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PACIFIC GAS AND ELECTRIC COMPANY  
STANDARD OFFER #4  
POWER PURCHASE AGREEMENT  
FOR  
LONG-TERM ENERGY AND CAPACITY

Seller: Mega Hydro, Inc.

Project Name: Clover Creek

Location: Clover Creek, East of Oak Run, Shasta County

Size: 999 kW

APRIL 1985

STANDARD OFFER #4:  
LONG-TERM ENERGY AND CAPACITY  
POWER PURCHASE AGREEMENT

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1 LONG-TERM ENERGY AND CAPACITY

2 POWER PURCHASE AGREEMENT

3 BETWEEN

4 MEGA HYDRO, INC.

5 AND

6 PACIFIC GAS AND ELECTRIC COMPANY

7  
8  
9 MEGA HYDRO, INC. ("Seller"), and PACIFIC GAS AND  
10 ELECTRIC COMPANY ("PGandE"), referred to collectively as  
11 "Parties" and individually as "Party", agree as follows:  
12

13 ARTICLE 1 QUALIFYING STATUS  
14

15 Seller warrants that, at the date of first power  
16 deliveries from Seller's Facility<sup>1</sup> and during the term of  
17 agreement, its Facility shall meet the qualifying facility  
18 requirements established as of the effective date of this  
19 Agreement by the Federal Energy Regulatory Commission's  
20 rules (18 Code of Federal Regulations 292) implementing the  
21 Public Utility Regulatory Policies Act of 1978 (16 U.S.C.A.  
22 796, et seq.).  
23  
24  
25  
26

27 <sup>1</sup> Underlining identifies those terms which are defined in Section A-1  
28 of Appendix A.

ARTICLE 2 COMMITMENT OF PARTIES

1  
2  
3 The prices to be paid Seller for energy and/or capacity  
4 delivered pursuant to this Agreement have wholly or partly  
5 been fixed at the time of execution. Actual avoided costs  
6 at the time of energy and/or capacity deliveries may be  
7 substantially above or below the prices fixed in this  
8 Agreement. Therefore, the Parties expressly commit to the  
9 prices fixed in this Agreement for the applicable period of  
10 performance and shall not seek to or have a right to  
11 renegotiate such prices for any reason. As part of its  
12 consideration for the benefit of fixing part or all of the  
13 energy and/or capacity prices under this Agreement, Seller  
14 waives any and all rights to judicial or other relief from  
15 its obligations and/or prices set forth in Appendices B, D,  
16 and E, or modification of any other term or provision for  
17 any reasons whatsoever.

18  
19 This Agreement contains certain provisions which set  
20 forth methods of calculating damages to be paid to PGandE in  
21 the event Seller fails to fulfill certain performance  
22 obligations. The inclusion of such provisions is not  
23 intended to create any express or implied right in Seller to  
24 terminate this Agreement prior to the expiration of the term  
25 of agreement. Termination of this Agreement by Seller prior  
26 to its expiration date shall constitute a breach of this  
27 Agreement and the damages expressly set forth in this  
28

1 Agreement shall not constitute PGandE's sole remedy for such  
2 breach.

3  
4 ARTICLE 3 PURCHASE OF POWER

5  
6 (a) Seller shall sell and deliver and PGandE shall  
7 purchase and accept delivery of capacity and energy at the  
8 voltage level of 60 kV.

9  
10 (b) Seller shall provide capacity and energy from its  
11 999 kW Facility located at Clover Creek, East of Oak Run,  
12 Shasta County, California.

13  
14 (c) The scheduled operation date of the Facility is  
15 February 1984. At the end of each calendar quarter Seller  
16 shall give written notice to PGandE of any change in the  
17 scheduled operation date.

18  
19 (d) To avoid exceeding the physical limitations of the  
20 interconnection facilities, Seller shall limit the  
21 Facility's actual rate of delivery into the PGandE system to  
22 1,000 kW.

23  
24 (e) The primary energy source for the Facility is  
25 hydroelectric.

26  
27 (f) If Seller does not begin construction of its  
28 Facility by March 1983. PGandE may reallocate the existing

1 capacity on PGandE's transmission and/or distribution system  
2 which would have been used to accommodate Seller's power  
3 deliveries to other uses. In the event of such  
4 reallocation, Seller shall pay PGandE for the cost of any  
5 upgrades or additions to PGandE's system necessary to  
6 accommodate the output from the Facility. Such additional  
7 facilities shall be installed, owned and maintained in  
8 accordance with the applicable PGandE tariff.

9  
10 (g) The transformer loss adjustment factor is .98<sup>1</sup>.

11  
12 ARTICLE 4 ENERGY PRICE

13 PGandE shall pay Seller { for its net energy output<sup>2</sup>  
14 under the energy payment option checked below<sup>3</sup>:  
15

16  
17 X Energy Payment Option 1 - Forecasted Energy Prices

18 During the fixed price period, Seller shall be  
19

20  
21  
22 <sup>1</sup> If Seller chooses to have meters placed on Seller's side of the  
23 transformer, an estimated transformer loss adjustment factor of 2  
24 percent, unless the Parties agree otherwise, will be applied. This  
25 estimated transformer loss figure will be adjusted to a measurement  
of actual transformer losses performed at Seller's request and  
expense.

26 <sup>2</sup> Insert either "net energy output" or "surplus energy output" to  
show the energy sale option selected by Seller.

27 <sup>3</sup> Energy Payment Option 2 is not available to oil or gas-fired  
28 cogenerators.

B3  
O  
~~100%~~

1 paid for energy delivered at prices equal to ~~100%~~  
2 percent of the prices set forth in Table B-1, Appen-  
3 dix B, plus <sup>100%</sup>~~0%~~ percent of PGandE's full short-run  
4 avoided operating costs.

5 For the remaining years of the term of agreement,  
6 Seller shall be paid for energy delivered at prices  
7 equal to PGandE's full short-run avoided operating  
8 costs.

9  
10 If Seller's Facility is not an oil or gas-fired  
11 cogeneration facility, Seller may convert from Energy  
12 Payment Option 1 to Energy Payment Option 2 and be  
13 subject to the conditions therein, provided that Seller  
14 shall not change the percentage of energy prices to be  
15 based on PGandE's full short-run avoided operating  
16 costs. Such conversion must be made at least 90 days  
17 prior to the date of initial energy deliveries and must  
18 be made by written notice in accordance with  
19 Section A-17, Appendix A.

20  
21 \_\_\_\_\_ Energy Payment Option 2 - Levelized Energy Prices

22  
23 During the fixed price period, Seller shall be

24  
25 <sup>1</sup> Insert either 0, 20, 40, 60, 80, or 100, at Seller's option. If  
26 Seller's Facility is an oil or gas-fired cogeneration facility,  
either 0 or 20 must be inserted.

27 <sup>2</sup> Insert the difference between 100 and the percentage selected under  
28 footnote 1 above.

1 paid for energy delivered at prices equal to \_\_\_\_\_<sup>1</sup>  
2 percent of the levelized energy prices set forth in  
3 Table B-2, Appendix B for the year in which energy  
4 deliveries begin and term of agreement, plus \_\_\_\_\_<sup>2</sup>  
5 percent of PGandE's full short-run avoided operating  
6 costs. During the fixed price period, Seller shall be  
7 subject to the conditions and terms set forth in  
8 Appendix B, Energy Payment Option 2.

9  
10 For the remaining years of the term of agreement,  
11 Seller shall be paid for energy delivered at prices  
12 equal to PGandE's full short-run avoided operating  
13 costs.

14  
15 Seller may convert from Energy Payment Option 2 to  
16 Energy Payment Option 1, provided that Seller shall not  
17 change the percentage of energy prices to be based on  
18 PGandE's full short-run avoided operating costs. Such  
19 conversion must be made at least 90 days prior to the  
20 date of initial energy deliveries and must be made by  
21 written notice in accordance with Section A-17,  
22 Appendix A.

23  
24  
25 \_\_\_\_\_  
26 <sup>1</sup> Insert either 20, 40, 60, 80, or 100, at Seller's option.

27 <sup>2</sup> Insert the difference between 100 and the percentage selected under  
28 footnote 1 above.



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\_\_\_\_\_ Energy Payment Option 3 - Incremental Energy Rate

Beginning with the date of initial energy deliveries and continuing until \_\_\_\_\_<sup>1</sup>, Seller shall be paid monthly for energy delivered at prices equal to PGandE's full short-run avoided operating costs, provided that adjustments shall be made annually to the extent set forth in Appendix B, Energy Payment Option 3.

The Incremental Energy Rate Band Widths specified by Seller in Table I below shall be used in determining the annual adjustment, if any.

Table I

<u>Year</u>	<u>Incremental Energy Rate Band Widths</u> (must be multiples of 100 or zero)
1984	_____
1985	_____
1986	_____
1987	_____
1988	_____
1989	_____
1990	_____
1991	_____
1992	_____
1993	_____
1994	_____
1995	_____
1996	_____
1997	_____
1998	_____

<sup>1</sup> Specified by Seller. Must be December 31, 1998 or prior.

1 After \_\_\_\_\_, Seller shall be paid for  
2 energy delivered at prices equal to PGandE's full  
3 short-run avoided operating costs.

4  
5 ARTICLE 5 CAPACITY ELECTION AND CAPACITY PRICE

6  
7 Seller may elect to deliver either firm capacity or  
8 as-delivered capacity, and Seller's election is indicated  
9 below. PGandE's prices for firm capacity and as-delivered  
10 capacity are derived from PGandE's full avoided costs as  
11 approved by the CPUC.

12  
13 \_\_\_\_\_ Firm capacity - \_\_\_\_\_ kW for \_\_\_\_\_ years from the  
14 firm capacity availability date with payment determined  
15 in accordance with Appendix E. Except for hydro-  
16 electric facilities, PGandE shall pay Seller for  
17 capacity delivered in excess of firm capacity on an  
18 as-delivered capacity basis in accordance with  
19 As-Delivered Capacity Payment Option \_\_\_\_\_ set forth  
20 in Appendix D.

21  
22 OR

23  
24 X As-delivered capacity with payment determined in  
25 accordance with As-Delivered Capacity Payment Option 2  
26 set forth in Appendix D.  
27  
28

1 ARTICLE 6 LOSS ADJUSTMENT FACTORS

2  
3 Capacity Loss Adjustment Factors shall be as shown in  
4 Appendix D and Appendix E, dependent upon Seller's capacity  
5 election set forth in Article 5 of this Agreement.

6  
7 Energy Loss Adjustment Factors shall be considered as  
8 unity for all energy payments related to Energy Payment  
9 Options 1 and 2 set forth in Appendix B for the entire fixed  
10 price period of this Agreement, except for the percentage of  
11 payments that Seller elected in Article 4 to have calculated  
12 based on PGandE's full short-run avoided operating costs.  
13 Energy Loss Adjustment Factors for all payments related to  
14 PGandE's full short-run avoided operating costs are subject  
15 to CPUC rulings for the entire term of agreement.

16  
17 ARTICLE 7 CURTAILMENT

18  
19 Seller has two options regarding possible curtailment  
20 by PGandE of Seller's deliveries, and Seller's selection is  
21 indicated below:

- 22 X Curtailment Option A - Hydro Spill and Negative Avoided  
23 Cost  
24 \_\_\_\_\_ Curtailment Option B - Adjusted Price Period

25  
26 The two options are described in Appendix C.

1                   ARTICLE 8   RETROACTIVE APPLICATION OF CPUC ORDERS

2  
3           Pursuant to Ordering Paragraph 1(f) of CPUC Decision  
4 No. 83-09-054 (September 7, 1983), after the effective date  
5 of the CPUC's Application 82-03-26 decision relating to line  
6 loss factors, Seller has the option to retain the relevant  
7 terms of this Agreement or have the results of that decision  
8 incorporated into this Agreement. To retain the terms  
9 herein, Seller shall provide written notice to PGandE within  
10 30 days after the effective date of the relevant CPUC  
11 decision on Application 82-03-26. Failure to provide such  
12 notice will result in the amendment of this Agreement to  
13 comply with that decision.

