STATE OF CALIFORNIA
ARNOLD SCHWARZENEGGER, *Governor*

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298

Tel. No. (415) 703-1691

October 24, 2005

Advice Letter 2704-E

Rose de la Torre
Pacific Gas & Electric
77 Beale Street, Room 1088
Mail Code B10C
San Francisco, CA 94105

Subject: Revised Form 79-974, Generating Facility Interconnection Application

Dear Ms de la Torre:

Advice Letter 2704-E is effective September 23, 2005. A copy of the advice letter is returned herewith for your records.

Sincerely,

Sean H. Gallagher, Director
Energy Division

jjr

Pacific Gas and Electric Company®

Brian K. Cherry
Director
Regulatory Relations

77 Beale Street, Room 1087
San Francisco, CA 94105

Mailing Address
Mail Code B10C
Pacific Gas and Electric Company
P.O. Box 770000
San Francisco, CA 94177

415.973.4977
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August 24, 2005

Advice 2704-E
(Pacific Gas and Electric Company ID U 39 E)

Subject: Revisions to Electric Standard Form 79-974--Generating Facility Interconnection Application (Electric Rule 21)

Public Utilities Commission of the State of California

Pacific Gas and Electric Company (PG&E) hereby submits for filing revisions to its Electric standard Form 79-974--Generating Facility Interconnection Application. The tariff revisions are shown on the enclosed Attachment 1.

Purpose

The purpose of this filing is to revise standard Form 79-974--Generating Facility Interconnection Application, in conjunction with Decision (D.) 00-12-037, which adopted new electric interconnection standards, and revisions to the standard interconnection and application forms for distributed generation. Electric Rule 21—*Generating Facility Interconnections*, and standard Form 79-973—Generating Facility Interconnection Agreement, were revised in Advice 2703-E filed August 22, 2005.

Background

In D. 00-12-037, issued by the Commission on December 21, 2000, the Commission recognized that, "...establishment of a post-implementation working group is a prudent and effective way to provide an opportunity for ongoing evaluation of implementation issued under the new rule and potential revisiting of areas of concern." (Conclusion of Law No. 9.) A post-implementation working group led by the California Energy Commission was developed to address the adequacy of electric Rule 21, and the associated agreement and application form on an ongoing basis. As part of this process, the working group has identified changes to Rule 21 for greater consistency with ANSI/IEEE 1547-2003, and to create a more uniform electric Rule 21 for the utilities. In this filing, revisions are made to Form 79-974 consistent with the recommendations of the working group.

Revisions to Form 79-974: Part 1—Introduction and Overview

Section A--PG&E is adding website and telephone references, and minor text changes.

Section B--Minor text changes are made and a reference is added to the California Energy Commission's distributed generation interconnection website.

Section C--Minor text changes include a text change from "are required" to "must be submitted" in reference to application and supporting document submittal. Text is added to clarify that the location of required net generation electric output meters and A.C. manually-operated disconnect devices must be shown on the site plans.

Section D--PG&E's address mail code is updated.

Revisions to Form 79-974: Part 2—Identifying the Generating Facility's Location and Responsible Parties

Section A--Formatting and text changes are made and customer contact information fields are added to more clearly identify the project and responsible parties.

Section B--Formatting and text changes are made to help identify project contacts, and whether or not the generating facility is owned by a third party.

Section C--This new section is added to better identify the parties responsible for the Generating Facility.

Section D--This section was previously Section C. No text changes are made.

Section E-- This new section sets a 12-month expiration date on the application from the date the application is accepted by PG&E as a "completed" application. Further, the section outlines the refund of review and study fees in the event that a project is withdrawn as defined in the application.

Revisions to Form 79-974: Part 3—Describing the Generating Facility and Host Customer's Electrical Facilities

Section A--Minor text changes, including reference to operating mode options.

Section B--Text changes identifying different types of interconnection agreement options availability in PG&E's service territory. Expanded subsections for customer-owned, third-party owned, and Net Energy Metering generation facilities.

Section C--Under Instructions and Notes, there is a change in reference from "Rule 21, Section I.4" to "Rule 21, Section I.2." Other minor formatting and text changes include designation of the section as "Protection Options."

Section D--Under Instructions and Notes, there is a change in reference from "Rule 21, Section D.3.a and Section I.9" to "Rule 21, Section D.4.a and I.3.g."

Section E--Minor text changes are made.

Section F--No changes.

