

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298



June 7, 2011

Advice Letters 3705-E and 3705-E-A

Jane K. Yura
Vice President, Regulation and Rates
Pacific Gas and Electric Company
77 Beale Street, Mail Code B10B
P.O. Box 770000
San Francisco, CA 94177

Subject: Restructuring Advice Letter Filing for Amendment to Power Purchase Agreement between ENXCO Wind Farm, Inc., and PG&E Company and Supplemental Filing

Dear Ms. Yura:

Advice Letters 3705-E and 3705-E-A are effective March 10, 2011 per Resolution E-4389.

Sincerely,

A handwritten signature in blue ink that reads "Julie A. Fitch".

Julie A. Fitch, Director
Energy Division



Jane K. Yura
Vice President
Regulation and Rates

Pacific Gas and Electric Company
77 Beale St., Mail Code B10B
P.O. Box 770000
San Francisco, CA 94177

Fax: 415-973-6520

July 21, 2010

Advice 3705-E
(Pacific Gas and Electric Company U 39 E)

Public Utilities Commission of the State of California

Subject: Restructuring Advice Letter Filing for Amendment to Power Purchase Agreement Between ENXCO Wind Farm, Inc., and Pacific Gas and Electric Company

Pacific Gas and Electric Company ("PG&E") seeks California Public Utilities Commission ("CPUC" or "Commission") approval of the Fourth Amendment ("Amendment") of its Interim Standard Offer 4 Power Purchase Agreement ("ISO4 PPA") with ENXCO Windfarm V, Inc ("ENXCO"). The Amendment will reduce the price paid for Additional Energy generated by a capacity upgrade of ENXCO's currently operational wind facility located in Solano County. The transaction is expected to reduce the notional value of payments for the delivery of approximately 30 GWh per year from ENXCO's 10 MW wind generation facility.

Commission approval of the ENXCO Amendment should be granted pursuant to the Restructuring Advice Letter Filing ("RALF") procedure adopted in Decision ("D.") 98-12-066 because the Amendment will reduce the average price of future deliveries of wind energy compared to the price currently paid for procurement from a reliable generator under ENXCO's ISO4 PPA.

The Amendment anticipates final, non-appealable CPUC Approval within 270 days from the date of execution, which is November 13, 2010.

A. PURPOSE

PG&E requests the Commission to issue a resolution no later than October 14, 2010, that approves this advice letter without modifications and finds that:

1. PG&E sought a Qualifying Facility Restructuring Reasonableness Letter (“QFRRL”) of support or no opposition from the Division of Ratepayer Advocates (“DRA”) pursuant to D.98-12-066.
2. DRA issued a letter finding the Amendment to be reasonable and no comments were received on the letter.
3. Pursuant to D.02-08-071, PG&E presented the Amendment to its Procurement Review Group (“PRG”) and the PRG provided no reason for the Commission to refrain from approving the Amendment.
4. PG&E has demonstrated that the proposed restructuring is reasonable.
5. The Amended Agreement is consistent with PG&E’s 2006 Long Term Procurement Plan, which was approved by D.07-012-052.
6. Procurement under the Amended Agreement is exempt from the Emissions Performance Standard (“EPS”) rules adopted by D.07-01-039 because it concerns an in-state RPS-eligible facility with a capacity factor less than 60 percent.¹
7. The Amendment is reasonable and prudent.
8. Payments made by PG&E under the Amended Agreement are fully recoverable in rates during the term of the Amendment through PG&E’s Energy Resource Recovery Account (“ERRA”) excluding the above-market portion, if any exist, in the Ongoing Competition Transition Charge (“Ongoing CTC”), subject only to ongoing CPUC review of PG&E’s prudent administration of the Amendment, existing ISO4 PPA, and prior amendments.
9. Procurement pursuant to the Amended PPA is procurement from eligible renewable energy resources for purposes of determining PG&E’s compliance with any obligation that it may have to procure eligible renewable energy resources pursuant to the California Renewables Portfolio Standard (Public Utilities Code Section 399.11 et seq.), D.03-06-071 and D.06-10-050, or other applicable law.

¹ See, D.07-10-039, Conclusion of Law 35 and Attachment 7, pp.4 and 5.

10. The material declared to be confidential should remain confidential under the terms of D.06-06-066 and D.08-04-023.

11. The Advice Letter should be approved without modifications.

B. BACKGROUND

On January 14, 2010, PG&E presented details of the Amendment to its Procurement Review Group (“PRG”).

On May 28, PG&E provided DRA and the Consumer Services and Information Division (“CSID”) with the following:

- A draft of this Advice Letter;
- The Agreement (“Confidential Appendix A”);
- The existing ISO4 PPA (“Public Appendix B-1”) and previous amendments to the existing ISO4 PPA (“Confidential Appendices B-2, B-3, and B-4”);
- Summary of the Transaction and Contract (“Confidential Appendix C”);
- PG&E’s Operational Viability Assessment (“Confidential Appendix D”);
- Historic Output Comparison (“Public Appendix F”); and
- PG&E’s Customer Benefits Analysis (“Confidential Appendix G”).

On July 2, 2010, the DRA issued a letter supporting this filing. The DRA letter is attached as Confidential Appendix E.

The ENXCO Windfarm employs wind energy technology, which is pre-approved as compliant with California’s EPS by D.07-01-039. Accordingly, procurement under the amendment complies with the EPS adopted by the Commission in D.07-01-039.

C. INFORMATION REQUIRED UNDER THE RESTRUCTURING ADVICE LETTER FILING PROCEDURE

1. Description of the QF

Counterparty	Resource Type	Location	Capacity	Expected 2010 Deliveries	Delivery Point	Remaining Length of Amended Contract	On Line Date
EnXco V Windfarm (AKA PG&E Log No. 06W148)	Wind	Solano County	10 MW	29 GWh	NP-15	7 Years	Operational

The ENXCO Windfarm V, Inc. or “Seller” is an existing wind generation facility with a total installed capacity of 10 MW located in the Solano County Wind Resource Area of Solano County.

2. Ownership

The facility is owned by ENXCO V Windfarm, Inc. PG&E has no ownership interest in ENXCO or any of its affiliates.

3. Historical QF Operation

ENXCO currently is paid for all deliveries under the terms of an ISO4 contract executed on October 30, 1984, as amended by the First Amendment (Appendix B2), by the Second Amendment (Appendix B3), and by the Third Amendment (Appendix B4). These deliveries total approximately 13 GWh of energy and capacity per year. The facility relies on the wind to generate electricity, thus its performance is not monitored for compliance with efficiency standards.

4. Summary of Proposed Contract Restructuring

The facility was repowered in 2006 and generates “Additional Energy” in excess of its ISO4 PPA historical production (“Contract Limit”). PG&E has paid the ISO4 contract price for the Additional Energy since 1984. However, in order to claim Production Tax Credits for its repowering investment, ENXCO must demonstrate that it is not being paid more than avoided cost for generation in excess of its historical output, which is output prior to repowering. To accommodate ENXCO’s needs and obtain benefits for PG&E’s customers, ENXCO and PG&E have agreed to a Stipulated Recovery of a principal amount, plus interest accruing from the Fourth Amendment Execution Date, that is intended to insure that the prices paid by customers for the Additional Energy retroactive to the date of repowered deliveries do not exceed the Avoided Costs for Energy or Capacity prices adopted by the CPUC for Qualifying Facilities selling as-delivered capacity to PG&E. The Stipulated Recovery Amount also represents the commensurate benefit to customers for facilitating ENXCO’s ability to claim PTCs. A complete summary of the Amendment is contained in Confidential Appendix C attached to this advice letter.

5. Summary of Customer Benefits

PG&E's customers will benefit from paying no more than Avoided Cost for the Additional Energy procured from the date of repowering until the end of the PPA term. A forecast of the benefits to be received during the remaining 7 years of the restructured contract, including total savings expressed in terms of present value, are shown in confidential Appendix G.

