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AS-DELIVERED CAPACITY AND ENERGY
POWER PURCHASE AGREEMENT
BETWEEN
ALTEL CORP.
AND
PACIFIC GAS AND ELECTRIC COMPANY

(ALTAMONT LANDFILL PROJECT)

JANUARY 1987

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STANDARD OFFER #1:
AS-DELIVERED CAPACITY AND ENERGY
POWER PURCHASE AGREEMENT

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AS-DELIVERED CAPACITY AND ENERGY
POWER PURCHASE AGREEMENT
BETWEEN
ALTEL CORP.
AND
PACIFIC GAS AND ELECTRIC COMPANY

ALTEL CORP. ("Seller"), and PACIFIC GAS AND ELECTRIC COMPANY ("PG&E"), referred to collectively as "Parties" and individually as "Party", agree as follows:

ARTICLE 1 QUALIFYING STATUS

Seller warrants that, at the date of first power deliveries from Seller's Facility¹ and during the term of agreement, its Facility shall meet the qualifying facility requirements established as of the effective date of this Agreement by the Federal Energy Regulatory Commission's rules (18 Code of Federal Regulations 292) implementing the Public Utility Regulatory Policies Act of 1978 (16 U.S.C.A. 796, et seq.).

¹ Underlining identifies those terms which are defined in Section A-1 of Appendix A.

ARTICLE 2 PURCHASE OF POWER

1
2
3 (a) Seller shall sell and deliver and PG&E shall
4 purchase and accept from the Facility having a nameplate
5 rating of 13,200 kW located at 10840 Altamont Pass Road,
6 Livermore, California the as-delivered capacity and energy
7 at the voltage level of 230 kV. Seller has chosen net
8 energy output¹ as its energy sale option. Seller may
9 convert its energy sale option as provided in Section A-3 of
10 Appendix A.

11
12 (b) The scheduled operation date when Seller estimates
13 first delivery of electric energy from the Facility to PG&E
14 is August 1, 1988. At the end of each calendar quarter
15 Seller shall give to PG&E written notice of any change in
16 the scheduled operation date.

17
18 (c) The primary energy source for the Facility is gas
19 turbines, fueled by landfill gas.

20
21 (d) The transformer loss adjustment factor is 2%².

22
23
24 ¹ Insert either "net energy output" or "surplus energy output" to show
the energy sale option selected by Seller.

25 ² If Seller chooses to have meters placed on Seller's side of the
26 transformer, an estimated transformer loss adjustment factor of
27 2 percent, unless the Parties agree otherwise, will be applied. This
28 estimated transformer loss figure will be adjusted to a measurement
of actual transformer losses performed at Seller's request and expense.

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ARTICLE 3 PURCHASE PRICE

PG&E shall pay Seller for as-delivered capacity at prices authorized from time to time by the CPUC and which are derived from PG&E's full avoided costs as approved by the CPUC. PG&E shall pay Seller for energy at prices equal to PG&E's full short run avoided operating costs as approved by the CPUC. PG&E's current as-delivered capacity price calculation is shown in Appendix C. PG&E's current energy price calculation is shown in Table A, Appendix B.

ARTICLE 4 NOTICES

All written notices shall be directed as follows:

to PG&E: Pacific Gas and Electric Company
Attention: Senior Vice President -
Power Generation
77 Beale Street
San Francisco, CA 94106

to Seller: Altel Corp.
Attention: Regional Energy Coordinator
18500 Von Karman Avenue, Suite 900
Irvine, CA 92715

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ARTICLE 5 DESIGNATED SWITCHING CENTER

The designated PG&E switching center shall be unless changed by PG&E:

Tesla Substation
17545 Patterson Pass Road
Tracy, CA 95376
(209) 835-6391

ARTICLE 6 TERMS AND CONDITIONS

This Agreement includes the following appendices which are attached and incorporated by reference:

- Appendix A - GENERAL TERMS AND CONDITIONS
- Appendix B - ENERGY PRICES
- Appendix C - AS-DELIVERED CAPACITY PRICES
- Appendix D - INTERCONNECTION
- Appendix E - QUALIFYING FACILITY MILESTONE PROCEDURE

ARTICLE 7 QUALIFYING FACILITY MILESTONE PROCEDURE

(a) To accommodate power deliveries from the Facility under this Agreement, PG&E shall allocate to Seller existing transmission and distribution line capacity available when Seller establishes interconnection priority in accordance with the QFMP, PG&E's electric Rule No. 21 and this Agreement.

1 (b) Seller is responsible for complying with the terms
2 and conditions of the QFMP as it may be modified by
3 subsequent CPUC decisions following QFMP quarterly reviews
4 as ordered in Decision 85-12-075.

5
6 (c) Seller has read the QFMP and PG&E's electric Rule
7 No. 21, understands its obligations thereunder, and
8 acknowledges that Seller's failure to meet any milestone may
9 result in the termination of this Agreement in accordance
10 with the QFMP.

11
12 (d) The details of PG&E's obligation to notify Seller
13 as to whether or not Seller has met a particular QFMP
14 milestone are specified in the QFMP.

15
16 (e) Seller shall lose its interconnection priority if
17 it fails to meet any QFMP milestone. Seller shall then have
18 45 calendar days, commencing with the date Seller receives
19 written notice from PG&E of the loss of interconnection
20 priority, to establish a new interconnection priority. The
21 date of Seller's new priority shall be the date on which
22 Seller has submitted all of the following to PG&E:

23
24 (1) an updated Project Definition, as defined in
25 the QFMP,

26
27 (2) an updated preliminary or final project
28 development schedule, as appropriate, and

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(3) a written request for a new interconnection study.

Should the terms of this paragraph conflict with the terms of the QFMP, the terms of the QFMP shall prevail.

(f) In addition to the consequences specified in the QFMP, if Seller fails to establish a new interconnection priority as provided above, this Agreement shall terminate.

ARTICLE 8 TERM OF AGREEMENT

This Agreement shall become effective on the date of execution by the Parties and shall remain in effect until terminated by Seller or terminated pursuant to Article 7.

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

ALTEL CORP.

PACIFIC GAS AND ELECTRIC COMPANY

BY: Harold Cahill
HAROLD CAHILL

BY: Paula G. Rosput
PAULA G. ROSPUT

TITLE: Vice President

TITLE: Manager, QF Contracts

DATE SIGNED: 5/20/88

DATE SIGNED: June 1, 1988

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APPENDIX A
GENERAL TERMS AND CONDITIONS

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1 APPENDIX A

2 GENERAL TERMS AND CONDITIONS

3
4 A-1 DEFINITIONS

5
6 Whenever used in this Agreement, appendices, and
7 attachments hereto, the following terms shall have the
8 following meanings:

9
10 CPUC - The Public Utilities Commission of the State
11 of California.

12
13 Designated PG&E switching center - That switching
14 center or other PG&E installation identified in Article 5.

15
16 Facility - That generation apparatus described in
17 Article 2 and all associated equipment owned, maintained,
18 and operated by Seller.

19
20 Interconnection facilities - All means required and
21 apparatus installed to interconnect and deliver power from
22 the Facility to the PG&E system including, but not limited
23 to, connection, transformation, switching, metering,
24 communications, and safety equipment, such as equipment
25 required to protect (1) the PG&E system and its customers
26 from faults occurring at the Facility, and (2) the Facility
27 from faults occurring on the PG&E system or on the systems
28 of others to which the PG&E system is directly or indirectly

1 connected. Interconnection facilities also include any
2 necessary additions and reinforcements by PG&E to the PG&E
3 system required as a result of the interconnection of the
4 Facility to the PG&E system.

5
6 Net energy output - The Facility's gross output in
7 kilowatt-hours less station use and transformation and
8 transmission losses to the point of delivery into the PG&E
9 system. Where PG&E agrees that it is impractical to connect
10 the station use on the generator side of the power purchase
11 meter, PG&E may, at its option, apply a station load
12 adjustment.

