

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298

Tel. No. (415) 703-1691



December 19, 2003

Advice Letter 2373E-B

Ms Anita Smith, Rate Analyst
Pacific Gas and Electric Company
77 Beale Street, 10B Mail Code
San Francisco, CA 94177

Subject: Revisions to Electric Rate Schedule E-NET – Net Energy Metering Service and
Electric Rule 21 Generating Facility Interconnections and Associated Documents
to Comply with Assembly Bill 58

Dear Ms Smith:

Advice Letter 2373E-B is effective January 1, 2003. A copy of the advice letter is sent
herewith for your records.

Sincerely,

A handwritten signature in cursive script that reads "Paul Clavin".

Director
Energy Division

August 5, 2003

Advice 2373-E-A

(Pacific Gas and Electric Company ID U 39 E)

Public Utilities Commission of the State of California

Subject: Revisions to Electric Rate Schedule E-NET – Net Energy Metering, Electric Rule 21 and Associated Documents to Comply with Assembly Bill 58

Pacific Gas and Electric Company (PG&E) hereby submits this supplemental filing requesting further revisions to its electric tariffs. This supplemental filing modifies PG&E's April 14, 2003 filing due to input from the California Public Utilities Commission ("Energy Division") subsequent to the initial filing, and recent discussions in the Rule 21 Working Group sponsored by the California Energy Commission ("CEC Rule 21 Working Group") regarding proposed changes to Rule 21. The affected tariff sheets are listed on the enclosed Attachment I.¹ This filing supercedes Advice 2373-E.

Purpose

The purpose of this filing is to comply with Assembly Bill (AB) 58, which replaces Sections 2827, 2827.7 and adds Section 2827.8 in the California Public Utilities Code. This bill became effective January 1, 2003. In this filing, PG&E submits revisions to:

- Electric Rate Schedule *E-NET-- Net Energy Metering (E-NET)*;
- Electric *Rule 21 -- Generating Facility Interconnections*;

¹ PG&E reserves all legal rights to challenge the decisions or statutes under which it has been required to make this advice filing, and nothing in this advice filing constitutes a waiver of such rights. Also, PG&E reserves any additional legal rights to challenge the requirement to make this advice filing by reason of its status as a debtor under Chapter 11 of the Bankruptcy Code, and nothing in this advice filing constitutes a waiver of such rights.

- 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*;
- 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*;
- Form 79-994, *Application for Interconnecting Residential or Small Commercial Net Energy Metering (E-NET) Customers with Solar or Wind Electric Generating Facilities of 10 Kilowatts or Less*;
- Form 79-974, *Generating Facility Interconnection Application*; and creates a new form,
- Form 79-998, *Expanded Net Energy Metering (E-NET) Supplemental Application*

PG&E changes the requested effective date of this filing to January 1, 2003.

Background

On September 24, 2002, Governor Davis signed Assembly Bill (AB) 58 into law. It amended Section 2827 of the California Public Utilities Code (PUC) to keep in place the expanded eligibility for the net metering program otherwise set to expire on December 31, 2002.² In addition the new law placed a “cap” on the total rated generating capacity that can be interconnected system wide under electric Rate Schedule E-NET, set new time limits for processing E-NET interconnection application requests, and added language regarding the payment of nonbypassable charges (public benefits charges³ and, depending on Commission action, Department of Water Resource (DWR) charges⁴) on usage displaced by each customer’s generator.

Also, AB 58 modified PUC Section 2827.7 to “grandfather” E-NET applicants who obtain all local and/or state permits required to commence construction on or before December 31, 2002, and who complete construction on or before

² Without Assembly Bill (AB) 58, only residential and small commercial customers with solar and wind systems 10 kilowatts (kW) or less would have been eligible to apply for Schedule E-NET starting January 1, 2003. With this new law, customers in all classes with solar or wind systems up to and including 1 megawatt (MW) continue to be eligible.

³ See PUC Section 2827(k).

⁴ See PUC Section 2827(l). On April 3, 2003, the Commission issued D. 03-04-030 exempting E-NET customers from DWR charges on departed load (i.e., on usage displaced by the customer’s generator).

September 30, 2003, under the E-NET terms and conditions in effect on the date the original permits were obtained.

Finally, AB 58 added PUC Section 2827.8 creating a new wind energy co-metering program for any E-NET customer with a wind generator larger than 50 kilowatts (kW), up to and including one megawatt (MW).

PG&E filed Advice letter 2373-E on April 14, 2003. PG&E had several discussions with the Energy Division regarding suggested edits to the tariff and forms. In an effort to achieve consistency PG&E worked with the other energy utilities regarding many of the suggested edits and with the CEC's Rule 21 Working Group where applicable.