14  
15           As soon as practicable following the issuance of a  
16 decision in Application 82-03-26, PGandE shall notify Seller  
17 of the effective date thereof and its results.

18  
19                   ARTICLE 9   NOTICES

20  
21           All written notices shall be directed as follows:

22           To PGandE:       Pacific Gas and Electric Company  
23                            Attention: Vice President -  
24                            Electric Operations  
25                            77 Beale Street  
26                            San Francisco, CA 94106

27           To Seller:       Mega Hydro, Inc.  
28                            2576 Hartnell Ave.  
                          Redding, CA 96002  
                          (916) 222-1414

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ARTICLE 10 DESIGNATED SWITCHING CENTER

The designated PGandE switching center shall be, unless changed by PGandE:

Cottonwood Substation  
Trefoil Lane, Cottonwood  
(916) 347-3019

ARTICLE 11 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 PAYMENT OPTIONS
- Appendix C - CURTAILMENT OPTIONS
- Appendix D - AS-DELIVERED CAPACITY
- Appendix E - FIRM CAPACITY
- Appendix F - INTERCONNECTION

ARTICLE 12 TERM OF AGREEMENT

This Agreement shall be binding upon execution and remain in effect thereafter for 30 years<sup>1</sup> from the date of initial energy deliveries<sup>2</sup>; provided, however, that it shall

---

<sup>1</sup> The minimum contract term is 15 years and the maximum contract term is 30 years.

<sup>2</sup> Insert "firm capacity availability date" if Seller has elected to deliver firm capacity or "date of initial energy deliveries" if Seller has elected to deliver as-delivered capacity.

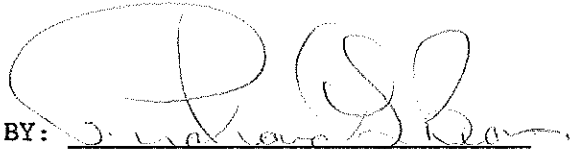
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terminate if energy deliveries do not start within five years of the execution date.

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

MEGA HYDRO, INC.

PACIFIC GAS AND ELECTRIC COMPANY

BY:   
RICHARD L. BEAN

BY:   
E. E. HALL

TITLE: Director of Engineering

Chief Generation  
TITLE: Planning Engineer

DATE SIGNED: 4-15-85

DATE SIGNED: 4/17/85

APPENDIX A  
GENERAL TERMS AND CONDITIONS

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APPENDIX A  
GENERAL TERMS AND CONDITIONS

A-1 DEFINITIONS

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

Adjusted firm capacity price - The \$/kW-year purchase price for firm capacity from Table E-2, Appendix E for the period of Seller's actual performance.

As-delivered capacity - Capacity delivered to PGandE in excess of firm capacity or in lieu of a firm capacity commitment.

CPUC - The Public Utilities Commission of the State of California.

Current firm capacity price - The \$/kW-year capacity price from PGandE's firm capacity price schedule effective at the time PGandE derates the firm capacity pursuant to Section E-4(b), Appendix E or Seller terminates performance under this Agreement, for a term equal to the period from



1 the date of deration or termination to the end of the term  
2 of agreement.

3 Designated PGandE switching center - That switching  
4 center or other PGandE installation identified in  
5 Article 10.  
6

7 Facility - That generation apparatus described in  
8 Article 3 and all associated equipment owned, maintained,  
9 and operated by Seller.  
10

11 Firm capacity - That capacity, if any, identified as  
12 firm in Article 5 except as otherwise changed as provided  
13 herein.  
14

15 Firm capacity availability date - The day following  
16 the day during which all features and equipment of the  
17 Facility are demonstrated to PGandE's satisfaction to be  
18 capable of operating simultaneously to deliver firm capacity  
19 continuously into PGandE's system as provided in this  
20 Agreement.  
21

22 Firm capacity price - The price for firm capacity  
23 applicable for the firm capacity availability date and the  
24 number of years of firm capacity delivery from the firm  
25 capacity price schedule, Table E-2, Appendix E.  
26  
27  
28

1                    Firm capacity price schedule - The periodically  
2 published schedule of the \$/kW-year prices that PGandE  
3 offers to pay for firm capacity. See Table E-2, Appendix E.

4                    Fixed price period - The period during which  
5 forecasted or levelized energy prices, and/or forecasted  
6 as-delivered capacity prices, are in effect; defined as the  
7 first five years of the term of agreement if the term of  
8 agreement is 15 or 16 years; the first six years of the term  
9 of agreement if the term of agreement is 17, 18, or 19  
10 years; or the first ten years of the term of agreement if  
11 the term of agreement is anywhere from 20 through 30 years.

12                    Forced outage - Any outage resulting from a design  
13 defect, inadequate construction, operator error or a  
14 breakdown of the mechanical or electrical equipment that  
15 fully or partially curtails the electrical output of the  
16 Facility.

17                    Full short-run avoided operating costs -  
18 CPUC-approved costs which are the basis of PGandE's  
19 published energy prices. PGandE's current energy price  
20 calculation is shown in Table B-5, Appendix B. PGandE's  
21 published off-peak hours' prices shall be adjusted, as  
22 appropriate, if Seller has selected Curtailment Option B.

1           Interconnection facilities - All means required and  
2 apparatus installed to interconnect and deliver power from  
3 the Facility to the PGandE system including, but not limited  
4 to, connection, transformation, switching, metering,  
5 communications, and safety equipment, such as equipment  
6 required to protect (1) the PGandE system and its customers  
7 from faults occurring at the Facility, and (2) the Facility  
8 from faults occurring on the PGandE system or on the systems  
9 of others to which the PGandE system is directly or  
10 indirectly connected.   Interconnection facilities also  
11 include any necessary additions and reinforcements by PGandE  
12 to the PGandE system required as a result of the  
13 interconnection of the Facility to the PGandE system.

14  
15           Net energy output - The Facility's gross output in  
16 kilowatt-hours less station use and transformation and  
17 transmission losses to the point of delivery into the PGandE  
18 system. Where PGandE agrees that it is impractical to  
19 connect the station use on the generator side of the power  
20 purchase meter, PGandE may, at its option, apply a station  
21 load adjustment.

22  
23           Prudent electrical practices - Those practices,  
24 methods, and equipment, as changed from time to time, that  
25 are commonly used in prudent electrical engineering and  
26  
27  
28

1 operations to design and operate electric equipment lawfully  
2 and with safety, dependability, efficiency, and economy.

3  
4 Scheduled operation date - The day specified in  
5 Article 3(c) when the Facility is, by Seller's estimate,  
6 expected to produce energy that will be available for  
7 delivery to PGandE.

8  
9 Special facilities - Those additions and  
10 reinforcements to the PGandE system which are needed to  
11 accommodate the maximum delivery of energy and capacity from  
12 the Facility as provided in this Agreement and those parts  
13 of the interconnection facilities which are owned and  
14 maintained by PGandE at Seller's request, including metering  
15 and data processing equipment. All special facilities shall  
16 be owned, operated, and maintained pursuant to PGandE's  
17 electric Rule No. 21, which is attached hereto.

18  
19 Station use - Energy used to operate the Facility's  
20 auxiliary equipment. The auxiliary equipment includes, but  
21 is not limited to, forced and induced draft fans, cooling  
22 towers, boiler feed pumps, lubricating oil systems, plant  
23 lighting, fuel handling systems, control systems, and sum  
24 pumps.

25  
26 Surplus energy output - The Facility's gross output  
27 in kilowatt-hours, less station use, and any other use

1 Seller, and transformation and transmission losses to the  
2 point of delivery into the PGandE system.

3  
4 Term of agreement - The number of years this  
5 Agreement will remain in effect as provided in Article 12.

6  
7 Voltage level - The voltage at which the Facility  
8 interconnects with the PGandE system, measured at the point  
9 of delivery.

10  
11 A-2 CONSTRUCTION

12  
13 A-2.1 Land Rights

14  
15 Seller hereby grants to PGandE all necessary rights  
16 of way and easements, including adequate and continuing  
17 access rights on property of Seller, to install, operate,  
18 maintain, replace, and remove the special facilities.  
19 Seller agrees to execute such other grants, deeds, or  
20 documents as PGandE may require to enable it to record such  
21 rights of way and easements. If any part of PGandE's  
22 equipment is to be installed on property owned by other than  
23 Seller, Seller shall, at its own cost and expense, obtain  
24 from the owners thereof all necessary rights of way and  
25 easements, in a form satisfactory to PGandE, for the  
26 construction, operation, maintenance, and replacement of  
27 PGandE's equipment upon such property. If Seller is unable

1 to obtain such rights of way and easements, Seller shall  
2 reimburse PGandE for all costs incurred by PGandE in  
3 obtaining them. PGandE shall at all times have the right of  
4 ingress to and egress from the Facility at all reasonable  
5 hours for any purposes reasonably connected with this  
6 Agreement or the exercise of any and all rights secured to  
7 PGandE by law or its tariff schedules.

8  
9 A-2.2 Design, Construction, Ownership, and Maintenance

10  
11 (a) Seller shall design, construct, install, own,  
12 operate, and maintain all interconnection facilities, except  
13 special facilities, to the point of interconnection with the  
14 PGandE system as required for PGandE to receive capacity and  
15 energy from the Facility. The Facility and interconnection  
16 facilities shall meet all requirements of applicable codes  
17 and all standards of prudent electrical practices and shall  
18 be maintained in a safe and prudent manner. A description  
19 of the interconnection facilities for which Seller is solely  
20 responsible is set forth in Appendix F, or if the  
21 interconnection requirements have not yet been determined at  
22 the time of the execution of this Agreement, the description  
23 of such facilities will be appended to this Agreement at the  
24 time such determination is made.

25  
26 (b) Seller shall submit to PGandE the design and all  
27 specifications for the interconnection facilities (except  
28 special facilities) and, at PGandE's option, the Facility.

1 for review and written acceptance prior to their release for  
2 construction purposes. PGandE shall notify Seller in  
3 writing of the outcome of PGandE's review of the design and  
4 specifications for Seller's interconnection facilities (and  
5 the Facility, if requested) within 30 days of the receipt of  
6 the design and all of the specifications for the  
7 interconnection facilities (and the Facility, if requested).  
8 Any flaws perceived by PGandE in the design and  
9 specifications for the interconnection facilities (and the  
10 Facility, if requested) will be described in PGandE's  
11 written notification. PGandE's review and acceptance of the  
12 design and specifications shall not be construed as  
13 confirming or endorsing the design and specifications or as  
14 warranting their safety, durability, or reliability. PGandE  
15 shall not, by reason of such review or lack of review, be  
16 responsible for strength, details of design, adequacy, or  
17 capacity of equipment built pursuant to such design and  
18 specifications, nor shall PGandE's acceptance be deemed to  
19 be an endorsement of any of such equipment. Seller shall  
20 change the interconnection facilities as may be reasonably  
21 required by PGandE to meet changing requirements of the  
22 PGandE system.

