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FIRST AMENDMENT
TO THE
POWER PURCHASE AGREEMENT
FOR THE
LONG-TERM ENERGY AND CAPACITY
POWER PURCHASE AGREEMENT
BETWEEN
THERMAL ENERGY DEVELOPMENT CORPORATION
AND
PACIFIC GAS AND ELECTRIC COMPANY

WHEREAS, Power Resources Development Corporation, on April 16, 1985, and Pacific Gas and Electric Company ("PG&E"), on June 25, 1985, executed an Interim Standard Offer No. 4 Long-Term Energy and Capacity Power Purchase Agreement (the "Agreement") for a proposed biomass facility to be located at Tracy, California (the "Facility"), which Agreement was assigned to Thermal Energy Development Corporation, a California corporation ("Seller"),^{and acknowledged} by the Consent to Assignment and Agreement executed by PG&E on August 30, 1985; and

3/11/85
RJS
4/29/85

WHEREAS, Seller requests PG&E to amend the existing Agreement by increasing the Facility's generator nameplate rating, as specified in Article 3(b), from 13,000 kW to 21,000 kW; and

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[Handwritten initials]
4/18/85
WA

WHEREAS, Seller requests PG&E to amend the existing Agreement by increasing the Facility's generator nameplate rating, as specified in Article 3(b), from 13,000 kW to 21,000 kW; and

1 WHEREAS, PG&E is willing to agree to Seller's request to
2 increase the Facility's generator nameplate rating in
3 exchange for commensurate ratepayer benefits; and

4
5 WHEREAS, Seller and PG&E agree that the prices for
6 capacity and energy delivered at a rate up to and including
7 13,000 kW shall be based on the existing Agreement, except
8 that the energy prices paid for such energy deliveries shall
9 be reduced by three (3) percent; and

10
11 WHEREAS, Seller and PG&E agree that PG&E will accept
12 deliveries of energy and capacity at a rate in excess of
13 13,000 kW and pay for that energy and capacity delivered at a
14 rate in excess of 13,000 kW based on full short-run avoided
15 operating costs established for Standard Offer No. 1 as
16 determined by the CPUC from time to time; and

17
18 WHEREAS, Seller and PG&E agree that PG&E shall not be
19 obligated to accept or pay for energy or capacity deliveries
20 in excess of 21,000 kW; and

21
22 WHEREAS, Seller and PG&E agree that PG&E will have the
23 right to curtail the entire 21,000 kW output of the Facility
24 in accordance with the terms and conditions of Article 7,
25 Curtailment Option B of the Agreement, except that the 7.7%
26 and 9.6% off-peak and super off-peak energy price adjustment,
27 or its successor, shall apply only to energy delivered at a
28 rate up to 13,000 kW; and

1 WHEREAS, all other terms and conditions of the Agreement,
2 including the net energy output option (which requires Seller
3 to sell the Facility's entire gross output, less only station
4 use and transformation and transmission losses to PG&E), will
5 not be changed;

6
7 NOW THEREFORE, Seller and PG&E hereby agree to amend the
8 Agreement as follows ("the First Amendment"):

9
10 1. DEFINITIONS

11
12 Underlined terms shall have the same meaning stated in
13 Appendix A, Section A-1 DEFINITIONS, pages A-2 through A-7,
14 of the Agreement.

15
16 2. ARTICLE 3 PURCHASE OF POWER

17
18 2.1 Amend Article 3(a), page 5, lines 6-8, to read:

19
20 "(a) Seller shall sell and deliver and PG&E shall
21 purchase and accept delivery of capacity and energy at the
22 voltage level of 115 kV."

23
24 2.2 Amend Article 3(b), page 5, lines 10-11, to read:

25
26 "(b) Seller shall provide capacity and energy from
27 its 21,000 KVA (generator nameplate) Facility located at
28 Tracy, California."

1 2.3 Amend Article 3(d), page 5, lines 18-21, to read:

2
3 "(d) Seller shall limit the Facility's actual rate
4 of delivery into the PG&E system to 21,000 kW."

5
6 2.4 Amend Article 3(g), page 6, line 15, to read:

7
8 "(g) The transformer loss adjustment factor is 2
9 percent."

