility 1,000kW or less, other than customers with facilities of 30kW or less, a supplemental application (Form Number 79-998) is also required.
6. **Multiple Tariff** - Generating Facilities that have a combination of non-Net Energy Metering (non-NEM) generator(s) and a Net Energy Metering (NEM) generator(s). Check one of the following four options on the next sheet.

Part 3 Cont'd - Describing the Generating Facility and Host Customer's Electrical Facilities

For **Multiple Tariff** Generating Facilities, check one of the following:

- New facility installing non-NEM generator(s) and NEM generator(s) at the same time.
- Existing facility with non-NEM generator(s) and planning to add NEM generator(s). Please provide data for the table below.
- Existing facility with NEM generator(s) and planning to add non-NEM generator(s). Please provide data for the table below.
- Existing facility with NEM generator(s) and planning to add NEM generator(s) under a different NEM tariff. Please provide data for the table below.

Instructions (From Part 4)	Generator Information	Existing Generator Type	Existing Generator Type	New Generator Type	New Generator Type	Generating Facility Totals
#	Please indicate the number of each "type" of Generator being installed: (see Instruction)					
A	Gen/Inverter Manufacturer					
B	Generator/Inverter Model					
C	Gen/Inverter software Version					
D	Is the Gen/Inverter certified	___ Yes ___ No	___ Yes ___ No	___ Yes ___ No	___ Yes ___ No	
E	Generator design	___ Synch ___ Induct. ___ Inverter				
F	Gross Nameplate Rating					
I	Operating Voltage					
J	Power Factor rating					
K	PF Adjustment Range					
L	Wiring Configuration					

Part 3 Cont'd - Describing the Generating Facility and Host Customer's Electrical Facilities

<u>Instructions</u> From Part 4	Generator Information	Existing Generator Type	Existing Generator Type	New Generator Type	New Generator Type
M (MP)	3-Phase Winding Configuration (Choose One)	__ 3 Wire Delta __ 3 Wire Wye __ 4 Wire Wye	__ 3 Wire Delta __ 3 Wire Wye __ 4 Wire Wye	__ 3 Wire Delta __ 3 Wire Wye __ 4 Wire Wye	__ 3 Wire Delta __ 3 Wire Wye __ 4 Wire Wye
N (MP)	Neutral Grounding System Used (Choose One)	__ Ungrounded __ Solidly Grounded __ Ground Resistor _____ Ohms			
O	<i>For Synchronous Generators Only:</i> Synchronous Reactance: Transient Reactance: Subtransient Reactance:	_____ (Xd %) _____ (X'd %) _____ (X''d %)			
P	<i>For Induction Generators Only:</i> Locked Rotor Current: OR Stator Resistance: Stator Leakage Reactance: Rotor Resistance: Rotor Leakage Reactance:	_____ (Amps) _____ (%) _____ (%) _____ (%) _____ (%)	_____ (Amps) _____ (%) _____ (%) _____ (%) _____ (%)	_____ (Amps) _____ (%) _____ (%) _____ (%) _____ (%)	_____ (Amps) _____ (%) _____ (%) _____ (%) _____ (%)
Q	Short Circuit Current Produced by Generator:	_____ (Amps)	_____ (Amps)	_____ (Amps)	_____ (Amps)
R	<i>For Generators that are Started as a "Motor" Only</i> 1. In-Rush Current: 2. Host Customer's Service Entrance Panel (Main Panel) Continuous Current Rating:	_____ (Amps) _____ (Amps)	_____ (Amps) _____ (Amps)	_____ (Amps) _____ (Amps)	_____ (Amps) _____ (Amps)
S (MP&I)	Prime Mover Type: (Circle One)	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

Part 3 Cont'd - Describing the Generating Facility and Host Customer's Electrical Facilities

F. (MP&I)	Please indicate if Qualifying Facility Status will be obtained from the FERC for this Generating Facility.	<input type="checkbox"/> Yes <input type="checkbox"/> No
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Instructions and Notes

Parties operating Generating Facilities complying with all of the requirements for qualification as either a small power production facility or cogeneration facility pursuant to the regulations of the FERC (18 Code of Federal Regulations Part 292, Section 292.203 et seq.) implementing the Public Utility Regulatory Policies Act of 1978 (16 U.S.C.A. Section 796, et seq.), or any successor requirements for "Qualifying Facilities," may seek certification from FERC to have the Generating Facility designated as a Qualifying Facility or "QF." In summary, QF's are Generating Facilities using renewable or alternative fuels as a primary energy source or facilities that utilize the thermal energy given off by the generation process for some other useful purpose. QF's enjoy certain rights and privileges not available to non-QF Generating Facilities.

QF status is not required to interconnect and operate in parallel with PG&E's Distribution System.

G.	Please indicate if Generating Facility will meet the annual Efficiency and Operating Standards of PUC Code 218.5(Applicable to Cogeneration Only)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
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Part 4 – Instructions for Describing the Generators

	Generator Information	Instructions and Comments
#	Please indicate the number of each "type" of Generator being installed:	Please provide the following information for each Generator "type". Be sure all Generators classified as one "type" are identical in all respects. If only one type of Generator is to be used, only one column needs to be completed. Please be sure the information in the "Totals" column is correct and reflects the total number of Generator units to be installed.
A	Generator/Inverter Manufacturer	Enter the brand name of the Generator.
B	Generator/Inverter Model	Enter the model name or number assigned by the manufacturer of the Generator.
C	Generator/Inverter Software Version	If this Generator's control and or protective functions are dependent on a "software" program supplied by the manufacturer of the equipment, please provide the version or release number for the software that will be used.
D	Is the Generator Certified by a Nationally Recognized Testing Laboratory (NRTL) according to Rule 21?	Answer "Yes" only if the Generator manufacturer can or has provided certification data. See PG&E's Rule 21, Section J for additional information regarding Generator certification.

Part 4 – Instructions for Describing the Generators

Generator Information	Instructions and Comments

	Generator Information	Instructions and Comments
E	Generator Design	Please indicate the design of each Generator. Designate "Inverter" anytime an inverter is used as the interface between the Generator and the electric system regardless of the primary power production/storage device used.
F	Gross Nameplate Rating (kVA)	This is the capacity value normally supplied by the manufacturer and stamped on the Generator's "nameplate". This value is not required where the manufacturer provides only a "kW" rating. However, where both kVA and kW values are available, please indicate both.
G	Gross Nameplate Rating (kW)	This is the capacity value normally supplied by the manufacturer and stamped on the Generator's "nameplate". This value is not required where the manufacturer provides only a "kVA" rating. However, where both kVA and kW values are available, please indicate both.
H	Net Nameplate Rating (kW)	This capacity value is determined by subtracting the "auxiliary" or "station service" loads used to operate the Generator or Generating Facility. Applicants are not required to supply this value but, if it is not supplied, applicable standby charges may be based on the higher "gross" values.
I	Operating Voltage	This value should be the voltage rating designated by the manufacturer and used in this Generating Facility. Please indicate phase-to-phase voltages for 3-phase installations. See PG&E's Rule 21, Section D.2.b. for additional information.
J	Power Factor Rating	This value should be the nominal power factor rating designated by the manufacturer for the Generator. See PG&E's Rule 21, Section D.2.i. for additional information.
K	PF Adjustment Range	Where the power factor of the Generator is adjustable, please indicate the maximum and minimum operating values. See PG&E's Rule 21, Section D.2.i.
L	Wiring Configuration	Please indicate whether the Generator is a single-phase or three-phase device. See PG&E's Rule 21, Section D.3.
M	3-Phase Winding Configuration	For three-phase generating units, please indicate the configuration of the Generator's windings or inverter systems.
N	Neutral Grounding	Wye connected generating units are often grounded – either through a resistor or directly, depending upon the nature of the electrical system to which the Generator is connected. If the grounding method used at this facility is not listed, please attach additional descriptive information.