23  
24 (c) In the event it is necessary for PGandE  
25 to install interconnection facilities for the purposes of the  
26 Agreement, they shall be installed as special facilities

1 (d) Upon the request of Seller, PGandE shall provide  
2 a binding estimate for the installation of interconnection  
3 facilities by PGandE.  
4

5 A-2.3 Meter Installation

6 (a) PGandE shall specify, provide, install, own,  
7 operate, and maintain as special facilities all metering and  
8 data processing equipment for the registration and recording  
9 of energy and other related parameters which are required  
10 for the reporting of data to PGandE and for computing the  
11 payment due Seller from PGandE.  
12

13 (b) Seller shall provide, construct, install, own,  
14 and maintain at Seller's expense all that is required to  
15 accommodate the metering and data processing equipment, such  
16 as, but not limited to, metal-clad switchgear, switchboards,  
17 cubicles, metering panels, enclosures, conduits, rack  
18 structures, and equipment mounting pads.  
19

20 (c) PGandE shall permit meters to be fixed on  
21 PGandE's side of the transformer. If meters are placed on  
22 PGandE's side of the transformer, service will be provided  
23 at the available primary voltage and no transformer loss  
24 adjustment will be made. If Seller chooses to have meters  
25 placed on Seller's side of the transformer, an estimated  
26 transformer loss adjustment factor of 2 percent, unless the  
27 Parties agree otherwise, will be applied.  
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A-3 OPERATION

A-3.1 Inspection and Approval

Seller shall not operate the Facility in parallel with PGandE's system until an authorized PGandE representative has inspected the interconnection facilities, and PGandE has given written approval to begin parallel operation. Seller shall notify PGandE of the Facility's start-up date at least 45 days prior to such date. PGandE shall inspect the interconnection facilities within 30 days of the receipt of such notice. If parallel operation is not authorized by PGandE, PGandE shall notify Seller in writing within five days after inspection of the reason authorization for parallel operation was withheld.

A-3.2 Facility Operation and Maintenance

Seller shall operate and maintain its Facility according to prudent electrical practices, applicable laws, orders, rules, and tariffs and shall provide such reactive power support as may be reasonably required by PGandE to maintain system voltage level and power factor. Seller shall operate the Facility at the power factors or voltage levels prescribed by PGandE's system dispatcher or designated representative. If Seller fails to provide reactive power support, PGandE may do so at Seller's expense.

1 A-3.3 Point of Delivery

2 Seller shall deliver the energy at the point where  
3 Seller's electrical conductors (or those of Seller's agent)  
4 contact PGandE's system as it shall exist whenever the  
5 deliveries are being made or at such other point or points  
6 as the Parties may agree in writing. The initial point of  
7 delivery of Seller's power to the PGandE system is set forth  
8 in Appendix F.  
9

10 A-3.4 Operating Communications

11  
12 (a) Seller shall maintain operating communications  
13 with the designated PGandE switching center. The operating  
14 communications shall include, but not be limited to, system  
15 paralleling or separation, scheduled and unscheduled  
16 shutdowns, equipment clearances, levels of operating voltage  
17 or power factors and daily capacity and generation reports.  
18

19 (b) Seller shall keep a daily operations log for  
20 each generating unit which shall include information on unit  
21 availability, maintenance outages, circuit breaker tripping  
22 operations requiring a manual reset, and any significant  
23 events related to the operation of the Facility.  
24

25 (c) If Seller makes deliveries greater than  
26 megawatt, Seller shall measure and register on a grade  
27 recording device power in kW and voltage in kV at a local  
28

1 within the Facility agreed to by both Parties.

2  
3 (d) If Seller makes deliveries greater than one and  
4 up to and including ten megawatts, Seller shall report to  
5 the designated PGandE switching center, twice a day at  
6 agreed upon times for the current day's operation, the  
7 hourly readings in kW of capacity delivered and the energy  
8 in kWh delivered since the last report.

9  
10 (e) If Seller makes deliveries of greater than ten  
11 megawatts, Seller shall telemeter the delivered capacity and  
12 energy information, including real power in kW, reactive  
13 power in kVAR, and energy in kWh to a switching center  
14 selected by PGandE. PGandE may also require Seller to  
15 telemeter transmission kW, kVAR, and kV data depending on  
16 the number of generators and transmission configuration.  
17 Seller shall provide and maintain the data circuits required  
18 for telemetering. When telemetering is inoperative, Seller  
19 shall report daily the capacity delivered each hour and the  
20 energy delivered each day to the designated PGandE switching  
21 center.

22  
23 A-3.5 Meter Testing and Inspection

24  
25 (a) All meters used to provide data for the  
26 computation of the payments due Seller from PGandE shall be  
27 sealed, and the seals shall be broken only by PGandE when  
28 the meters are to be inspected, tested, or adjusted.

1 (b) PGandE shall inspect and test all meters upon  
2 their installation and annually thereafter. At Seller's  
3 request and expense, PGandE shall inspect or test a meter  
4 more frequently. PGandE shall give reasonable notice to  
5 Seller of the time when any inspection or test shall take  
6 place, and Seller may have representatives present at the  
7 test or inspection. If a meter is found to be inaccurate or  
8 defective, PGandE shall adjust, repair, or replace it at its  
9 expense in order to provide accurate metering.

10  
11 A-3.6 Adjustments to Meter Measurements

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

24  
25 A-4 PAYMENT

26  
27 PGandE shall mail to Seller not later than 30 days  
28 after the end of each monthly billing period (1) a statement

1 showing the energy and capacity delivered to PGandE during  
2 on-peak, partial-peak, and off-peak periods during the  
3 monthly billing period, (2) PGandE's computation of the  
4 amount due Seller, and (3) PGandE's check in payment of said  
5 amount. Except as provided in Section A-5, if within 30  
6 days of receipt of the statement Seller does not make a  
7 report in writing to PGandE of an error, Seller shall be  
8 deemed to have waived any error in PGandE's statement,  
9 computation, and payment, and they shall be considered  
10 correct and complete.

11  
12 A-5 ADJUSTMENTS OF PAYMENTS

13  
14 (a) In the event adjustments to payments are  
15 required as a result of inaccurate meters, PGandE shall use  
16 the corrected measurements described in Section A-3.6  
17 to recompute the amount due from PGandE to Seller for  
18 capacity and energy delivered under this Agreement during  
19 the period of inaccuracy.

20  
21 (b) The additional payment to Seller or refund  
22 PGandE shall be made within 30 days of notification of  
23 owing Party of the amount due.

24  
25 A-6 ACCESS TO RECORDS AND PGandE DATA

26 Each Party, after giving reasonable written notice  
27 to the other Party, shall have the right of access to all  
28

1 metering and related records including operations logs of  
2 the Facility. Data filed by PGandE with the CPUC pursuant  
3 to CPUC orders governing the purchase of power from  
4 qualifying facilities shall be provided to Seller upon  
5 request; provided that Seller shall reimburse PGandE for the  
6 costs it incurs to respond to such request.

7  
8 A-7 INTERRUPTION OF DELIVERIES

9 PGandE shall not be obligated to accept or pay for  
10 and may require Seller to interrupt or reduce deliveries of  
11 energy (1) when necessary in order to construct, install,  
12 maintain, repair, replace, remove, investigate, or inspect  
13 any of its equipment or any part of its system, or (2) if it  
14 determines that interruption or reduction is necessary  
15 because of PGandE system emergencies, forced outages, force  
16 majeure, or compliance with prudent electrical practices;  
17 provided that PGandE shall not interrupt deliveries pursuant  
18 to this section in order to take advantage, or make  
19 purchases, of less expensive energy elsewhere. Whenever  
20 possible, PGandE shall give Seller reasonable notice of the  
21 possibility that interruption or reduction of deliveries may  
22 be required.

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24  
25 A-8 FORCE MAJEURE

26 (a) The term force majeure as used herein means  
27 unforeseeable causes, other than forced outages, beyond  
28

1 reasonable control of and without the fault or negligence of  
2 the Party claiming force majeure including, but not limited  
3 to, acts of God, labor disputes, sudden actions of the  
4 elements, actions by federal, state, and municipal agencies,  
5 and actions of legislative, judicial, or regulatory agencies,  
6 which conflict with the terms of this Agreement.

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

13  
14 (1) the non-performing Party, within two weeks  
15 after the occurrence of the force majeure, gives the  
16 other Party written notice describing the particulars  
17 of the occurrence,

18 (2) the suspension of performance is of no  
19 greater scope and of no longer duration than is  
20 required by the force majeure,

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

1 labor disputes shall be at the sole discretion of the  
2 Party having the difficulty),

3 (4) when the non-performing Party is able to  
4 resume performance of its obligations under this  
5 Agreement, that Party shall give the other Party  
6 written notice to that effect, and

7 (5) capacity payments during such periods of  
8 force majeure on Seller's part shall be governed by  
9 Section E-2(c), Appendix E.

10 (c) In the event a Party is unable to perform due to  
11 legislative, judicial, or regulatory agency action, this  
12 Agreement shall be renegotiated to comply with the legal  
13 change which caused the non-performance.  
14

15  
16 A-9 INDEMNITY

17 Each Party as indemnitor shall save harmless and  
18 indemnify the other Party and the directors, officers, and  
19 employees of such other Party against and from any and all  
20 loss and liability for injuries to persons including  
21 employees of either Party, and property damages including  
22 property of either Party resulting from or arising out of  
23 (1) the engineering, design, construction, maintenance, or  
24 operation of, or (2) the making of replacements, additions,  
25 or betterments to, the indemnitor's facilities. This  
26 indemnity and save harmless provision shall apply  
27 notwithstanding the active or passive negligence of the  
28



1 indemnatee. Neither Party shall be indemnified hereunder  
2 for its liability or loss resulting from its sole negligence  
3 or willful misconduct. The indemnitor shall, on the other  
4 Party's request, defend any suit asserting a claim covered  
5 by this indemnity and shall pay all costs, including  
6 reasonable attorney fees, that may be incurred by the other  
7 Party in enforcing this indemnity.

8  
9 A-10 LIABILITY; DEDICATION

10  
11 (a) Nothing in this Agreement shall create any duty  
12 to, any standard of care with reference to, or any liability  
13 to any person not a Party to it. Neither Party shall be  
14 liable to the other Party for consequential damages.

15  
16 (b) Each Party shall be responsible for protecting  
17 its facilities from possible damage by reason of electrical  
18 disturbances or faults caused by the operation, faulty  
19 operation, or nonoperation of the other Party's facilities,  
20 and such other Party shall not be liable for any such  
21 damages so caused.

22  
23 (c) No undertaking by one Party to the other under  
24 any provision of this Agreement shall constitute the  
25 dedication of that Party's system or any portion thereof to  
26 the other Party or to the public or affect the status of  
27 PGandE as an independent public utility corporation or  
28 Seller as an independent individual or entity and not a

1 public utility.

2  
3 A-11 SEVERAL OBLIGATIONS

4 Except where specifically stated in this Agreement to  
5 be otherwise, the duties, obligations, and liabilities of  
6 the Parties are intended to be several and not joint or  
7 collective. Nothing contained in this Agreement shall ever  
8 be construed to create an association, trust, partnership,  
9 or joint venture or impose a trust or partnership duty,  
10 obligation, or liability on or with regard to either Party.  
11 Each Party shall be liable individually and severally for  
12 its own obligations under this Agreement.  
13

14  
15 A-12 NON-WAIVER

16 Failure to enforce any right or obligation by either  
17 Party with respect to any matter arising in connection with  
18 this Agreement shall not constitute a waiver as to the  
19 matter or any other matter.  
20

21  
22 A-13 ASSIGNMENT

23 Neither Party shall voluntarily assign its rights  
24 delegate its duties under this Agreement, or any part  
25 such rights or duties, without the written consent of  
26 other Party, except in connection with the sale or merge  
27 a substantial portion of its properties. Any such  
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S.O. #4  
May 7, 1984

1 assignment or delegation made without such written consent  
2 shall be null and void. Consent for assignment shall not be  
3 withheld unreasonably. Such assignment shall include,  
4 unless otherwise specified therein, all of Seller's rights  
5 to any refunds which might become due under this Agreement.