6. Significant Disputes

There are no pending legal or regulatory disputes between ENXCO and PG&E.

7. QF's Projected Economic and Operational Viability Under Existing Contract

The Seller's track record of economic and operational viability under its current contracts with PG&E is illustrated by the volume of annual deliveries shown in the following table:

Year	ENXCO Windfarm V Annual Deliveries
2006	27,900
2007	35,563
2008	26,881
2009	19,897
2010	29,363

D. REASONABLENESS LETTER

As required by the RALF procedure established in D.98-12-066, PG&E sought a Qualifying Facility Restructuring Reasonableness Letter ("QFRRL") of support or no opposition from the DRA. In response to this request, Cynthia Walker, Program Manager with DRA, provided a letter dated July 2, 2010, to Jane Yura, PG&E's Vice President of Regulation and Rates, which finds the Amendment reasonable and consistent with Commission guidelines on restructuring QF contracts. The letter states, "DRA has reviewed the amendment and responses to data requests, and has verified the net cost savings to PG&E's customers. As a result of this analysis and review, DRA does not oppose the approval of the proposed Amendment 4 between PG&E and ENXCO." The Commission should confirm the DRA's conclusions and recommendations.

Protests

Anyone wishing to protest this filing may do so by sending a letter by **August 11, 2010**, which is 20 days from the date of this filing. The protest must state the grounds upon which it is based, including such items as financial and service impact, and should be submitted expeditiously. PG&E provides notice pursuant to D.98-12-066 that this RALF may be protested on one or more of the following grounds:

- a. PG&E did not properly serve or give notice of the advice letter;
- b. The relief requested in the advice letter would violate statute or Commission order;
- c. The advice letter contains material errors, or it does not follow the Commission's approved methodology, if any; or
- d. The proposed restructuring is unjust, unreasonable, or discriminatory, provided, however, that this advice letter is not subject to protest on these grounds if such protest would require re-litigating a prior order of the Commission.

Protests should be mailed to:

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

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

Copies of protests also should be mailed to the attention of the Director, Energy Division, Room 4004, at the address shown above.

The protest also should be sent via U.S. mail (and by facsimile and electronically, if possible) to PG&E at the address shown below on the same date it is mailed or delivered to the Commission:

Pacific Gas and Electric Company
Attention: Jane Yura
Vice President, Regulation and Rates
77 Beale Street, Mail Code B10B
P.O. Box 770000
San Francisco, California 94177

Facsimile: (415) 973-6520
E-mail: PGETariffs@pge.com

Effective Date

PG&E requests that the Commission issue a resolution approving this advice filing on or before **October 14, 2010**. PG&E submits this as a Tier 3 filing.

Notice

D.98-12-066 provides that RALFs should be served on the Consumer Service & Information Division ("CSID"), the DRA, and on PG&E's restructuring advice letter service list and any other third parties as specified by the Energy Division or other Commission order or statute. PG&E has served copies on CSID and DRA. However, D.03-01-034 closed the restructuring dockets effective January 16, 2003. Therefore, in accordance with Section IV, of General Order 96-B, PG&E is sending a copy of this advice letter, excluding the confidential appendices, electronically and via U.S. mail to parties shown on the service list of R.08-08-009 and R.04-04-025 and to the attached list. Non-market participants who are members of PG&E's Procurement Review Group and have signed appropriate Non-Disclosure Certificates will also receive the advice letter and accompanying confidential appendices by overnight mail. Address changes to the General Order 96-B service list should be directed to e-mail PGETariffs@pge.com. For changes to any other service list, please contact the Commission's Process Office at (415) 703-2021 or at Process_Office@cpuc.ca.gov. Send all electronic approvals to PGETariffs@pge.com. Advice letter filings can also be accessed electronically at <http://www.pge.com/tariffs>.

Handwritten signature of Jane Yura in cursive script, followed by a vertical line and the initials 'lmt'.

Vice President – Regulation and Rates

cc: Service Lists R.08-08-009 and R.04-04-025
Pacific Gas and Electric Company's Procurement Review Group
Joseph Abhulimen, CPUC - Legal Division
Cynthia Walker, CPUC – Division of Ratepayer Advocates
Teresa Hortinela, CPUC – Division of Ratepayer Advocates

Attachments

LIMITED ACCESS TO CONFIDENTIAL MATERIAL

The portions of this advice letter marked, "Confidential Protected Material" are entitled to confidentiality protection pursuant to D.06-06-066 and are submitted under the confidentiality protection of Section 583 of the Public Utilities Code and General Order 66-C. Pursuant to D.08-04-023, a Declaration in Support of Confidential Treatment regarding the confidential information is attached.

Confidential Attachments:

Appendix A – Amendment

Appendix B2 – First Confidential Amendment

Appendix B3 – Second Confidential Amendment

Appendix B4 – Third Confidential Amendment

**Appendix C - Summary of the Transaction Documents and Transaction
Details**

Appendix D – Operational Viability Assessment

Appendix E – DRA Letter of Conditional Support

Appendix G – Customer Benefits Analysis

Public Attachments:

Appendix B1 – Existing ISO4 Power Purchase Agreements

Appendix F – Historical Output of Project

CALIFORNIA PUBLIC UTILITIES COMMISSION

ADVICE LETTER FILING SUMMARY ENERGY UTILITY

MUST BE COMPLETED BY UTILITY (Attach additional pages as needed)

Company name/CPUC Utility No. **Pacific Gas and Electric Company (ID U39 M)**

Utility type:

ELC GAS
 PLC HEAT WATER

Contact Person: David Poster and Linda Tom-Martinez

Phone #: (415) 973-1082 and (415) 973-4612

E-mail: dxpu@pge.com and lmt1@pge.com

EXPLANATION OF UTILITY TYPE

ELC = Electric GAS = Gas
PLC = Pipeline HEAT = Heat WATER = Water

(Date Filed/ Received Stamp by CPUC)

Advice Letter (AL) #: **3705-E**

Tier: **3**

Subject of AL: **Restructuring Advice Letter Filing for Amendment to Power Purchase Agreement Between ENXCO Wind Farm, Inc., and Pacific Gas and Electric Company**

Keywords (choose from CPUC listing): Contracts, Portfolios

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

If AL filed in compliance with a Commission order, indicate relevant Decision/Resolution #:

Does AL replace a withdrawn or rejected AL? If so, identify the prior AL: No

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

Is AL requesting confidential treatment? If so, what information is the utility seeking confidential treatment for: Yes. See the attached matrix that identifies all of the confidential information.

Confidential information will be made available to those who have executed a nondisclosure agreement: Yes No All members of PG&E's Procurement Review Group who have signed nondisclosure agreements will receive the confidential information.

Name(s) and contact information of the person(s) who will provide the nondisclosure agreement and access to the confidential information: Hugh Merriam (415) 973-1269

Resolution Required? Yes No

Requested effective date: **October 14, 2010**

No. of tariff sheets: N/A

Estimated system annual revenue effect (%): N/A

Estimated system average rate effect (%): N/A

When rates are affected by AL, include attachment in AL showing average rate effects on customer classes (residential, small commercial, large C/I, agricultural, lighting).

Tariff schedules affected: N/A

Service affected and changes proposed¹: N/A

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

Protests, dispositions, and all other correspondence regarding this AL are due no later than 20 days after the date of this filing, unless otherwise authorized by the Commission, and shall be sent to:

CPUC, Energy Division

Tariff Files, Room 4005

DMS Branch

505 Van Ness Ave.,

San Francisco, CA 94102

jnj@cpuc.ca.gov and mas@cpuc.ca.gov

Pacific Gas and Electric Company

Attn: Jane Yura

Vice President, Regulation and Rates

77 Beale Street, Mail Code B10B

P.O. Box 770000

San Francisco, CA 94177

E-mail: PGETariffs@pge.com

**DECLARATION OF HUGH M. MERRIAM
SEEKING CONFIDENTIAL TREATMENT
FOR CERTAIN DATA AND INFORMATION
CONTAINED IN ADVICE LETTER 3705-E
(PACIFIC GAS AND ELECTRIC COMPANY - U 39 E)**

I, Hugh M. Merriam, declare:

1. I am presently employed by Pacific Gas and Electric Company ("PG&E"), and have been an employee at PG&E since 1983. My current title is Principal within PG&E's Energy Procurement organization. In this position, my responsibilities include negotiating new and amended Power Purchase Agreements. In carrying out these responsibilities, I have acquired knowledge of PG&E's contracts with numerous counterparties and have also gained knowledge of the operations of electricity sellers in general. Through this experience, I have become familiar with the type of information that would affect the negotiating positions of electricity sellers with respect to price and other terms, as well as with the type of information that such sellers consider confidential and proprietary.