13
14 Prudent electrical practices - Those practices,
15 methods, and equipment, as changed from time to time, that
16 are commonly used in prudent electrical engineering and
17 operations to design and operate electric equipment lawfully
18 and with safety, dependability, efficiency, and economy.

19
20 QFMP - The Qualifying Facility Milestone Procedure, a
21 milestone procedure adopted by the CPUC on January 16, 1985,
22 in Decision 85-01-038, as modified by Decisions 85-08-045,
23 85-11-017, and subsequent CPUC decisions following QFMP
24 quarterly reviews as ordered in Decision 85-12-075. The
25 QFMP, which outlines the procedure for establishing and
26 maintaining priority to interconnect with an electric
27 utility's transmission and distribution facilities, is
28 attached hereto as Appendix E.

1 Special facilities - Those additions and
2 reinforcements to the PG&E system which are needed to
3 accommodate the maximum delivery of energy and capacity from
4 the Facility as provided in this Agreement and those parts
5 of the interconnection facilities which are owned and
6 maintained by PG&E at Seller's request, including metering
7 and data processing equipment. All special facilities shall
8 be owned, operated, and maintained pursuant to PG&E's
9 electric Rule No. 21, which is attached hereto.

10
11 Station use - Energy used to operate the Facility's
12 auxiliary equipment. The auxiliary equipment includes, but
13 is not limited to, forced and induced draft fans, cooling
14 towers, boiler feed pumps, lubricating oil systems, plant
15 lighting, fuel handling systems, control systems, and sump
16 pumps.

17
18 Surplus energy output - The Facility's gross output,
19 in kilowatt-hours, less station use, and any other use by
20 the Seller, and transformation and transmission losses to
21 the point of delivery into the PG&E system.

22
23 Term of agreement - The period of time during which
24 this Agreement will be in effect as provided in Article 8.

25
26 Voltage level - The voltage at which the Facility
27 interconnects with the PG&E system, measured at the point of
28 delivery.

1 A-2 CONSTRUCTION

2

3 A-2.1 Land Rights

4

5 Seller hereby grants to PG&E all necessary rights of
6 way and easements to install, operate, maintain, replace,
7 and remove the special facilities, including adequate and
8 continuing access rights on property of Seller. Seller
9 agrees to execute such other grants, deeds, or documents as
10 PG&E may require to enable it to record such rights of way
11 and easements. If any part of PG&E's equipment is to be
12 installed on property owned by other than Seller, Seller
13 shall, at its own cost and expense, obtain from the owners
14 thereof all necessary rights of way and easements, in a form
15 satisfactory to PG&E, for the construction, operation,
16 maintenance, and replacement of PG&E's equipment upon such
17 property. If Seller is unable to obtain these rights of way
18 and easements, Seller shall reimburse PG&E for all costs
19 incurred by PG&E in obtaining them. PG&E shall at all times
20 have the right of ingress to and egress from the Facility at
21 all reasonable hours for any purposes reasonably connected
22 with this Agreement or the exercise of any and all rights
23 secured to PG&E by law or its tariff schedules.

24

25 A-2.2 Design, Construction, Ownership, and Maintenance

26

27 (a) Seller shall design, construct, install, own,
28 operate, and maintain all interconnection facilities, except

1 special facilities, to the point of interconnection with the
2 PG&E system as required for PG&E to receive as-delivered
3 capacity and energy from the Facility. The Facility and
4 interconnection facilities shall meet all requirements of
5 applicable codes and all standards of prudent electrical
6 practices and shall be maintained in a safe and prudent
7 manner. A description of the interconnection facilities for
8 which Seller is solely responsible is set forth in
9 Appendix D or if the interconnection requirements have not
10 yet been determined at the time of the execution of this
11 Agreement, the description of such facilities will be
12 appended to this Agreement at the time such determination is
13 made.

14
15 (b) Seller shall submit to PG&E the design and all
16 specifications for the interconnection facilities (except
17 special facilities) for review and written acceptance prior
18 to their release for construction purposes. PG&E shall
19 notify Seller in writing of the outcome of PG&E's review of
20 the design and specifications for Seller's interconnection
21 facilities within 30 days of the receipt of the design and
22 all of the specifications for the interconnection
23 facilities. Any flaws perceived by PG&E in the design and
24 specification for the interconnection facilities will be
25 described in PG&E's written notification. PG&E's review and
26 acceptance of the design and specifications shall not be
27 construed as confirming or endorsing the design and
28 specifications or as warranting their safety, durability, or

1 reliability. PG&E shall not, by reason of such review or
2 lack of review, be responsible for strength, details of
3 design, adequacy, or capacity of equipment built pursuant to
4 such design and specifications, nor shall PG&E's acceptance
5 be deemed to be an endorsement of any of such equipment.
6 Seller shall change the interconnection facilities as may be
7 reasonably required by PG&E to meet changing requirements of
8 the PG&E system.

9
10 (c) In the event it is necessary for PG&E to install
11 interconnection facilities for the purposes of this
12 Agreement, they shall be installed as special facilities.

13
14 (d) Upon the request of Seller, PG&E shall provide a
15 binding estimate for the installation of interconnection
16 facilities by PG&E.

17
18 A-2.3 Meter Installation

19
20 (a) PG&E shall specify, provide, install, own,
21 operate, and maintain as special facilities all metering and
22 data processing equipment for the registration and recording
23 of energy and other related parameters which are required
24 for the reporting of data to PG&E and for computing the
25 payment due Seller from PG&E.

26
27 (b) Seller shall provide, construct, install, own,
28 and maintain at Seller's expense all that is required to

1 accommodate the metering and data processing equipment, such
2 as, but not limited to, metal-clad switchgear, switchboards,
3 cubicles, metering panels, enclosures, conduits, rack
4 structures, and equipment mounting pads.

5
6 (c) PG&E shall permit meters to be fixed on PG&E's
7 side of the transformer. If meters are placed on PG&E's
8 side of the transformer, service will be provided at the
9 available primary voltage and no transformer loss adjustment
10 will be made. If Seller chooses to have meters placed on
11 Seller's side of the transformer, an estimated transformer
12 loss adjustment factor of 2 percent, unless the Parties
13 agree otherwise, will be applied.

14
15 A-3 ENERGY SALE OPTIONS

16
17 A-3.1 General

18
19 Seller has two energy sale options, net energy output
20 or surplus energy output. Seller has made its initial
21 selection in Article 2(a).

22
23 A-3.2 Energy Sale Conversion

24
25 (a) Seller is entitled to convert from one option to
26 the other 12 months after execution of this Agreement, and
27 thereafter at least 12 months after the effective date of
28

1 the most recent conversion, subject to the following
2 conditions:

3 (1) Seller shall provide PG&E with a written
4 request to convert its energy sale option.

5 (2) Seller shall comply with all applicable
6 tariffs on file with the CPUC and contracts in effect
7 between the Parties at the time of conversion
8 covering the existing and proposed (i) facilities
9 used to serve Seller's premises and
10 (ii) interconnection facilities.

11 (3) Seller shall install and operate equipment
12 required by PG&E to prevent PG&E from serving any
13 part of Seller's load which is served by the Facility
14 and not under contract for PG&E standby service. At
15 Seller's request, PG&E shall provide this equipment
16 as special facilities.

17
18 (b) If, as a result of an energy sales conversion,
19 Seller no longer requires the use of interconnection
20 facilities installed and/or operated and maintained by PG&E
21 as special facilities under a Special Facilities Agreement,
22 Seller may reserve these facilities, for its future use, by
23 continuing its performance under its Special Facilities
24 Agreement. If Seller does not wish to reserve such
25 facilities, it may terminate its Special Facilities
26 Agreement.

27
28

1 If Seller's energy sale conversion results in
2 its discontinuation of its use of PG&E facilities not
3 covered by Seller's Special Facilities Agreement, Seller
4 cannot reserve those facilities for future use. Seller's
5 future use of such facilities shall be contingent upon the
6 availability of such facilities at the time Seller requests
7 such use. If such facilities are not available, Seller
8 shall bear the expense necessary to install, own, and
9 maintain the needed additional facilities in accordance with
10 PG&E's applicable tariff.