6  
7 A-14 CAPTIONS

8 All indexes, titles, subject headings, section  
9 titles, and similar items are provided for the purpose of  
10 reference and convenience and are not intended to affect the  
11 meaning of the contents or scope of this Agreement.  
12

13  
14 A-15 CHOICE OF LAWS

15 This Agreement shall be interpreted in accordance  
16 with the laws of the State of California, excluding any  
17 choice of law rules which may direct the application of the  
18 laws of another jurisdiction.  
19

20  
21 A-16 GOVERNMENTAL JURISDICTION AND AUTHORIZATION

22 Seller shall obtain any governmental authorizations  
23 and permits required for the construction and operation of  
24 the Facility. Seller shall reimburse PGandE for any and all  
25 losses, damages, claims, penalties, or liability it incurs  
26 as a result of Seller's failure to obtain or maintain such  
27 authorizations and permits.  
28

1 A-17 NOTICES

2 Any notice, demand, or request required or permitted  
3 to be given by either Party to the other, and any instrument  
4 required or permitted to be tendered or delivered by either  
5 Party to the other, shall be in writing (except as provided  
6 in Section E-3) and so given, tendered, or delivered, as the  
7 case may be, by depositing the same in any United States  
8 Post Office with postage prepaid for transmission by  
9 certified mail, return receipt requested, addressed to the  
10 Party, or personally delivered to the Party, at the address  
11 in Article 9 of this Agreement. Changes in such designation  
12 may be made by notice similarly given.  
13

14 A-18 INSURANCE

15 A-18.1 General Liability Coverage

16  
17 (a) Seller shall maintain during the performance  
18 hereof, General Liability Insurance<sup>1</sup> of not less than  
19 \$1,000,000 if the Facility is over 100 kW, \$500,000 if  
20 Facility is over 20 kW to 100 kW, and \$100,000 if  
21 Facility is 20 kW or below of combined single limit  
22 equivalent for bodily injury, personal injury, and property  
23 damage as the result of any one occurrence.  
24  
25

26 \_\_\_\_\_  
27 <sup>1</sup> Governmental agencies which have an established record  
28 self-insurance may provide the required coverage through  
self-insurance.

1 (b) General Liability Insurance shall include  
2 coverage for Premises-Operations, Owners and Contractors  
3 Protective, Products/Completed Operations Hazard, Explosion,  
4 Collapse, Underground, Contractual Liability, and Broad Form  
5 Property Damage including Completed Operations.

6 (c) Such insurance, by endorsement to the  
7 policy(ies), shall include PGandE as an additional insured  
8 if the Facility is over 100 kW insofar as work performed by  
9 Seller for PGandE is concerned, shall contain a severability  
10 of interest clause, shall provide that PGandE shall not by  
11 reason of its inclusion as an additional insured incur  
12 liability to the insurance carrier for payment of premium  
13 for such insurance, and shall provide for 30-days' written  
14 notice to PGandE prior to cancellation, termination,  
15 alteration, or material change of such insurance.  
16

17  
18 A-18.2 Additional Insurance Provisions

19 (a) Evidence of coverage described above in Section  
20 A-18.1 shall state that coverage provided is primary and is  
21 not excess to or contributing with any insurance or  
22 self-insurance maintained by PGandE.  
23

24 (b) PGandE shall have the right to inspect or obtain  
25 a copy of the original policy(ies) of insurance.  
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(c) Seller shall furnish the required certificates<sup>1</sup> and endorsements to PGandE prior to commencing operation.

(d) All insurance certificates<sup>1</sup>, 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

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

APPENDIX B  
ENERGY PAYMENT OPTIONS

Energy Payment Option 1 - Forecasted Energy Prices

Pursuant to Article 4, the energy payment calculation for Seller's energy deliveries during each year of the fixed price period shall include the appropriate prices for such year in Table B-1, multiplied by the percentage Seller has specified in Article 4. If Seller has selected Curtailment Option B in Article 7, the forecasted off-peak hours' energy prices listed in Table B-1 shall be adjusted upward by 7.7% for Period A and 9.6% for Period B.

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TABLE B-1  
Forecasted Energy Price Schedule

Year of Energy Deliveries	Forecasted Energy Prices*, ¢/kWh						Weighted Annual Average
	Period A			Period B			
	On-Peak	Partial-Peak	Off-Peak	On-Peak	Partial-Peak	Off-Peak	
1983	5.36	5.12	4.94	5.44	5.31	5.19	5.18
1984	5.66	5.40	5.22	5.74	5.61	5.48	5.47
1985	5.75	5.48	5.30	5.83	5.69	5.56	5.55
1986	5.99	5.72	5.52	6.08	5.94	5.80	5.79
1987	6.38	6.08	5.88	6.47	6.32	6.17	6.16
1988	6.94	6.62	6.39	7.03	6.87	6.71	6.70
1989	7.60	7.25	7.00	7.70	7.53	7.35	7.34
1990	8.12	7.74	7.48	8.23	8.04	7.85	7.84
1991	8.64	8.24	7.96	8.75	8.56	8.35	8.34
1992	9.33	8.90	8.60	9.46	9.24	9.02	9.01
1993	10.10	9.63	9.30	10.23	10.00	9.76	9.75
1994	10.91	10.41	10.06	11.06	10.81	10.55	10.54
1995	11.79	11.25	10.87	11.96	11.68	11.40	11.39
1996	12.67	12.09	11.68	12.85	12.56	12.25	12.24
1997	13.61	12.98	12.54	13.79	13.48	13.15	13.14

\* These prices are differentiated by the time periods as defined in Table B-4.



1 Energy Payment Option 2 - Levelized Energy Prices

2 Pursuant to Article 4, the energy payment calculation  
3 for Seller's energy deliveries during the fixed price period  
4 shall include the appropriate prices set forth in Table B-2  
5 for the year in which energy deliveries begin and term of  
6 agreement, multiplied by the percentage Seller has specified  
7 in Article 4. If Seller has selected Curtailment Option B  
8 in Article 7, the levelized off-peak hours' energy prices  
9 listed in Table B-2 shall be adjusted upward by 7.7% for  
10 Period A and 9.6% for Period B. The discount specified in  
11 (c)(vi) below, if applicable, will be applied to the energy  
12 payments during the fixed price period.  
13

14 During the fixed price period, Seller shall be subject  
15 to the following conditions and terms:  
16

17 (a) Minimum Damages  
18

19 The Parties agree that the levelized energy prices  
20 which PGandE pays Seller for the energy which Seller  
21 delivers to PGandE is based on the agreed value to  
22 PGandE of Seller's energy deliveries during the entire  
23 fixed price period. In the event PGandE does not  
24 receive such full performance by reason of a  
25 termination, Seller shall pay PGandE an amount based on  
26 the difference between the net present values, at the  
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time of termination, of the payments Seller would receive at the forecasted energy prices in Table B-1 and the payments Seller would receive at the levelized energy prices, for the remaining years of the fixed price period. This amount shall be calculated by assuming that Seller continued to generate for the remaining years of the fixed price period at a level equal to the average annual energy generation during the period of performance, and by applying the weighted annual average levelized price applicable to Seller's Facility and the weighted annual average forecasted energy prices in Table B-1 for the remaining years of the fixed price period. The following formula shall be used to make this calculation:

$$P = \sum_{n=1}^Y \frac{(F_n)(A)(W)}{(1.15)^n} - \sum_{n=1}^Y \frac{(L)(A)(W)}{(1.15)^n}$$

where:

P = amount due PGandE.

Y = number of years remaining in the fixed price period.

F<sub>n</sub> = weighted annual average forecasted energy price in the n<sup>th</sup> year after the breach, failure to perform, or expiration of security, as shown in Table B-1 for the corresponding calendar year.

1 L = weighted annual average levelized energy  
2 price applicable to Seller's Facility.

3 A = average annual energy generation by Seller  
4 during the period of performance.

5 n = summation index; refers to the  $n^{\text{th}}$  year  
6 following termination.

7 W = percent of Seller's energy payments based on  
8 the levelized energy prices, as specified in  
9 Article 4.

10  
11 (b) Performance Requirements

12 Seller shall operate and maintain the Facility in  
13 accordance with prudent electrical practices in order  
14 to maximize the likelihood that the Facility's output  
15 as delivered to PGandE during the part of the fixed  
16 price period when the levelized price is below the  
17 forecasted price ("last part") shall equal or exceed  
18 70% of the Facility's output during the part of the  
19 fixed price period when the levelized price is above  
20 the forecasted price ("first part"). In the event that  
21 the Facility's output during any year or series of  
22 years in the last part of the fixed price period is  
23 less than 70% of the average annual production during  
24 the first part of the fixed price period, PGandE may,  
25 at its discretion (taking into consideration events  
26 occurring during such year or series of years such as  
27 curtailment by PGandE, Seller's choice not to operate  
28

1 during adjusted price periods, or scheduled maintenance  
2 including major overhauls, and the probability that  
3 Seller's future performance will be adequate), either  
4 request payment from Seller or immediately draw on the  
5 security posted, up to the amount equal to  
6  $P \times \frac{A-B}{A}$ , where:

7  
8 P and A are as defined in Section (a) above.

9 B = Seller's average annual energy generation  
10 during the year or series of years in which  
11 the 70% performance requirement was not met.

12  
13 PGandE shall not request payment from Seller or draw on  
14 the security posted if the Facility's output during the  
15 last part of the fixed price period falls below 70% of  
16 the average annual energy generation during the first  
17 part of the fixed price period solely because of force  
18 majeure as defined in Section A-8, Appendix A or a lack  
19 of or limited availability of the primary energy  
20 resource of the Facility, if such energy resource is  
21 wind, water, or sunlight.

22  
23 (c) Security

24  
25 (1) As security for amounts which Seller may be  
26 obligated to pay PGandE pursuant to Sections (a)  
27 and (b) above, Seller shall provide and maintain  
28 one or more of the following in an amount as

described in Section (c)(2) below.

1  
2  
3 (i) An irrevocable bank letter of credit  
4 delivered to and in favor of PGandE with  
5 terms acceptable to PGandE.

6 (ii) A payment bond providing for payment to  
7 PGandE in the event of any failure to meet  
8 the performance requirements set forth in  
9 Section (b) above or breach of this Agreement  
10 by Seller. Such bond shall be issued by  
11 a surety company acceptable to PGandE and shall  
12 have terms acceptable to PGandE.

13  
14 (iii) Fully paid up, noncancellable Project Failure  
15 Insurance made payable to PGandE with terms  
16 of such policy(ies) acceptable to PGandE.

17  
18 (iv) A performance bond providing for payment to  
19 PGandE in the event of any failure to meet  
20 the performance requirements set forth in  
21 Section (b) above or breach of this Agreement  
22 by Seller. Such bond shall be issued by  
23 a surety company acceptable to PGandE and shall  
24 have terms acceptable to PGandE.

25  
26 (v) A corporate guarantee of payment to  
27 which PGandE deems, in its sole discretion,  
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to provide at least the same quality of security as subsections (i) through (iv) above.

(vi) Other forms of security which PGandE does not deem to be equivalent security to those listed in subsections (i) through (v) above, and which PGandE, in its sole discretion, deems adequate. Such other forms of security may include, for example, a corporate guarantee or a lien, mortgage or deed of trust on the Facility or land upon which it is located. A 1.5% discount will be applied against the levelized energy price portion of PGandE's payments to Seller during the fixed price period if this type of security is provided.

(2) (i) Commencing 90 days prior to the scheduled operation date and continuing until December 1 of the following calendar year, security as described in Section (c)(1) above shall be in place in an amount calculated in accordance with the formula set forth in Section (a) above, assuming Seller delivered energy through the end of the following calendar year and then terminated this Agreement. For purposes of determining the

1 required amount of security, it shall be  
2 assumed that Seller's deliveries through the  
3 end of the following calendar year would  
4 equal  $R \times C \times H$ , where:

5 R = nameplate rating, in kW, of the  
6 Facility.

7 C = estimated capacity factor of the  
8 Facility, which shall be  
9 established by mutual agreement of  
10 the Parties at the time of  
11 execution of this Agreement.