2. Based on my knowledge and experience, and in accordance with Decision ("D.") 08-04-023 and the August 22, 2006 "Administrative Law Judge's Ruling Clarifying Interim Procedures for Complying with Decision 06-06-066," I make this declaration seeking confidential treatment of Appendices A, B2, B3, B4, C, D, E and G to Advice Letter 3705-E, submitted on July 22, 2010. By this Advice Letter, PG&E is seeking this Commission's approval of an amendment of its Power Purchase Agreement with ENXCO Windfarm V, Inc.

3. Attached to this declaration is a matrix identifying the data and information for which PG&E is seeking confidential treatment. The matrix specifies that the material PG&E is seeking to protect constitutes the particular type of data and information listed in Appendix 1 of D.06-06-066 and Appendix C of D.08-04-023 (the "IOU Matrix"), or constitutes information

that should be protected under General Order 66-C. The matrix also specifies the category or categories in the IOU Matrix to which the data and information corresponds, and why confidential protection is justified. Finally, the matrix specifies that: (1) PG&E is complying with the limitations specified in the IOU Matrix for that type of data or information; (2) the information is not already public; and (3) the data cannot be aggregated, redacted, summarized or otherwise protected in a way that allows partial disclosure. By this reference, I am incorporating into this declaration all of the explanatory text in the attached matrix that is pertinent to this filing.

I declare under penalty of perjury, under the laws of the State of California, that to the best of my knowledge the foregoing is true and correct. Executed on July 22, 2010 at San Francisco, California.



Hugh M. Merriam

PACIFIC GAS AND ELECTRIC COMPANY Advice Letter 3705-E July 22, 2010		IDENTIFICATION OF CONFIDENTIAL INFORMATION PER DECISION 06-05-066 AND DECISION 08-04-023				Length of Time
Redaction Reference	1) The material submitted constitutes a particular type of data listed in the Matrix, appended as Appendix 1 to D.06-06-066 and Appendix C to D.08-04-023 (Y/N)	2) Which category or categories in the Matrix the data correspond to:	3) That it is complying with the limitations on confidentiality specified in the Matrix for that type of data (Y/N)	4) That the information is not already public (Y/N)	5) The data cannot be aggregated, redacted, summarized, masked or otherwise protected in a way that allows partial disclosure (Y/N)	PG&E's Justification for Confidential Treatment
1 Document: Advice Letter 3705-E	Y	Item VII B) Contracts and power purchase agreements between utilities and non-affiliated third parties. General Order 66-C.	Y	Y	Y	This Appendix contains the proposed Amendment. Disclosure would provide valuable market sensitive information to competitors. Since RPS negotiations are still in progress with bidders from the 2005, 2006, 2007, 2008 and 2009 RPS solicitations, as well as negotiations with other QFs and bilateral RPS negotiations, this information should remain confidential for three years. Release of this information would be damaging to negotiations. Furthermore, the counterparty to the Amendment has an expectation that the terms will remain confidential. I am informed and believe that General Order 66-C also provides a basis for confidential treatment. General Order 66-C includes in its category of records not open to public inspection "information obtained in confidence from other than a business regulated by this Commission where the disclosure would be against the public interest." (Paragraph 2.8). It is in the public interest to treat such information as confidential because if such information were made public, it could have a damaging effect on current and future negotiations with other offers.
2 Appendix A	Y	Item VII B) Contracts and power purchase agreements between utilities and non-affiliated third parties. General Order 66-C.	Y	Y	Y	These Appendices contain previous, active Amendments to the PPA. Since RPS negotiations are still in progress with bidders from the 2005, 2006, 2007, 2008 and 2009 RPS solicitations, as well as negotiations with other QFs and bilateral RPS negotiations, this information should remain confidential for three years. Release of this information would be damaging to negotiations. Furthermore, the counterparty to the Amendment has an expectation that the terms will remain confidential. I am informed and believe that General Order 66-C also provides a basis for confidential treatment. General Order 66-C includes in its category of records not open to public inspection "information obtained in confidence from other than a business regulated by this Commission where the disclosure would be against the public interest." (Paragraph 2.8). It is in the public interest to treat such information as confidential because if such information were made public, it could have a damaging effect on current and future negotiations with other offers.
3 Appendices B2-B4	Y	Item VII B) Contracts and power purchase agreements between utilities and non-affiliated third parties. General Order 66-C.	Y	Y	Y	This Appendix contains a summary of the Amendment terms. Since RPS negotiations are still in progress with bidders from the 2005, 2006, 2007, 2008 and 2009 RPS solicitations, as well as negotiations with other QFs and bilateral RPS negotiations, this information should remain confidential for three years. Release of this information would be damaging to negotiations. Furthermore, the counterparty to the Amendment has an expectation that the terms will remain confidential. I am informed and believe that General Order 66-C also provides a basis for confidential treatment. General Order 66-C includes in its category of records not open to public inspection "information obtained in confidence from other than a business regulated by this Commission where the disclosure would be against the public interest." (Paragraph 2.8). It is in the public interest to treat such information as confidential because if such information were made public, it could have a damaging effect on current and future negotiations with other offers.
4 Appendix C	Y	Item VII B) Contracts and power purchase agreements between utilities and non-affiliated third parties. General Order 66-C.	Y	Y	Y	This Appendix contains a summary of the Amendment terms. Since RPS negotiations are still in progress with bidders from the 2005, 2006, 2007, 2008 and 2009 RPS solicitations, as well as negotiations with other QFs and bilateral RPS negotiations, this information should remain confidential for three years. Release of this information would be damaging to negotiations. Furthermore, the counterparty to the Amendment has an expectation that the terms will remain confidential. I am informed and believe that General Order 66-C also provides a basis for confidential treatment. General Order 66-C includes in its category of records not open to public inspection "information obtained in confidence from other than a business regulated by this Commission where the disclosure would be against the public interest." (Paragraph 2.8). It is in the public interest to treat such information as confidential because if such information were made public, it could have a damaging effect on current and future negotiations with other offers.

Redaction Reference	1) The material submitted constitutes a particular type of data listed in the Matrix, appended as Appendix 1 to D.06-06-066 and Appendix C to D.08-04-023 (Y/N)	2) Which category or categories in the Matrix the data correspond to:	3) That it is complying with the confidentiality limitations on the Matrix for that type of data (Y/N)	4) That the information is not already public (Y/N)	5) The data cannot be aggregated, redacted, summarized, masked or otherwise protected in a way that allows partial disclosure (Y/N)	PG&E's Justification for Confidential Treatment	Length of Tmo
5 Appendix D	Y	Item VII B) Contracts and power purchase agreements between utilities and non-affiliated third parties	Y	Y	Y	This Appendix consists of an operational viability assessment of the project. It describes the terms of the Agreement. Disclosure of this information would provide valuable market sensitive information to competitors, as described above with regard to Appendices A-B. Under D.06-06-066, an IOU may maintain the confidentiality of a power purchase agreement for three years. Disclosure of this Appendix could undermine PG&E's ability to bargain on behalf of its customers, the Appendix should remain confidential for three years.	For information covered under Item VII B), remain confidential for three years
6 Appendix E	Y	Item VII B) Contracts and power purchase agreements between utilities and non-affiliated third parties	Y	Y	Y	This Appendix consists of the Letter of Conditional Support from the Division of Ratepayer Advocates. It describes the terms of the Agreement. Disclosure of this information would provide valuable market sensitive information to competitors, as described above with regard to Appendices A-B. Under D.06-06-066, an IOU may maintain the confidentiality of a power purchase agreement for three years. Disclosure of this Appendix could undermine PG&E's ability to bargain on behalf of its customers, the Appendix should remain confidential for three years.	For information covered under Item VII B), remain confidential for three years
7 Appendix G	Y	Item VII B) Contracts and power purchase agreements between utilities and non-affiliated third parties	Y	Y	Y	This Appendix contains the Customer Benefit Analysis. It describes the terms of the Agreement. Disclosure of this information would provide valuable market sensitive information to competitors, as described above with regard to Appendices A-B. Under D.06-06-066, an IOU may maintain the confidentiality of a power purchase agreement for three years. Disclosure of this Appendix could undermine PG&E's ability to bargain on behalf of its customers, the Appendix should remain confidential for three years.	For information covered under Item VII B), remain confidential for three years