Tariff Revisions

PG&E revises Rate Schedule E-NET to:

- a) Remove the sunset date that would otherwise have closed E-NET to new customers other than residential and small commercial customers with system capacities of 10 kW or less;
- b) Add a paragraph in the applicability section setting a cap on the total amount of net metered generation (in kW) that can interconnect with PG&E's grid. The cap is based on one half of one percent of PG&E's aggregate customer peak demand;
- c) Amend wording detailing nonbypassable charges customer-generators are responsible for paying under various conditions. After the CPUC decision on DWR charges, Decision (D.) 03-04-030, PG&E has not included language regarding the obligation of eligible customer-generators to pay those charges in this tariff except to explicitly exempt grandfathered customers from these charges (in the event the Commission assesses any such charges at a future date to non-grandfathered customers). However, with respect to Public Purpose Program charges, PG&E has included generic language stating that the Public Purpose Program charge will be applied to usage displaced by the customer's generator "at such time, and in such a manner, as may be approved by the CPUC".⁵ PG&E proposes that such usage would either be estimated based on Commission-approved capacity factors as applied to individual system capacities, or alternatively at the election of customers with generators 30 kW or larger, meter reads. This approach would provide a means of assessing a charge that the legislation makes clear is non-bypassable, without requiring the installation of a second meter. This language will be filed in a separate advice letter.

⁵ PUC Section 2827(k), added by AB 58, states "Net-metering and co-metering customers shall not be exempt from the public benefits charge."

- d) Add language regarding wind energy co-metering in Special Condition 5. Customer-generators with wind generating facilities greater than 50 kW up to and including 1 MW must take service under a time-of-use (TOU) otherwise applicable rate schedule (OAS) and must pay for a meter(s) capable of separately measuring total consumption and total export of energy. The net energy supplied by the generating facility will be credited in accordance with the generation component of the energy charge in the customer's TOU OAS, while energy supplied by PG&E to the customer-generator will be charged in accordance with the total TOU OAS. The maximum credit over the annual reconciliation period for wind co-metering customers is capped at the average credit per kilowatt-hour (kWh) exported to the grid, multiplied by total consumption (in kWh).

In addition to the above, in this amendment to advice letter 2373-E, PG&E is proposing to:

- a) Remove the last sentence in Rule 21 Section C.1.h that was proposed in the original advice letter, 2373-E. This language is already proposed in C.1.e. and the CEC Rule 21 Working Group determined that it was not needed in two places.
- b) Make various other edits to Schedule E-NET and related forms as suggested by the Energy Division that relate to AB 58 compliance.
- c) At the request of the Energy Division, change the proposed effective date to January 1, 2003.

Effective Date

At the request of the Energy Division, PG&E requests that this advice filing become effective **January 1, 2003**.

Protest

Anyone wishing to protest this filing should do so by sending a letter via postal mail and facsimile by **August 25, 2003**, which is 20 days after the date of this filing. The protest must state the grounds upon which it is based, including such items as financial and service impact, and should be submitted expeditiously. Protests should be mailed to:

IMC Branch Chief
Energy Division
California Public Utilities Commission
505 Van Ness Avenue, Room 4002
San Francisco, California 94102
Facsimile: (415) 703-2200
E-mail: jjr@cpuc.ca.gov

Copies should also be mailed to the attention of the Director, Energy Division, Room 4005 and Jerry Royer, Energy Division, at the address shown above. It is also requested that a copy of the protest be sent via postal mail and facsimile to Pacific Gas and Electric Company on the same date it is mailed or delivered to the Commission at the address shown below.

Brian K. Cherry
Director, Regulatory Relations
Pacific Gas and Electric Company
P.O. Box 770000 Mail Code B10C
San Francisco, California 94177
Facsimile: (415) 973-7226
E-mail: RxDd@pge.com

The protest shall set forth the grounds upon which it is based and shall be submitted expeditiously. There is no restriction on who may file a protest.

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, and the service list parties for R. 99-10-025. Address changes should be directed to Sandra Ciach (415) 973-7572. Advice letter filings can also be accessed electronically at:

http://www.pge.com/customer_services/business/tariffs/

Vice President - Regulatory Relations

Attachments

cc: Service List R. 99-10-025



SCHEDULE E-NET—NET ENERGY METERING SERVICE

APPLICABILITY: This net-metering schedule is applicable to a residential, small commercial (as defined in subdivision (h) of Section 331 of the California Public Utilities Code), commercial, industrial, or agricultural 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 facilities, 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. (T)

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 electric provider that does not provide distribution service for the direct transactions, the electric provider, 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 until such time as the total rated generating capacity used by eligible customer-generators exceeds one-half of 1 percent of PG&E's aggregate customer peak demand. (D)
(T)
|
(T)

TERRITORY: The entire territory served.

RATES: All rates charged under this schedule will be in accordance with the eligible customer-generator's otherwise-applicable metered rate schedule. An eligible customer-generator served under this schedule is responsible for all charges from its otherwise-applicable rate schedule including monthly minimum charges, customer charges, meter charges, facilities charges, demand charges and surcharges. The "Peak Rate Limiter" and "Average Rate Limiter" for general service otherwise-applicable-rate schedules, the "Demand Charge Limiter" for agricultural otherwise-applicable-rate schedules 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 otherwise-applicable-rate schedule, will be based on the average power factor over the past 12 billing months of operation prior to starting on E-NET. 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 electricity supplied by PG&E will be based on the net metered usage in accordance with Net Energy Metering and Billing (Special Condition 2, below). (L)

(Continued)



SCHEDULE E-NET—NET ENERGY METERING SERVICE
(Continued)

RATES: (Cont'd.) Customer-generators eligible for service under this schedule are exempt from the requirements of Schedule S—Standby Service. (L)
(L)

Except for those eligible customer-generators qualifying for Special Condition 4 below, customer-generators are responsible for: Public Purpose Program (PPP) charges and any other charges the California Public Utilities Commission (CPUC) determines to be nonbypassable. (T)
|
|
(T)