Section G--This is a new section that identifies whether or not a generating facility will meet the annual efficiency and operating standards of PUC Code 218.5.

Revisions to Form 79-974: Part 4—Describe each of the Generators (See Instructions)

Minor formatting changes are made to the technical project parameters.

This filing will not increase any rate or charge, cause withdrawal of service, or conflict with any other schedule or rule.

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 20 days after the date of this filing, which is **September 13, 2005**. Protests should be mailed to:

CPUC Energy Division
Attention: Tariff Unit, 4th Floor
505 Van Ness Avenue
San Francisco, California 94102

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

Pacific Gas and Electric Company
Attention: Brian Cherry
Director, Regulatory Relations
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, **September 23, 2005**, which is 30 calendar days after the date of filing.

Notice

In accordance with General Order 96-A, Section III, Paragraph G, a copy of this advice letter is being sent electronically and via U.S. mail to parties shown on the attached list. Address changes 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**

Brian K. Cherry /ss

Director, Regulatory Relations

Attachments

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)**

Utility type:	Contact Person: Sue Shaw
☑ ELC ☑ GAS	Phone #: (415) 973-7375
☐ PLC ☐ HEAT ☐ WATER	E-mail: SXS9@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) #: **2704-E**

Subject of AL: **Revisions to Electric Form 79-974----Generating Facility Interconnection Application**

Keywords (choose from CPUC listing): FORM, INTERCONNECTION

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

If AL filed in compliance with a Commission order, indicate relevant Decision/Resolution #: **D. 00-12-037**

Does AL replace a withdrawn or rejected AL? If so, identify the prior AL: N/A

Summarize differences between the AL and the prior withdrawn or rejected AL[1]: _____

Resolution Required? ☐ Yes ☑ No

Requested effective date: **9/23/2005** No. of tariff sheets: **3**

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: Form 79-974

Service affected and changes proposed[1]: Electric Generating Facilities Interconnections

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

Protests 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
Attention: Tariff Unit
505 Van Ness Ave.,
San Francisco, CA 94102
jjr@cpuc.ca.gov and jnj@cpuc.ca.gov

Pacific Gas and Electric Company
Attn: Brian K. Cherry
Director, Regulatory Relations
77 Beale Street, Mail Code B10C
P.O. Box 770000
San Francisco, CA 94177
E-mail: PGETariffs@pge.com

[1] Discuss in AL if more space is needed.

ATTACHMENT 1
Advice 2704-E

Cal P.U.C. Sheet No.	Title of Sheet	Cancelling Cal P.U.C. Sheet No.
23740-E	Sample Form 79-974--Generating Facility Interconnection Application	20855-E
23741-E	Table of Contents -- Sample Forms	23737-E
23742-E	Table of Contents -- Rate Schedules	23739-E

PACIFIC GAS AND ELECTRIC COMPANY

GENERATING FACILITY INTERCONNECTION APPLICATION
FORM NO. 79-974 (8/05) (T)
(ATTACHED)

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 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 most solar and/or wind Net Energy Metered Generating Facilities. (Form 79-994. 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 need to be completed to satisfy PG&E's notice requirements for operating an isolated Generating Facility.

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.

B. **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 Pacific Gas and Electric must accompany all Applications except those Applications for isolated Generating Facilities, Solar and Net Energy Metering Generating Facilities. The $800 Initial Review fee must be submitted separately from the Application. 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. Please refer to the California Energy Commission's website: http://www.energy.ca.gov/distgen/interconnection/guide_book.html for more information regarding interconnection of a generator to PG&E's Distribution System.

This document is only an Application. Upon acceptance, 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 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.

C. **Required Documents:** Four (4) copies of this Application and each of the following documents **must 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 meters and the A.C. manually operated disconnect devices 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 meters and the A.C. manually operated disconnect devices 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.

Part 1 Cont'd – Introduction and Overview

D. **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: Generation Interconnection Services
Mail Code N7L
P.O. Box 770000
San Francisco, California 94177

Alternatively, you may contact PG&E at (415 972-5676

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 connected? 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	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 contact 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 - Generation Facility Interconnection Agreement ("GFIA") or Customer Generation Agreement ("CGA") (applicable to 3rd Party Owner Only) Information (Please identify, if known, the party that will execute the applicable agreement. Not applicable for Net Energy Metering Applicants.