Public Appendix B1

Existing ISO4 Power Purchase Agreements

SECRET
DOCUMENT No. 20828-152B

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

Seller: U.S. Windpower, Inc.

Location: Solano County

Capacity: 10,000 kW

Energy Source: Wind

MAY 1984

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

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LONG-TERM ENERGY AND CAPACITY
POWER PURCHASE AGREEMENT
BETWEEN
U.S. WINDPOWER, INC.
AND
PACIFIC GAS AND ELECTRIC COMPANY

U.S. WINDPOWER, INC. ("Seller"), a corporation organized and existing under the laws of the State of Delaware, and PACIFIC GAS AND ELECTRIC COMPANY ("PGandE"), referred to collectively as "Parties" and individually as "Party", agree as follows:

ARTICLE 1 QUALIFYING STATUS

Seller warrants that, at the date of first power deliveries from Seller's Windplant(s)¹ and during the term of agreement, its Windplant(s) shall meet the qualifying facility requirements established as of the effective date of this Agreement by the Federal Energy Regulatory Commission's rules (18 Code of Federal Regulations 292) implementing the Public Utility Regulatory Policies Act of 1978 (16 U.S.C.A. 796, et seq.).

ARTICLE 2 COMMITMENT OF PARTIES

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

This Agreement contains certain provisions which set forth methods of calculating damages to be paid to PGandE in the event Seller fails to fulfill certain performance obligations. The inclusion of such provisions is not intended to create any express or implied right in Seller to terminate this Agreement prior to the expiration of the term of agreement. Termination of this Agreement by Seller prior to its expiration date shall constitute a breach of this Agreement and the damages expressly set forth in this Agreement shall not constitute PGandE's sole remedy for such breach.

ARTICLE 3 PURCHASE OF POWER

- (a) Seller shall sell and deliver and PGandE shall purchase and accept delivery of capacity and energy at the voltage level of _____² kv.
- (b) Seller shall provide capacity and energy from its 10,000 kw Facility located at _____².
- (c) The scheduled operation date of the Facility is January 1, 1988. At the end of each calendar quarter Seller shall give written notice to PGandE of any change in the scheduled operation date.
- (d) To avoid exceeding the physical limitations of the interconnection facilities, Seller shall limit the Facility's actual rate of delivery into the PGandE system to _____² kw.
- (e) The primary energy source for the Facility is wind energy.

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

² To be amended when the Parties enter into a Special Facilities Agreement. Seller shall notify PGandE in writing as to the special facilities location(s) at least one year prior to the scheduled operation date of each Windplant. Failure by Seller to so notify PGandE shall release PGandE from any obligation to supply special facilities within any period less than one year from the date of said notification.

- (f) If Seller does not begin construction of its Windplant(s) by _____¹, PGandE may reallocate the existing capacity on PGandE's transmission and/or distribution system which would have been used to accommodate Seller's power deliveries to other uses. In the event of such reallocation, Seller shall pay PGandE for the cost of any upgrades or additions to PGandE's system necessary to accommodate the output from the Windplant(s). Such additional facilities shall be installed, owned, and maintained in accordance with the applicable PGandE tariff.
- (g) The transformer loss adjustment factor is zero.

ARTICLE 4 ENERGY PRICE

PGandE shall pay Seller for its net energy output under the energy payment option checked below:

 Energy Payment Option 1 - Forecasted Energy Prices

During the fixed price period, Seller shall be paid for energy delivered at prices equal to _____ percent of the prices set forth in Table B-1, Appendix B, plus _____ percent of PGandE's full short-run avoided operating costs.

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

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

 X Energy Payment Option 2 - Levelized Energy Prices

During the fixed price period, Seller shall be paid for energy delivered at prices equal to 100 percent of the levelized energy prices set forth in Table B-2, Appendix B for the year 1988 or the year in which energy deliveries begin for the last wind turbine installed for a Windplant, whichever is earlier and term of agreement. Seller shall notify PGandE when the last wind turbine for a Windplant begins energy deliveries. During the fixed price period, Seller shall be subject to the conditions and terms set forth in Appendix B, Energy Payment Option 2.

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

¹ To be amended when the Parties enter into a Special Facilities Agreement. Seller shall notify PGandE in writing as to the special facilities location(s) at least one year prior to the scheduled operation date of each Windplant. Failure by Seller to so notify PGandE shall release PGandE from any obligation to supply special facilities within any period less than one year from the date of said notification.

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

_____ Energy Payment Option 3 - Incremental Energy Rate

Beginning with the date of initial energy deliveries and continuing until _____¹, 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	_____

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

ARTICLE 5 CAPACITY ELECTION AND CAPACITY PRICE

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

_____ Firm capacity - _____ kW for _____ years from the firm capacity availability date with payment determined in accordance with Appendix E. Except for hydro-electric facilities, PGandE shall pay Seller for capacity delivered in excess of firm capacity on an as-delivered capacity basis in accordance with As-Delivered Capacity Payment Option _____ set forth in Appendix D.

OR

X As-delivered capacity with payment determined in accordance with As-Delivered Capacity Payment Option 2 set forth in Appendix D.

¹ Specified by Seller. Must be December 31, 1998 or prior.

ARTICLE 6 LOSS ADJUSTMENT FACTORS

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

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

ARTICLE 7 CURTAILMENT

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

- Curtailment Option A - Hydro Spill and Negative Avoided Cost
- Curtailment Option B - Adjusted Price Period

The two options are described in Appendix C.

ARTICLE 8 RETROACTIVE APPLICATION OF CPUC ORDERS

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

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

ARTICLE 9 NOTICES

All written notices shall be directed as follows:

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

To Seller: U.S. Windpower, Inc.
Attention: President
500 Sansome Street, Suite 600
San Francisco, CA 94111

ARTICLE 10 DESIGNATED SWITCHING CENTER

The designated PGandE switching center shall be, unless changed by PGandE¹:

(Name)

(Location)

(Phone number)

¹ See page 4 footnote.

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 twenty-eight years (28) from January 1, 1988; provided, however, that it shall 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.

U.S. WINDPOWER, INC.

PACIFIC GAS AND ELECTRIC COMPANY

BY: Gerald R. Alderson
 GERALD R. ALDERSON
 President *my SBT*

BY: Nolan H. Daines
 NOLAN H. DAINES
 Vice President -
 Planning and Research

DATE SIGNED: 10/30/84

DATE SIGNED: 11/5/84

Approved as to Form
Harold P. Brown
 Attorney

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.

Average cost - PGandE's average cost of electric power, including energy and capital charges (determined by dividing the total cost of energy produced by the total amount of such production, in terms of kilowatt-hours), at the generation level. Transmission and distribution costs are not to be included.

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

Designated PGandE switching center - That switching center or other PGandE installation identified in Article 10.