To determine nonbypassable PPP charges and any other charges the CPUC determines to be nonbypassable, a customer-generator's Departing Load (as defined in Preliminary Statement BB) shall be estimated by PG&E at such time, and in such a manner, as may be approved by the Commission (CPUC). (N)

(Continued)



SCHEDULE E-NET—NET ENERGY METERING SERVICE
(Continued)

SPECIAL
CONDITIONS:

1. METERING EQUIPMENT: Eligible Wind Energy Co-Metering customer-generators, see Special Condition 5. Net energy metering shall be accomplished using a single meter capable of registering the flow of electricity in two directions. If the eligible customer-generator's existing electrical meter is not capable of measuring the flow of electricity in two directions, the eligible customer-generator shall be responsible for all expenses involved in purchasing and installing a meter that is able to measure electricity flow in two directions. An additional meter or meters, installed in a dual meter socket ("dual metering"), to monitor the flow of electricity in each direction may be installed with the consent of the eligible customer-generator, at the expense of PG&E, and the dual metering shall be used only to provide the information necessary to accurately bill or credit the customer according to the utility's otherwise applicable tariff or to collect solar or wind, or a hybrid system of both, electric generating system performance information for research purposes. PG&E shall determine whether dual metering is required under this provision. If dual metering is installed, the net energy metering calculation (see below) shall yield a result identical to that of a single meter capable of measuring the flow of electricity in two directions.

PG&E shall not require dual metering except where necessary for billing accuracy. If none of the normal metering options available at PG&E's disposal which are necessary to render accurate billing are acceptable to the customer-generator, PG&E shall have the right to refuse interconnection.

Customer-generators eligible for Special Condition 4 shall not be responsible for replacing, nor be obligated to replace, their existing meter unless the customer-generator's existing electrical meter is not capable of measuring the flow of electricity in two directions. (N)
|
(N)

2. NET ENERGY METERING AND BILLING: Eligible Wind Energy Co-Metering customer-generators, see Special Condition 5. Net energy is defined as measuring the difference between the electricity supplied by PG&E through the electric grid to the eligible customer-generator and electricity generated by an eligible customer generator and fed back into the electric grid over a 12-month period. At the end of each 12-month period following the date the customer-generator was first eligible for Schedule E-NET, or the date of final interconnection, whichever is later, and at each anniversary date thereafter, the eligible customer-generator shall be billed for electricity used during that period. If an eligible customer-generator terminates service under this rate schedule, or experiences a change in electric service provider prior to the end of any 12-month period, PG&E shall reconcile the customer's consumption and production of electricity and bill the customer as described below, as if it were the end of the normal 12-month period. (T)
(T)

In the event the energy generated exceeds the energy consumed during the 12-month period, based on the eligible customer-generator's otherwise-applicable rate schedule as set forth below, no payment shall be made for the excess energy delivered to PG&E's grid. If PG&E is the electric service provider, this condition may be modified where the customer has signed a contract to sell electricity to PG&E.

(Continued)



SCHEDULE E-NET—NET ENERGY METERING SERVICE
(Continued)

SPECIAL
CONDITIONS:
(Cont'd.)

2. NET ENERGY METERING AND BILLING: (Cont'd.)

In the event that the electricity supplied by PG&E during the 12-month period exceeds the electricity generated by the eligible customer-generator during the same period, the eligible customer-generator is a net electricity consumer and PG&E shall bill the eligible customer-generator for the net consumption during the 12-month period based on the eligible customer-generator's otherwise-applicable rate schedule, as set forth below.

Except as provided in Special Condition 5, for customer-generators taking service on otherwise-applicable rate schedules, any net monthly consumption or production shall be valued as follows: (T)
(T)

a) Baseline Rates

For eligible customer-generators taking service on otherwise-applicable baseline rate schedules, any net consumption or production shall be valued monthly as follows:

If the eligible customer-generator is a net consumer, the eligible customer-generator will be billed in accordance with the eligible customer-generator's otherwise-applicable rate schedule. (T)

If the eligible customer-generator is a net generator, the net kWh generated shall be valued at the rate for the kWh up to the baseline quantity, with any excess kWh generated, valued at the rate for the appropriate tier level in which the equivalent kWh of usage would fall.

b) Time of Use

For eligible customer-generators taking service on otherwise-applicable time-of-use rate schedules, any net consumption or production shall be valued monthly as follows:

If the eligible customer-generator is a net consumer during any discrete time-of-use period, the net kWh consumed shall be billed in accordance with that same time-of-use period in the eligible customer-generator's otherwise-applicable rate schedule.

If the eligible customer-generator is a net generator during any discrete time-of-use period, the net kWh produced shall be valued at the same price per kWh as the same time-of-use period in the eligible customer generator's otherwise-applicable rate schedule.

c) Annual and Monthly Billing

If PG&E supplies the eligible customer-generator with electricity, PG&E shall provide the eligible customer-generator with net electricity consumption information with each regular bill. That information shall include the current monetary balance owed PG&E for the net electricity consumed since the last 12-month period ended. Eligible residential and small commercial



SCHEDULE E-NET—NET ENERGY METERING SERVICE
(Continued)

SPECIAL
CONDITIONS:
(Cont'd.)