11
12 (c) PG&E shall process requests for conversion in
13 the order received. The effective date of conversion shall
14 depend on the completion of the changes required to
15 accommodate Seller's energy sale conversion.

16
17 A-4 OPERATION

18
19 A-4.1 Inspection and Approval

20
21 Seller shall not operate the Facility in parallel
22 with PG&E's system until an authorized PG&E representative
23 has inspected the interconnection facilities, and PG&E has
24 given written approval to begin parallel operation. Seller
25 shall notify PG&E of the Facility's start-up date at least
26 45 days prior to such date. PG&E shall inspect the
27 interconnection facilities within 30 days of the receipt of
28 such notice. If parallel operation is not authorized by

1 PG&E, PG&E shall notify Seller in writing within five days
2 after inspection of the reason authorization for parallel
3 operation was withheld.

4
5 A-4.2 Facility Operation and Maintenance

6
7 Seller shall operate and maintain its Facility
8 according to prudent electrical practices, applicable laws,
9 orders, rules, and tariffs and shall provide such reactive
10 power support as may be reasonably required by PG&E to
11 maintain system voltage level and power factor. Seller
12 shall operate the Facility at the power factors or voltage
13 levels prescribed by PG&E's system dispatcher or designated
14 representative. If Seller fails to provide reactive power
15 support, PG&E may do so at Seller's expense.

16
17 A-4.3 Point of Delivery

18
19 Seller shall deliver the energy at the point where
20 Seller's electrical conductors (or those of Seller's agent)
21 contact PG&E's system as it shall exist whenever the
22 deliveries are being made or at such other point or points
23 as the Parties may agree in writing. The initial point of
24 delivery of Seller's power to the PG&E system is set forth
25 in Appendix D.

1 A-4.4 Operating Communications

2
3 (a) Seller shall maintain operating communications
4 with the designated PG&E switching center. The operating
5 communications shall include, but not be limited to, system
6 paralleling or separation, scheduled and unscheduled
7 shutdowns, equipment clearances, levels of operating voltage
8 or power factors, and daily capacity and generation reports.
9

10 (b) Seller shall keep a daily operations log for
11 each generating unit which shall include information on unit
12 availability, maintenance outages, circuit breaker trip
13 operations requiring a manual reset, and any significant
14 events related to the operation of the Facility.
15

16 (c) If Seller makes deliveries greater than one
17 megawatt, Seller shall measure and register on a graphic
18 recording device power in kW and voltage in kV at a location
19 within the Facility agreed to by both Parties.
20

21 (d) If Seller makes deliveries greater than one and
22 up to and including ten megawatts, Seller shall report to
23 the designated PG&E switching center, twice a day at agreed
24 upon times for the current day's operation, the hourly
25 readings in kW of capacity delivered and the energy in kWh
26 delivered since the last report.
27
28

1 (e) If Seller makes deliveries of greater than ten
2 megawatts, Seller shall telemeter the delivered capacity and
3 energy information, including real power in kW, reactive
4 power in kVAR, and energy in kWh to a switching center
5 selected by PG&E. PG&E may also require Seller to telemeter
6 transmission kW, kVAR, and kV data depending on the number
7 of generators and transmission configuration. Seller shall
8 provide and maintain the data circuits required for
9 telemetering. When telemetering is inoperative, Seller
10 shall report daily the capacity delivered each hour and the
11 energy delivered each day to the designated PG&E switching
12 center.

13

14 A-4.5 Meter Testing and Inspection

15

16 (a) All meters used to provide data for the
17 computation of the payments due Seller from PG&E shall be
18 sealed, and the seals shall be broken only by PG&E when the
19 meters are to be inspected, tested, or adjusted.

20

21 (b) PG&E shall inspect and test all meters upon
22 their installation and annually thereafter. At Seller's
23 request and expense, PG&E shall inspect or test a meter more
24 frequently. PG&E shall give reasonable notice to Seller of
25 the time when any inspection or test shall take place, and
26 Seller may have representatives present at the test or
27 inspection. If a meter is found to be inaccurate or

28

1 defective, PG&E shall adjust, repair, or replace it at its
2 expense in order to provide accurate metering.

3
4 A-4.6 Adjustments to Meter Measurements

5
6 If a meter fails to register, or if the measurement
7 made by a meter during a test varies by more than two
8 percent from the measurement made by the standard meter used
9 in the test, an adjustment shall be made correcting all
10 measurements made by the inaccurate meter for (1) the actual
11 period during which inaccurate measurements were made, if
12 the period can be determined, or if not, (2) the period
13 immediately preceding the test of the meter equal to
14 one-half the time from the date of the last previous test of
15 the meter, provided that the period covered by the
16 correction shall not exceed six months.

17
18 A-5 PAYMENT

19
20 PG&E shall mail to Seller not later than 30 days
21 after the end of each monthly billing period (1) a statement
22 showing the kilowatt-hours delivered to PG&E during on-peak,
23 partial-peak, and off-peak periods during the monthly
24 billing period, (2) PG&E's computation of the payment due
25 Seller, and (3) PG&E's check in payment of said amount.
26 Except as provided in Section A-6, if within 30 days of
27 receipt of the statement Seller does not make a report in
28 writing to PG&E of an error, Seller shall be deemed to have

1 waived any error in PG&E's statement, computation, and
2 payment, and they shall be considered correct and complete.
3

4 A-6 ADJUSTMENTS OF PAYMENTS
5

6 (a) In the event adjustments to payments are
7 required as a result of inaccurate meters, PG&E shall use
8 the corrected measurements described in Section A-4.6 to
9 recompute the amount due from PG&E to Seller for the
10 as-delivered capacity and energy delivered under this
11 Agreement during the period of inaccuracy.
12

13 (b) The additional payment to Seller or refund to
14 PG&E shall be made within 30 days of notification of the
15 owing Party of the amount due.
16

17 A-7 ACCESS TO RECORDS AND PG&E DATA
18

19 Each Party, after reasonable written notice to the
20 other Party, shall have the right of access to all metering
21 and related records including the operations logs of the
22 Facility. Data filed by PG&E with the CPUC pursuant to CPUC
23 orders governing the purchase of power from qualifying
24 facilities shall be provided to Seller upon request;
25 provided that Seller shall reimburse PG&E for the costs it
26 incurs to respond to such request.
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1 A-8 CURTAILMENT OF DELIVERIES AND HYDRO SPILL CONDITIONS

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(a) PG&E shall not be obligated to accept or pay for and may require Seller to interrupt or reduce deliveries of as-delivered capacity and energy (1) when necessary in order to construct, install, maintain, repair, replace, remove, investigate, or inspect any of its equipment or any part of its system, or (2) if it determines that interruption or reduction is necessary because of emergencies, forced outages, force majeure, or compliance with prudent electrical practices.

(b) In anticipation of a period of hydro spill conditions, as defined by the CPUC, PG&E may notify Seller that any purchases of energy from Seller during such period shall be at hydro savings prices quoted by PG&E. If Seller delivers energy to PG&E during any such period, Seller shall be paid hydro savings prices for those deliveries in lieu of prices which would otherwise be applicable. The hydro savings prices shall be calculated by PG&E using the following formula:

$$\frac{AQF - S}{AQF} \times PP$$

where:

AQF = Energy, in kWh, projected to be available during hydro spill conditions from all qualifying facilities

1 under agreements containing hydro savings price
2 provisions.

3 S = Potential energy, in kWh, from PG&E hydro facilities
4 which will be spilled if all AQF is delivered to
5 PG&E.

6 PP = Prices published by PG&E for purchases during other
7 than hydro spill conditions.

8
9 (c) PG&E shall not be obligated to accept or pay for
10 and may require Seller with a Facility with a nameplate
11 rating of one megawatt or greater to interrupt or reduce
12 deliveries of as-delivered capacity and energy during
13 periods when purchases under this Agreement would result in
14 costs greater than those which PG&E would incur if it did
15 not make such purchases but instead generated an equivalent
16 amount of energy itself.