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

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

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

Firm capacity price - The price for firm capacity applicable for the firm capacity availability date and the number of years of firm capacity delivery from the firm capacity price schedule, Table E-2, Appendix E.

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

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

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

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

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

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

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

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

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

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

Surplus energy output - The Facility's gross output, in kilowatt-hours, less station use, and any other use by Seller, and transformation and transmission losses to the point of delivery into the PGandE system.

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

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

Windplant - All of Seller's facilities and rights, excluding interconnection facilities, owned by a single legal entity and required to produce energy from a wind generating facility consisting of a number of wind turbines and associated equipment.

A-2 CONSTRUCTION

A-2.1 Land Rights

Seller hereby grants to PGandE all necessary rights of way and easements, including adequate and continuing access rights on property of Seller, to install, operate, maintain, replace, and remove the special facilities. Seller agrees to execute such other grants, deeds, or documents as PGandE may require to enable it to record such rights of way and easements. If any part of PGandE's equipment is to be installed on property owned by other than Seller, Seller shall, at its own cost and expense, obtain from the owners thereof all necessary rights of way and easements, in a form satisfactory to PGandE, for the construction, operation, maintenance, and replacement of PGandE's equipment upon such property. If Seller is unable to obtain such rights of way and easements, Seller shall reimburse PGandE for all costs incurred by PGandE in obtaining them. PGandE shall at all times have the right of ingress to and egress from

the Facility at all reasonable hours for any purposes reasonably connected with this Agreement or the exercise of any and all rights secured to PGandE by law or its tariff schedules.

A-2.2 Design, Construction, Ownership, and Maintenance

- (a) Seller shall design, construct, install, own, operate, and maintain all interconnection facilities, except special facilities, to the point(s) of interconnection with the PGandE system as required for PGandE to receive capacity and energy from the Windplant(s). The Windplant(s) and interconnection facilities shall meet all requirements of applicable codes and all standards of prudent electrical practices and shall be maintained in a safe and prudent manner. A description of the interconnection facilities for which Seller is solely responsible is set forth in Appendix F, or if the interconnection requirements have not yet been determined at the time of the execution of this Agreement, the description of such facilities will be appended to this Agreement at the time such determination is made.
- (b) Seller shall submit to PGandE the design and all specifications for the interconnection facilities (except special facilities) and, at PGandE's option, the Windplant(s), for review and written acceptance prior to their release for construction purposes. PGandE shall notify Seller in writing of the outcome of PGandE's review of the design and specifications for Seller's interconnection facilities (and the Facility, if requested) within 30 days of the receipt of the design and all of the specifications for the interconnection facilities (and the Facility, if requested). Any flaws perceived by PGandE in the design and specifications for the interconnection facilities (and the Facility, if requested) will be described in PGandE's written notification. PGandE's review and acceptance of the design and specifications shall not be construed as confirming or endorsing the design and specifications or as warranting their safety, durability, or reliability. PGandE 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 design and specifications, nor shall PGandE's acceptance be deemed to be an endorsement of any of such equipment. Seller shall change the interconnection facilities as may be reasonably required by PGandE to meet changing requirements of the PGandE system.
- (c) In the event it is necessary for PGandE to install interconnection facilities for the purposes of this Agreement, they shall be installed as special facilities.
- (d) Upon the request of Seller, PGandE shall provide a binding estimate for the installation of interconnection facilities by PGandE.

A-2.3 Meter Installation

- (a) PGandE shall specify, provide, install, own, operate, and maintain as special facilities metering and data processing equipment for the registration and recording of energy and other related parameters which are required for the reporting of data to PGandE and for computing the payment due Seller from PGandE.
- (b) Seller shall provide, construct, install, own, and maintain at Seller's expense all that is required to accommodate the metering and data processing equipment, such as, but not limited to, metal-clad switchgear, switchboards, cubicles, metering panels, enclosures, conduits, rack structures, and equipment mounting pads.
- (c) PGandE shall permit meters to be fixed on PGandE's side of the transformer. If meters are placed on PGandE's side of the transformer, service will be provided at the available primary voltage and no transformer loss adjustment will be made. If Seller chooses to have meters placed on Seller's side of the transformer, an estimated transformer loss adjustment factor of 2 percent, unless the Parties agree otherwise, will be applied.

A-3 OPERATION

A-3.1 Inspection and Approval

Seller shall not operate the Windplant(s) 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 Windplant's start-up date(s) at least 45 days prior to such date(s). 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 Windplant(s) Operation and Maintenance

Seller shall operate and maintain its Windplant(s) 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 Windplant(s) 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.

A-3.3 Point of Delivery

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

A-3.4 Operating Communications

- (a) Seller shall maintain operating communications with the designated PGandE switching center. The operating communications shall include, but not be limited to, system paralleling or separation, scheduled and unscheduled shutdowns, equipment clearances, levels of operating voltage or power factors and daily capacity and generation reports.
- (b) Seller shall keep a daily operations log for each generating unit which shall include information on unit availability, maintenance outages, circuit breaker trip operations requiring a manual reset, and any significant events related to the operation of the Facility.
- (c) If Seller makes deliveries greater than one megawatt, Seller shall measure and register on a graphic recording device power in kW and voltage in kV at a location within the Windplant(s) agreed to by both Parties.
- (d) If Seller makes deliveries greater than one and up to and including ten megawatts, Seller shall report to the designated PGandE switching center, twice a day at agreed upon times for the current day's operation, the hourly readings in kW of capacity delivered and the energy in kWh delivered since the last report.
- (e) If Seller makes deliveries of greater than ten megawatts, Seller shall telemeter the delivered capacity and energy information, including real power in kW, reactive power in kVAR, and energy in kWh to a switching center selected by PGandE. PGandE may also require Seller to telemeter transmission kW, kVAR, and kV data depending on the number of generators and transmission configuration. Seller shall provide and maintain the data circuits required for telemetering. When telemetering is inoperative, Seller shall report daily the capacity delivered each hour and the energy delivered each day to the designated PGandE switching center.

A-3.5 Meter Testing and Inspection

- (a) PGandE's meters used to provide data for the computation of the payments due Seller from PGandE shall be sealed, and the seals shall be broken only by PGandE when the meters are to be inspected, tested, or adjusted.
- (b) PGandE shall inspect and test its meters upon their installation and annually thereafter. At Seller's request and expense, PGandE shall inspect or test a meter more frequently. PGandE shall give reasonable notice to Seller of the time when any inspection or test shall take place, and Seller may have representatives present at the test or inspection. If a meter is found to be inaccurate or defective, PGandE shall adjust, repair, or replace it at its expense in order to provide accurate metering.

A-3.6 Adjustments to Meter Measurements

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

A-4 PAYMENT

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

A-5 ADJUSTMENTS OF PAYMENTS

- (a) In the event adjustments to payments are required as a result of inaccurate meters, PGandE shall use the corrected measurements described in Section A-3.6 to recompute the amount due from PGandE to Seller for the capacity and energy delivered under this Agreement during the period of inaccuracy.
- (b) The additional payment to Seller or refund to PGandE shall be made within 30 days of notification of the owing Party of the amount due.

A-6 ACCESS TO RECORDS AND PGandE DATA

Each Party, after giving reasonable written notice to the other Party, shall have the right of access to all metering and related records including operations logs of the Facility. Data filed by PGandE with the CPUC pursuant to CPUC orders governing the purchase of power from qualifying facilities shall be provided to Seller upon request; provided that Seller shall reimburse PGandE for the costs it incurs to respond to such request.