2. NET ENERGY METERING AND BILLING: (Cont'd.)

c) Annual and Monthly Billing (Cont'd.)

customer-generators may pay monthly or annually for the net energy consumed. For all other commercial, industrial, and agricultural customers, the net balance of all moneys owed must be paid on each monthly billing cycle; when they are a net electricity producer over a monthly billing cycle, any excess kilowatt-hours generated during the billing cycle shall be carried over to the following billing period and appear as a credit on the customer generator's account, until the end of the 12-month period.

(T)

d) Energy Service Providers (ESP) Charges

If PG&E provides direct access metering, UDC consolidated billing, or ESP dual or consolidated billing support services for DA customer-generators served under this rate or their ESPs, PG&E may recover the incremental costs related to net energy metering from the customer's ESP as follows:

Metering services: \$104 Metering Service Base charge, plus \$73/hour for on-site work, plus materials.

Billing: \$85/hour plus materials.

3. INTERCONNECTION: Prior to receiving approval for Parallel Operation, the customer-generator must submit a completed PG&E application form *Application for Interconnecting Residential or Small Commercial Net Energy Metering (E-NET) Customers with Solar or Wind Electric Generating Facilities of 10 Kilowatts or Less, (Form 79-994) or Generating Facility Interconnection Application, (Form 79-974), and Expanded Net Energy Metering (E-NET) Supplemental Application Form (Form 79-998)*. Also, prior to receiving approval for Parallel Operation, the customer generator must execute and comply with the requirements of PG&E's *Interconnection Agreement for Net Energy Metering for Residential or Small Commercial Solar or Wind Electric Generating Facilities of 10 Kilowatts or Less, (Form 79-854)*, or PG&E's *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 (Form 79-978)*. The eligible customer-generator 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 California Public Utilities Commission regarding safety and reliability.

(T)

(T)



SCHEDULE E-NET—NET ENERGY METERING SERVICE
(Continued)

SPECIAL
CONDITIONS:
(Cont'd.)

4. EXEMPTIONS FROM CERTAIN CHARGES: Per Section 2827.7 of the California Public Utilities Code, except as provided for in Special Condition 2, eligible customer-generators who have all local and state permits required to commence construction of their generating facilities on or before December 31, 2002, and have completed construction on or before September 30, 2003, shall not be required to pay non-bypassable charges including California Department of Water Resources (DWR) charges or Public Purpose Program charges and shall be entitled to the net energy metering terms in effect on the date the local and state permits were acquired, for the life of the generating facility, regardless of any change in customer or ownership of the generating facility.

5. WIND ENERGY CO-METERING: In accordance with Section 2827.8 of the California Public Utilities Code, any customer-generator with wind energy generating facilities greater than 50 kW but not exceeding 1,000 kW taking service under this tariff is required to do so pursuant to this section. This definition includes eligible customer-generators with a hybrid system including a solar generating facility where the size of the wind energy generating facility component exceeds 50 kW and total generating facility size is less than 1,000 kW.

Wind Energy Co-Metering customer-generators are required to take service on a time-of-use (TOU) otherwise-applicable rate schedule. In addition, the customer-generator must utilize a TOU meter, or multiple TOU meters, capable of separately measuring the electricity in both directions that is, the electricity supplied by PG&E to the customer and the electricity generated by the customer and fed back to the electric grid. If the customer's existing meter is not a TOU meter or is not capable of separately measuring the flow of electricity in both directions, the eligible customer-generator is responsible for all expenses involved in purchasing and installing a meter that is both TOU and able to separately measure electricity flow in both directions.

Subject to Special Condition 2, 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, excluding generation surcharges from Schedule E-EPS. 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.

(N)

(N)



SCHEDULE E-NET—NET ENERGY METERING SERVICE
(Continued)

SPECIAL
CONDITIONS:
(Cont'd.)

5. WIND ENERGY CO-METERING (Cont'd):

At the end of each 12-month period (as described in Special Condition 2), 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; (otherwise the eligible customer-generator is a Wind Energy Co-Metering consumer.) To calculate the maximum generation credit for a Wind Energy Co-Metering producer, PG&E will, at the end of each 12-month period, determine the average credit for energy based on the following equation:

Average Credit (\$/kWh) =

Total Credit (\$) calculated for the 12-month period

Total energy fed back to PG&E (kWh) during the 12-month period

Then the

Maximum Credit (\$) =

Average Credit (\$/kWh) × Total energy (kWh) PG&E supplied during the 12-month period

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 this excess energy.

(N)

(N)

(Continued)



RULE 21—GENERATING FACILITY INTERCONNECTIONS
(Continued)

C. APPLICATION AND INTERCONNECTION PROCESS (Cont'd.)

1. APPLICATION PROCESS (Cont'd.)

d. When Required, Applicant and PG&E Commit to Additional Interconnection Study Steps. When a Supplemental Review reveals that the proposed Generating Facility cannot be Interconnected to PG&E's Distribution System by means of a Simplified Interconnection, or that significant PG&E Interconnection Facilities or Distribution System improvements will be needed to accommodate an Applicant's Generating Facility, PG&E and Applicant shall enter into an agreement that provides for PG&E to perform additional studies, facility design, and engineering and to provide detailed cost estimates for fixed price or actual cost billing to the Applicant at the Applicant's expense. The Interconnection Study agreement shall set forth PG&E's estimated schedule and charges for completing such work. Initial and Supplemental Review and Interconnection Study fees for solar generating facilities up to 1 megawatt (MW) that do not sell power to the grid will be waived up to the amount of \$5,000. Generating Facilities eligible for Net Energy Metering under Public Utilities Code Section 2827 are exempt from any costs associated with Interconnection Studies.