Part 4 – Instructions for Describing the Generators

Generator Information	Instructions and Comments
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	Generator Information	Instructions and Comments
O	<i>For Synchronous Generators Only:</i>	If the Generator is of a “synchronous” design, please provide the synchronous reactance, transient reactance, and subtransient reactance values supplied by the manufacturer. This information is necessary to determine the short circuit contribution of the Generator and as data in load flow and short circuit computer models of PG&E’s Distribution System. If the Generator’s Gross Nameplate Capacity is 10 MW or greater, PG&E may request additional data to better model the nature and behavior of the Generator with relation to its Distribution System.
P	<i>For Induction Generators Only:</i>	If the Generator is of an “induction” design, please provide the “locked rotor current” value supplied by the manufacturer. If this value is not available, the stator resistance, stator leakage reactance, rotor resistance, rotor leakage reactance values supplied by the manufacturer may be used to determine the locked rotor current. If the Generator’s Gross Nameplate Capacity is 10 MW or greater, PG&E may request additional data to better model the nature and behavior of the Generator with relation to its Distribution System.
Q	Short Circuit Current Produced by Generator	Please indicate the current each Generator can supply to a three-phase fault across its output terminals. For single phase Generators, please supply the phase-to-phase fault current.
R	<i>For Generators that are Started as a “Motor” Only:</i> 1. In-Rush Current 2. Host Customer’s Service Entrance Panel (Main Panel) Continuous Current Rating	This information is needed only for Generators that are started by “motoring” the generator. See PG&E’s Rule 21, Section I.3.e. for significance and additional information. If this question was answered in Part 3, question C of this Application, it need not be answered here.
S	Prime Mover Type	Please indicate the type and fuel used as the “prime mover” or source of energy for the Generator. 1 = Internal Combustion Engine – Natural Gas 2 = Internal Combustion Engine – Diesel Fueled 3 = Internal Combustion Engine - Other Fuel 4 = Microturbine– Natural Gas 5 = Microturbine – Other Fuel 6 = Combustion Turbine Natural Gas 7 = Combustion Turbine - Other Fuel 8 = Steam Turbine 9 = Photovoltaic Panels 10 = Solar-thermal engine 11 = Fuel Cell– Natural Gas 12 = Fuel Cell– Other Fuel 13 = Hydroelectric Turbine 14 = Wind Turbine 15 = Other (please describe)



PACIFIC GAS AND ELECTRIC COMPANY

INTERCONNECTION AGREEMENT FOR NET ENERGY METERING OF SOLAR OR
WIND ELECTRIC GENERATING FACILITIES OF 1,000 KILOWATTS OR LESS,
OTHER THAN FACILITIES OF 30 KILOWATTS OR LESS
FORM NO. 79-978 (REV. 08/07)
(ATTACHED)

(T)
(T)

This "Interconnection Agreement for Net Energy Metering of Solar or Wind Electric Generating Facilities of 1,000 Kilowatts or Less, Other Than Facilities of 30 Kilowatts or Less" ("Agreement")¹ is entered into by and between _____ ("Customer-Generator"), and Pacific Gas and Electric Company ("PG&E"), a California Corporation. Customer-Generator and PG&E are sometimes also referred to in this Agreement jointly as "Parties" or individually as "Party." In consideration of the mutual promises and obligations stated in this Agreement and its attachments, the Parties agree as follows:

1. SCOPE AND PURPOSE

This Agreement provides for Customer-Generator to interconnect and operate a Generating Facility in parallel with PG&E's Distribution System to serve the electrical loads connected to the electric service account that PG&E uses to interconnect Customer-Generator's Generating Facility. Customer-Generator's Generating Facility is intended primarily to offset part or all of the Customer-Generator's own electrical requirements. Consistent with, and in order to effectuate, the provisions of Sections 2827, 2827.7 and 2827.8 of the California Public Utilities Code and PG&E's electric rate Schedule NEM ("NEM"), Parties enter into this Agreement. This Agreement applies to the Customer-Generator's Generating Facilities identified below with the specified characteristics and generating capacity, and does not allow interconnection or operation of facilities different than those described.

2. SUMMARY AND DESCRIPTION OF CUSTOMER-GENERATOR'S GENERATING FACILITY AND DESIGNATION OF OTHERWISE-APPLICABLE RATE SCHEDULE

2.1 A description of the Generating Facility, including a summary of its significant components and a single-line diagram showing the general arrangement of how Customer-Generator's Generating Facility and loads are interconnected with PG&E's Distribution System, is attached to and made a part of this Agreement. (This description is supplied by Customer-Generator as Appendix A).

2.2 Generating Facility identification number: _____ (Assigned by PG&E)

2.3 Customer-Generator's electric service account number: _____ (Assigned by PG&E)

2.4 Name and address used by PG&E to locate the electric service account used to interconnect the Generating Facility with PG&E's Distribution System:

Name: _____

Address: _____

City/Zip Code: _____

2.5 Interconnected Equipment:

¹ Additional forms are available upon request by telephoning 415-972-5676 or on PG&E's website at <http://www.pge.com/gen>).

**INTERCONNECTION AGREEMENT FOR NET ENERGY METERING OF SOLAR OR WIND ELECTRIC
GENERATING FACILITIES OF 1,000 KILOWATTS OR LESS, OTHER THAN FACILITIES OF 30 KILOWATTS OR LESS**

List of generating equipment interconnected with, or without, an inverter to PG&E. (For those generators interconnecting without an inverter, write in "N/A" in the right three columns. If an inverter is shared by more than one generator, write "shared" on the same line as that generator under the manufacturer column and do not enter the inverter rating. Attach list of additional equipment, if applicable.)

	Type of Generator (Solar / Wind / Hybrid)	Generator Rating (watts)	Manufacturer of Inverter used with Generator (if Applicable)	Inverter Model Number (if Applicable)	Inverter Rating (watts) ² (if Applicable)
1					
2					

- 2.6 Customer-Generator's otherwise-applicable rate schedule under the provisions of Schedule NEM will be _____. (Eligible Wind Energy Co-Metering Customer-Generators **must** be on a time-of-use rate schedule. See Special Condition 5 of the NEM tariff.)
- 2.7 The Generating Facility's expected date of Initial Operation is _____. The expected date of Initial Operation shall be within two years of the date of this Agreement.
- 2.8 If the date of the permits allowing the Customer-Generator to commence construction of the Generating Facility is prior to January 1, 2003, please provide the date the permits were issued: _____.