17
18 (d) Whenever possible, PG&E shall give Seller
19 reasonable notice of the possibility that interruption or
20 reduction of deliveries under subsections (a) or (c), above,
21 may be required. PG&E shall give Seller notice of general
22 periods when hydro spill conditions are anticipated, and
23 shall give Seller as much advance notice as practical of any
24 specific hydro spill period and the hydro savings price
25 which will be applicable during such period. Before
26 interrupting or reducing deliveries under subsection (c),
27 above, and before invoking hydro savings prices under
28 subsection (b) above, PG&E shall take reasonable steps to

1 make economy sales of the surplus energy giving rise to the
2 condition. If such economy sales are made, while the
3 surplus energy condition exists Seller shall be paid at the
4 economy sales price obtained by PG&E in lieu of the
5 otherwise applicable prices.

6
7 (e) If Seller is selling net energy output to PG&E
8 and simultaneously purchasing its electrical needs from
9 PG&E, energy curtailed pursuant to subsections (b) or (c)
10 above shall not be used by Seller to meet its electrical
11 needs. When Seller elects not to sell energy to PG&E at the
12 hydro savings price pursuant to subsection (b) or when PG&E
13 curtails deliveries of energy pursuant to subsection (c),
14 Seller shall continue to purchase all its electrical needs
15 from PG&E. If Seller is selling surplus energy output to
16 PG&E, subsections (b) or (c) shall only apply to the surplus
17 energy output being delivered to PG&E, and Seller can
18 continue to internally use that generation it has retained
19 for its own use.

20
21 A-9 FORCE MAJEURE

22
23 (a) The term force majeure as used herein means
24 unforeseeable causes beyond the reasonable control of and
25 without the fault or negligence of the Party claiming force
26 majeure including, but not limited to, acts of God, labor
27 disputes, sudden actions of the elements, actions by
28 federal, state, and municipal agencies, and actions of

1 legislative, judicial or regulatory agencies which conflict
2 with the terms of this Agreement.

3

4 (b) If either Party because of force majeure is
5 rendered wholly or partly unable to perform its obligations
6 under this Agreement, that Party shall be excused from
7 whatever performance is affected by the force majeure to the
8 extent so affected provided that:

9

10 (1) The non-performing Party, within two weeks
11 after the occurrence of the force majeure, gives the
12 other Party written notice describing the particulars
13 of the occurrence,

14 (2) the suspension of performance is of no
15 greater scope and of no longer duration than is
16 required by the force majeure,

17 (3) the non-performing Party uses its best
18 efforts to remedy its inability to perform (this
19 subsection shall not require the settlement of any
20 strike, walkout, lockout, or other labor dispute on
21 terms which, in the sole judgment of the Party
22 involved in the dispute, are contrary to its
23 interest. It is understood and agreed that the
24 settlement of strikes, walkouts, lockouts, or other
25 labor disputes shall be at the sole discretion of the
26 Party having the difficulty), and

27 (4) when the non-performing Party is able to
28 resume performance of its obligations under this

1 Agreement, that Party shall give other Party written
2 notice to that effect.

3
4 (c) In the event a Party is unable to perform due to
5 legislative, judicial or regulatory agency action, this
6 Agreement shall be renegotiated to comply with the legal
7 change which caused the non-performance.

8
9 A-10 INDEMNITY

10
11 Each Party as indemnitor shall save harmless and
12 indemnify the other Party and the directors, officers, and
13 employees of such other Party against and from any and all
14 loss and liability for injuries to persons including
15 employees of either Party, and property damages, including
16 property of either Party, resulting from or arising out of
17 (1) the engineering, design, construction, maintenance, or
18 operation of or (2) the making of replacements, additions,
19 or betterments to, the indemnitor's facilities. This
20 indemnity and save harmless provision shall apply
21 notwithstanding the active or passive negligence of the
22 indemnitee. Neither Party shall be indemnified hereunder
23 for liability or loss resulting from its sole negligence or
24 willful misconduct. The indemnitor shall, on the other
25 Party's request, defend any suit asserting a claim covered
26 by this indemnity and shall pay all costs, including
27 reasonable attorney fees, that may be incurred by the other
28 Party in enforcing this indemnity.

1 A-11 LIABILITY; DEDICATION

2

3 (a) Nothing in this Agreement shall create any duty
4 to, any standard of care with reference to, or any liability
5 to any person not a Party to it. Neither Party shall be
6 liable to the other Party for consequential damages.

7

8 (b) Each Party shall be responsible for protecting
9 its facilities from possible damage by reason of electrical
10 disturbances or faults caused by the operation, faulty
11 operation, or nonoperation of the other Party's facilities,
12 and such other Party shall not be liable for any such
13 damages so caused.

14

15 (c) No undertaking by one Party to the other under
16 any provision of this Agreement shall constitute the
17 dedication of that Party's system or any portion thereof to
18 the other Party or to the public nor affect the status of
19 PG&E as an independent public utility corporation or Seller
20 as an independent individual or entity and not a public
21 utility.

22

23 A-12 SEVERAL OBLIGATIONS

24

25 Except where specifically stated in this Agreement to
26 be otherwise, the duties, obligations, and liabilities of
27 the Parties are intended to be several and not joint or
28 collective. Nothing contained in this Agreement shall ever

1 be construed to create an association, trust, partnership,
2 or joint venture or impose a trust or partnership duty,
3 obligation, or liability on or with regard to either Party.
4 Each Party shall be liable individually and severally for
5 its own obligations under this Agreement.

6

7 A-13 NON-WAIVER

8

9 Failure to enforce any right or obligation by either
10 Party with respect to any matter arising in connection with
11 this Agreement shall not constitute a waiver as to that
12 matter or any other matter.

13

14 A-14 ASSIGNMENT

15

16 Neither Party shall voluntarily assign its rights nor
17 delegate its duties under this Agreement, or any part of
18 such rights or duties, without the written consent of the
19 other Party, except in connection with the sale or merger of
20 a substantial portion of its properties. Any such
21 assignment or delegation made without such written consent
22 shall be null and void. Consent for assignment will not be
23 withheld unreasonably. Such assignment shall include,
24 unless otherwise specified therein, all of Seller's rights
25 to any refunds which might become due under this Agreement.

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1 A-15 CAPTIONS

2

3 All indexes, titles, subject headings, section
4 titles, and similar items are provided for the purpose of
5 reference and convenience and are not intended to affect the
6 meaning of the contents or scope of this Agreement.

7

8 A-16 CHOICE OF LAWS

9

10 This Agreement shall be interpreted in accordance
11 with the laws of the State of California, excluding any
12 choice of law rules which may direct the application of the
13 laws of another jurisdiction.

14

15 A-17 GOVERNMENTAL JURISDICTION AND AUTHORIZATION

16

17 Seller shall obtain any governmental authorizations
18 and permits required for the construction and operation of
19 the Facility. Seller shall reimburse PG&E for any and all
20 losses, damages, claims, penalties or liability it incurs as
21 a result of Seller's failure to obtain or maintain such
22 authorizations and permits.

23

24 A-18 NOTICES

25

26 Any notice, demand, or request required or permitted
27 to be given by either Party to the other, and any instrument
28 required or permitted to be tendered or delivered by either

1 Party to the other, shall be in writing and so given,
2 tendered, or delivered, as the case may be, by depositing
3 the same in any United States Post Office with postage
4 prepaid for transmission by certified mail, return receipt
5 requested, addressed to the Party, or personally delivered
6 to the Party, at the address in Article 4 of this Agreement.

7
8 Changes in such designation may be made by notice similarly
9 given.

10
11 A-19 INSURANCE

12
13 A-19.1 General Liability Coverage

14
15 (a) Seller shall maintain during the performance
16 hereof, General Liability Insurance¹ of not less than
17 \$1,000,000 if the Facility is over 100 kW, \$500,000 if the
18 Facility is over 20 kW to 100 kW, and \$100,000 if the
19 Facility is 20 kW or below of combined single limit or
20 equivalent for bodily injury, personal injury, and property
21 damage as the result of any one occurrence.