e. Applicant and PG&E Enter Into an Interconnection Agreement and, Where Required, a Financing and Ownership Agreement for Interconnection Facilities or Distribution System Improvements. PG&E shall provide the Applicant with an executable version of the Interconnection Agreement or Net Energy Metering agreement appropriate for the Applicant's Generating Facility and desired mode of operation. Where the Supplemental Review or Interconnection Study performed by PG&E has determined that modifications or additions to its Distribution System are required, or that additional Interconnection Facilities will be necessary to accommodate an Applicant's Generating Facility, PG&E may also provide the Applicant with other Interconnection Facilities financing and ownership agreements. These agreements shall set forth PG&E and the Applicant's responsibilities, completion schedules, and estimated or fixed price costs for the required work. For Generating Facilities qualifying for service under Public Utilities Code Section 2827, with the exception of Section 2827.9, PG&E approval for Parallel Operation shall normally be provided no later than thirty (30) business days following PG&E's receipt of: (1) a completed Net Energy Metering Application including all supporting documents and required payments; (2) a completed, signed Net Energy Metering Interconnection Agreement; and (3) evidence of the Producer's final inspection clearance from the governmental authority having jurisdiction over the Generating Facility.

(N)
|
- - -
|
(N)

(L)

(Continued)



RULE 21—GENERATING FACILITY INTERCONNECTIONS
(Continued)

C. APPLICATION AND INTERCONNECTION PROCESS (Cont'd.)

1. APPLICATION PROCESS (Cont'd.)

f. Where Applicable, PG&E or Producer Installs Required Interconnection Facilities or Modifies PG&E's Distribution System. After executing the applicable agreements, PG&E or Producer will commence construction/ installation of the Distribution System improvements or Interconnection Facilities which have been identified in the agreements. The parties will use good faith efforts to meet schedules and fixed costs or estimated costs as appropriate. (L)

g. Producer Arranges for and Completes Commissioning Testing of Generating Facility and Producer's Interconnection Facilities. The Producer is responsible for testing new Generating Facilities and associated Interconnection Facilities according to Section J.5 to ensure compliance with the safety and reliability provisions of this Rule prior to being operated in parallel with PG&E's Distribution System. For non-Certified Equipment, the Producer shall develop a written testing plan to be submitted to PG&E for its review and acceptance. Alternatively, the Producer and PG&E may agree to have PG&E conduct the required testing at the Producer's expense. Where applicable, the test plan shall include the installation test procedures published by the manufacturer of the generation or Interconnection equipment. Facility testing shall be conducted at a mutually agreeable time, and depending on who conducts the test, PG&E or Producer shall be given the opportunity to witness the tests. (L)

(Continued)



RULE 21—GENERATING FACILITY INTERCONNECTIONS
(Continued)

C. APPLICATION AND INTERCONNECTION PROCESS (Cont'd.)

1. APPLICATION PROCESS (Cont'd.)

h. PG&E Authorizes Parallel Operation or Momentary Parallel Operation. The Producer's Generating Facility shall be authorized for Parallel Operation or Momentary Parallel Operation, as applicable, with PG&E's Distribution System upon satisfactory compliance with the terms of all applicable agreements and PG&E's express written permission. Compliance may include, but not be limited to, provision of any required documentation and satisfactorily completing any required inspections or tests as described herein or in the agreements formed between the Producer and PG&E. A Producer shall not commence Parallel Operation of its Generating Facility with PG&E's system unless it has received PG&E's express written permission to do so.

(L)

(L)

i. PG&E Reconciles Costs and Payments. If the Producer selected a fixed price billing for the Interconnection Facilities or Distribution System improvements, no reconciliation will be necessary. If the Producer selected actual cost billing, a true-up will be required. Within a reasonable time after the Interconnection of a Producer's Generating Facility, PG&E will reconcile its actual costs related to the Generating Facility against any advance payments made by the Producer. The Producer will receive either a bill for any balance due or a reimbursement for overpayment as determined by PG&E's reconciliation. The Producer shall be entitled to a reasonably detailed and understandable accounting for the payments.

(Continued)



RULE 21—GENERATING FACILITY INTERCONNECTIONS
(Continued)

H. DEFINITIONS (Cont'd.)

Line Section: That portion of PG&E's Distribution System connected to a Customer bounded by automatic sectionalizing devices or the end of the distribution line.

Metering: The measurement of electrical power flow in kW and/or energy flow in kWh, and, if necessary, kVAR at a point, and its display to PG&E, as required by this Rule.

Metering Equipment: All equipment, hardware, software including meter cabinets, conduit, etc., that are necessary for Metering.

Momentary Parallel Operation: The interconnection of a Generating Facility to the Distribution System for one second (60 cycles) or less.

Nationally Recognized Testing Laboratory (NRTL): A laboratory accredited to perform the Certification Testing requirements under this Rule.