² If installing an inverter, the inverter rating equals: (the CEC efficiency for each installed inverter) TIMES (the nameplate rating, in kW, of each inverter). The CEC efficiency is obtained on the CEC website at http://www.consumerenergycenter.org/erprebate/eligible_inverters.html as listed on the date the application is reviewed. Enter the total of all inverter ratings for multiple inverter installations in the Table above.

3. DOCUMENTS INCLUDED AND DEFINED TERMS

- 3.1 This Agreement includes the following exhibits that are specifically incorporated herein and made a part of this Agreement.

Appendix A Description of Generating Facility and Single-Line Diagram (Supplied by Customer-Generator).

Appendix B A Copy of PG&E's Agreement for Installation or Allocation of Special Facilities (Forms 79-255, 79-280, 79-702) or Agreements to Perform Any Tariff Related Work (62-4527), if applicable (Formed by the Parties).

In addition, PG&E Electric Tariff Rules and Rates, including but not limited to Electric Rules 2, 14, 15, 16, and 21, Schedule NEM, and Customer-Generator's otherwise-applicable rate schedule, available at PG&E's website at www.pge.com or by request, are specifically incorporated herein and made part of this Agreement.

- 3.2 When initially capitalized, whether in the singular or in the plural, the terms used herein shall have the meanings assigned to them either in this Agreement or in PG&E's Electric Rule 21, Section H.

4. CUSTOMER BILLING AND PAYMENT

Customer-Generators Other Than Wind Energy Co-Metering Customer-Generators

Except as otherwise provided for eligible Wind Energy Co-Metering Customer-Generators covered in Special Condition 5 of the NEM tariff, Customer-Generator initially selects PG&E's electric rate schedule referenced in Section 2.6 of this Agreement as its otherwise-applicable rate schedule. Customer-Generator understands:

Customer-Generator will be billed and is required to pay monthly for all applicable charges due under Customer-Generator's otherwise-applicable rate schedule, unless Customer-Generator is a residential or small commercial customer. If Customer-Generator is a residential or small commercial customer, the Customer-Generator may pay annually for energy charges and will only be required to pay monthly for all non-energy charges (i.e., non-per-kilowatt-hour charges).

At the end of every twelve (12) month period, or other reconciliation period as provided in Schedule NEM, the Customer-Generator's charges will be totaled, including the monthly non-energy charges and the charge for any net-energy consumption as defined in Schedule NEM. The Customer-Generator's total payments for the twelve (12) months or other reconciliation period as provided in Schedule NEM will then be subtracted from the total charges. The Customer-Generator will then be billed for any balance due. If the Customer-Generator has overpaid for the energy it consumed, a credit will be applied to the next month's bill.

**INTERCONNECTION AGREEMENT FOR NET ENERGY METERING OF SOLAR OR WIND ELECTRIC
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Wind Energy Co-Metering Customer-Generators

The eligible Wind Energy Co-Metering Customer-Generator with wind energy Generating Facilities greater than 50 kilowatts (kW) but not exceeding 1,000 kW initially selects a **time-of-use** electric rate schedule referenced in Section 2.6 of this Agreement as its otherwise-applicable rate schedule. The Customer-Generator understands:

Subject to Special Condition 2 of the NEM tariff, the generation of electricity provided to PG&E by a Wind Energy Co-Metering Customer-Generator shall result in a credit to the eligible Customer-Generator priced in accordance with the generation component of the energy charge of the eligible Customer-Generator's otherwise-applicable rate schedule for the account, excluding generation surcharges from Schedule E-EPS and any other surcharges to cover the purchase of power by the Department of Water Resources. All electricity supplied to the Wind Energy Co-Metering Customer-Generator by PG&E shall be priced in accordance with the Customer-Generator's otherwise-applicable rate schedule.

At the end of each twelve (12) month period (as described in Special Condition 2 of the NEM tariff), if the electricity fed back to the electric grid by the eligible Customer-Generator exceeds the electricity supplied to the eligible Customer-Generator by PG&E, the eligible Customer-Generator is a Wind Energy Co-Metering producer. The maximum generation credit for a Wind Energy Co-Metering producer will be calculated as provided in Special Condition 5 of the NEM tariff.

Any credit for excess energy (kWh) over this maximum will be retained by PG&E and the Wind Energy Co-Metering producer will not be owed any compensation for excess energy.

5. TERM AND TERMINATION

5.1 This Agreement shall become effective as of the last date entered in Section 18 below. The Agreement shall continue in full force and effect until the earliest date that one of the following events occurs:

- (a) The Parties agree in writing to terminate the Agreement.
- (b) Unless otherwise agreed in writing by the Parties, at 12:01 A.M. on the day following the date the electric service account through which Customer-Generator's Generating Facility is interconnected to PG&E is closed or terminated.
- (c) At 12:01 A.M. on the 61st day after Customer-Generator or PG&E provides written Notice pursuant to Section 11 below to the other Party of Customer-Generator's or PG&E's intent to terminate this Agreement.

5.2 Customer-Generator may elect to terminate this Agreement pursuant to the terms of Section 5.1(c) for any reason. PG&E may elect to terminate this Agreement pursuant to the terms of Section 5.1(c) for one or more of the following reasons:

- (a) A change in applicable rules, tariffs, or regulations, as approved or directed by the Commission, or a change in any local, state or federal law, statute or regulation, either of which materially alters or otherwise affects PG&E's ability or obligation to perform PG&E's duties under this Agreement; or,
- (b) Customer-Generator fails to take all corrective actions specified in PG&E's Notice that Customer-Generator's Generating Facility is out of compliance with the terms of this Agreement within the time frame set forth in such Notice; or,

- (c) Customer-Generator abandons the Generating Facility. PG&E shall deem the Generating Facility to be abandoned if PG&E determines, in its sole opinion, the Generating Facility is nonoperational and Customer-Generator does not provide a substantive response to PG&E Notice of its intent to terminate this Agreement as a result of Customer-Generator's apparent abandonment of the Generating Facility affirming Customer-Generator's intent and ability to continue to operate the Generating Facility; or,
 - (d) Customer-Generator's Generating Facility ceases to meet all applicable safety and performance standards set out in Section 6.
- 5.3 Notwithstanding any other provisions of this Agreement, PG&E shall have the right to unilaterally file with the Commission, pursuant to the Commission's rules and regulations, an application to terminate this Agreement.
- 5.4 Any agreements attached to and incorporated into this Agreement shall terminate concurrently with this Agreement unless the Parties have agreed otherwise in writing.