A-7 INTERRUPTION OF DELIVERIES

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

A-8 FORCE MAJEURE

- (a) The term force majeure as used herein means unforeseeable causes, other than forced outages, beyond the reasonable control of and without the fault or negligence of the Party claiming force majeure including, but not limited to, acts of God, labor disputes, sudden actions of the elements, actions by federal, state, and municipal agencies, and actions of legislative, judicial, or regulatory agencies which conflict with the terms of this Agreement.
- (b) If either Party because of force majeure is rendered wholly or partly unable to perform its obligations under this Agreement, that Party shall be excused from whatever performance is affected by the force majeure to the extent so affected provided that:
 - (1) the non-performing Party, within two weeks after the occurrence of the force majeure, gives the other Party written notice describing the particulars of the occurrence,

- (2) the suspension of performance is of no greater scope and of no longer duration than is required by the force majeure,
 - (3) the non-performing Party uses its best efforts to remedy its inability to perform (this subsection shall not require the settlement of any strike, walkout, lockout or other labor dispute on terms which, in the sole judgment of the Party involved in the dispute, are contrary to its interest. It is understood and agreed that the settlement of strikes, walkouts, lockouts or other labor disputes shall be at the sole discretion of the Party having the difficulty),
 - (4) when the non-performing Party is able to resume performance of its obligations under this Agreement, that Party shall give the other Party written notice to that effect, and
 - (5) capacity payments during such periods of force majeure on Seller's part shall be governed by Section E-2(c), Appendix E.
- (c) In the event a Party is unable to perform due to legislative, judicial, or regulatory agency action, this Agreement shall be renegotiated to comply with the legal change which caused the non-performance.

A-9 INDEMNITY

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

A-10 LIABILITY; DEDICATION

- (a) Nothing in this Agreement shall create any duty to, any standard of care with reference to, or any liability to any person not a Party to it. Neither Party shall be liable to the other Party for consequential damages.
- (b) Each Party shall be responsible for protecting its facilities from possible damage by reason of electrical disturbances or faults caused by the operation, faulty operation, or nonoperation of the other Party's facilities, and such other Party shall not be liable for any such damages so caused.
- (c) No undertaking by one Party to the other under any provision of this Agreement shall constitute the dedication of that Party's system or any portion thereof to the other Party or to the public or affect the status of PGandE as an independent public utility corporation or Seller as an independent individual or entity and not a public utility.

A-11 SEVERAL OBLIGATIONS

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

A-12 NON-WAIVER

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

A-13 ASSIGNMENT

It is contemplated that Seller will construct the Facility, consisting of up to one (1) Windplant, on behalf of a single legal entity owner of such Windplant, and will assign to such entity its rights and obligations under this Agreement. PGandE acknowledges that Seller shall have the right to so assign its rights and obligations hereunder, provided that:

- (a) unless otherwise agreed to by the Parties, such transfer shall relate to a Windplant having a capacity of 10,000 kW; and
- (b) with respect to any such transfer, Seller shall assign its entire rights hereunder, and the entity to whom the transfer is made shall specifically assume all of Seller's obligations hereunder, insofar as such obligations pertain to the Windplant so transferred. Copies of any such assignment and assumption shall be furnished to PGandE within 30 days of their occurrences.

Upon completion of any assignment(s) permitted above, assignor shall be released from any obligation to PGandE under this Agreement with respect to the Windplant to which the assignment relates.

Except as permitted above, any assignment(s) or transfer(s) by Seller without the prior written consent of PGandE shall be null and void. Any required consent of PGandE to any assignment of Seller's rights, duties, or interest in this Agreement shall not be unreasonably withheld.

Seller presently intends to organize a wholly-owned subsidiary of Seller to act as the general partner of any limited partnership to which Windplant(s) are transferred pursuant to this Section; but Seller shall be under no obligation to PGandE to use a subsidiary for this purpose.

A-14 CAPTIONS

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

A-15 CHOICE OF LAWS

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

A-16 GOVERNMENTAL JURISDICTION AND AUTHORIZATION

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

A-17 NOTICES

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

A-18 INSURANCE

A-18.1 General Liability Coverage

- (a) Seller shall maintain during the performance hereof, General Liability Insurance¹ of not less than \$1,000,000 if the Facility is over 100 kW,

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

\$500,000 if the Facility is over 20 kW to 100 kW, and \$100,000 if the Facility is 20 kW or below of combined single limit or equivalent for bodily injury, personal injury, and property damage as the result of any one occurrence.

- (b) General Liability Insurance shall include coverage for Premises-Operations, Owners and Contractors Protective, Products/Completed Operations Hazard, Explosion, Collapse, Underground, Contractual Liability, and Broad Form Property Damage including Completed Operations.
- (c) Such insurance, by endorsement to the policy(ies), shall include PGandE as an additional insured if the Facility is over 100 kW insofar as work performed by Seller for PGandE is concerned, shall contain a severability of interest clause, shall provide that PGandE shall not by reason of its inclusion as an additional insured incur liability to the insurance carrier for payment of premium for such insurance, and shall provide for 30-days' written notice to PGandE prior to cancellation, termination, alteration, or material change of such insurance.

A-18.2 Additional Insurance Provisions

- (a) Evidence of coverage described above in Section A-18.1 shall state that coverage provided is primary and is not excess to or contributing with any insurance or self-insurance maintained by PGandE.
- (b) PGandE shall have the right to inspect or obtain a copy of the original policy(ies) of insurance.
- (c) Seller shall furnish the required certificates¹ and endorsements to PGandE prior to commencing operation.
- (d) All insurance certificates¹, endorsements, cancellations, terminations, alterations, and material changes of such insurance shall be issued and submitted to the following:

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

A-19 Avoided Cost Methodology

If the CPUC at any time ceases to prescribe the method by which the price is calculated for power purchased by PGandE from Seller after the fixed price period, the Parties shall renegotiate, in good faith, the price to be paid thereafter by PGandE to Seller under this Agreement, based on prices PGandE is then paying others for power; pending agreement the price shall be 80% of average cost.

¹ 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.

TABLE B-1

Forecasted Energy Price Schedule

Year of Energy Deliv- eries	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.

Energy Payment Option 2 - Levelized Energy Prices

Pursuant to Article 4, the energy payment calculation for Seller's energy deliveries during the fixed price period shall include the appropriate prices set forth in Table B-2 for the year 1988 or the year in which energy deliveries begin for the last wind turbine installed for a Windplant whichever is earlier, and term of agreement, multiplied by the percentage Seller has specified in Article 4. Seller shall notify PGandE when the last wind turbine for a Windplant begins energy deliveries. If Seller has selected Curtailment Option B in Article 7, the levelized off-peak hours' energy prices listed in Table B-2 shall be adjusted upward by 7.7% for Period A and 9.6% for Period B. The discount specified in (c)(vi) below, if applicable, will be applied to the energy payments during the fixed price period.

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

(a) Minimum Damages

The Parties agree that the levelized energy prices which PGandE pays Seller for the energy which Seller delivers to PGandE is based on the agreed value to PGandE of Seller's energy deliveries during the entire fixed price period. In the event PGandE does not receive such full performance by reason of a breach of this Agreement by Seller, Seller shall pay PGandE an amount based on the difference between the net present values, at the 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 Windplant 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 for each Windplant:

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

where:

P = amount due PGandE.

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

F_n = weighted annual average forecasted energy price in the n^{th} year after the breach, failure to perform, or expiration of security, as shown in Table B-1 for the corresponding calendar year.

L = weighted annual average levelized energy price applicable to Seller's Windplant.

A = average annual energy generation by Seller from the Windplant during the period of performance.

n = summation index; refers to the n^{th} year following termination.