10
11 3. ARTICLE 4 ENERGY PRICES

12
13 3.1 Amend Article 4, Energy Payment Option 1 -
14 Forecasted Energy prices, by deleting the first paragraph on
15 page 7, lines 1-5, and substituting the following:

16
17 "During the fixed price period, Seller shall be paid for
18 energy delivered at a rate up to and including 13,000 kW at
19 prices equal to 100 percent of the prices set forth in
20 Revised Table B-1, Appendix B (as amended by Paragraph 6.2 of
21 the First Amendment), plus 0 percent of PG&E's full short-run
22 avoided operating costs. Seller shall be paid for energy
23 delivered at a rate in excess of 13,000 kW at prices equal to
24 100 percent of PG&E's full short-run avoided operating cost."

25
26 3.2 Amend Article 4, Energy Payment Option 2 - Levelized
27 Energy Prices, by deleting the first paragraph on page 8,
28 lines 1-9 , and substituting the following:

1 "During the fixed price period, Seller shall be paid for
2 energy delivered at a rate up to and including 13,000 kW at
3 prices equal to 100 percent of the levelized energy prices
4 set forth in Revised Table B-2, Appendix B (as amended by
5 Paragraph 6.4 of the First Amendment) for the year in which
6 energy deliveries begin and the term of agreement, plus 0
7 percent of PG&E's full short-run avoided operating costs.
8 During the fixed price period, Seller shall be subject to the
9 conditions and terms set forth in Appendix B, Energy Payment
10 Option 2. Seller shall be paid for energy delivered at a
11 rate in excess of 13,000 kW at the prices equal to 100
12 percent of PG&E's full short-run avoided operating costs."

13
14 4. ARTICLE 5 CAPACITY ELECTION AND CAPACITY PRICE

15
16 Amend Article 5, page 10, line 19, by deleting "As-
17 Delivered Capacity Payment Option 2," and by substituting
18 "As-Delivered Capacity Payment Option 1."

19
20 5. ARTICLE 9 NOTICES

21
22 Amend Article 9, page 12, line 23 of the Agreement by
23 replacing:

24
25 "Attention: Vice President - Electric Operations"

26 with

27 "Attention: Vice President - Power Generation"
28

1 6. APPENDIX B ENERGY PAYMENT OPTIONS

2
3 6.1 Delete the first paragraph under Energy Payment
4 Option 1 - Forecasted Energy Prices, Appendix B, page B-1,
5 lines 6-13 of the Agreement, and substitute the following:

6
7 "Pursuant to Article 4, the energy payment calculation
8 for Seller's energy delivered at a rate up to and including
9 13,000 kW during each year of the fixed price period shall
10 include the appropriate prices for such year in Revised Table
11 B-1 (as amended by Paragraph 6.2 of the First Amendment),
12 multiplied by the percentage Seller has specified in
13 Article 4. If Seller has selected Curtailment Option B in
14 Article 7, the forecasted off-peak and super off-peak hours'
15 energy prices listed in Revised Table B-1 (as amended by
16 Paragraph 6.2 of the First Amendment) shall be adjusted
17 upward by 7.7% for Period A and 9.6% for Period B for energy
18 delivered at a rate up to and including 13,000 kW. No such
19 upward adjustment whatsoever shall be made to the prices
20 payable for energy delivered at a rate in excess of 13,000 kW
21 which are based upon full short-run avoided operating costs."

22
23
24 6.2 Delete page B-2, Table B-1 (Forecasted Energy Price
25 Schedule) in Appendix B of this Agreement and substitute the
26 Revised Table B-1, which is attached hereto as Attachment 1
27 and incorporated herein by this reference.
28

1 6.3 Delete the first paragraph under Energy Payment
2 Option 2 - Levelized Energy Prices, Appendix B, page B-3,
3 lines 3-13 of the Agreement and substitute the following:

4
5 "Pursuant to Article 4, the energy payment calculation
6 for Seller's energy delivered at a rate up to and including
7 13,000 kW during the fixed price period shall include the
8 appropriate prices set forth in Revised Table B-2 (as amended
9 by Paragraph 6.4 of the First Amendment) for the year in
10 which energy deliveries begin and term of agreement,
11 multiplied by the percentage Seller has specified in Article
12 4. If Seller has selected Curtailment Option B in Article 7,
13 the levelized off-peak and super off-peak hours' energy
14 prices listed in Revised Table B-2 (as amended by
15 Paragraph 6.4 of the First Amendment) shall be adjusted
16 upward by 7.7% for Period A and 9.6% for Period B for energy
17 delivered at a rate up to and including 13,000 kW. No such
18 upward adjustment shall be made to the prices payable for
19 energy delivered at a rate in excess of 13,000 kW which are
20 based upon full short-run avoided operating costs. The
21 discount specified in (c)(vi) below, if applicable, will be
22 applied to the energy payment during the fixed price period."