6. GENERATING FACILITY REQUIREMENTS

- 6.1 Customer-Generator's Generating Facility must meet all applicable safety and performance standards established by the National Electrical Code, the Institute of Electrical and Electronics Engineers, and accredited testing laboratories such as Underwriters Laboratories and, where applicable, rules of the Commission regarding safety and reliability including Rule 21.
- 6.2 Customer-Generator shall: (a) maintain the Generating Facility and Interconnection Facilities in a safe and prudent manner and in conformance with all applicable laws and regulations including, but not limited to, Section 6.1, and (b) obtain any governmental authorizations and permits required for the construction and operation of the Generating Facility and Interconnection Facilities. Customer-Generator shall reimburse PG&E for any and all losses, damages, claims, penalties, or liability it incurs as a result of Customer-Generator's failure to obtain or maintain any governmental authorizations and permits required for construction and operation of Customer-Generator's Generating Facility.
- 6.3 Customer-Generator shall not commence parallel operation of the Generating Facility until PG&E has provided express written approval. Such approval shall normally be provided no later than thirty (30) business days following PG&E's receipt of: (1) a completed *Generating Facility Interconnection Application* (Form 79-974), including all supporting documents and payments as described in the Application; (2) a completed *Expanded Net Energy Metering (NEM) Supplemental Application* (Form 79-998); (3) a signed and completed *Interconnection Agreement* (Form 79-978); and (4) a copy of the Customer-Generator's final inspection clearance from the governmental authority having jurisdiction over the Generating Facility. Such approval shall not be unreasonably withheld. PG&E shall have the right to have representatives present at the Commissioning Test as defined in Rule 21. Customer-Generator shall notify PG&E at least five (5) business days prior to the initial testing.

7. INTERCONNECTION FACILITIES

- 7.1 Customer-Generator and/or PG&E, as appropriate, shall provide Interconnection Facilities that adequately protect PG&E's Distribution System, personnel, and other persons from damage or injury, which may be caused by the operation of Customer-Generator's Generating Facility.
- 7.2 Customer-Generator shall be solely responsible for the costs, design, purchase, construction, permitting, operation, and maintenance of the Interconnection Facilities that Customer-Generator owns.
- 7.3 If the provisions of PG&E's Electric Rule 21, or any other tariff or rule approved by the Commission, require PG&E to own and operate a portion of the Interconnection Facilities, Customer-Generator and PG&E shall promptly execute a Special Facilities Agreement that establishes and allocates responsibility for the design, installation, operation, maintenance, and ownership of the Interconnection Facilities. This Special Facilities Agreement shall be attached to and made a part of this Agreement as Appendix B.

8. LIMITATION OF LIABILITY

Each Party's liability to the other Party for any loss, cost, claim, injury, liability, or expense, including reasonable attorney's fees, relating to or arising from any act or omission in its performance of this agreement, shall be limited to the amount of direct damage actually incurred. In no event shall either Party be liable to the other Party for any indirect, special, consequential, or punitive damages of any kind whatsoever.

9. INSURANCE

Customer-Generator Facility is required to comply with standards and rules set forth in section 6 and provide the following for insurance policies in place.

Customer-Generator shall furnish the required certificates and all endorsements to PG&E prior to Parallel Operation.

The certificate shall provide thirty (30) calendar days' written notice to PG&E prior to cancellation, termination, alteration, or material change of such insurance.

PG&E shall have the right to inspect or obtain a copy of the original policy or policies of insurance.

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- 9.1 If at any time during this agreement the Customer-Generator fails to meet the requirements in section 6, the following insurance shall apply:

Customer-Generator shall procure and maintain a commercial general liability insurance policy at least as broad as the Insurance Services Office (ISO) commercial general liability coverage "occurrence" form; or, if Customer-Generator is an individual, then liability coverage with respect to premises and use at least as broad as the ISO homeowners' or personal liability Insurance occurrence policy form, or substitute, providing equivalent coverage no less than the following limits, based on generator size:

- (a) Two million dollars (\$2,000,000) for each occurrence if the Gross Nameplate Rating of the Generating Facility is greater than one hundred (100) kW; or
- (b) One million dollars (\$1,000,000) for each occurrence if the Gross Nameplate Rating of the Generating Facility is greater than twenty (20) kW and less than or equal to one hundred (100) kW; or
- (c) Five hundred thousand dollars (\$500,000) for each occurrence if the Gross Nameplate Rating of the Generating Facility is twenty (20) kW or less;
- (d) Two hundred thousand dollars (\$200,000) for each occurrence if the Gross Nameplate Rating of the Generating Facility is ten (10) kW or less and the Generating Facility is connected to an account receiving residential service from PG&E.

The insurance shall, by endorsement, shall:

- (a) Add PG&E as an additional insured;
 - (b) State that coverage provided is primary and is not in excess to or contributing with any insurance or self-insurance maintained by PG&E.
 - (c) Contain a severability of interest clause or cross-liability clause.
- 9.2 If Customer-Generator's Generating Facility is connected to an account receiving residential service from PG&E and the requirement of Section 9.1 prevents Customer-Generator from obtaining the insurance required in this Section, then upon Customer-Generator's written Notice to PG&E in accordance with Section 11.1, the requirements of Section 9.1 may be waived.
- 9.3 Customer-Generator may self-insure with approval from PG&E. Evidence of an acceptable plan to self-insure, at least thirty (30) calendar days' prior to operations shall be submitted.

If Customer-Generator ceases to self-insure to the level required hereunder, or if Customer-Generator is unable to provide continuing evidence of Customer-Generator's ability to self-insure, Customer-Generator agrees to immediately obtain the coverage required under agreement.

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- 9.4 All required certificates, endorsements or letters of self-insurance shall be issued and submitted to the following:

Pacific Gas and Electric Company
Attn: Generation Interconnection Services
P.O. Box 770000
Mail Code N7L
San Francisco, California 94177

10. INDEMNITY FOR FAILURE TO COMPLY WITH INSURANCE PROVISIONS

- 10.1 If Customer-Generator fails to comply with the insurance provisions of this Agreement, Customer-Generator shall, at its own cost, defend, save harmless and indemnify PG&E, its directors, officers, employees, agents, assignees, and successors in interest from and against any and all loss, liability, damage, claim, cost, charge, demand, or expense of any kind or nature (including attorney's fees and other costs of litigation) resulting from the death or injury to any person or damage to any property, including the personnel and property of the utility, to the extent that the utility would have been protected had Customer-Generator complied with all such insurance provisions. The inclusion of this Section 10.1 is not intended to create any expressed or implied right in Customer-Generator to elect not to provide any such required insurance.
- 10.2 The provisions of this Section 10 shall not be construed to relieve any insurer of its obligations to pay any insurance claims in accordance with the provisions of any valid insurance policy.

11. NOTICES

- 11.1 Any written notice, demand, or request required or authorized in connection with this Agreement ("Notice") shall be deemed properly given if delivered in person or sent by first class mail, postage prepaid, to the person specified below:

If to PG&E: Pacific Gas and Electric Company
Attention: Manager, Business Customer Center
P.O. Box 770000
Mail Code B19C
San Francisco, California 94177
Phone: (800) 468-4743
FAX: (415) 972-5309

If to Customer-Generator :

Customer-Generator Name: _____

Address: _____

City: _____

Phone: () _____

FAX: () _____

- 11.2 A Party may change its address for Notices at any time by providing the other Party

notice of the change in accordance with Section 11.1.

- 11.3 The Parties may also designate operating representatives to conduct the daily communications, which may be necessary or convenient for the administration of this Agreement. Such designations, including names, addresses, and phone numbers may be communicated or revised by one Party's Notice to the other.