12 H = number of hours from the scheduled  
13 operation date through the end of  
14 the following calendar year.  
15

16 (ii) In the second calendar year of operation and  
17 each year thereafter until the end of the  
18 fixed price period, from December 1 through  
19 December 1 of the following year, security  
20 shall be in place in an amount calculated by  
21 the formula set forth in Section (a) above  
22 assuming Seller continued to deliver energy  
23 in each month through the end of the  
24 following calendar year, at a level equal to  
25 the average monthly energy deliveries to  
26 date, and then terminated this Agreement.  
27

1 (3) Security must be maintained throughout the fixed  
2 price period as specified above. Any security  
3 with a fixed expiration date must be renewed by  
4 Seller prior to that date. If such security is  
5 not renewed at least 30 days prior to its  
6 expiration, PGandE may, at its discretion, either  
7 request payment from Seller or immediately draw on  
8 the security posted, up to the amount calculated  
9 in accordance with the formula set forth in  
10 Section (a) above.

11 (4) If, at any time during the fixed price period,  
12 PGandE believes Seller is in material breach of  
13 this Agreement, PGandE shall so notify Seller in  
14 writing and Seller must remedy such breach within  
15 a reasonable period of time. If Seller does not  
16 so remedy, PGandE may, at its discretion, either  
17 request payment from Seller or immediately draw  
18 upon the security posted, up to the amount  
19 calculated in accordance with the formula set  
20 forth in Section (a) above, provided that if  
21 during Seller's period to remedy, Seller disputes  
22 PGandE's conclusion that Seller is in material  
23 breach, and PGandE elects to draw upon the  
24 security, the amount drawn upon by PGandE shall be  
25 deposited in an interest earning escrow account  
26 and held in such account until the dispute is  
27 resolved in accordance with Section (c)(5) below.  
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(5) Upon the written request of either Party, any controversy or dispute between the Parties concerning Section (c)(4) above shall be subject to arbitration in accordance with the provisions of the California Arbitration Act, Sections 1280-1294.2 of the California Code of Civil Procedure except as provided otherwise in this section. Either Party may demand arbitration by first giving written notice of the existence of a dispute and then within 30 days of such notice giving a second written notice of the demand for arbitration.

Within ten days after receipt of the demand for arbitration, each Party shall appoint one person who shall not be an employee of either Party, to hear and determine the dispute. After both arbitrators have been appointed, they shall within five (5) days select a third arbitrator.

The arbitration hearing shall take place in San Francisco, California, within 30 days of appointment of the arbitrators, at such time and place as they select. The arbitrators shall give written notice of the time of the hearing to the Parties at least ten days prior to the hearing. The arbitrators shall not be authorized to amend, extend, or modify the terms of this Agreement.

1 the hearing, each Party shall submit a proposed  
2 written decision, and any relevant evidence may be  
3 presented. The decision of the arbitrators must  
4 consist of selection of one of the two proposed  
5 decisions, in its entirety.

6 The decision of any two arbitrators shall be  
7 binding and conclusive as to disputes relating to  
8 Section (c)(4) only. Upon determining the matter,  
9 the arbitrators shall promptly execute and  
10 acknowledge their decision and deliver a copy to  
11 each Party. A judgment confirming the award may  
12 be rendered by any superior court having  
13 jurisdiction. Each Party shall bear its own  
14 arbitration costs and expenses, including the cost  
15 of the arbitrator it selected, and the costs and  
16 expenses of the third arbitrator shall be divided  
17 equally between both Parties, except as provided  
18 otherwise elsewhere in this Agreement.

19  
20 Pending resolution of any controversy or dispute  
21 hereunder, performance by each Party shall  
22 continue so as to maintain the status quo prior to  
23 notice of such controversy or dispute. Resolution  
24 of the controversy or dispute shall include  
25 payment of any interest accrued in the escrow  
26 account.  
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TABLE B-2  
Levelized Energy Price Schedule

For a term of agreement of 15-16 years:

Year in Which Energy Deliveries Begin	Levelized Energy Prices*, ¢/kWh						Weighted Annual Average
	Period A			Period B			
	On-Peak	Partial-Peak	Off-Peak	On-Peak	Partial-Peak	Off-Peak	
1983	5.76	5.50	5.31	5.85	5.71	5.58	5.57
1984	6.06	5.78	5.58	6.14	6.00	5.86	5.85
1985	6.41	6.11	5.91	6.50	6.35	6.20	6.19
1986	6.85	6.54	6.32	6.95	6.79	6.63	6.62
1987	7.37	7.03	6.79	7.47	7.30	7.13	7.12
1988	7.96	7.60	7.34	8.07	7.89	7.70	7.69

For a term of agreement of 17-19 years:

Year in Which Energy Deliveries Begin	Levelized Energy Prices*, ¢/kWh						Weighted Annual Average
	Period A			Period B			
	On-Peak	Partial-Peak	Off-Peak	On-Peak	Partial-Peak	Off-Peak	
1983	5.90	5.63	5.44	5.98	5.84	5.71	5.70
1984	6.23	5.95	5.74	6.32	6.18	6.03	6.02
1985	6.60	6.30	6.08	6.69	6.53	6.38	6.37
1986	7.06	6.73	6.51	7.16	7.00	6.83	6.82
1987	7.60	7.25	7.00	7.70	7.53	7.35	7.34
1988	8.21	7.83	7.57	8.32	8.13	7.94	7.93

For a term of agreement of 20-30 years:

Year in Which Energy Deliveries Begin	Levelized Energy Prices*, ¢/kWh						Weighted Annual Average
	Period A			Period B			
	On-Peak	Partial-Peak	Off-Peak	On-Peak	Partial-Peak	Off-Peak	
1983	6.49	6.20	5.98	6.58	6.43	6.28	6.27
1984	6.90	6.58	6.35	6.99	6.83	6.67	6.66
1985	7.34	7.00	6.76	7.44	7.27	7.10	7.09
1986	7.88	7.51	7.26	7.99	7.81	7.62	7.61
1987	8.49	8.10	7.82	8.61	8.41	8.21	8.20
1988	9.16	8.74	8.44	9.29	9.08	8.86	8.85

\* These prices are differentiated by the time periods as defined in Table B-4.

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Energy Payment Option 3 - Incremental Energy Rate

During the period specified in Article 4, annual adjustments to Seller's energy payments shall be made as described below.

At the end of each calendar year, the Derived Incremental Energy Rate (with units expressed in Btu/kWh) will be calculated as follows:

$$\text{Derived Incremental Energy Rate (DIER)} = \frac{B}{A \times C}$$

where:

A = the total kWh delivered by Seller during the calendar year, excluding any kWh delivered when Seller was asked to curtail deliveries under Curtailment Option A or when Seller was asked to take adjusted prices under Curtailment Option B.

B = the total dollars paid for the energy described for A above.

C = the weighted average price paid during the calendar year by PGandE's Electric Department for oil and natural gas for PGandE's fossil steam plants, expressed in \$/Btu on a gas Btu basis.

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If the DIER is between the upper and lower Incremental Energy Rate Bounds specified for that year in Table B-3 for the curtailment option selected by Seller, no additional payment is due either Party.

If the DIER is below the lower Incremental Energy Rate Bound, PGandE shall pay Seller an amount calculated as follows:

$$P_S = (\text{Lower Incremental Energy Rate Bound} - \text{DIER})(A)(C)$$

where:

$P_S$  = additional payment due Seller.

DIER = Derived Incremental Energy Rate.

PGandE shall add this payment to the first payment made to Seller following the calculation.

If the DIER is above the upper Incremental Energy Rate Bound, Seller shall pay PGandE an amount calculated as follows:

$$P_B = (\text{DIER} - \text{Upper Incremental Energy Rate Bound})(A)(C)$$

where:

$P_B$  = amount due PGandE.

DIER = Derived Incremental Energy Rate.

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This amount shall be deducted from the first payment made to Seller following the calculation. If there is any remaining amount due PGandE, PGandE may, at its option, invoice Seller with such payment due within 30 days or deduct this amount from future payments due Seller.

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TABLE B-3

Forecasted Incremental Energy Rates and  
Incremental Energy Rate Bounds

Curtailment Option A:

Year	Forecasted Incremental Energy Rates, Btu/kWh (a)	Incremental Energy Rate Band Width from Article 4, Btu/kWh (b)	Upper Incremental Energy Rate Bound, Btu/kWh [column (a) plus column (b)]	Lower Incremental Energy Rate Bound, Btu/kWh [column (a) minus column(b)]
1984	9,000	_____	_____	_____
1985	9,050	_____	_____	_____
1986	8,840	_____	_____	_____
1987	8,850	_____	_____	_____
1988	8,960	_____	_____	_____
1989	8,820	_____	_____	_____
1990	8,540	_____	_____	_____
1991	8,540	_____	_____	_____
1992	8,540	_____	_____	_____
1993	8,540	_____	_____	_____
1994	8,540	_____	_____	_____
1995	8,540	_____	_____	_____
1996	8,540	_____	_____	_____
1997	8,540	_____	_____	_____
1998	8,540	_____	_____	_____

TABLE B-3 (continued)

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Curtailement Option B:

Year	Forecasted Incremental Energy Rates, Btu/kWh (a)	Incremental Energy Rate Band Width from Article 4, Btu/kWh (b)	Upper Incremental Energy Rate Bound, Btu/kWh [column (a) plus column (b)]	Lower Incremental Energy Rate Bound, Btu/kWh [column (a) minus column (b)]
1984	9,440			
1985	9,500			
1986	9,280			
1987	9,290			
1988	9,400			
1989	9,270			
1990	8,970			
1991	8,970			
1992	8,970			
1993	8,970			
1994	8,970			
1995	8,970			
1996	8,970			
1997	8,970			
1998	8,970			



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TABLE B-4<sup>1</sup>  
Time Periods

	<u>Monday through Friday<sup>2</sup></u>	<u>Saturdays<sup>2</sup></u>	<u>Sundays and Holidays</u>
Seasonal Period A (May 1 through September 30)			
On-Peak	12:30 p.m. to 6:30 p.m.		
Partial-Peak	8:30 a.m. to 12:30 p.m. 6:30 p.m. to 10:30 p.m.	8:30 a.m. to 10:30 p.m.	
Off-Peak	10:30 p.m. to 8:30 a.m.	10:30 p.m. to 8:30 a.m.	All Day
Seasonal Period B (October 1 through April 30)			
On-Peak	4:30 p.m. to 8:30 p.m.		
Partial-Peak	8:30 p.m. to 10:30 p.m. 8:30 a.m. to 4:30 p.m.	8:30 a.m. to 10:30 p.m.	
Off-Peak	10:30 p.m. to 8:30 a.m.	10:30 p.m. to 8:30 a.m.	All Day

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

<sup>2</sup> 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)).

TABLE B-5  
ENERGY PRICES

Energy Prices Effective May 1 - July 31, 1985

The energy purchase price calculations which will apply to energy deliveries determined from meter readings taken during May, June, and July 1985 are as follows:

Time Period	(a) Incremental Energy Rate <sup>1</sup> (Btu/kWh)	(b) Cost of Energy <sup>2</sup> (\$/10 <sup>6</sup> Btu)	(c) Revenue Requirement for Cash Working Capital <sup>3</sup> (\$/kWh)	(d) Energy Purchase Price <sup>4</sup> (d) = [(a) x (b)] + (c) (\$/kWh)
May 1 - July 31 (Period A)				
Time of Delivery Basis:				
On-Peak	12,168	5.2445	0.00041	0.06423
Partial-Peak	11,369	5.2445	0.00038	0.06000
Off-Peak	9,429	5.2445	0.00033	0.04978
Seasonal Average (Period A)	10,515	5.2445	0.00036	0.05551

<sup>1</sup> Incremental energy rates (Btu/kWh) for Seasonal Period A and Seasonal Period B are derived from the marginal energy costs (including variable operating and maintenance expense) adopted by the CPUC in Decision No. 83-12-068 (page 339). They are based upon natural gas as the incremental fuel and weighted average hydroelectric power conditions. The incremental energy rates in column (a) include the Helms Pumped Storage Facility and Diablo Canyon Unit 1. If Diablo Canyon Unit 1 does not become commercially operative May 1, the incremental energy rates in column (a) will not apply and instead the incremental energy rates, and the resulting energy prices, shown in this footnote will apply until Diablo Canyon Unit 1 is commercially operative.