22
23 (b) General Liability Insurance shall include
24 coverage for Premises-Operations, Owners and Contractors
25 Protective, Products/Completed Operations Hazard, Explosion,
26

27
28 ¹ Governmental agencies which have an established record of self-
insurance may provide the required coverage through self-insurance.

1 Collapse, Underground, Contractual Liability, and Broad Form
2 Property Damage including Completed Operations.
3

4 (c) Such insurance, by endorsement to the
5 policy(ies), shall include PG&E as an additional insured if
6 the Facility is over 100 kW insofar as work performed by
7 Seller for PG&E is concerned, shall contain a severability
8 of interest clause, shall provide that PG&E shall not by
9 reason of its inclusion as an additional insured incur
10 liability to the insurance carrier for payment of premium
11 for such insurance, and shall provide for 30-days' written
12 notice to PG&E prior to cancellation, termination,
13 alteration, or material change of such insurance.
14

15 A-19.2 Additional Insurance Provisions
16

17 (a) Evidence of coverage described above in Section
18 A-19.1 shall state that coverage provided is primary and is
19 not excess to or contributing with any insurance or self-
20 insurance maintained by PG&E.
21

22 (b) PG&E shall have the right to inspect or obtain a
23 copy of the original policy(ies) of insurance.
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25 (c) Seller shall furnish the required certificates
26 and endorsements to PG&E prior to commencing operation.
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(d) All insurance certificates¹, endorsements, cancellations, terminations, alterations, and material changes of such insurance shall be issued and submitted to the following:

PACIFIC GAS AND ELECTRIC COMPANY
Attention: Manager - Insurance Department
77 Beale Street, Room E280
San Francisco, CA 94106

¹ A governmental agency qualifying to maintain self-insurance should provide a statement of self-insurance.

APPENDIX B
ENERGY PRICES

TABLE A

Energy Prices Effective May 1, 1988 to July 31, 1988

The energy purchase price calculations which will apply to energy deliveries determined from meter readings taken during May, June, and July 1988 are as follows:

Time Period	(a) Incremental Energy Rate ¹ (Btu/kWh)	(b) Cost of Energy ² (\$/mmBtu)	(c) Revenue Requirement for Cash Working Capital ³ (\$/kWh)	(d) Geothermal Adder ⁴ (\$/kWh)	(e) Energy Purchase Price ⁵ (e)=[(a)x(b)]+(c)+(d) (\$/kWh)
Time of Delivery Basis:					
Peak	10,007	2.9905	0.00014	0.00008547	0.03015
Partial-Peak	9,579	2.9905	0.00014	0.00008547	0.02887
Off-Peak	8,938	2.9905	0.00013	0.00008547	0.02694
Super Off-Peak	7,953	2.9905	0.00011	0.00008547	0.02398
Seasonal Average	9,090	2.9905	0.00013	0.00008547	0.02740

¹ Incremental energy rates (Btu/kWh) are derived from PG&E's marginal energy costs (which include variable operating and maintenance expense) adopted by the CPUC in Decision No. 87-12-091. They are based upon natural gas as the incremental fuel and weighted average hydroelectric power conditions.

² Weighted average cost of natural gas under PG&E Schedule No. G-UEG effective on May 1, 1988.

³ Revenue requirement for cash working capital as prescribed by the CPUC in Decision No. 86-12-091.

⁴ Geothermal adder is calculated as specified in Decision No. 86-12-091.

⁵ Energy Purchase Price = (Incremental Energy Rate x Cost of Energy) + Revenue Requirement for Cash Working Capital + Geothermal Adder. The energy purchase price excludes the applicable energy line loss adjustment factors. However, as ordered by Ordering Paragraph No. 12(j) of CPUC Decision No. 82-12-120, this figure is currently 1.0 for transmission and primary distribution loss adjustments and is equal to marginal cost line loss adjustment factors for the secondary distribution voltage level. These factors may be changed by CPUC in the future. The currently applicable energy loss adjustment factors are shown in Table C.

TABLE B¹
Time Periods

	Monday through <u>Friday</u> ²	Saturdays, Sundays, <u>and Holidays</u>
4	Seasonal Period A (May 1 through October 31)	
5	Peak	None
6	Noon to 6:00 p.m.	
7	Partial-Peak	None
8	8:30 a.m. to Noon	
9	6:00 p.m. to 9:30 p.m.	
10	Off-Peak	
11	9:30 p.m. to 1:00 a.m.	
12	5:00 a.m. to 8:30 a.m.	5:00 a.m. to 1:00 a.m.
13		
14	Super Off-Peak	1:00 a.m. to 5:00 a.m.
15	Seasonal Period B (November 1 - April 30)	
16	Partial-Peak	None
17	8:30 a.m. to 9:30 p.m.	
18	Off-Peak	
19	9:30 p.m. to 1:00 a.m.	
20	5:00 a.m. to 8:30 a.m.	5:00 a.m. to 1:00 a.m.
21	Super Off-Peak	1:00 a.m. to 5:00 a.m.
22	1:00 a.m. to 5:00 a.m.	

1 This table is subject to change to accord with the peak, partial-peak, off-peak and super off-peak periods as defined in PGandE's own rate schedules for the sale of electricity to its large industrial customers.

2 Except the following holidays: New Year's Day, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, and Christmas Day, as specified in Public Law 90-363 (5 U.S.C.A. Section 6103(a)).

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TABLE C

Energy Loss Adjustment Factors

	<u>Transmission</u>	<u>Primary Distribution</u>	<u>Secondary Distribution</u>
Seasonal Period A (May 1 through September 30)			
On-Peak	1.0	1.0	1.0148
Partial-Peak	1.0	1.0	1.0131
Off-Peak	1.0	1.0	1.0093
Seasonal Period B (October 1 through April 30)			
On-Peak	1.0	1.0	1.0128
Partial-Peak	1.0	1.0	1.0119
Off-Peak	1.0	1.0	1.0087

¹ The applicable energy loss adjustment factors may be revised pursuant to orders of the CPUC.

1 APPENDIX C

2 AS-DELIVERED CAPACITY PRICES

3
4 Purchase Price for As-Delivered Capacity
5 from Qualifying Facilities for 1988
6

7 For Facilities with time-of-delivery metering and
8 from which PG&E is contractually obligated to purchase
9 as-delivered capacity at its annually published as-delivered
10 capacity price, the as-delivered capacity payment for power
11 delivered by the Facility to PG&E and accepted by PG&E is
12 based on 100 percent of the shortage value of such power.
13 The payment will be made at a rate which will vary by time
14 of delivery and will be made for each kWh produced and
15 delivered by the Facility. The as-delivered capacity
16 purchase price is shown on Table C as a function of the
17 interconnection voltage, and is the product of three
18 factors:

19
20 (a) The current shortage cost in each year the
21 Facility is operating. Currently, this shortage cost, \$42
22 per kW-year, is the product of the annualized gas turbine
23 cost as prescribed by the CPUC in Decision No. 86-08-083
24 (August 20, 1986) and the Energy Reliability Index (ERI)
25 adjustment factor, as prescribed by the CPUC in Decision No.
26 83-12-068 (December 22, 1983). The basis for the shortage
27 cost may be revised by the CPUC from time to time.
28

1 (b) A capacity loss adjustment factor. The current
2 shortage cost is adjusted for the effect of the deliveries
3 on PG&E's transmission and distribution losses based on the
4 Seller's interconnection voltage level. The applicable
5 capacity loss adjustment factors for non-remote¹ Facilities
6 are presented in Table A. Capacity loss adjustment factors
7 for remote Facilities shall be calculated individually.

8
9 (c) An allocation factor, which accounts for the
10 different values of as-delivered capacity in different time
11 periods, and converts dollars per kW-year to cents per kWh.
12 The allocation factors are presented in Table B. The time
13 periods to which they apply are shown in Table B,
14 Appendix B.