12. REVIEW OF RECORDS AND DATA

- 12.1 PG&E shall have the right to review and obtain copies of Customer-Generator's operations and maintenance records, logs, or other information such as Generating Facility availability, maintenance outages, circuit breaker operation requiring manual reset, relay targets and unusual events pertaining to Customer-Generator's Generating Facility or its interconnection to PG&E.
- 12.2 Customer-Generator authorizes to release to the California Energy Commission (CEC) information regarding Customer-Generator's facility, including customer name and Generating Facility location, size, and operational characteristics, as requested from time to time pursuant to the CEC's rules and regulations.

13. ASSIGNMENT

Customer-Generator shall not voluntarily assign its rights nor delegate its duties under this Agreement without PG&E's written consent. Any assignment or delegation Customer-Generator makes without PG&E's written consent shall not be valid. PG&E shall not unreasonably withhold its consent to Customer-Generator's assignment of this Agreement.

14. NON-WAIVER

None of the provisions of this Agreement shall be considered waived by a Party unless such waiver is given in writing. The failure of a Party to insist in any one or more instances upon strict performance of any of the provisions of this Agreement or to take advantage of any of its rights hereunder shall not be construed as a waiver of any such provisions or the relinquishment of any such rights for the future, but the same shall continue and remain in full force and effect.

15. GOVERNING LAW, JURISDICTION OF COMMISSION, INCLUSION OF PG&E's TARIFF SCHEDULES AND RULES

- 15.1 This Agreement shall be interpreted, governed, and construed under the laws of the State of California as if executed and to be performed wholly within the State of California without giving effect to choice of law provisions that might apply to the law of a different jurisdiction.
- 15.2 This Agreement shall, at all times, be subject to such changes or modifications by the Commission as it may from time to time direct in the exercise of its jurisdiction.
- 15.3 The interconnection and services provided under this Agreement shall at all times be subject to the terms and conditions set forth in the Tariff Schedules and Rules applicable to the electric service provided by PG&E, which Tariff Schedules and Rules are hereby incorporated into this Agreement by this reference.

15.4 Notwithstanding any other provisions of this Agreement, PG&E shall have the right to unilaterally file with the Commission, pursuant to the Commission's rules and regulations, an application for change in rates, charges, classification, service, tariff or rule or any agreement relating thereto.

16. AMENDMENT AND MODIFICATION

This Agreement can only be amended or modified by a writing signed by both Parties.

17. ENTIRE AGREEMENT

This Agreement, including any incorporated Tariff Schedules and Rules, contains the entire Agreement and understanding between the Parties, their agents, and employees as to the subject matter of this Agreement. Each party also represents that in entering into this Agreement, it has not relied on any promise, inducement, representation, warranty, agreement or other statement not set forth in this Agreement or in the incorporated Tariff Schedules and Rules.

18. SIGNATURES

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

CUSTOMER-GENERATOR'S NAME	PACIFIC GAS AND ELECTRIC COMPANY
By: _____	By: _____
Name: _____	Name: _____
Title: _____	Title: <u>Manager,</u> <u>Generation Interconnection Services</u>
Date: _____	Date: _____

APPENDIX A
DESCRIPTION OF GENERATING FACILITY
AND SINGLE-LINE DIAGRAM
(Provided by Customer-Generator)

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APPENDIX B

(If Applicable)

Any Rule 2 or Rule 21 Agreements for the Installation or Allocation of Special Facilities (Forms 79-255, 79-280, 79-702) or Agreements to Perform Any Tariff Related Work (62-4527)
(Formed between the Parties)



PACIFIC GAS AND ELECTRIC COMPANY

APPLICATION AND INTERCONNECTION AGREEMENT FOR CUSTOMERS WITH
SOLAR AND/OR WIND ELECTRIC GENERATING FACILITIES OF 30 KILOWATTS OR
LESS
FORM NO. 79-1101 (08/07)
(ATTACHED)

(N)
|
|
(N)



Net Energy Metering

Application and Interconnection Agreement for Customers with Solar and/or Wind Electric Generating Facilities of 30 Kilowatts or less



Please note that this agreement does not constitute an application to any **rebate** and/or **incentive programs** such as the California Solar Initiative (CSI) or the Self Generation Incentive Program (SGIP). For more information on these programs and their specific applications, please contact PG&E by phone, or by email using the subject "solar energy" at smarter-energy@pge.com, 1-800-933-9555 (residential) or BusinessCustomerHelp@pge.com, 1-800-468-4743 (commercial/industrial).

For more information on the CSI, please go to www.pge.com/csi where you will find information about the program, including the program handbook, reservation request forms with the program contract as well as a list of requirements, FAQ's and resources. For additional questions about the CSI, contact PG&E at solar@pge.com.

Part I – Identifying the Generating Facility’s Location and Responsible Parties

A. Applicability and Purpose:

This *NET ENERGY METERING APPLICATION AND INTERCONNECTION AGREEMENT FOR CUSTOMERS WITH SOLAR AND/OR WIND ELECTRIC GENERATING FACILITIES OF 30 KW OR LESS* ("Agreement") applies to electric rate schedule NEM, Net Energy Metering Service (NEM) for Customer-Generators ("Customer") who interconnect a solar and/or wind turbine electrical Generating Facility, or a hybrid system of both, with an aggregate capacity of 30 kilowatts (kW) or less that is located on Customer's premises, and that operates in parallel with Pacific Gas and Electric Company's ("PG&E") Distribution System.

The purpose of this Agreement is to allow Customer to interconnect with PG&E's Distribution System, subject to the provisions of this Agreement and PG&E's rate schedule NEM. Customer has elected to interconnect and operate its solar and/or wind electric Generating Facility in parallel with PG&E's Distribution System, primarily to offset part or all of the Customer's own electrical requirements at this Point Of Common Coupling (PCC). Customer shall at all times comply with this Agreement as well as with all applicable laws, tariffs and applicable requirements of the Public Utilities Commission of the State of California.

B. Description of Service (This Agreement is being filed for, check all that apply):

- A New NEM Generating Facility interconnection (at an existing service)
- For Physical Changes to an interconnected NEM Generating Facility with previous approval by PG&E (adding PV panels, changing inverters/turbines or changing load and/or operations).
- A New NEM Generating Facility interconnection in conjunction with a separate Application for Service
 - An **Application for Service** must be completed. Additional fees may be required if a service or line extension is required (in accordance with PG&E Electric Rules 15 and 16). Please contact PG&E at 1-800-PGE-5000.
- A New NEM Generating Facility Interconnection under Direct Access (DA)
 - Customers applying for NEM who are served under **Direct Access** by an Energy Service Provider (ESP) must contact their ESP directly for information regarding the ESP's net energy metering program.
- An interconnected non-exporting Generating Facility (demand always exceeds generation)
 - For Customers with a non-exporting Generating Facility, Form 79-974 may be more appropriate. Form 79-974 may be found at <http://www.pge.com/tariffs/pdf/E79-974.pdf>

If you are applying for a CSI rebate, please check below and continue with this application

- Yes, I am also applying for a CSI rebate.