Person Executing the GFIA/CGA	Title of Person Executing GFIA/CGA

Name of Legal Entity to be entered in signatures section of the GFIA/CGA

C.2. 3rd Party Owner – GFIA Information (Please identify the Party, if known, that will execute the GFIA). Not applicable for Net Energy Metering Applicants.

Person Executing the GFIA	Title of Person Executing GFIA

Name of Legal Entity to be entered in signatures section of the GFIA

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 received written authorization to operate in parallel, 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". 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 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)

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.

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, 6, 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

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.
2. **A Generating Facility Interconnection Agreement (Inadvertent Export)** that provides for parallel operation of the Generating Facility, and the occasional, inadvertent, non-compensated, export of power to PG&E's Distribution System (This type of agreement has not yet been developed by PG&E or approved by the CPUC. PG&E has developed an inadvertent deliveries addendum for use in the interim. Check with PG&E for availability).
3. **A "Qualifying Facility" Power Purchase Agreement** that provides for parallel operation of the Generating Facility, and exporting power 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).

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

Third Party Owned Generating Facility

4. **A Generating Facility Interconnection Agreement** that provides for parallel operation of the third party owned Generating Facility, but does not provide for exporting power to PG&E's Distribution System.
5. **A Generating Facility Interconnection Inadvertent Export Agreement** that provides for parallel operation of the third party owned Generating Facility and the occasional, inadvertent, non-compensated, export of power to PG&E's Distribution System. (This type of agreement has not yet been developed by PG&E or approved by the CPUC. PG&E has developed an inadvertent deliveries addendum for use in the interim. Check with PG&E for availability).
6. **A "Qualifying Facility" Power Purchase Agreement** that provides for parallel operation of the third party owned Generating Facility, and exporting power 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).
7. **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 to 4. 5. or 6.)

Net Energy Metering Generating Facility

8. **A Net Energy Metering Agreement** that provides for parallel operation of the Generating Facility, and exporting power to PG&E's Distribution System for credit under the terms of PG&E's Net Energy Metering tariffs. This option is available only to eligible generating facilities as defined in PG&E's Net Energy Metering tariffs. (An interconnection agreement for a Generating Facility consisting of two generators eligible for two different Net Energy Metering tariffs has not yet been developed. Check with PG&E for availability).
9. **A Net Energy Metering /Non- Net Energy Metering eligible Generating Facility Agreement** that provides for the parallel operation of the 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. (This type of agreement has not yet been developed by PG&E or approved by the CPUC. Check with PG&E for availability).
10. **Other, please describe:** _____

C. *Parallel Operation Applications Only*	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. 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): If Protection Option 4 to this Section C is selected, please provide the minimum load of the host Customer facility:	protection option: __1 __2 __3 __4 (Choose one) _____ Amps _____ kW

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.

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

D. *Parallel Operation Applications Only*	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.) Please indicate the short circuit interrupting rating of the host Customer facility's service panel:	_____ Amps _____ Amps

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.

E. (MP&I)	Please indicate how this Generating Facility will be operated.	__1 __2 __3 __4 __5 (Please choose all options that may apply.)

Instructions and Notes

Choose from the following five 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 facility1000kW or less, other than residential or small commercial customers, a supplemental application (Form Number 79-998) is also required.

F. (MP&I)	Please indicate if Qualifying Facility Status will be obtained from the FERC for this Generating Facility.	__Yes __No

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 <u>not</u> 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)	__Yes __No __N/A

Part 4 – Describe each of the Generators (See Instructions.) Use additional sheets, if necessary.

	Generator Information	Generator Type 1	Generator Type 2	Generator Type 3	Totals For All Generators
#	Please indicate the number of each "type" of Generator being installed: (See instructions)				
A (MP&I)	Generator/Inverter Manufacturer (Name)				
B (MP&I)	Generator/Inverter Model (Name/Number)				
C	Generator/Inverter Software Version (Number)				
D	Is the Generator Certified by a Nationally Recognized Testing Laboratory (NRTL) according to Rule 21?	__Yes __No	__Yes __No	__Yes __No	
E (MP)	Generator Design (Choose One)	__Synchronous __Induction __Inverter	__Synchronous __Induction __Inverter	__Synchronous __Induction __Inverter	
F (MP&I)	Gross Nameplate Rating (kVA)				
G	Gross Nameplate Rating (kW)				
H	Net Nameplate Rating (kW)				
I (MP)	Operating Voltage (Volts or kV)				
J	Power Factor Rating (%)				
K	PF Adjustment Range (%)	Min. _____ Max. _____	Min. _____ Max. _____	Min. _____ Max. _____	
L (MP)	Wiring Configuration (Choose One)	__Single-Phase __Three-Phase	__Single-Phase __Three-Phase	__Single-Phase __Three-Phase	