15
16 For Facilities without time-of-delivery metering, the
17 price paid for as-delivered capacity shall be 50% of the
18 current shortage cost (a) multiplied by a capacity loss
19 adjustment factor (b) and multiplied by a weighted average
20 allocation factor (c).

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28 ¹ As defined by the CPUC.

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TABLE A

Capacity Loss Adjustment Factors¹
for Non-Remote² Facilities

<u>Voltage Level</u>	<u>Loss Adjustment Factor</u>
Transmission	.989
Primary Distribution	.991
Secondary Distribution	.991

TABLE B

Allocation Factors for
As-Delivered Capacity³

<u>With Time-of Delivery Metering</u>	<u>On-Peak</u>	<u>Partial-Peak</u>	<u>Off-Peak</u>	<u>Super Off-Peak</u>
	(¢-yr/\$-hr)	(¢-yr/\$-hr)	(¢-yr/\$-hr)	(¢-yr/S-hr)
Seasonal Period A	.1121	.0151	.000000	.000000
Seasonal Period B	None	.0001	.000000	.000000
<u>Without Time-of Delivery Metering</u>	<u>Weighted Average</u> (¢-yr/\$-hr)			
Seasonal Period A	.0226			
Seasonal Period B	.0001			

1 The capacity loss adjustment factors for non-remote Facilities are subject to change pursuant to orders of the CPUC. The capacity loss adjustment factors for remote Facilities are determined individually.

2 As defined by the CPUC.

3 The units for the allocation factor, ¢-yr/\$-hr, are derived from the conversion of \$/kW-yr into ¢/kWh as follows:

$$\frac{\text{¢/kWh}}{\text{\$/kW-yr}} = \frac{\text{¢/kW-hr}}{\text{\$/kW-yr}} = \frac{\text{¢-yr}}{\text{\$-hr}}$$

The allocation factors were prescribed by the CPUC in Decision No. 83-12-068 and are subject to change from time to time.

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TABLE C

Payment for As-Delivered Capacity
from Non-Remote¹ Qualifying Facilities

(The product of the current shortage
cost (a), the capacity loss adjustment
factor (b), and the allocation factor (c))

	<u>Transmission Voltage</u>		<u>Primary & Secondary Distribution Voltage</u>	
	<u>Seasonal Period A</u> (¢/kWh)	<u>Seasonal Period B</u> (¢/kWh)	<u>Seasonal Period A</u> (¢/kWh)	<u>Seasonal Period B</u> (¢/kWh)
<u>With Time-of Delivery Metering</u>				
Time of Delivery				
On-Peak	4.656	None	4.666	None
Partial-Peak	0.627	0.004	0.629	0.004
Off-Peak	0.000	0.000	0.000	0.000
Super Off-Peak	0.000	0.000	0.000	0.000
<u>Without Time-of Delivery Metering</u>				
Weighted Average	0.469	0.000	0.470	0.000

¹ As defined by the CPUC.

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APPENDIX D
INTERCONNECTION

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D-3	INTERCONNECTION FACILITIES FOR WHICH SELLER IS RESPONSIBLE	D-4

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D-1 INTERCONNECTION TARIFFS

The applicable tariffs in effect at the time of execution of this Agreement is attached.



RULE 21 -- NONUTILITY-OWNED PARALLEL GENERATION

This describes the minimum operation, metering and interconnection requirements for any generating source or sources paralleled with the Utility's electric system. Such source or sources may include, but are not limited to, hydroelectric generators, wind-turbine generators, steam or gas driven turbine generators and photovoltaic systems.

A. GENERAL

1. The type of interconnection and voltage available at any location and the Utility's specific interconnection requirements shall be determined by inquiry at the Utility's local office.
2. The Power Producer (Producer) will normally connect to the Utility's facilities at or above the minimum nominal voltage indicated in the table below. (N)

Net Generator Output (MVA)	Minimum Nominal Voltage (kv)
0 to less than 12	None
12 to less than 30	60, 70
30 to less than 90	115
90 to less than 250	230
greater than 250	To be determined on a case-by-case basis

The Utility shall determine where the Producer may connect to its system. Any deviation from this table shall be at the sole discretion of the Utility. (N)

3. The Producer shall ascertain and be responsible for compliance with the requirements of all governmental authorities having jurisdiction.
4. The Producer shall sign the Utility's written form of power purchase agreement or parallel operation agreement and a "Standard Operating Agreement for Facilities 40 kW and Larger" before connecting or operating a generating source in parallel with the Utility's system.
5. The Producer shall be fully responsible for the costs of designing, installing, owning, operating and maintaining all interconnection facilities defined in Section B.1.
6. The Producer shall submit to the Utility, for the Utility's review and written acceptance, equipment specifications and detailed plans for the installation of all interconnection facilities to be furnished by the Producer prior to their purchase or installation. The Utility's review and written acceptance of the Producer's equipment specifications and detailed plans shall not be construed as confirming or endorsing the Producer's design or as warranting the equipment's safety, durability or reliability. The Utility shall not, by reason of such review or lack of review, be responsible for strength, details of design adequacy, or capacity of equipment built pursuant to such specifications, nor shall the Utility acceptance be deemed an endorsement of any such equipment.
7. No generating source shall be operated in parallel with the Utility's system until the interconnection facilities have been inspected by the Utility and the Utility has provided written approval to the Producer.
8. Only duly authorized employees of the Utility are allowed to connect Producer-installed interconnection facilities to, or disconnect the same from, the Utility's facilities. (T)

B. INTERCONNECTION FACILITIES

1. GENERAL: Interconnection facilities are all means required, and apparatus installed, to interconnect the Producer's generation with the Utility's system. Where the Producer desires to sell power to the Utility, interconnection facilities are also all

(Continued)



RULE 21 -- NONUTILITY-OWNED PARALLEL GENERATION (Cont'd.)

B. INTERCONNECTION FACILITIES (Continued)

means required, and apparatus installed, to enable the Utility to receive power deliveries from the Producer. Interconnection facilities may include, but are not limited to:

- a. connection, transformation, switching, metering, communications, control, protective and safety equipment; and
- b. any necessary additions to and reinforcements of the Utility's system by the Utility. Interconnection facilities shall be categorized as either:
 - (1) Producer-specific facilities - those interconnection facilities that have a direct benefit only to the Producer(s). (N)
 - (2) Multipurpose facilities - those interconnection facilities that have a direct benefit to the Utility's system as well as the Producer(s). (N)

2. CONTROL, PROTECTION AND SAFETY EQUIPMENT (L)

- a. GENERAL: The Utility has established functional requirements essential for safe and reliable parallel operation of the Producer's generation. These requirements provide for control, protective and safety equipment to:
 - (1) sense and properly react to failure and malfunction on the Utility's system;
 - (2) assist the Utility in maintaining its system integrity and reliability; and
 - (3) protect the safety of the public and the Utility's personnel.
- b. Listed below are the various devices and features generally required by the Utility as a prerequisite to parallel operation of the Producer's generation:

CONTROL, PROTECTION AND SAFETY EQUIPMENT GENERAL REQUIREMENTS¹

Device or Feature	GENERATOR SIZE					
	10 kw or Less	11 kw to 40 kw	41 kw to 100 kw	101 kw to 400 kw	401 kw to 1,000 kw	Over 1,000 kw
Dedicated Transformer ²	-	X	X	X	X	X
Interconnection Disconnect Device	X	X	X	X	X	X
Generator Circuit Breaker	X	X	X	X	X	X
Over-voltage Protection	X	X	X	X	X	X
Under-voltage Protection	-	-	X	X	X	X
Under/Over-frequency Protection	X	X	X	X	X	X
Ground Fault Protection	-	-	X	X	X	X
Over-current Relay w/Voltage Restraint	-	-	-	-	X	X
Synchronizing	Manual	Manual	Manual	Manual	Manual	Automatic
Power Factor or Voltage Regulation Equipment	-	-	X	X	X	X (T)
Fault Interrupting Device	-	-	-	X	X	X (N)

- c. DISCONNECT DEVICE: The Producer shall provide, install, own and maintain the interconnection disconnect device required by Section B.2.b at a location readily accessible to the Utility. Such device shall normally be located near the Utility's meter or meters for sole operation by the Utility. The interconnection disconnect device and its precise location shall be specified by the Utility. At the Producer's option and request, the Utility will provide, install, own and maintain the disconnect device on the Utility's system as special facilities in accordance with Section F.