C. Customer Generating Facility Information - Where will the Generating Facility be installed?

Name shown on PG&E service account (Must Match Customer Name on PG&E Blue Bill)		Account Number	Meter Number (Meter Badge ID)
Street Address			
City		State	Zip
Mailing Address			
City		State	Zip
Business Phone	Home Phone	Fax	Email

D. Contractor Information (Must be completed even if Contractor will not serve as a PG&E contact).

Contractor		Company Name	
Mailing Address			
City		State	Zip
Business Phone	Fax	Email	
<input type="checkbox"/> This contact person is to be used as PG&E contact and is authorized by Customer to receive confidential Customer information and act on behalf of Customer with respect to this agreement.			

E. Other Contact Information (This information is optional.)

Contact Person		Company Name	
Mailing Address			
City		State	Zip
Business Phone	Fax	Email	
<input type="checkbox"/> This contact person is to be used as PG&E contact and is authorized by Customer to receive confidential Customer information and act on behalf of Customer with respect to this agreement.			

By checking the boxes above and signing this agreement, Customer authorizes PG&E to release information to the contact(s) named above as requested in the course of this interconnection process. PG&E is granted permission to share information with authorized recipients for a period of **one year** from the date this agreement is received by PG&E. Contacts(s) are also authorized to make changes to rates and metering arrangements which may result in charges to Customer. Should Customer wish to select a different authorization period, Customer may utilize the "Authorization to Receive Customer Information or Act on a Customer's Behalf" which can be found at: http://www.pge.com/includes/docs/pdfs/res/brochures/customer_behalf_app.pdf

Please complete this agreement in its entirety

In addition, Customer authorizes PG&E to release to the California Energy Commission (CEC) information regarding Customer's facility, including customer name and Generating Facility location, size, and operational characteristics, as requested from time to time pursuant to the CEC's rules and regulations.

Part II – Requirements for Interconnection

In submitting this document, I the Customer, understand and agree to the following terms and conditions:

Permission to Interconnect

Customers must not operate their Generating Facility in parallel with PG&E's Distribution System until they receive written authorization for Parallel Operation from PG&E. Unauthorized Parallel Operation could result in injury to persons and/or damage to equipment and/or property for which the Customer may be liable.

Safe Operation of Customer's Generating Facility

Notwithstanding any other provision of this Agreement, if at any time PG&E determines that either (a) the Customer's Facility, or its operation, may endanger PG&E personnel, or (b) the continued operation of the Customer's Facility may endanger the safe and reliable operation of PG&E's electrical system, PG&E shall have the right to disconnect the Facility from PG&E's system. Customer's Facility shall remain disconnected until such time as PG&E is satisfied that the unsafe condition(s) have been corrected.

Interconnections on PG&E's Secondary Network

Applications to interconnect Generating Facilities located in San Francisco or Oakland may require additional analysis to determine whether or not their proposed installation is on PG&E's networked secondary system. Networked secondary systems are in place to provide heightened levels of reliability in densely populated areas and may affect the ability of PG&E to interconnect customer's Generating Facility. **Please contact Generation Interconnection Services at 415-972-5676 or email gen@pge.com if your proposed installation is in San Francisco or Oakland.**

Meter Access

Customer's bi-directional meter must be installed in a safe, 24/7 PG&E-accessible location, unobstructed by locked gates or pets. Additionally meter access must be maintained at all times for reading and system maintenance. Any animals owned by the customer, including pet dogs, should not have access to these areas to avoid hindering PG&E service personnel from completing their work.

Document and Fee Requirements

Other Documents and/or Fees *may* be required and there may be requirements for interconnection in addition to the above list, depending on the specifics of the planned Generating Facility. Other approvals and/or other agreements may be needed for special PG&E programs or regulatory agency requirements.

Stale Agreements

If this agreement is still pending two years from its date of submittal and customer has not met all of the requirements, PG&E will close this application and Customer will be required to submit a new application should Customer wish to take service on Schedule NEM.

A. Agreement Package:

These documents are needed to ensure safe and reliable operation of PG&E's Distribution System and to confirm that Customer's interconnection has been performed in accordance with PG&E's tariffs. (Additional forms are available upon request by telephoning 415-972-5676, emailing gen@pge.com, or visiting PG&E's website at <http://www.pge.com/standardnem>). **Customers should not delay sending any part of the agreement package to PG&E.** As PG&E receives documentation described in Sections (1) through (5) below, PG&E will begin to process the application.

Required Documents for New Applicants:

1. A completed copy of this **Agreement**. **Please note:** the Customer name (as identified in Part I, Section C) must be the same name as on the PG&E bill. In this Agreement, Customer will confirm their otherwise-applicable rate schedule (OAS), establishing how Customer's monthly usage or net generation will be charged/credited. Customer-initiated rate changes are governed in accordance with PG&E's Electric Rule 12.

Please complete this agreement in its entirety

2. A **single-line diagram** showing Customer's actual installation of his/her Generating Facility. The diagram must include the electrical rating and operating voltages of the significant electrical components such as the service panel, the disconnect switch (if required), inverters, all wind and/or photovoltaic generators, circuit breakers and other protective devices of the Generating Facility, the location of the Customer's loads relative to the Generating Facility, and the interconnection with PG&E's Distribution System. The diagram must include the following information:

a. A description and location of the visible, lockable **AC disconnect switch** if present.

Note: Effective November 21, 2006, customers installing inverter-based systems will no longer be required to include an AC disconnect switch when the facility has a self-contained electric revenue meter (i.e. 0-320 amp socket-based meters or 400 amp K-based meters). This type of meter is used by 98% of all PG&E customers.

To accommodate this option while maintaining utility operating needs, the revenue meter may be temporarily removed by PG&E to isolate the customer's generator from the electric distribution system. Removal of the revenue meter (due to an emergency or maintenance on PG&E's system) will result in loss of electrical service to the Customer's facility or residence, even from the solar/wind generator.

PG&E recommends that customers installing an inverter-based generator consider also installing an AC disconnect switch to facilitate maintenance of the customer's equipment (i.e. inverter, PV arrays, etc). The AC disconnect switch provides the additional benefit of allowing PG&E to isolate the customer's generator from the utility's Distribution System without having to interrupt service to the customer's facility or residence.

PG&E's AC disconnect switch requirement for Distributed Generation will continue to apply to:

- Inverter-based interconnections having a transformer-rated meter (i.e. all meter panels or switchboards employing the use of potential and current transformers).
- Non-inverter based generator interconnections, including rotating or machine-based generators - irrespective of whether the service meter configuration is transformer-rated or self-contained.

b. A description of the specific **inverter(s)** used to control the interconnection between PG&E and the generator(s), including rating, brand name, and model number. CEC-certified inverters¹ will pass the requirements for Simplified Interconnection per PG&E's Electric Rule 21. Non-certified units will require further study and may involve additional costs.

c. A complete description of the **Generating Facility Customer plans to install**. If the Generating Facility includes photovoltaic panels, the description must include the manufacturer name, model number, number of panels, and the nameplate rating. If the Generating Facility includes a wind turbine, the description must include the manufacturer name, model number, number of turbines, and the nameplate rating. Only CEC-certified inverters and certified wind-turbine generators without separate inverters will pass the requirements for Simplified Interconnection. (See the PG&E website <http://www.pge.com/gen> or the CEC website at: www.aaa.com<http://www.consumerenergycenter.org/erprebate/equipment.html>)

d. A description of how the power output from the inverter is connected to the **main service panel via a branch breaker**. The ampere rating of this branch breaker and the main service panel breaker must be compatible with the output rating of the Generating Facility. The output rating is computed based on the total nameplate rating of the inverter.

e. If such metering is required, a complete description of the **performance (generation output) meter and related equipment**. The description must include the meter manufacturer, model number and type (socket or panel-mounted), as well as any other relevant information (e.g., socket, panels, breakers, etc.). If instrument transformers are required, the description should include this information.