	Incremental Energy Rate (Btu/kWh)	Energy Purchase Price (\$/kWh)
On-Peak	14,086	0.07428
Partial-Peak	13,382	0.07056
Off-Peak	10,499	0.05539
Seasonal Average	12,031	0.06346

<sup>2</sup> Cost of natural gas under PGandE Gas Schedule No. G-55 effective May 1, 1985.

<sup>3</sup> Revenue Requirement for Cash Working Capital as prescribed by the CPUC in Decision No. 83-12-068.

<sup>4</sup> Energy Purchase Price = (Incremental Energy Rate x Cost of Energy) + Revenue Requirement for Cash Working Capital. 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 the CPUC in the future. The currently applicable energy loss adjustment factors are shown in Table B-6.

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TABLE B-6

Energy Loss Adjustment Factors<sup>1</sup>

	<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

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

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APPENDIX C  
CURTAILMENT OPTIONS

Seller has two options regarding curtailment of energy deliveries and Seller has made its selection in Article 7. The two options are as follows:

CURTAILMENT OPTION A - HYDRO SPILL AND  
NEGATIVE AVOIDED COST

(a) In anticipation of a period of hydro spill conditions, as defined by the CPUC, PGandE may notify Seller that any purchases of energy from Seller during such period shall be at hydro savings prices quoted by PGandE. If Seller delivers energy to PGandE 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 PGandE using the following formula:

$$\frac{AQF - S}{AQF} \times PP \quad (\geq 0)$$

where:

AQF = Energy, in kWh, projected to be available during hydro spill conditions from all qualifying facilities under agreements containing hydro savings price provisions.



1 be paid at the economy sales price obtained by PGandE in  
2 lieu of the otherwise applicable prices.

3  
4 (d) If Seller is selling net energy output to PGandE  
5 and simultaneously purchasing its electrical needs from  
6 PGandE and Seller elects not to sell energy to PGandE at the  
7 hydro savings price pursuant to subsection (a) or when  
8 PGandE curtails deliveries of energy pursuant to subsection  
9 (b), Seller shall not use such energy to meet its electrical  
10 needs but shall continue to purchase all its electrical  
11 needs from PGandE. If Seller is selling surplus energy  
12 output to PGandE, subsections (a) or (b) shall only apply to  
13 the surplus energy output being delivered to PGandE, and  
14 Seller can continue to internally use that generation it has  
15 retained for its own use.

16  
17 CURTAILMENT OPTION B - ADJUSTED PRICE PERIOD

18  
19 (a) In each calendar year, the price which PGandE is  
20 obligated to pay Seller for energy deliveries during 1,000  
21 off-peak hours (as defined in Table B-4, Appendix B) may be  
22 adjusted to a price equal to, but not in excess of, PGandE's  
23 available alternative source. This adjusted price shall be  
24 effective under any of the following conditions:

25  
26 (i) when PGandE's energy source at the margin  
27 is not a PGandE oil- or gas-fueled plant, and PGandE  
28

1 can replace Seller's energy with energy from this  
2 source at a cost less than the price paid to Seller;

3  
4 (ii) when PGandE would incur negative avoided  
5 costs (as defined by the CPUC) due to continued  
6 acceptance of energy deliveries under this Agreement;  
7 or

8 (iii) when PGandE is experiencing minimum system  
9 operations.  
10

11 During any of the conditions described above the  
12 adjusted price may be zero.  
13

14 (b) Whenever possible, PGandE shall give Seller  
15 reasonable notice of any price adjustment for energy  
16 deliveries and its probable duration.  
17

18 (c) If Seller is selling net energy output to PGandE  
19 and simultaneously purchasing its electrical needs from  
20 PGandE and Seller elects not to sell energy to PGandE at the  
21 adjusted price, Seller shall not use such energy to meet its  
22 electrical needs but shall continue to purchase all its  
23 electrical needs from PGandE.  
24

25 (d) After Seller receives notice of the probab  
26 duration of the period during which the adjusted price wi  
27 be paid, Seller may elect to perform maintenance during st  
28

1 period and so inform the PGandE employee in charge at the  
2 designated PGandE switching center prior to the time when  
3 the adjusted price period is expected to begin. If Seller  
4 makes such election, the number of off-peak hours of  
5 probable duration quoted in PGandE's notice to Seller shall  
6 be applied to the 1,000-hour calendar year limitation set  
7 forth in this section. After an election to do maintenance,  
8 if Seller makes any deliveries of energy during the quoted  
9 probable duration period, Seller shall be paid the adjusted  
10 price quoted in its notice from PGandE without regard to any  
11 subsequent changes on the PGandE system which may alter the  
12 adjusted price or shorten the actual duration of the  
13 condition.

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APPENDIX D  
AS-DELIVERED CAPACITY

D-1 AS-DELIVERED CAPACITY PAYMENT OPTIONS

Seller has two options for as-delivered capacity payments and Seller has made its selection in Article 5. The two options are as follows:

AS-DELIVERED CAPACITY PAYMENT OPTION 1

PGandE shall pay Seller for as-delivered capacity at prices authorized from time to time by the CPUC. The as-delivered capacity prices in effect on the date of execution are calculated as shown in Exhibit D-1.

AS-DELIVERED CAPACITY PAYMENT OPTION 2

During the fixed price period, the as-delivered capacity prices will be calculated in accordance with Exhibit D-1 and the forecasted shortage costs in Table D-2.

For the remaining years of the term of agreement, PGandE shall pay Seller for as-delivered capacity at the

1 higher of:

2  
3 (i) prices authorized from time to time by the  
4 CPUC;

5  
6 (ii) the as-delivered capacity prices that were  
7 paid Seller in the last year of the fixed  
8 price period; or

9  
10 (iii) the as-delivered capacity prices in effect in  
11 the first year following the end of the fixed  
12 price period, provided that the annualized  
13 shortage cost from which these prices are  
14 derived does not exceed the annualized value  
15 of a gas turbine.

16  
17 D-2 AS-DELIVERED CAPACITY IN EXCESS OF FIRM CAPACITY

18  
19 The amount of capacity delivered in excess of firm  
20 capacity will be considered as-delivered capacity. This  
21 as-delivered capacity is based on the total kilowatt-hours  
22 delivered each month during all on-peak, partial-peak and  
23 off-peak hours excluding any energy associated with  
24 generation levels equal to or less than the firm capacity.

25  
26 Seller has the two options listed in Section D-1 for  
27 payment for such as-delivered capacity. Seller has made its  
28 selection in Article 5.

EXHIBIT D-1

1  
2  
3 The as-delivered capacity price (in cents per kW-hr)  
4 for power delivered by the Facility is the product of three  
5 factors:

6  
7 (a) The shortage cost in each year the Facility  
8 is operating. Currently, this shortage cost is \$60 per  
9 kW-year.

10  
11 (b) ~~A~~ capacity loss adjustment factor which  
12 provides for the effect of the deliveries on PGandE's  
13 transmission and distribution losses based on the  
14 Seller's interconnection voltage level. The applicable  
15 capacity loss adjustment factors for non-remote<sup>1</sup>  
16 Facilities are presented in Table D-1(a). Capacity  
17 loss adjustment factors for remote Facilities shall be  
18 calculated individually.

19  
20 (c) An allocation factor which accounts for the  
21 different values of as-delivered capacity in different  
22 time periods and converts dollars per kW-year to cents  
23 per kWh. The current allocation factors are presented  
24 in Table D-1(b). The time periods to which they apply  
25 are shown in Table B-4, Appendix B. The allocation  
26 factors are subject to change from time to time.

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28 <sup>1</sup> As defined by the CPUC.

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TABLE D-1(a)  
Capacity Loss Adjustment Factors  
for Non-Remote<sup>1</sup> Facilities

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

If the Facility is remote, the capacity loss adjustment factor is           <sup>2</sup>          <sup>3</sup>.

TABLE D-1(b)  
Allocation Factors  
for As-Delivered Capacity<sup>3</sup>

	<u>On-Peak</u> (¢-yr/\$-hr)	<u>Partial-Peak</u> (¢-yr/\$-hr)	<u>Off-Peak</u> (¢-yr/\$-hr)
Seasonal Period A	.10835	.02055	.00002
Seasonal Period B	.00896	.00109	.00001

<sup>1</sup> As defined by the CPUC. The capacity loss adjustment factors for remote Facilities are determined individually.

<sup>2</sup> To be determined upon completion of the detailed interconnection study for the Facility.

<sup>2</sup> Determined individually.

<sup>3</sup> 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 D-2

Forecasted Shortage Cost Schedule

<u>Year</u>	<u>Forecast Shortage Cost, \$/kW-Yr</u>
	70
1983	76
1984	81
1985	
	88
1986	95
1987	102
1988	
	110
1989	118
1990	126
1991	
	135
1992	144
1993	154
1994	
	164
1995	176
1996	188
1997	

APPENDIX E  
FIRM CAPACITY

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1 APPENDIX E  
2 FIRM CAPACITY

3  
4 E-1 GENERAL

5  
6 This Appendix E establishes conditions and prices under  
7 which PGandE shall pay for firm capacity.

8  
9 PGandE's obligation to pay for firm capacity shall  
10 begin on the firm capacity availability date. The firm  
11 capacity price shall be subject to adjustment as provided  
12 for in this Appendix E.

13  
14 The firm capacity prices in Table E-2 are applicable  
15 for deliveries of firm capacity beginning after December 30,  
16 1982.

17  
18 E-2 PERFORMANCE REQUIREMENTS

19  
20 (a) To receive full capacity payments, the firm  
21 capacity shall be delivered for all of the on-peak hours<sup>1</sup> in  
22 the peak months on the PGandE system, which are presently  
23 the months of June, July, and August, subject to a 20  
24 percent allowance for forced outages in any month.  
25 Compliance with this provision shall be based on the  
26 Facility's total on-peak deliveries for each of the peak

27  
28 <sup>1</sup> On-peak, partial-peak, and off-peak hours are defined in Table B-4,  
Appendix B.

1 months and shall exclude any energy associated with  
2 generation levels greater than the firm capacity.

3  
4 (b) If Seller is prevented from meeting the  
5 performance requirements because of a forced outage on the  
6 PGandE system, a PGandE curtailment of Seller's deliveries,  
7 or a condition set forth in Section A-7, Appendix A, PGandE  
8 shall continue capacity payments. Firm capacity payments  
9 will be calculated in the same manner used for scheduled  
10 maintenance outages.

11  
12 (c) If Seller is prevented from meeting the  
13 performance requirements because of force majeure, PGandE  
14 shall continue capacity payments for ninety days from the  
15 occurrence of the force majeure. Thereafter, Seller shall  
16 be deemed to have failed to have met the performance  
17 requirements. Firm capacity payments will be calculated in  
18 the same manner used for scheduled maintenance outages.

19  
20 (d) If Seller is prevented from meeting the  
21 performance requirements because of extreme dry year condi-  
22 tions, PGandE shall continue capacity payments. Extreme dry  
23 year conditions are drier than those used to establish firm  
24 capacity pursuant to Section E-8. Seller shall warrant to  
25 PGandE that the Facility is a hydroelectric facility and  
26 that such conditions are the sole cause of Seller's  
27 inability to meet its firm capacity obligations.  
28



1 (e) If Seller is prevented from meeting the  
2 performance requirements for reasons other than those  
3 described above in Sections E-2(b), (c), or (d):

4 (1) Seller shall receive the reduced firm  
5 capacity payments as provided in Section E-5 for a  
6 probationary period not to exceed 15 months, or as  
7 otherwise agreed to by the Parties.

8 (2) If, at the end of the probationary period  
9 Seller has not demonstrated that the Facility can meet  
10 the performance requirements, PGandE may derate the  
11 firm capacity pursuant to Section E-4(b).