23
24 6.4 Delete page B-13, Table B-2 (Levelized Energy Price
25 Schedule) in Appendix B of this Agreement and substitute the
26 Revised Table B-2, which is attached hereto as Attachment 2
27 and incorporated herein by this reference.

28

1 6.5 Delete page B-19, Table B-4 (Time Periods) in
2 Appendix B of this Agreement and substitute the Revised Table
3 B-4, which is attached hereto as Attachment 3 and
4 incorporated herein by this reference.

5
6 7. APPENDIX C CURTAILMENT OPTIONS

7
8 Delete the first paragraph under Curtailment Option B -
9 Adjusted Price Period, Appendix C, page C-3, lines 19-24, and
10 substitute the following:

11
12 "(a) In each calendar year, the price which PG&E is
13 obligated to pay Seller for Facility's total energy
14 deliveries during 1,000 off-peak and super off-peak hours (as
15 defined in Table B-4, Appendix B) may be adjusted to a price
16 equal to, but not in excess of, PG&E's available alternative
17 source. This adjusted price shall be effective for the
18 entire output of Seller's Facility (up to and including
19 21,000 kW) under any of the following conditions:"

20
21 8. APPENDIX D AS-DELIVERED CAPACITY

22
23 Amend Appendix D by deleting lines 9-10, page D-4, and
24 substituting the following:

25
26 "The Facility is non-remote."
27
28

1 9. APPENDIX E FIRM CAPACITY

2
3 Amend Appendix E-5, Firm Capacity Payments by deleting
4 lines 21-22, page E-9, and substituting the following:

5
6 "The Facility is non-remote."
7

8 10. EFFECT ON AGREEMENT

9
10 Except as expressly modified by the First Amendment, the
11 provisions of the Agreement shall remain unchanged.
12

13 11. ENTIRE AGREEMENT; MODIFICATION

14
15 The First Amendment constitutes the entire agreement of
16 the Parties with respect to the subject-matter thereof and
17 supersedes any and all prior negotiations, correspondence,
18 understandings and agreements between the Parties respecting
19 the subject-matter thereof. The First Amendment may be
20 further amended or modified only by a written instrument
21 signed by the Parties hereto.
22

23 12. REASONABLENESS

24
25 PG&E and Seller shall support the reasonableness of the
26 First Amendment before any government authority of competent
27 jurisdiction in a proceeding involving a review of the First
28

1 Amendment for purposes of allowance or disallowance in rates
2 charged by PG&E.

3
4 IN WITNESS WHEREOF, Seller and PG&E hereto have caused
5 this First Amendment to be executed by their duly authorized
6 representatives and it is effective as of the last date set
7 forth below.

8
9
10 THERMAL ENERGY DEVELOPMENT CORP. PACIFIC GAS AND ELECTRIC COMPANY

11
12 By: *Timothy A. Hoblitzell*
13 TIMOTHY A. HOBLITZELL

By: *Robert J. Haywood*
ROBERT J. HAYWOOD

14 Title: President

Title: Vice President -
Power Contracts

15
16 Date Signed: 3/30/88

Date Signed: April 19, 1988
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Revised