3..Information Regarding any existing **insurance coverage** (liability and/or property) for the Schedule-NEM Generating Facility location.

Customer shall meet all applicable safety and performance standards established by the National Electrical Code, the Institute of Electrical and Electronics Engineers, accredited testing laboratories such as Underwriters Laboratories

¹ The CEC's eligible inverter list can be found at: (http://www.consumerenergycenter.org/erprebate/eligible_inverters.html)

and, where applicable, rules of the California Public Utilities Commission regarding safety and reliability. A Customer with a solar or wind-turbine electrical generating system, or a hybrid system of both, that meets those standards and rules shall not be required to install additional controls, perform or pay for additional tests, or purchase additional liability insurance.

To the extent that Customer has currently in force property insurance and commercial general liability or personal liability insurance, Customer agrees that it will maintain such insurance in force for the duration of this Agreement in no less amounts than those currently in effect. Pacific Gas and Electric Company shall have the right to inspect or obtain a copy of the original policy or policies of insurance prior to commencing operation. As long as Customer meets the requirements of this section, Customer shall not be required to purchase any additional liability insurance.

I have insurance. I hereby certify that there is presently insurance coverage in the amount of \$_____ for the Schedule-NEM Generating Facility location.

Insuring Company's Name: _____

Insurance Policy # _____

I **do not** have insurance. I hereby certify that there is presently \$0 (zero) dollars of insurance for the Schedule-NEM Generating Facility location

4. A copy of the **final, signed, jurisdictional approval (building permit) for Customer's Generating Facility** from the local government entity with jurisdiction over the Customer's project. **Customer's agreement package will not be complete until PG&E receives this document.** Once PG&E receives the final building permit, PG&E will contact Customer to schedule an on-site inspection and, if required, bi-directional meter installation.

B. Internet Agreement Forms

If this Agreement has been completed on PG&E's website, it may be automatically submitted via that system. Copies or forms requiring a signature, attachments and any applicable fees described in Part II must be mailed to PG&E at the address noted in Section IV (E), Notices.

Part III – General Facility and Rate Information

A. What applicable **Rate Schedule** have you selected for your NEM account (known as your "otherwise applicable rate schedule" or "OAS")?

RESIDENTIAL:

- E-1 – Non-Time-of-Use Residential Service
- E-6 – Residential Time-of-Use Service
- E-7 – Residential Time-of-Use Service²
- E-9 – Experimental Residential Time-of-Use for Low Emission Vehicle Customers³
- Other (_____)

SMALL COMMERCIAL

- A-1 – Small General Non-Time-of-Use Service
- A-6 – Small General Time-of-Use Service
- A-10 - Medium General Demand-Metered Service

²New NEM solar residential customers taking service after January 1, 2007 may select E-7 as their OAS until either 5,000 new NEM solar customers have been interconnected or until the final 2007 General Rate Case decision has been made regarding revisions to E-6, whichever is sooner. Customers taking service on E-7 may remain on E-7 until they decide to make a change in their OAS. In a subdivision, the first customer purchasing a home from the builder/developer, for a PV system that was interconnected after 01/01/2007 is considered a new NEM solar customer for the purposes of selecting E-7.

³ If customer selects **Schedule E-9, the Experimental Rate for Low Emission Vehicles** as the otherwise-applicable rate, a **Schedule E-9 Application** will need to be completed and signed.

Please complete this agreement in its entirety

Other (_____)

AGRICULTURAL

- AG-1 – Agricultural Power
- AG-R – Split-Week Time-of-Use Agricultural Power
- AG-V – Short-Peak Time-of-Use Agricultural Power
- AG-4 – Time-of-Use Agricultural Power
- AG-5 - Large Time-of-Use Agricultural Power

Historical electrical rate information may be found at: <http://www.pge.com/notes/rates/tariffs/rateinfo.shtml>, and current electric rate schedules may be found at: <http://www.pge.com/tariffs/ERS.SHTML#ERS>.

Depending on Customer's rate schedule and metering arrangement, an installation fee and/or reprogramming fee may be required to provide net energy metering.

Customers will be billed and will be expected to pay monthly for the non-energy charges (i.e., non-per-kilowatt-hour charges) that are due under Customer's OAS. In addition, Customer may (at his/her option) pay any amount for energy charges monthly, with the understanding that any and all payments will be reconciled at the completion of the reconciliation period. At the end of every twelve (12) billing cycles, or other reconciliation period as provided in Schedule NEM, Customer's charges will be totaled including: (1) any unpaid monthly non-energy charges, (2) the charge for any net-energy consumption as defined in rate Schedule NEM. Customer's total payments for the twelve (12) billing cycles or other reconciliation period as provided in Schedule NEM will then be subtracted from the total charges. Customer will then be billed for any balance due. In addition, PG&E Electric Rules and Rates, including but not limited to Electric Rules 2, 14, 15, 16, and 21, Schedule NEM, and Customer's OAS may apply.

For further information on understanding NEM billing, please go to the 'related docs' section of PG&E's Net Energy Metering website at: www.pge.com/standardnem.

B. Will this account be established in a new subdivision?

- Yes **If yes**, who is the developer? _____
- No

C. Will an electric vehicle recharging facility be included as part of the load at this location?

- Yes
If yes, will the vehicle recharging facility be separately metered from the residence?
 - Yes
 - No
- No

D. Expected date of Project Completion and PG&E Receipt of Final, Signed-Off Building Permit for Generating Facility?

Date: _____

E. Are there any other generators connected on this account?

- Yes
If yes, specify what kind of generator _____
- No

F. Are there any possible meter access issues?

- Yes
 - Dog at Residence
 - Locked Gate
 - Meter located inside of facility/residence
 - Other (Please explain) _____
- No

Please complete this agreement in its entirety

A. AC Disconnect Switch

List the disconnect switch that will be used at this Generating Facility, if any (Enter "N/A" if not applicable).

Disconnect Switch Manufacturer	Disconnect Switch Model Number	Disconnect Switch Rating (amps)

B. Inverters interconnected with PG&E

List all the inverters that will be interconnected to PG&E.

Customers with non-standard inverters which do not meet the UL and IEEE requirements specified in Electric Rule 21, or Customers whose aggregate Generating Facility capacity exceeds 15% of the peak load on the distribution line section as described in Electric Rule 21 (Section 1.6.) require a **Supplemental Review** which may entail a study, additional equipment, and/or other requirements. Supplemental Reviews may result in a delay to the interconnection of your project, as additional time may be necessary to ensure the safe operation of your Generating Facility.

No.	Inverter Manufacturer	Inverter Model Number	Inverter Rating (kW) ⁴	Quantity of Inverters	Inverter Output Voltage	Single or Three phase?
1						
2						

C. Photovoltaic Generator Equipment

List the photovoltaic (PV) panel information requested below. If the panels are not all identical modules, list the total capacity connected to each inverter you listed above. (Please attach additional sheets if more space is needed.)