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

(b) Performance Requirements

Seller shall operate and maintain each Windplant in accordance with prudent electrical practices in order to maximize the likelihood that the Windplant's output as delivered to PGandE during the part of the fixed price period when the levelized price is below the forecasted price ("last part") shall equal or exceed 70% of the Windplant's output during the part of the fixed price period when the levelized price is above the forecasted price ("first part"). In the

event that the Windplant's output during any year or series of years in the last part of the fixed price period is less than 70% of the average annual production during the first part of the fixed price period, PGandE may, at its discretion (taking into consideration events occurring during such year or series of years such as curtailment by PGandE, Seller's choice not to operate during adjusted price periods, or scheduled maintenance including major overhauls, and the probability that Seller's future performance will be adequate), either request payment from Seller ^{A-B} or immediately draw on the security posted, up to the amount equal to $P \times \frac{A-B}{A}$, where:

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

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

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

(c) Security

- (1) As security for amounts which Seller may be obligated to pay PGandE pursuant to Sections (a) and (b) above, Seller shall provide and maintain one or more of the following in an amount as described in Section (c)(2) below.
 - (i) An irrevocable bank letter of credit delivered to and in favor of PGandE with terms acceptable to PGandE.
 - (ii) A payment bond providing for payment to PGandE in the event of any failure to meet the performance requirements set forth in Section (b) above or breach of this Agreement by Seller. Such bond shall be issued by a surety company acceptable to PGandE and shall have terms acceptable to PGandE.
 - (iii) Fully paid up, noncancellable Project Failure Insurance made payable to PGandE with terms of such policy(ies) acceptable to PGandE.
 - (iv) A performance bond providing for payment to PGandE in the event of any failure to meet the performance requirements set forth in Section (b) above or breach of this Agreement by Seller. Such bond shall be issued by a surety company acceptable to PGandE and shall have terms acceptable to PGandE.
 - (v) A corporate guarantee of payment to PGandE or equivalent form of security which PGandE deems, in its sole discretion, 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 Windplant(s) 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

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

R = nameplate rating, in kW, of the Windplant.

C = estimated capacity factor of the Windplant, which shall be established by mutual agreement of the Parties at the time of execution of this Agreement.

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

- (ii) In the second calendar year of operation and each year thereafter until the end of the fixed price period, from December 1 through December 1 of the following year, security shall be in place in an amount calculated by the formula set forth in Section (a) above assuming Seller continued to deliver energy in each month through the end of the following calendar year, at a level equal to the average monthly energy deliveries to date, and then terminated this Agreement.
- (3) Security must be maintained throughout the fixed price period as specified above. Any security with a fixed expiration date must be renewed by Seller prior to that date. If such security is not renewed at least 30 days prior to its expiration, PGandE may, at its discretion, either request payment from Seller or immediately draw on the security posted, up to the amount calculated in accordance with the formula set forth in Section (a) above.
- (4) If, at any time during the fixed price period, PGandE believes Seller is in material breach of this Agreement, PGandE shall so notify Seller in writing and Seller must remedy such breach within a reasonable period of time. If Seller does not so remedy, PGandE may, at its discretion, either request payment from Seller or immediately draw upon the security posted, up to the amount calculated in accordance with the formula set forth in Section (a) above, provided that if during Seller's period to remedy, Seller disputes PGandE's conclusion that Seller is in material breach, and PGandE elects to draw upon the security, the amount drawn upon by PGandE shall be deposited in an interest earning escrow account and held in such account until the dispute is resolved in accordance with Section (c)(5) below.
- (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 the 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 both Parties at least ten days prior to the hearing. The arbitrators shall not be authorized to alter, extend, or modify the terms of this Agreement. At the hearing, each Party shall submit a proposed written decision, and any relevant evidence may be presented. The decision of the arbitrators must consist of selection of one of the two proposed decisions, in its entirety.

The decision of any two arbitrators shall be binding and conclusive as to disputes relating to Section (c)(4) only. Upon determining the matter, the arbitrators shall promptly execute and acknowledge their decision and deliver a copy to each Party. A judgment confirming the award may be

rendered by any superior court having jurisdiction. Each Party shall bear its own arbitration costs and expenses, including the cost of the arbitrator it selected, and the costs and expenses of the third arbitrator shall be divided equally between both Parties, except as provided otherwise elsewhere in this Agreement.

Pending resolution of any controversy or dispute hereunder, performance by each Party shall continue so as to maintain the status quo prior to notice of such controversy or dispute. Resolution of the controversy or dispute shall include payment of any interest accrued in the escrow account.

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.

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.

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.

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.

TABLE B-3

Forecasted Incremental Energy Rates and
Incremental Energy Rate Bounds

Curtailement 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	_____	_____	_____

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	_____	_____	_____

TABLE B-4¹

Time Periods

	<u>Monday through Friday²</u>	<u>Saturdays²</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

¹ 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.

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

TABLE B-5

ENERGY PRICES

Energy Prices Effective August 1 - October 31, 1984

The energy purchase price calculations which will apply to energy deliveries determined from meter readings taken during August, September, and October 1984 are as follows:

Time Period	(a) Incremental Energy Rate ¹ (Btu/kWh)	(b) Cost of Energy ² (\$/10 ⁶ Btu)	(c) Revenue Requirement for Cash Working Capital ³ (\$/kWh)	(d) Energy Purchase Price ⁴ (d)=[(a)x(b)]+(c) (\$/kWh)
August 1 - September 30 (Period A)				
Time of Delivery Basis:				
On-Peak	14,086	5.4050	0.00041	0.07654
Partial-Peak	13,382	5.4050	0.00038	0.07271
Off-Peak	10,499	5.4050	0.00033	0.05708
Seasonal Average (Period A)	12,031	5.4050	0.00036	0.06539
October 1 - October 31 (Period B)				
Time of Delivery Basis:				
On-Peak	16,320	5.4050	0.00053	0.08874
Partial-Peak	15,689	5.4050	0.00051	0.08531
Off-Peak	11,625	5.4050	0.00038	0.06321
Seasonal Average (Period B)	13,692	5.4050	0.00045	0.07446

¹ 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.

² Cost of natural gas under PGandE Gas Schedule No. G-55 effective July 24, 1984 per Advice No. 1280-G.

³ Revenue requirement for cash working capital as prescribed by the CPUC in Decision No. 83-12-068.

⁴ 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 C.

TABLE B-6

Energy Loss Adjustment Factors¹

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

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

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.
- S = Potential energy, in kWh, from PGandE hydro facilities which will be spilled if all AQF is delivered to PGandE.
- PP = Prices published by PGandE for purchases during other than hydro spill conditions.

PGandE shall give Seller notice of general periods when hydro spill conditions are anticipated, and shall give Seller as much advance notice as practical of any specific hydro spill period and the hydro savings price which will be applicable during such period.

- (b) PGandE shall not be obligated to accept or pay for and may require Seller with a Facility with a nameplate rating of one megawatt or greater to interrupt or reduce deliveries of energy during periods when PGandE would incur negative avoided costs (as defined by the CPUC) due to continued acceptance of energy deliveries under this Agreement. Whenever possible, PGandE shall give Seller reasonable notice of the possibility that interruption or reduction of deliveries may be required.
- (c) Before interrupting or reducing deliveries under subsection (b), above, and before invoking hydro savings prices under subsection (a), above, PGandE shall take reasonable steps to make economy sales of the surplus energy giving rise to the condition. If such economy sales are made, while the surplus energy condition exists Seller shall be paid at the economy sales price obtained by PGandE in lieu of the otherwise applicable prices.
- (d) If Seller is selling net energy output to PGandE and simultaneously purchasing its electrical needs from PGandE and Seller elects not to sell energy to PGandE at the hydro savings price pursuant to subsection (a) or when PGandE curtails deliveries of energy pursuant to subsection (b), Seller shall not use such energy to meet its electrical needs but shall continue to purchase all its electrical needs from PGandE. If Seller is selling surplus energy output to PGandE, subsections (a) or (b) shall only apply to the surplus energy output being delivered to PGandE, and Seller can continue to internally use that generation it has retained for its own use.

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 higher of:

- (i) prices authorized from time to time by the CPUC;
- (ii) the as-delivered capacity prices that were paid Seller in the last year of the fixed price period; or
- (iii) the as-delivered capacity prices in effect in the first year following the end of the fixed price period, provided that the annualized shortage cost from which these prices are derived does not exceed the annualized value of a gas turbine.