12  
13 E-3 SCHEDULED MAINTENANCE

14  
15 Outage periods for scheduled maintenance shall not  
16 exceed 840 hours (35 days) in any 12-month period. This  
17 allowance may be used in increments of an hour or longer on  
18 a consecutive or nonconsecutive basis. Seller may  
19 accumulate unused maintenance hours from one 12-month period  
20 to another up to a maximum of 1,080 hours (45 days). This  
21 accrued time must be used consecutively and only for major  
22 overhauls. Seller shall provide PGandE with the following  
23 advance notices: 24 hours for scheduled outages less than  
24 one day, one week for a scheduled outage of one day or more  
25 (except for major overhauls), and six months for a major  
26 overhaul. Seller shall not schedule major overhauls during  
27 the peak months (presently June, July and August). Seller  
28 shall make reasonable efforts to schedule or reschedule

1 routine maintenance outside the peak months, and in no event  
2 shall outages for scheduled maintenance exceed 30 peak hours  
3 during the peak months. Seller shall confirm in writing to  
4 PGandE pursuant to Article 9, within 24 hours of the  
5 original notice, all notices Seller gives personally or by  
6 telephone for scheduled maintenance.

7 If Seller has selected Curtailment Option B, off-peak  
8 hours of maintenance performed pursuant to Section (d) of  
9 Curtailment Option B, Appendix C shall not be deducted from  
10 Seller's scheduled maintenance allowances set forth above.  
11

#### 12 E-4 ADJUSTMENTS TO FIRM CAPACITY

13  
14 (a) Seller may increase the firm capacity with the  
15 approval of PGandE and receive payment for the additional  
16 capacity thereafter in accordance with the applicable  
17 capacity purchase price published by PGandE at the time the  
18 increase is first delivered to PGandE.  
19

20 (b) Seller may reduce the firm capacity at any time  
21 prior to the firm capacity availability date by giving  
22 written notice thereof to PGandE. PGandE may derate the  
23 firm capacity in accordance with Section E-2(e) as a result  
24 of appropriate data showing Seller has failed to meet the  
25 performance requirements of Section E-2.  
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E-5 FIRM CAPACITY PAYMENTS

The method for calculation of firm capacity payments is shown below. As used below in this section, month refers to a calendar month.

The monthly payment for firm capacity will be the product of the Period Price Factor (PPF), the Monthly Delivered Capacity (MDC), the appropriate capacity loss adjustment factor from Table E-1 based on the Facility's interconnection voltage, and the appropriate performance bonus factor, if any, from Table E-3, plus any allowable payment for outages due to scheduled maintenance. The firm capacity price shall be applied to meter readings taken during the separate times and periods as illustrated in Table B-4, Appendix B.

The PPF is determined by multiplying the firm capacity price by the following Allocation Factors<sup>1</sup>:

	Allocation Factor	* <u>Firm Capacity Price</u>	= PPF (\$/kW-month)
Seasonal Period A	.18540	_____	_____
Seasonal Period B	.01043	_____	_____

<sup>1</sup> These allocation factors were prescribed by the CPUC in Decision No. 83-12-068. All allocation factors are subject to change by PGandE based on PGandE's marginal capacity cost allocation, as determined in general rate case proceedings before the CPUC. Seasonal Periods A and B are defined in Table B-4, Appendix B.

1 The MDC is determined in the following manner:

2 (1) Determine the Performance Factor (P), which is  
3 defined as the lesser of 1.0 or the following quantity:  
4

$$5 \quad P = \frac{A}{C \times (B-S) \times (0.8^*)} \quad (\leq 1.0)$$

6  
7 Where:

8 A = Total kilowatt-hours delivered during all on-peak  
9 and partial-peak hours excluding any energy  
10 associated with generation levels greater than the  
11 firm capacity.

12 C = Firm capacity in kilowatts.

13 B = Total on-peak and partial-peak hours during the  
14 month.

15 S = Total on-peak and partial-peak hours during the  
16 month Facility is out of service on scheduled  
17 maintenance.

18  
19 (2) Determine the Monthly Capacity Factor (MCF), which  
20 is computed using the following expression:

$$21 \quad MCF = P \times \left(1.0 - \frac{M}{D}\right)$$

22  
23 Where:

24 M = The number of hours during the month Facility is  
25 out of service on scheduled maintenance.

26 D = The number of hours in the month.

27  
28 \* 0.8 reflects a 20% allowance for forced outage.

1 (3) Determine the MDC by multiplying the MCF by C:

2 
$$\text{MDC (kilowatts)} = \text{MCF} \times \text{C}$$

3  
4 The monthly payment for firm capacity is then  
5 determined by multiplying the PPF by the MDC, by the  
6 appropriate capacity loss adjustment factor presented from  
7 Table E-1, and by the appropriate performance bonus factor,  
8 if any, from Table E-3.

9  
10 
$$\text{monthly payment for } \underline{\text{firm capacity}} = \text{PPF} \times \text{MDC} \times \text{capacity loss adjustment factor} \times \text{performance bonus factor}$$

11  
12 Furthermore, the payment for a month in which  
13 there is an outage for scheduled maintenance shall also  
14 include an amount equal to the product of the average hourly  
15 firm capacity payment<sup>1</sup> for the most recent month in the same  
16 type of Seasonal Period (i.e., Seasonal Period A or Seasonal  
17 Period B) during which deliveries were made times the number  
18 of hours of outage for scheduled maintenance in the current  
19 month. Firm capacity payments will continue during the  
20 outage periods for scheduled maintenance provided that the  
21 provisions of Section E-3 are met.

22  
23 During a probationary period Seller's monthly  
24 payment for firm capacity shall be determined by  
25 substituting for the firm capacity, the capacity at which

26  
27 

---

  
28 <sup>1</sup> Total monthly payment divided by the total number of hours in the monthly billing period.

1 Seller would have met the performance requirements. In the  
 2 event that during the probationary period Seller does not  
 3 meet the performance requirements at whatever firm capacity  
 4 was established for the previous month, Seller's monthly  
 5 payment for firm capacity shall be determined by  
 6 substituting the firm capacity at which Seller would have  
 7 met the performance requirements. The performance bonus  
 8 factor shall not be applied during probationary periods.

10  
 11 TABLE E-1

12  
 13 If the Facility is non-remote<sup>1</sup> the firm capacity loss  
 14 adjustment factors are as follows:

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

15  
 16  
 17  
 18  
 19  
 20 If the Facility is remote the firm capacity loss adjustment  
 21 factor is \_\_\_\_\_<sup>2</sup>.

22  
 23  
 24  
 25 1 As defined by the CPUC.  
 26 2 Determined individually.

28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1

TABLE E-2

Firm Capacity Price Schedule  
(Levelized \$/kW-year)

Firm Capacity Avail-ability Date

Number of Years of Firm Capacity Delivery

(Year)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	20	25	30
1982	65	68	70	72	75	77	79	81	84	86	88	90	91	93	95	103	109	113
1983	70	73	75	78	80	83	85	88	90	92	94	96	98	100	102	110	117	122
1984	76	78	81	84	86	89	92	94	97	99	101	103	106	108	110	118	125	130
1985	81	84	87	90	93	96	99	101	104	106	109	111	113	115	118	127	134	140
1986	88	91	94	97	100	103	106	109	112	114	117	119	122	124	126	136	144	150
1987	95	98	101	105	108	111	114	117	120	123	125	128	130	133	135	146	154	160

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TABLE E-3

Performance Bonus Factor

The following shall be the performance bonus factors applicable to the calculation of the monthly payments for firm capacity delivered by the Facility after it has demonstrated a firm capacity factor in excess of 85%.

DEMONSTRATED FIRM CAPACITY FACTOR (%)	PERFORMANCE BONUS FACTOR
85	1.000
90	1.059
95	1.118
100	1.176

After the Facility has delivered power during the span of all of the peak months on the PGandE system (presently June, July, and August) in any year (span),

(i) the firm capacity factor for each such month shall be calculated in the following manner:

$$\text{FIRM CAPACITY FACTOR (\%)} = \frac{F}{(N-W) \times Q} \times 100$$

Where:

F = Total kilowatt-hours delivered by Seller in any peak month during all on-peak hours excluding any energy associated with generation levels greater than the firm capacity.



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N = Total on-peak hours during the month.

W = Total on-peak hours during the peak month that the Facility is out of service on scheduled maintenance.

Q = Firm capacity in kilowatts.

(ii) the arithmetic average of the above firm capacity factors shall be determined for that span,

(iii) the average of the above arithmetic average firm capacity factors for the most recent span(s), not to exceed 5, shall be calculated and shall become the Demonstrated Firm Capacity Factor.

To calculate the performance bonus factor for a Demonstrated Firm Capacity Factor not shown in Table E-3 use the following formula:

$$\text{Performance Bonus Factor} = \frac{\text{Demonstrated Firm Capacity Factor (\%)}}{85\%}$$

SECTIONS E-6 THROUGH E-10 SHALL APPLY ONLY TO HYDROELECTRIC PROJECTS

E-6 DETERMINATION OF NATURAL FLOW DATA

Natural flow data shall be based on a period of record of at least 50 years and which includes historic critically

1 dry periods. In the event Seller demonstrates that a  
2 natural flow data base of at least 50 years would be  
3 unreasonably burdensome, PGandE shall accept a shorter  
4 period of record with a corresponding reduction in the  
5 averaging basis set forth in Section E-8. Seller shall  
6 determine the natural flow data by month by using one of the  
7 following methods:

8  
9 Method 1

10  
11 If stream flow records are available from a recognized  
12 gauging station on the water course being developed in the  
13 general vicinity of the project, Seller may use the data  
14 from them directly.

15  
16 Method 2

17  
18 If directly applicable flow records are not available,  
19 Seller may develop theoretical natural flows based on  
20 correlation with available flow data for the closest  
21 adjacent and similar area which has a recognized gauging  
22 station using generally accepted hydrologic estimating  
23 methods.

24  
25 E-7 THEORETICAL OPERATION STUDY

26  
27 Based on the monthly natural flow data developed under  
28 Section E-6 a theoretical operation study shall be prepared

1 by Seller. Such a study shall identify the monthly capacity  
2 rating in kW and the monthly energy production in kWh for  
3 each month of each year. The study shall take into account  
4 all relevant operating constraints, limitations, and  
5 requirements including but not limited to --

6 (1) Release requirements for support of fish life and  
7 any other operating constraints imposed on the project;

8 (2) Operating characteristics of the proposed  
9 equipment of the Facility such as efficiencies, minimum and  
10 maximum operating levels, project control procedures, etc.;

11 (3) The design characteristics of project facilities  
12 such as head losses in penstocks, valves, tailwater  
13 elevation levels, etc.; and

14 (4) Release requirements for purposes other than power  
15 generation such as irrigation, domestic water supply, etc.

16 The theoretical operation study for each month shall  
17 assume an even distribution of generation throughout the  
18 month unless Seller can demonstrate that the Facility has  
19 water storage characteristics. For the study to show  
20 monthly capacity ratings, the Facility shall be capable of  
21 operating during all on-peak hours in the peak months on the  
22 PGandE system, which are presently the months of June, July,  
23 and August. If the project does not have this capability  
24 throughout each such month, the capacity rating in that  
25 month of that year shall be set at zero for purposes of this  
26 theoretical operation study.

1 E-8 DETERMINATION OF AVERAGE DRY YEAR CAPACITY RATINGS

2  
3 Based on the results of the theoretical operation study  
4 developed under Section E-7, the average dry year capacity  
5 rating shall be established for each month. The average dry  
6 year shall be based on the average of the five years of the  
7 lowest annual generation as shown in the theoretical  
8 operation study. Once such years of lowest annual  
9 generation are identified, the monthly capacity rating is  
10 determined for each month by averaging the capacity ratings  
11 from each month of those years. The firm capacity shown in  
12 Article 5 shall not exceed the lowest average dry year  
13 monthly capacity ratings for the peak months on the PGandE  
14 system, which are presently the months of June, July, and  
15 August.