¹Detailed requirements are specified in the Utility's current operating, metering and equipment protection publications, as revised from time to time by the Utility and available to the Producer upon request. For a particular generator application, the Utility will furnish its specific control, protective and safety requirements to the Producer after the exact location of the generator has been agreed upon and the interconnection voltage level has been established.

²This is a transformer interconnected with no other Producers and serving no other Utility customers. Although the dedicated transformer is not a requirement for generators rated 10 kw or less, its installation is recommended by the Utility.

³This is a requirement for synchronous and other types of generators with stand-alone capability. For all such generators, the Utility will also require the installation of "reclose blocking" features on its system to block certain operations of the Utility's automatic line restoration equipment.

⁴To be installed by the Producer at the point where his ownership changes with the Utility. (N)



RULE 21 -- NONUTILITY-OWNED PARALLEL GENERATION (Cont'd.)

B. INTERCONNECTION FACILITIES (Continued)

3. METERING

(L)

a. A Producer desiring to sell power to the Utility shall provide, install, own and maintain all facilities necessary to accommodate metering equipment specified by the Utility. Such metering equipment may include meters, telemetering (applicable where deliveries to the Utility exceed 10 MW) and other recording and communications devices as may be required for the reporting of power delivery data to the Utility. Except as provided for in Section B.3.b following, the Utility shall provide, install, own and maintain all metering equipment as special facilities in accordance with Section F.

(T)

b. The Producer may at its option provide, install, own and maintain current and potential transformers rated above 600 volts and a non-revenue type graphic recorder where applicable. Such metering equipment, its installation and maintenance shall all be in conformance with the Utility's specifications.

c. The Utility's meters shall be equipped with detents to prevent reverse registration so that power deliveries to and from the Producer's equipment can be separately recorded.

4. UTILITY SYSTEM ADDITIONS AND REINFORCEMENTS

a. Except as provided for in Section B.5, all additions to and reinforcements of the Utility's system necessary to interconnect with and receive power deliveries from the Producer's generation will be provided, installed, owned and maintained by the Utility. All prudent and reasonable costs of multipurpose facilities are the responsibility of the Utility. Costs of all producer-specific facilities and costs of those multipurpose facilities which are not deemed prudent and reasonable are the responsibility of the Producer(s) and will be billed as special facilities in accordance with Section F.

(N)

b. Costs of multipurpose facilities shall be deemed prudent and reasonable if those facilities meet both of the following criteria:

(1) Facilities are at the voltage guidelines specified in Section A.2.

(2) The cost of multipurpose facilities does not exceed the level determined by the Utility. The cost level will be submitted to the Public Utilities Commission for review 30 days after this rule has been accepted and will become effective 30 days thereafter. The cost level will be updated by the same method, if appropriate, on or about January 1 of each year.

(N)

c. The Producer shall advance to the Utility its estimated costs of performing a preliminary or detailed engineering study as may be reasonably required to identify any Producer-related Utility system additions and reinforcements. Where the Producer has requested a detailed study, the Utility will complete its study within 120 days of receiving all necessary plans, specifications and fees from the Producer.

(N)

(N)

5. PRODUCER-INSTALLED UTILITY-OWNED LINE EXTENSIONS: The Producer may at its option employ a qualified contractor/subcontractor (as defined in Rule 1) to provide and install an extension of the Utility's distribution or transmission lines where required to complete the Producer's interconnection with the Utility. Such extension shall be installed in accordance with the Utility's design and specifications. The Producer shall pay the Utility the Utility's estimated costs of design, administration and inspection as may be reasonably required to assure such extension is installed in compliance with the Utility's requirements. Upon final inspection and acceptance by the Utility, the Producer shall transfer ownership of the line extension to the Utility where thereafter it shall be owned and maintained as special facilities in accordance with Section F. This provision does not preclude the Producer from installing, owning and maintaining a distribution or transmission line extension as part of its other Producer-owned interconnection facilities.

(N)

(T)

(Continued)



RULE 21 -- NONUTILITY-OWNED PARALLEL GENERATION (Cont'd.)

B. INTERCONNECTION FACILITIES (Continued)

- 6. COSTS OF FUTURE UTILITY SYSTEM ALTERATIONS: The Producer shall be responsible for the costs of only those future Utility system alterations which are directly related to the Producer's presence or necessary to maintain the Producer's interconnection in accordance with the Utility's applicable operating, metering and equipment publication in effect when the Producer and the Utility entered into a written form of power purchase agreement. Such alterations may include, but are not limited to, relocation (T) or undergrounding of the Utility's distribution or transmission facilities as may be ordered by a governmental authority having jurisdiction. Alterations made at the Producer's expense shall specifically exclude increases of existing line capacity necessary to accommodate other Producers or Utility customers. (T)
- 7. ALLOCATION OF THE UTILITY'S EXISTING LINE CAPACITY: Producers seeking access to limited transmission and/or distribution line capacity for power deliveries shall establish and maintain an interconnection priority in accordance with the Qualifying Facilities Milestone Procedure (QFMP) as adopted in Commission Decision No. 85-01-038 in OII 84-04-077 and as modified in subsequent decisions. Such priority will be site- and project-specific and may not be transferred to other projects or locations. The QFMP with which the Producer must comply shall be that version in effect at the time of execution of a power purchase agreement. The effective version may be revised by the Commission as a result of QFMP quarterly reviews. The following Producers shall be exempt from QFMP compliance: 1) projects of less than 100 kW design capacity, 2) projects using all power internally, and 3) projects with a special facilities agreement executed prior to January 16, 1985. Failure to meet any QFMP milestone may result in termination of the power purchase agreement and loss of interconnection priority.

C. ELECTRIC SERVICE FROM THE UTILITY: If the Producer requires regular, supplemental, interruptible or standby service from the Utility, the Producer shall enter into separate contractual arrangements with the Utility in accordance with the Utility's applicable electric tariffs on file with and authorized by the Public Utilities Commission.

D. OPERATION

- 1. PREPARALLEL INSPECTION: In accordance with Section A.7, the Utility will inspect the Producer's interconnection facilities prior to providing it with written authorization to commence parallel operation. Such inspection shall determine whether or not the Producer has installed certain control, protective and safety equipment to the Utility's specifications. Where the Producer's generation has a rated output in excess of 100 kw, the Producer shall pay the Utility its estimated costs of performing the inspection.
- 2. JURISDICTION OF THE UTILITY'S SYSTEM DISPATCHER: The Producer's generation while operating in parallel with the Utility's system is at all times under the jurisdiction of the Utility's system dispatcher. The system dispatcher shall normally delegate such control to the Utility's designated switching center.
- 3. COMMUNICATIONS: The Producer shall maintain telephone service from the local telephone company to the location of the Producer's generation. In the event such location is remote or unattended, telephone service shall be provided to the nearest building normally occupied by the Producer's generator operator. The Utility and the Producer shall maintain operating communications through the Utility's designated switching center.
- 4. GENERATOR LOG: The Producer shall at all times keep and maintain a detailed generator operations log. Such log shall include, but not be limited to, information on unit availability, maintenance outages, circuit breaker trip operations requiring manual reset and unusual events. The Utility shall have the right to review the Producer's log.

(Continued)



RULE 21 -- NONUTILITY-OWNED PARALLEL GENERATION (Cont'd.)