Net Energy Metering: Metering for the receipt and delivery of electricity between the Producer and PG&E pursuant to Section 2827 of the Public Utilities Code and Schedule E-NET, Net Energy Metering. (T)

Net Generation Metering: Metering of the net electrical power of energy output in kW or energy in kWh, respectively, from a given Generating Facility. This may also be the measurement of the difference between the total electrical energy produced by a Generator and the electrical energy consumed by the auxiliary equipment necessary to operate the Generator. For a Generator with no Host Load and/or Public Utilities Code Section 218 Load (Section 218 Load), Metering that is located at the Point of Common Coupling. For a Generator with Host Load and/or Section 218 Load, Metering that is located at the Generator but after the point of auxiliary load(s) and prior to serving Host Load and/or Section 218 Load.

Net Nameplate Rating: The Gross Nameplate Rating minus the consumption of electrical power of a Generator or Generating Facility as designated by the manufacturer(s) of the Generator(s).

Network Service: More than one electrical feeder providing Distribution Service at a Point of Common Coupling.

Non-Export; Non-Exporting: Designed to prevent the transfer of electrical energy from the Generating Facility to PG&E.

(Continued)



Pacific Gas and Electric Company
San Francisco, California

Cancelling

Revised
Revised

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

20603-E
18342-E

PACIFIC GAS AND ELECTRIC COMPANY

INTERCONNECTION AGREEMENT FOR NET ENERGY METERING FOR
RESIDENTIAL AND SMALL COMMERCIAL SOLAR OR WIND ELECTRIC
GENERATING FACILITIES OF 10 KILOWATTS OR LESS
FORM NO. 79-854 (REV 08/03)
(ATTACHED)

(T)

Advice Letter No. 2373-E-A
Decision No.

Issued by
Karen A. Tomcala
Vice President
Regulatory Relations

Date Filed August 5, 2003
Effective _____
Resolution No. _____

49091



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 RESIDENTIAL OR SMALL COMMERCIAL FACILITIES	(T)
OF 10 KILOWATTS OR LESS	(T)
FORM NO. 79-978 (08/03) (ATTACHED)	(T)



Pacific Gas and Electric Company
San Francisco, California

Cancelling

Original

Cal. P.U.C. Sheet No.

20605-E

Cal. P.U.C. Sheet No.

18970-E

PACIFIC GAS AND ELECTRIC COMPANY

APPLICATION FOR INTERCONNECTING RESIDENTIAL OR SMALL COMMERCIAL
NET ENERGY METERING (E-NET) CUSTOMERS WITH SOLAR OR WIND ELECTRIC
GENERATING FACILITIES OF 10 KILOWATTS OR LESS

FORM NO. 79-994 (08/03)
(ATTACHED)

(T)

Advice Letter No. 2373-E-A
Decision No.

Issued by
Karen A. Tomcala
Vice President
Regulatory Relations

Date Filed August 5, 2003
Effective _____
Resolution No. _____

49093



Pacific Gas and Electric Company
San Francisco, California

Cancelling

Original

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

20606-E

PACIFIC GAS AND ELECTRIC COMPANY

EXPANDED NET ENERGY METERING (E-NET) SUPPLEMENTAL APPLICATION
FORM NO. 79-998 (08/03)
(ATTACHED)

(N)
|
|
|
(N)

Advice Letter No. 2373-E-A
Decision No.

Issued by
Karen A. Tomcala
Vice President
Regulatory Relations

Date Filed August 5, 2003
Effective _____
Resolution No. _____

49094



Pacific Gas and Electric Company
San Francisco, California

Cancelling

Revised
Revised

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

20607-E
18580-E

PACIFIC GAS AND ELECTRIC COMPANY

GENERATING FACILITY INTERCONNECTION APPLICATION
FORM NO. 79-974 (08/03)
(ATTACHED)

(T)

Advice Letter No. 2373-E-A
Decision No.

Issued by
Karen A. Tomcala
Vice President
Regulatory Relations

Date Filed August 5, 2003
Effective _____
Resolution No. _____

49095



TABLE OF CONTENTS—SAMPLE FORMS
(Continued)

FORM NO.	DATE SHOWN ON FORM	AGREEMENT/CONTRACT TITLE	CPUC SHEET NO.	
<u>RESIDENTIAL</u>				
79-744	10/88	Declaration of Eligibility for Baseline Quantities for Residential RV Parks.....	10629-E	(L)
79-763		Experimental Residential Dispatchable Peak Time-of-Use Service Letter of Understanding.....	11647-E	
<u>NET ENERGY METERING</u>				
79-854	REV 8/03	Interconnection Agreement for Net Energy Metering for Residential and Small Commercial Solar or Wind Electric Generating Facilities of 10 Kilowatts or Less..	20603-E	(T)
79-978	REV 8/03	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 10 Kilowatts or Less ...	20604-E	(T)
79-994	REV 8/03	Application for Interconnecting Residential or Small Commercial Net Energy Metering (E-NET) Customers With Solar or Wind Generating Facilities of 10 Kilowatts or Less.....	20605-E	(T)
79-998	8/03	Expanded Net Energy Metering (E-NET) Supplemental Application	20606-E	(N)

(Continued)



TABLE OF CONTENTS—SAMPLE FORMS
(Continued)