16  
17 E-9 INFORMATION REQUIREMENTS

18  
19 Seller shall provide the following information to  
20 PGandE for its review:

21 (1) A summary of the average dry year capacity ratings  
22 based on the theoretical operation study as provided in  
23 Table E-4;

24 (2) A topographic project map which shows the location  
25 of all aspects of the Facility and locations of stream  
26 gauging stations used to determine natural flow data;

27 (3) A discussion of all major factors relevant to  
28 project operation;

1 (4) A discussion of the methods and procedures used to  
2 establish the natural flow data. This discussion shall be  
3 in sufficient detail for PGandE to determine that the  
4 methods are consistent with those outlined in Section E-6  
5 and are consistent with generally accepted engineering  
6 practices; and

7 (5) Upon specific written request by PGandE, Seller's  
8 theoretical operation study.

9  
10 E-10 ILLUSTRATIVE EXAMPLE

11  
12 (1) Determine natural flows - These flows are  
13 developed based on historic stream gauging records and are  
14 compiled by month, for a long-term period (normally at least  
15 50 years or more) which covers dry periods which  
16 historically occurred in the 1920's and 30's and more  
17 recently in 1976 and 77. In all but unusual situations this  
18 will require application of hydrological engineering methods  
19 to records that are available, primarily from the USGS  
20 publication "Water Resources Data for California".

21  
22 (2) Perform theoretical operation study - Using the  
23 natural flow data compiled under (1) above a theoretical  
24 operation study is prepared which determines, for each month  
25 of each year, energy generation (kWh) and capacity rating  
26 (kW). This study is performed based on the Facility's  
27 design, operating capabilities, constraints, etc., and  
28 should take into account all factors relevant to project

1 operation. Generally such a study is done by computer which  
2 routes the natural flows through project features,  
3 considering additions and withdrawals from storage, spill  
4 past the project, releases for support of fish life, etc.,  
5 to determine flow available for generation. Then the  
6 generation and capacity amounts are computed based on  
7 equipment performance, efficiencies, etc.

8  
9 (3) Determine average dry year capacity ratings -  
10 After the theoretical project operation study is complete  
11 the five years in which the annual generation (kWh) would  
12 have been the lowest are identified. Then for each month,  
13 the capacity rating (kW) is averaged for the five years to  
14 arrive at a monthly average capacity rating. The firm  
15 capacity is then set by the Seller based on the monthly  
16 average dry year capacity ratings and the performance  
17 requirements of this appendix. An example project is shown  
18 in the attached completed Table E-4.

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20  
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EXAMPLE  
TABLE E-4

Summary of Theoretical Operation Study

Project: New Creek 1  
 Water Source: West Fork New Creek  
 Mode of Operation: Run of the river  
 Type of Turbine: Francis Design Flow: 100 cfs Design Head: 150 feet

Operating Characteristics<sup>1</sup>:

	Flow (cfs)	Head (feet)		Output (kW)	Efficiency (%)	
		Gross	Net		Turbine	Generator
Normal Operation	100	160	150	1,120	90	98
Maximum Operation	110	160	148	1,150	85	98
Minimum Operation	30	160	155	290	75	98

Average Dry Year Operation - Based on the average of the following lowest generation years: 1930, 1932, 1934, 1949, 1977.

Month	Energy Generation (kWh)	Capacity Output (kW)	Percent of Total Hours Operated
January	855,000	1,150	100
February	753,000	1,120	100
March	818,000	1,100	100
April	727,000	1,010	100
May	699,000	940	100
June	612,000	850	100
July	484,000	650	100
August	305,000	410	100
September	245,000	340	100
October	148,800	200	100
November	468,000	650	100
December	595,000	800	100

Maximum firm capacity: 410 kW

<sup>1</sup> If Facility has a variable head, operating curves should be provided.

1 E-11 MINIMUM DAMAGES

2  
3 (a) In the event the firm capacity is derated or  
4 Seller terminates this Agreement, the quantity by which the  
5 firm capacity is derated or the firm capacity shall be used  
6 to calculate the payments due PGandE in accordance with  
7 Section (d).

8  
9 (b) Seller shall be invoiced by PGandE for all amounts  
10 due under this section. Payment shall be due within 30 days  
11 of the date of invoice.

12  
13 (c) If Seller does not make payments pursuant to  
14 Section (b), PGandE shall have the right to offset any  
15 amounts due it against any present or future payments due  
16 Seller.

17  
18 (d) Seller shall pay to PGandE:

19  
20 (i) an amount equal to the difference  
21 between (a) the firm capacity payments already  
22 paid by PGandE, based on the original term of  
23 agreement and (b) the total firm capacity payments  
24 which PGandE would have paid based on the period  
25 of Seller's actual performance using the adjusted  
26 firm capacity price. Additionally, Seller shall  
27 pay interest, compounded monthly from the date the  
28 excess capacity payment was made until the date



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Seller repays PGandE, on all overpayments, at the published Federal Reserve Board three months' Prime Commercial Paper rate; plus

(ii) a sum equal to the amount by which the firm capacity is being terminated or derated times the difference between the current firm capacity price on the date of termination or deration for a term equal to the balance of the term of agreement and the firm capacity price, multiplied by the appropriate factor shown in Table E-5 below. In the event that the current firm capacity price is less than the firm capacity price, no payment under this subsection (ii) shall be due either Party.

TABLE E-5

<u>Amount of Firm Capacity Terminated or Derated</u>	<u>Factor</u>
1,000 kW or under	0.25
over 1,000 kW through 10,000 kW	0.75
over 10,000 kW through 25,000 kW	1.00
over 25,000 kW through 50,000 kW	3.00
over 50,000 kW through 100,000 kW	4.00
over 100,000 kW	5.00

APPENDIX F  
INTERCONNECTION

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Section

F-1

INTERCONNECTION TARIFFS

F-2

POINT OF DELIVERY LOCATION SKETCH

F-3

INTERCONNECTION FACILITIES FOR WHICH  
SELLER IS RESPONSIBLE

Page

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May 7, 1984

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F-1 INTERCONNECTION TARIFFS

(The applicable tariffs in effect at the time of execution of this Agreement shall be attached.)

RULE NO. 21 -- NONUTILITY-OWNED PARALLEL GENERATION

(T)

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 Utility's distribution and transmission lines which are an integral part of its overall system are distinguished by the voltages at which they are operated. Distribution lines are operated at voltages below 60 kv and transmission lines are operated at voltages 60 kv and higher. (N)
3. The Power Producer (Producer) shall ascertain and be responsible for compliance with the requirements of all governmental authorities having jurisdiction. (N)
4. The Producer shall sign the Utility's written form of power purchase agreement or parallel operation agreement 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 overhead or underground lines.

**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 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.
2. **METERING**
  - 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.2.b following, the Utility shall provide, install, own and maintain all metering equipment as special facilities in accordance with Section F. (T)

(Continued)

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**RULE NO. 21 -- NONUTILITY-OWNED PARALLEL GENERATION (Cont'd.)**

**B. INTERCONNECTION FACILITIES (continued)**

**2. METERING**

- 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.

**3. CONTROL, PROTECTION AND SAFETY EQUIPMENT**

- 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 REQUIREMENTS<sup>1</sup>**

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 <sup>2</sup>	-	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
Under-voltage Protection	X	X	X	X	X	X
Under/Over-frequency Protection	-	-	X	X	X	X
Ground Fault Protection	-	-	-	-	X	X
Over-current Relay w/Voltage Restraint	Manual	Manual	Manual	Manual	Manual	Automatic
Synchronizing			X	X	X	X (T)
Power Factor or Voltage Regulation						

- c. **DISCONNECT DEVICE:** The Producer shall provide, install, own and maintain the interconnection disconnect device required by Section B.3.b at a location readily accessible to the Utility. Such device shall normally be located near the Utility's meter or meters for safe 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.

<sup>1</sup>Detailed 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.

<sup>2</sup>This 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.

<sup>3</sup>This 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.

(Continue)

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**RULE NO. 21 -- NONUTILITY-OWNED PARALLEL GENERATION (Cont'd.)**

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**B. INTERCONNECTION FACILITIES (continued)**

**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 as special facilities in accordance with Section F. Such additions and reinforcements may include the installation of a Utility distribution or transmission line extension or the increase of capacity in the Utility's existing distribution or transmission lines. The Utility shall determine whether any such additions or reinforcements shall include an increment of additional capacity for the Utility's use in furnishing service to its customers. If so, then the costs of providing, installing, owning and maintaining such additional capacity shall be borne by the Utility and/or its customers in accordance with the Utility's applicable tariffs on file with and authorized by the California Public Utilities Commission (Commission).

b. 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 such preliminary or detailed engineering study involves analysis of the Utility's transmission lines (60 kv and higher), the Utility shall complete its study within twelve calendar months of receiving all necessary plans and specifications from the Producer.

5. **PRODUCER-INSTALLED UTILITY-OWNED LINE EXTENSIONS:** The Producer may at its option 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 by contractors approved by the Utility and in accordance with its design and specifications. The Producer shall pay the Utility its 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.

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. Alterations made at the Producer's expense shall specifically exclude increases of existing line capacity necessary to accommodate the other Producers or Utility customers. Such alterations may, however, include relocation or undergrounding of the Utility's distribution or transmission lines as may be ordered by a governmental authority having jurisdiction.

7. **ALLOCATION OF THE UTILITY'S EXISTING LINE CAPACITY:** For two or more Producers seeking to use an existing line, a first come, first served approach shall be used. The first Producer to request an interconnection shall have the right to use the existing line and shall incur no obligation for costs associated with future line upgrades needed to accommodate other Producers or customers. The Utility's power purchase agreement shall specify the date by which the Producer must begin construction. If that date passes and construction has not commenced, the Producer shall be given 30 days to correct the deficiency after receiving a reminder from the Utility that the construction start-up date has passed. If construction has not commenced after the 30-day corrective period, the Utility shall have the right to withdraw its commitment to the first Producer and offer the right to interconnect on the existing line to the next Producer in order. If two Producers establish the right of first-in-time simultaneously, the two Producers shall share the costs of any additional line upgrade necessary to facilitate their cumulative capacity requirements. Costs shall be shared based on the relative proportion of capacity each Producer will add to the line.

(Continued)

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RULE NO. 21 -- NONUTILITY-OWNED PARALLEL GENERATION (Cont'd.)

- 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 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.
  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 reserves the right to 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 a 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 reactive support equivalent to that provided by operating a synchronous generator of the same size between 95 percent leading and 90 percent lagging power factor.
    - 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.
- 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.

(Continued)

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**RULE NO. 21 -- NONUTILITY-OWNED PARALLEL GENERATION (Cont'd.)**

(T)

**E. INTERFERENCE WITH SERVICE AND COMMUNICATION FACILITIES (continued)**

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, including such continuing ownership costs as may be applicable.

2. Special facilities are (a) those facilities installed at the Producer's request which the Utility does not normally furnish under its tariff schedules, 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, effective June 1984) and its Appendix A, "Detail of Special Facilities Charges" (Form 79-702, effective June 1984). 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 No. 2.
- b. At the Producer's option, and where such Producer's generation is a qualifying facility<sup>4</sup> 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.

<sup>4</sup>A 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)

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RULE NO. 21 -- NONUTILITY-OWNED PARALLEL GENERATION (Cont'd.)

(T)

F. SPECIAL FACILITIES (continued)

- 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 I of the Rule No. 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. (T)
  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. (N)
- G. EXCEPTIONAL CASES: Where the application of this rule appears impractical or unjust, the Producer may refer the matter to the Commission for special ruling or for the approval of special conditions.
- 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 No. 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)

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F-2 POINT OF DELIVERY LOCATION SKETCH

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<sup>1</sup> To be determined upon execution of the Special Facilities Agreement for the Facility.

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F-3 INTERCONNECTION FACILITIES FOR WHICH SELLER IS RESPONSIBLE

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<sup>1</sup> To be determined upon execution of the Special Facilities Agreement for the Facility.