TABLE B-1¹

Forecasted Energy Price Schedule

Forecasted Energy Prices, cents/kwh

| Year of Energy Weighed Deliv- eries | Period A | | | | Period B | | | | Annual Average |
|---|----------|------------------|----------|-------------------|------------------|----------|-------------------|-------|-------------------|
| | Peak | Partial- Peak | Off-Peak | Super Off-Peak | Partial- Peak | Off-Peak | Super Off-Peak | | |
| 1987 | 6.26 | 6.09 | 5.74 | 5.54 | 6.31 | 6.06 | 5.63 | 5.98 | |
| 1988 | 6.80 | 6.63 | 6.25 | 6.02 | 6.86 | 6.60 | 6.12 | 6.50 | |
| 1989 | 7.45 | 7.26 | 6.85 | 6.61 | 7.52 | 7.23 | 6.70 | 7.12 | |
| 1990 | 7.96 | 7.75 | 7.31 | 7.05 | 8.03 | 7.72 | 7.16 | 7.60 | |
| 1991 | 8.47 | 8.25 | 7.78 | 7.50 | 8.55 | 8.21 | 7.61 | 8.09 | |
| 1992 | 9.15 | 8.91 | 8.40 | 8.11 | 9.22 | 8.87 | 8.23 | 8.74 | |
| 1993 | 9.90 | 9.64 | 9.09 | 8.77 | 9.98 | 9.60 | 8.90 | 9.46 | |
| 1994 | 10.70 | 10.43 | 9.83 | 9.49 | 10.80 | 10.38 | 9.62 | 10.22 | |
| 1995 | 11.56 | 11.26 | 10.62 | 10.24 | 11.67 | 11.21 | 10.40 | 11.05 | |
| 1996 | 12.43 | 12.11 | 11.42 | 11.01 | 12.53 | 12.05 | 11.17 | 11.87 | |
| 1997 | 13.34 | 13.00 | 12.25 | 11.82 | 13.45 | 12.94 | 12.00 | 12.75 | |
| 1998 | 13.34 | 13.00 | 12.25 | 11.82 | 13.45 | 12.94 | 12.00 | 12.75 | |
| 1999 | 13.34 | 13.00 | 12.25 | 11.82 | 13.45 | 12.94 | 12.00 | 12.75 | |
| 2000 | 13.34 | 13.00 | 12.25 | 11.82 | 13.45 | 12.94 | 12.00 | 12.75 | |

1 The above table is a modified Forecasted Energy Price Table for Thermal Energy Development Corporation's Power Purchase Agreement and reflects a 3 percent reduction. This table has also been amended to include years 1998 to 2000 pursuant to Ordering Paragraph 3(d) of Decision No. 86-12-104.

Revised

TABLE B-2

Levelized Energy Price Schedule¹

| First Year of Energy Deliv- eries | Levelized Energy Prices, cents/kWh | | | | | | | | Weighted Annual Average |
|---|------------------------------------|------------------|----------|----------------|----------|----------------|------------------|----------|-------------------------------|
| | Peak | Partial- Peak | Period A | | Period B | | Partial- Peak | Off-Peak | |
| | | | Off-Peak | Super Off-Peak | Off-Peak | Super Off-Peak | | | |
| For a term of agreement of 20-30 years: | | | | | | | | | |
| 1985 | 7.20 | 7.01 | 6.62 | 6.38 | 7.27 | 6.98 | 6.47 | 6.88 | |
| 1986 | 7.73 | 7.53 | 7.09 | 6.85 | 7.49 | 7.49 | 6.95 | 7.38 | |
| 1987 | 8.32 | 8.11 | 7.64 | 7.38 | 8.40 | 8.07 | 7.49 | 7.95 | |
| 1988 | 8.98 | 8.75 | 8.25 | 7.96 | 9.06 | 8.71 | 8.08 | 8.58 | |

¹ The above table is a modified Levelized Energy Price Table for Thermal Energy Development Corporation's Power Purchase Agreement and reflects a 3 percent reduction.

TABLE B-1
Time Periods

| | Monday through <u>Friday</u> ² | Saturdays, Sundays, <u>and Holidays</u> |
|----|---|---|
| 1 | | |
| 2 | Seasonal Period A | |
| 3 | (May 1 through October 31) | |
| 4 | Peak | None |
| 5 | Noon to 6:00 p.m. | |
| 6 | Partial-Peak | None |
| 7 | 8:30 a.m. to Noon | |
| 8 | 6:00 p.m. to 9:30 p.m. | |
| 9 | Off-Peak | |
| 10 | 9:30 p.m. to 1:00 a.m. | |
| 11 | 5:00 a.m. to 8:30 a.m. | 5:00 a.m. to 1:00 a.m. |
| 12 | Super Off-Peak | |
| 13 | 1:00 a.m. to 5:00 a.m. | 1:00 a.m. to 5:00 a.m. |
| 14 | Seasonal Period B | |
| 15 | (November 1 - April 30) | |
| 16 | Partial-Peak | None |
| 17 | 8:30 a.m. to 9:30 p.m. | |
| 18 | Off-Peak | |
| 19 | 9:30 p.m. to 1:00 a.m. | |
| 20 | 5:00 a.m. to 8:30 a.m. | 5:00 a.m. to 1:00 a.m. |
| 21 | Super Off-Peak | |
| 22 | 1:00 a.m. to 5:00 a.m. | 1:00 a.m. to 5:00 a.m. |
| 23 | | |
| 24 | | |

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

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