Part 4 Cont'd – Describe each of the Generators (See instructions) Use additional sheets if necessary

	Generator Information	Type 1	Type 2	Type 3
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
N (MP)	Neutral Grounding System Used (Choose One)	__Ungrounded __Solidly Grounded __Ground Resistor _____ Ohms	__Ungrounded __Solidly Grounded __Ground Resistor _____ Ohms	__Ungrounded __Solidly Grounded __Ground Resistor _____ Ohms
O	*For Synchronous Generators Only:* Synchronous Reactance: Transient Reactance: Subtransient Reactance:	 _____ (Xd %) _____(X'd %) _____(X"d %)	 _____ (Xd %) _____(X'd %) _____(X"d %)	 _____ (Xd %) _____(X'd %) _____(X"d %)
P	*For Induction Generators Only:* Locked Rotor Current: *OR* Stator Resistance: Stator Leakage Reactance: Rotor Resistance: Rotor Leakage Reactance:	 _____ (Amps) _____(%) _____(%) _____(%) _____(%)	 _____ (Amps) _____(%) _____(%) _____(%) _____(%)	 _____ (Amps) _____(%) _____(%) _____(%) _____(%)
Q	Short Circuit Current Produced by Generator:	_____ (Amps)	_____ (Amps)	_____ (Amps)
R	*For Generators that are Started as a "Motor" Only* 1. In-Rush Current: 2. Host Customer's Service Entrance Panel (Main Panel) Continuous Current Rating:	 _____ (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

Instructions for Part 4 – 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.
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.

Instructions for Part 4 Cont'd – Describing the Generators

	Generator Information	Instructions and Comments
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.
O	*For Synchronous Generators Only:*	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	*For Induction Generators Only:*	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.

Instructions for Part 4 Cont'd – Describing the Generators

	Generator Information	Instructions and Comments
R	*For Generators that are Started as a "Motor" Only:* 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)

TABLE OF CONTENTS—SAMPLE FORMS
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FORM NO.	DATE SHOWN ON FORM	AGREEMENT/CONTRACT TITLE	CPUC SHEET NO.	
		RULE 19 MEDICAL BASELINE QUANTITIES		
61-0502	7/02	Medical Baseline Allowance Self Certification	18978-E	
62-3481	REV 7/02	Declaration of Eligibility for a Standard Medical Baseline Quantity	18977-E	
		RULES 19.1, 19.2 AND 19.3 CALIFORNIA ALTERNATE RATES FOR ENERGY		
01-9077	REV 6/04	Application for Residential Single-Family Customers	21623-E	
01-9285	REV 6/04	Application for Tenants of Sub-metered Facilities	21624-E	
03-006	REV 6/04	Postage-Paid Application	21626-E	
62-0156	REV 7/01	Application for Qualified Nonprofit Group-Living Facilities	18338-E	
62-1198	REV 7/01	Application for Qualified Agricultural Employee Housing Facilities	18339-E	
62-1477	REV 6/04	Income Guidelines	21625-E	
		RULE 21 GENERATING FACILITY INTERCONNECTIONS		
79-280	REV 7/90	Agreement for Installation or Allocation of Special Facilities for Parallel Operation of Nonutility-Owned Generation and/or Electrical Standby Service	11581-E	
79-702	REV 7/90	Appendix to Form 79-280 – Detail of Special Facilities Charges	11582-E	
79-973	REV 8/05	Generating Facility Interconnection Agreement	23736-E	
79-974	REV 8/05	Generating Facility Interconnection Application	23740-E	(T)
79-988	05/02	Generating Facility Interconnection Agreement, Third Party Non-Exporting	18918-E	
79-992	05/02	Customer Generation Agreement Third Party Generation or Premise Non-Exporting	18919-E	
		RULE 22 DIRECT ACCESS SERVICES		
79-948	12/97	Energy Service Provider (ESP) Service Agreement	14948-E	
79-1011	1/04	Customer Advance Notification Form	21179-E	

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RATE SCHEDULES

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PG&E Gas and Electric Advice Filing List
General Order 96-A, Section III(G)

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