D. OPERATION (Continued)

- 5. REPORTING ABNORMAL CONDITIONS: The Utility shall advise the Producer of abnormal conditions which the Utility has reason to believe could affect the Utility's operating conditions or procedures. The Producer shall keep the Utility similarly informed.
- 6. POWER FACTOR: The Producer shall furnish reactive power as may be reasonably required by the Utility.
 - a. The Utility will specify that generators with power factor control capability, including synchronous generators, be capable of operating continuously at any power factor between 95 percent leading (absorbing vars) and 90 percent lagging (producing vars) at any voltage level within ± 5.0 percent of rated voltage. For other types of generators with no inherent power factor control capability, the Utility reserves the right to specify the installation of capacitors by the Producer to correct generator output to near 95 percent leading power factor. The Utility may also require the installation of switched capacitors on its system to produce the amount of reactive support equivalent to that provided by operating a synchronous generator of the same size. (T)
 - b. Where either the Producer or the Utility determines that it is not practical for the Producer to furnish the Utility's required level of reactive power or when the Utility specifies switched capacitors in its system pursuant to Section D.6.a, the Utility will provide, install, own and maintain the necessary devices on its system in accordance with Section F. (T)

E. INTERFERENCE WITH SERVICE AND COMMUNICATION FACILITIES

- 1. GENERAL: The Utility reserves the right to refuse to connect to any new equipment or to remain connected to any existing equipment of a size or character that may be detrimental to the Utility's operations or service to its customers.
- 2. The Producer shall not operate equipment that superimposes upon the Utility's system a voltage or current which causes interference with the Utility's operations, service to the Utility's customers or interference to communication facilities. If the Producer causes service interference to others, the Producer must diligently pursue and take corrective action at the Producer's expense after being given notice and reasonable time to do so by the Utility. If the Producer does not take timely corrective action, or continues to operate the equipment causing the interference without restriction or limit, the Utility may, without liability, disconnect the Producer's equipment from the Utility's system until a suitable permanent solution provided by the Producer is operational at the Producer's expense.

F. SPECIAL FACILITIES

- 1. Where the Producer requests the Utility to furnish interconnection facilities or where it is necessary to make additions to or reinforcements of the Utility's system and the Utility agrees to do so, such facilities shall be deemed to be special facilities and the costs thereof shall be borne by the Producer, in accordance with Section B.4.a and B.4.b, including such continuing ownership costs as may be applicable. (T)

¹Detailed requirements are specified in the Utility's current operating, metering and equipment protection publications, as revised from time to time by the Utility and available to the Producer upon request. For a particular generator application, the Utility will furnish its specific control, protective and safety requirements to the Producer after the exact location of the generator has been agreed upon and the interconnection voltage level has been established.

(Continued)



RULE 21 -- NONUTILITY-OWNED PARALLEL GENERATION (Cont'd.)

F. SPECIAL FACILITIES (Continued)

2. Special facilities are (a) those facilities installed at the Producer's request which the Utility does not normally furnish under its tariff schedule, or (b) a prorata portion of existing facilities requested by the Producer, allocated for the sole use of such Producer, which would not normally be allocated for such sole use. Unless otherwise provided by the Utility's filed tariff schedules, special facilities will be installed, owned and maintained or allocated by the Utility as an accommodation to the Producer only if acceptable for operation by the Utility and the reliability of service to the Utility's customers is not impaired.
3. Special Facilities will be furnished under the terms and conditions of the Utility's "Agreement for Installation or Allocation of Special Facilities for Parallel Operation of Nonutility-owned Generation and/or Electrical Standby Service" (Form 79-280), and its Appendix A, "Detail of Special Facilities Charges" (Form 79-702). Prior to the Producer signing such an agreement, the Utility shall provide the Producer with a breakdown of special facilities costs in a form having detail sufficient for the information to be reasonably understood by the Producer. The special facilities agreement will include, but is not limited to, a binding quotation of charges to the Producer and the following general terms and conditions:
 - a. Where facilities are installed by the Utility for the Producer's use as special facilities, the Producer shall advance to the Utility its estimated installed cost of the special facilities. The amount advanced is subject to the monthly ownership charge applicable to customer-financed special facilities as set forth in Section 1 of the Utility's Rule 2.
 - b. At the Producer's option, and where such Producer's generation is a qualifying facility¹ and the Producer has established credit worthiness to the Utility's satisfaction, the Utility shall finance those special facilities it deems to be removable and reusable equipment. Such equipment shall include, but not be limited to, transformation, disconnection and metering equipment.
 - c. Existing facilities allocated for the Producer's use as special facilities and removable and reusable equipment financed by the Utility in accordance with Section F.3.b are subject to the monthly ownership charge applicable to Utility-financed special facilities as set forth in Section 1 of Rule 2.
 - d. Where the Producer elects to install and deed to the Utility an extension of the Utility's distribution or transmission lines for use as special facilities in accordance with Section B.5, the Utility's estimate of the installed cost of such extension shall be subject to the monthly ownership charge applicable to customer-financed special facilities as set forth in Section 1 of Rule 2.
4. Where payment or collection of continuing monthly ownership charges is not practicable, the Producer shall be required to make an equivalent one-time payment in lieu of such monthly charges.
5. Costs of special facilities borne by the Producer may be subject to downward adjustment when such special facilities are used to furnish permanent service to a customer of the Utility. This adjustment will be based upon the extension allowance or other such customer allowance which the Utility would have utilized under its then applicable tariffs if the special facilities did not otherwise exist. In no event shall such adjustment exceed the original installed cost of that portion of the special facilities used to serve a new customer. An adjustment, where applicable, will consist of a refund applied to the Producer's initial payment for special facilities and/or a corresponding reduction of the ownership charge.

¹A qualifying facility is one which meets the requirements established by the Federal Energy Regulatory Commission's rules (18 Code of Federal Regulations 292) implementing the Public Utility Regulatory Policies Act of 1978 (16 U.S.C.A. 796, et seq.).

(Continued)



Pacific Gas and Electric Company
San Francisco, California

Revised Cal. P.U.C. Sheet No. 9741-E
Cancelling Original Cal. P.U.C. Sheet No. 8621-E

RULE 21 -- NONUTILITY-OWNED PARALLEL GENERATION (Cont'd.)

- G. EXCEPTIONAL CASES: Where the application of this rule appears impractical or unjust, either the Utility or the Producer may refer the matter to the Public Utilities Commission for special rulings. The test for approving variations from this rule will be proof of indifference to the Utility's ratepayers. The burden of proof will fall to the party requesting the variance. (N)
- H. INCORPORATION INTO POWER PURCHASE AGREEMENTS: Pursuant to Decision No. 83-10-093, if in accordance with Section A.4 the Producer enters into a written form of power purchase agreement with Utility, a copy of the Rule 21 in effect on the date of execution will be appended to, and incorporated by reference into, such power purchase agreement. The Rule appended to such power purchase agreement shall then be applicable for the term of the Producer's power purchase agreement with the Utility. Subsequent revisions to this rule shall not be incorporated into the rule appended to such power purchase agreement. (N)

Advice Letter No. 1120-E (Supplemental)
Decision No. 85-09-058

Issued by
STEPHEN P. REYNOLDS
Vice President
Rates

Date Filed November 14, 1986
Effective December 24, 1986
Resolution No. _____

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D-2 POINT OF DELIVERY LOCATION SKETCH

The Seller requests, and PG&E consents, that the location sketch not be made at the time of executing the Agreement, because the Seller, recognizing that the information is not yet available to make a definitive determination of the sketch to be inserted here, shall request PG&E to perform an interconnection study to be done in its accustomed manner of making such studies to determine the sketch to be inserted.

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D-3 INTERCONNECTION FACILITIES FOR WHICH SELLER IS RESPONSIBLE

The Seller requests, and PG&E consents, that this listing of facilities not be filled in at the time of executing the Agreement, because the Seller, recognizing that the information is not yet available to make a definitive determination of the listing of facilities to be inserted here, shall request PG&E to perform an interconnection study to be done in its accustomed manner of making such studies to determine the listing of facilities to be inserted.

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APPENDIX E

QUALIFYING FACILITY MILESTONE PROCEDURE

The applicable QFMP in effect at the time of execution of this Agreement is attached.