FORM NO.	DATE SHOWN ON FORM	AGREEMENT/CONTRACT TITLE	CPUC SHEET NO.
RULE 19 MEDICAL BASELINE QUANTITIES			
62-3481	REV 7/02	Declaration of Eligibility for a Standard Medical Baseline Quantity.....	18977-E
61-0502	7/02	Medical Baseline Allowance Self Certification.....	18978-E
RULES 19.1, 19.2 AND 19.3 CALIFORNIA ALTERNATE RATES FOR ENERGY			
01-9077	REV 7/01	Application for Residential Single-Family Customers.....	18336-E
01-9285	REV 7/01	Application for Tenants of Sub-metered Facilities.....	18337-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 7/01	Income Guidelines.....	18340-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 1/01	Generating Facility Interconnection Agreement.....	17837-E
79-974	REV 8/03	Generating Facility Interconnection Application.....	20607-E
RULE 22 DIRECT ACCESS SERVICES			
79-948	12/97	Energy Service Provider (ESP) Service Agreement	14948-E

(T)
(L)

(Continued)



TABLE OF CONTENTS
(Continued)
RULES

RULE	TITLE OF SHEET	CAL P.U.C. SHEET NO.
1	Definitions..... 14855,16368,14857 to 14861,19095,14863 to 14865,19403,14867 to 14871,15564,14873,14874-E	
2	Description of Service..... 11257,11896,11611, 14079,11261 to 11264,11498,11266,11267,11499,11269 to 11278,14055,11280 to 11283-E	
3	Application for Service..... 11714,14875-E	
4	Contracts 13612-E	
5	Special Information Required on Forms 11287,14192,11289-E	
6	Establishment and Re-establishment of Credit 14193,14194-E	
7	Deposits..... 11300,11301-E	
8	Notices..... 14144,14145,13137,14146,13139-E	
9	Rendering and Payment of Bills 16369,14877,14878,13986,14317,14318-E	
10	Disputed Bills 11308 to 11310-E	
11	Discontinuance and Restoration of Service..... 13140 to 13150,14080,13152-E	
12	Rates and Optional Rates..... 16872,16873,16874-E	
13	Temporary Service 15573,15574-E	
14	Shortage of Supply and Interruption of Delivery 15526,15527-E	
15	Distribution Line Extensions 15575,15576,15577,15578,17850,17851, 17852,15582,15583,17853,17854,17855,15587,15588,17856,17857,15591,16986,15593-E	
16	Service Extensions 15594, 15595,14880,14881,15596 to 15598,16987,15600 to 15608,14254,13775,15609,15610-E	
17	Meter Tests and Adjustment of Bills for Meter Error 14885,12050 to 12052-E	
17.1	Adjustment of Bills for Billing Error 14886,12054-E	
17.2	Adjustment of Bills for Unauthorized Use 14887,12056 to 12058-E	
18	Supply to Separate Premises and Submetering of Electric Energy 14329,14330,13396,13276-E	
19	Medical Baseline Quantities 14346,13839,13518-E	
19.1	California Alternate Rates for Energy for Individual Customers and Submetered Tenants of Master-Metered Customers..... 16391,18922,16393,16394-E	
19.2	California Alternate Rates for Energy for Nonprofit Group-Living Facilities..... 13728,18923,13589,13730,13591-E	
19.3	California Alternate Rates for Energy for Qualified Agricultural Employee Housing Facilities 13899,18924,13901,13902-E	
20	Replacement of Overhead with Underground Electric Facilities 19012,11240,11241,19013,16665,15611,19014-E	
21	Generating Facility Interconnections 19404 to 19407,20600,20601,19410 to 19425,20602,19427 to 19453-E	(T)
22	Direct Access Service..... 14888,14889, 15565,14891 to 14901,16448,14903,14904,16449,16235 to 16243,14913,16244,16245, 16384,14917,15833 to 15836,14920,14921,15568,14923,15569,14925,14926,15190,15191, 14929,14930,16385,16386,14933,16387,14935,14936,15192,14938 to 14946,16388-E	
SERVICE AREA MAPS:		
	Boundary Lines..... 10534-E	
	Map A Lassen Municipal Utility District/Surprise Valley 10423-E	
	Map B Sacramento Municipal Utility District 4524-E	
	Map C Modesto Irrigation/Turlock Irrigation District 4525-E	
	Map D SoCalEdison 4671-E	
	Map E Palo Alto 4672-E	
	Map F Redding 13310-E	
	Map G Healdsburg 13079-E	
	Map H Lompoc..... 13372-E	
	Map I Gridley 13780-E	
LIST OF CONTRACTS AND DEVIATIONS:..... 13819,13794,14452,12000,12001,13672,12003,13456,11435, 12004,17021,12006,14162,12008,12009,11191,12010,11193,11194,11195,12969, 15050,12012,13466, 12014,12015,13296,12955,14221,12018 to 12024,17259,12026,13092,11211,12027,12028,16703,12030, 12031,14035,11217,12032,12033,11219,12034,12035,12036,11223,11986,11987,17007,16898,11227-E		

(Continued)



TABLE OF CONTENTS
(Continued)