No.	PV Panel Manufacturer	PV Panel Model	PV Panel Rating ³ (kW)	Quantity of PV Panels	Total Capacity (kW) ⁴	Inverter number from (B) above (1 or 2)
1						
2						

D. Wind Turbine Equipment

List the wind turbine information requested below. If there is more than one wind turbine of the same type, list the total capacity connected to each inverter you listed in B) above. Write NONE if the inverter is incorporated in the wind turbine and no inverter is required.

No.	Wind Turbine Manufacturer	Wind Turbine Model	Wind Turbine Rating ⁴ (kW)	Quantity of Wind Turbines	Total Capacity (kW) ⁴	Inverter number from (B) above (1 or 2)	Turbine Output Voltage	Single or Three Phase
1								

⁴ The inverter rating equals the nameplate rating, in kW, of each inverter. The CEC efficiency is obtained the CEC website at http://www.consumerenergycenter.org/erprebate/eligible_inverters.html as listed on the date the application is reviewed. Enter the total of all inverter ratings for multiple inverter installations in the Table above.

⁴ For all generation equipment ratings, please use the nameplate rating found on the equipment or in the equipment specifications.

E. Notices - Mailing Instructions and Assistance:

When this agreement has been completed it should be mailed, along with the required attachments and any applicable fees, to:

Pacific Gas and Electric Company
Attention: Generation Interconnection Services
Mail Code N7L
P.O. Box 770000
San Francisco, California 94177

Phone calls and questions may be directed to the Generation Interconnection Services hotline at: 415-972-5676 or email gen@pge.com

GOVERNING LAW

This Agreement shall be interpreted, governed, and construed under the laws of the State of California as if executed and to be performed wholly within the State of California.

TERM OF AGREEMENT

This Agreement shall become effective as of the date of PG&E's issuance of the permission to operate in parallel letter after receipt of all applicable fees, required documents, and this completed Agreement. This Agreement shall continue in full force and effect until terminated by either Party providing 30-days prior written notice to the other Party, or when a new Customer takes service with PG&E operating this approved generating facility. This new Customer will be interconnected subject to the terms and conditions as set forth in Schedule NEM.

GOVERNING AUTHORITY

This contract shall at all times be subject to such changes or modification 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.

Customer Name (Please Print): _____

(Signature): _____ Date: _____

Title: _____

A copy of this signed agreement should be retained with the "Permission to Operate" letter to confirm project approval.

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62-0156	Application for Qualified Nonprofit Group-Living Facilities	26345-E
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79-973	Generating Facility Interconnection Agreement	26478-E
79-1070	Addendum to Form 79-973 -- Export Addendum for Inverter Based Solar and Wind Generators Sized 1 MW or Less	24333-E
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79-998	Expanded Net Energy Metering (E-Net) Application	22698-E
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Advice Letter No. 3068-E-A
Decision No.

Issued by **Brian K. Cherry**
Vice President

Date Filed: 8/29/2007
Effective Date: 8/29/2007
Regulation No.

79-998 Expanded Net Energy Metering (E-Net) Application 22698-E
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**PG&E Gas and Electric
Advice Filing List
General Order 96-B, Section IV**

ABAG Power Pool	Douglass & Liddell	PG&E National Energy Group
Accent Energy	Downey, Brand, Seymour & Rohwer	Pinnacle CNG Company
Aglet Consumer Alliance	Duke Energy	PITCO
Agnews Developmental Center	Duke Energy North America	Plurimi, Inc.
Ahmed, Ali	Duncan, Virgil E.	PPL EnergyPlus, LLC
Alcantar & Kahl	Dutcher, John	Praxair, Inc.
Ancillary Services Coalition	Dynergy Inc.	Price, Roy
Anderson Donovan & Poole P.C.	Ellison Schneider	Product Development Dept
Applied Power Technologies	Energy Law Group LLP	R. M. Hairston & Company
APS Energy Services Co Inc	Energy Management Services, LLC	R. W. Beck & Associates
Arter & Hadden LLP	Exelon Energy Ohio, Inc	Recon Research
Avista Corp	Exeter Associates	Regional Cogeneration Service
Barkovich & Yap, Inc.	Foster Farms	RMC Lonestar
BART	Foster, Wheeler, Martinez	Sacramento Municipal Utility District
Bartle Wells Associates	Franciscan Mobilehome	SCD Energy Solutions
Blue Ridge Gas	Future Resources Associates, Inc	Seattle City Light
Bohannon Development Co	G. A. Krause & Assoc	Sempra
BP Energy Company	Gas Transmission Northwest Corporation	Sempra Energy
Braun & Associates	GLJ Energy Publications	Sequoia Union HS Dist
C & H Sugar Co.	Goodin, MacBride, Squeri, Schlotz &	SESCO
CA Bldg Industry Association	Hanna & Morton	Sierra Pacific Power Company
CA Cotton Ginners & Growers Assoc.	Heeg, Peggy A.	Silicon Valley Power
CA League of Food Processors	Hitachi Global Storage Technologies	Smurfit Stone Container Corp
CA Water Service Group	Hogan Manufacturing, Inc	Southern California Edison
California Energy Commission	House, Lon	SPURR
California Farm Bureau Federation	Imperial Irrigation District	St. Paul Assoc
California Gas Acquisition Svcs	Integrated Utility Consulting Group	Sutherland, Asbill & Brennan
California ISO	International Power Technology	Tabors Caramanis & Associates
Calpine	Interstate Gas Services, Inc.	Tecogen, Inc
Calpine Corp	IUCG/Sunshine Design LLC	TFS Energy
Calpine Gilroy Cogen	J. R. Wood, Inc	Transcanada
Cambridge Energy Research Assoc	JTM, Inc	Turlock Irrigation District
Cameron McKenna	Luce, Forward, Hamilton & Scripps	U S Borax, Inc
Cardinal Cogen	Manatt, Phelps & Phillips	United Cogen Inc.
Cellnet Data Systems	Marcus, David	URM Groups
Chevron Texaco	Matthew V. Brady & Associates	Utility Resource Network
Chevron USA Production Co.	Maynor, Donald H.	Wellhead Electric Company
City of Glendale	MBMC, Inc.	White & Case
City of Healdsburg	McKenzie & Assoc	WMA
City of Palo Alto	McKenzie & Associates	
City of Redding	Meek, Daniel W.	
CLECA Law Office	Mirant California, LLC	
Commerce Energy	Modesto Irrigation Dist	
Constellation New Energy	Morrison & Foerster	
CPUC	Morse Richard Weisenmiller & Assoc.	
Cross Border Inc	Navigant Consulting	
Crossborder Inc	New United Motor Mfg, Inc	
CSC Energy Services	Norris & Wong Associates	
Davis, Wright, Tremaine LLP	North Coast Solar Resources	
Defense Fuel Support Center	Northern California Power Agency	
Department of the Army	Office of Energy Assessments	
Department of Water & Power City	OnGrid Solar	
DGS Natural Gas Services	Palo Alto Muni Utilities	