RATE SCHEDULES

SCHEDULE	TITLE OF SHEET	CAL P.U.C. SHEET NO.
COMMERCIAL/INDUSTRIAL (Continued)		
E-25	Restricted Variable-Peak-Period Time-of-Use Service to Water Agencies	19211,20020,20021,20022,20023,20024,15378,20025,20026,20027-E
E-36	Small General Service to Oil and Gas Extraction Customers	19214,20028,20029-E
E-37	Medium General Demand-Metered Time-of-Use Service to Oil and Gas Extraction Customers	19216,17108,20030,20031,19315,20032,2003-E
ED	Experimental Economic Development Rate	20034,17110-E
E-CARE	CARE Program Service for Qualified Nonprofit Group-Living and Qualified Agricultural Employee Housing Facilities	20035-E
LIGHTING RATES		
LS-1	PG&E-Owned Street and Highway Lighting	18577,20036,15395,15396,20037-E
LS-2	Customer-Owned Street and Highway Lighting	15398,20038,20039,15401,15402,15403,20040-E
LS-3	Customer-Owned Street and Highway Lighting Electrolier Meter Rate	20041,15406,15407,20042-E
TC-1	Traffic Control Service	20043,15410,20044-E
OL-1	Outdoor Area Lighting Service	20045,15413,15414,20046-E
OTHER		
S	Standby Service	19218,20047,20048,20049,19281,16200,15421,16201,16202,15424,19282,16203,16204,16205,20050,19220,20051-E
E-DEPART	Departing Customers	15905-E
E-EXEMPT	Competition Transition Charge Exemption	16068,17116,16070,16071,16072,16073-E
E-TD	Transmission and Distribution Bypass Deferral Rate	15694,19721,19722,19723-E
E-TDI	Incremental Sales Rate for New Customers	15698,19724,19725-E
E-RRB	Rate Reduction Bonds Bill Credit and Fixed Transition Amount Charge	20052,14799-E
E-NET	Net Energy Metering Service	20592 to 20598-E (T)
E-EPS	Emergency Procurement Surcharge	20053,18515,18179,18180,18181,19727,18183,18184,20054-E
E-20/20	California 20/20 Rebate Program	18927,18928-E

(Continued)



TABLE OF CONTENTS

	CAL P.U.C. SHEET NO.	
Title Page	8285-E	
Table of Contents:		
Rate Schedules.....	20612,20611,20410-E	(T)
Preliminary Statements.....	20088,20087,19877-E	
Rules, Maps, Contracts and Deviations	20610-E	(T)
Sample Forms.....	19880,20377,20609,20608,20409,19572,19308-E	(T)

RATE SCHEDULES

SCHEDULE	TITLE OF SHEET	CAL P.U.C. SHEET NO.
RESIDENTIAL RATES		
E-1	Residential Service	19908,19909,19910,19911,19912-E
EE	Service to Company Employees.....	18188-E
EM	Master-Metered Multifamily Service.....	19913,19914,19915,19916,19917-E
ES	Multifamily Service.....	19918,19919,19920,19921,19922-E
ESR	Residential RV Park and Residential Marina Service	19923,19924,19925,19926,19927-E
ET	Mobilehome Park Service	19928,19929,19930,19931,19932-E
E-7	Residential Time-of-Use Service	19170,19933,19934,19935,19936-E
E-A7	Experimental Residential Alternate Peak Time-of-Use Service	19172,19937,19938,19939,19940-E
E-8	Residential Seasonal Service Option	19941,19942,19943-E
E-9	Experimental Residential Time-of-Use Service for Low Emission Vehicle Customers.....	19176,19944,19945,19946,19947,19948,18627,19949-E
EL-1	Residential CARE Program Service	19950,19951,19952,19953-E
EML	Master-Metered Multifamily CARE Program Service	19954,19955,19956,19957-E
ESL	Multifamily CARE Program Service	19958,19959,19960,19961-E
ESRL	Residential RV Park and Residential Marina CARE Program Service	19962,19963,19964,19965-E
ETL	Mobilehome Park CARE Program Service	19966,19967,19968,19969,19970-E
EL-7	Residential CARE Program Time-of-Use Service.....	19990,19971,19781,19972-E
EL-A7	Experimental Residential CARE Program Alternate Peak Time-of-Use Service	19192,19973,19783,19974-E
EL-8	Residential Seasonal CARE Program Service Option.....	19975,19976,19977-E
COMMERCIAL/INDUSTRIAL		
A-1	Small General Service	19978,19979,19980,19981-E
A-6	Small General Time-of-Use Service	19790,19982,19791,19983,19984-E
A-10	Medium General Demand-Metered Service .	19794,19985,19986,19987,19988,19989,19990-E
A-T	Nondomestic Interruptible Service.....	11862-E
A-RTP	Experimental Real-Time-Pricing Service	19992,19993-E
A-15	Direct-Current General Service	19992,19993-E
E-19	Medium General Demand-Metered Time-of-Use Service.....	19797,17092,17093,19994, 19995,19996,19603,19696,19319,18037,18864,18039,18040,18865,17900,16414,15330, 20512,20485, 20000,20001,20002,20003,20004,19800,19801,19802,20005,19804,19805, 19806,20006-E
E-20	Service to Customers with Maximum Demands of 1,000 Kilowatts or More	19209,17254,20007,20008, 20009,20010,20011,19314,20012,18866,18044,18045,18867,15356,16430,15358,20513, 20486,20013,20014,20015,20016,20017,16434,16435,16436,20018,17100,17101,20019-E

(Continued)