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

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

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

EXHIBIT D-1

The as-delivered capacity price (in cents per kW-hr) for power delivered by each Windplant is the product of three factors:

- (a) The shortage cost in each year the Windplant is operating.
- (b) A capacity loss adjustment factor which provides for the effect of the deliveries on PGandE's transmission and distribution losses based on the Seller's interconnection voltage level. The applicable capacity loss adjustment factors for non-remote¹ Facilities are presented in Table D-1(a). Capacity loss adjustment factors for remote Facilities shall be calculated individually.
- (c) An allocation factor which accounts for the different values of as-delivered capacity in different time periods and converts dollars per kW-year to cents per kWh. The current allocation factors are presented in Table D-1(b). The time periods to which they apply are shown in Table B-4, Appendix B. 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 As defined by the CPUC.

CURTAILMENT OPTION B - ADJUSTED PRICE PERIOD

- (a) In each calendar year, the price which PGandE is obligated to pay Seller for energy deliveries during 1,000 off-peak hours (as defined in Table B-4, Appendix B) may be adjusted to a price equal to, but not in excess of, PGandE's available alternative source. This adjusted price shall be effective under any of the following conditions:
- (i) when PGandE's energy source at the margin is not a PGandE oil- or gas-fueled plant, and PGandE can replace Seller's energy with energy from this source at a cost less than the price paid to Seller;
 - (ii) when PGandE would incur negative avoided costs (as defined by the CPUC) due to continued acceptance of energy deliveries under this Agreement; or
 - (iii) when PGandE is experiencing minimum system operations.

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

- (b) Whenever possible, PGandE shall give Seller reasonable notice of any price adjustment for energy deliveries and its probable duration.
- (c) If Seller is selling net energy output to PGandE and simultaneously purchasing its electrical needs from PGandE and Seller elects not to sell energy to PGandE at the adjusted price, Seller shall not use such energy to meet its electrical needs but shall continue to purchase all its electrical needs from PGandE.
- (d) After Seller receives notice of the probable duration of the period during which the adjusted price will be paid, Seller may elect to perform maintenance during such period and so inform the PGandE employee in charge at the designated PGandE switching center prior to the time when the adjusted price period is expected to begin. If Seller makes such election, the number of off-peak hours of probable duration quoted in PGandE's notice to Seller shall be applied to the 1,000-hour calendar year limitation set forth in this section. After an election to do maintenance, if Seller makes any deliveries of energy during the quoted probable duration period, Seller shall be paid the adjusted price quoted in its notice from PGandE without regard to any subsequent changes on the PGandE system which may alter the adjusted price or shorten the actual duration of the condition.

TABLE D-1(a)

Capacity Loss Adjustment Factors
for Non-Remote¹ 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 _____².

TABLE D-1(b)

Allocation Factors
for As-Delivered Capacity³

	<u>On-Peak</u> <u>(¢-yr/\$-hr)</u>	<u>Partial-Peak</u> <u>(¢-yr/\$-hr)</u>	<u>Off-Peak</u> <u>(¢-yr/\$-hr)</u>
Seasonal Period A	0.10835	0.02055	0.00002
Seasonal Period B	0.00896	0.00109	0.00001

TABLE D-2

Forecasted Shortage Cost Schedule

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

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

² Determined individually.

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

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

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.

APPENDIX E
FIRM CAPACITY

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APPENDIX E
FIRM CAPACITY

E-1 GENERAL

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

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

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

E-2 PERFORMANCE REQUIREMENTS

- (a) To receive full capacity payments, the firm capacity shall be delivered for all of the on-peak hours¹ in the peak months on the PGandE system, which are presently the months of June, July, and August, subject to a 20 percent allowance for forced outages in any month. Compliance with this provision shall be based on the Facility's total on-peak deliveries for each of the peak months and shall exclude any energy associated with generation levels greater than the firm capacity.
- (b) If Seller is prevented from meeting the performance requirements because of a forced outage on the PGandE system, a PGandE curtailment of Seller's deliveries, or a condition set forth in Section A-7, Appendix A, PGandE shall continue capacity payments. Firm capacity payments will be calculated in the same manner used for scheduled maintenance outages.
- (c) If Seller is prevented from meeting the performance requirements because of force majeure, PGandE shall continue capacity payments for ninety days from the occurrence of the force majeure. Thereafter, Seller shall be deemed to have failed to have met the performance requirements. Firm capacity payments will be calculated in the same manner used for scheduled maintenance outages.
- (d) If Seller is prevented from meeting the performance requirements because of extreme dry year conditions, PGandE shall continue capacity payments. Extreme dry year conditions are drier than those used to establish firm capacity pursuant to Section E-8. Seller shall warrant to PGandE that the Facility is a hydroelectric facility and that such conditions are the sole cause of Seller's inability to meet its firm capacity obligations.
- (e) If Seller is prevented from meeting the performance requirements for reasons other than those described above in Sections E-2(b), (c), or (d):
 - (1) Seller shall receive the reduced firm capacity payments as provided in Section E-5 for a probationary period not to exceed 15 months, or as otherwise agreed to by the Parties.
 - (2) If, at the end of the probationary period Seller has not demonstrated that the Facility can meet the performance requirements, PGandE may derate the firm capacity pursuant to Section E-4(b).

E-3 SCHEDULED MAINTENANCE

Outage periods for scheduled maintenance shall not exceed 840 hours (35 days) in any 12-month period. This allowance may be used in increments of an hour or longer on a consecutive or nonconsecutive basis. Seller may accumulate unused maintenance hours from one 12-month period to another up to a maximum of 1,080 hours (45 days). This accrued time must be used consecutively and only for major overhauls. Seller shall provide PGandE with the following advance notices: 24 hours for scheduled outages less than one day, one week for a scheduled outage of one day or more (except for major

¹ On-peak, partial-peak, and off-peak hours are defined in Table B-4, Appendix B.

overhauls), and six months for a major overhaul. Seller shall not schedule major overhauls during the peak months (presently June, July, and August). Seller shall make reasonable efforts to schedule or reschedule routine maintenance outside the peak months, and in no event shall outages for scheduled maintenance exceed 30 peak hours during the peak months. Seller shall confirm in writing to PGandE pursuant to Article 9, within 24 hours of the original notice, all notices Seller gives personally or by telephone for scheduled maintenance.

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

E-4 ADJUSTMENTS TO FIRM CAPACITY

- (a) Seller may increase the firm capacity with the approval of PGandE and receive payment for the additional capacity thereafter in accordance with the applicable capacity purchase price published by PGandE at the time the increase is first delivered to PGandE.
- (b) Seller may reduce the firm capacity at any time prior to the firm capacity availability date by giving written notice thereof to PGandE. PGandE may derate the firm capacity in accordance with Section E-2(e) as a result of appropriate data showing Seller has failed to meet the performance requirements of Section E-2.

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 Factors¹:

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

The MDC is determined in the following manner:

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

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

Where:

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

¹ These allocation factors were prescribed by the CPUC in Decision 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.

* 0.8 reflects a 20% allowance for forced outage.

- C = Firm capacity in kilowatts.
- B = Total on-peak and partial-peak hours during the month.
- S = Total on-peak and partial-peak hours during the month Facility is out of service on scheduled maintenance.

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

$$MCF = P \times (1.0 - \frac{M}{D})$$

Where:

- M = The number of hours during the month Facility is out of service on scheduled maintenance.
- D = The number of hours in the month.

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

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

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

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

Furthermore, the payment for a month in which there is an outage for scheduled maintenance shall also include an amount equal to the product of the average hourly firm capacity payment¹ for the most recent month in the same type of Seasonal Period (i.e., Seasonal Period A or Seasonal Period B) during which deliveries were made times the number of hours of outage for scheduled maintenance in the current month. Firm capacity payments will continue during the outage periods for scheduled maintenance provided that the provisions of Section E-3 are met.

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

TABLE E-1

If the Facility is non-remote² the firm capacity loss adjustment factors are as follows:

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

If the Facility is remote the firm capacity loss adjustment factor is _____³.

¹ Total monthly payment divided by the total number of hours in the monthly billing period.

² As defined by the CPUC.

³ Determined individually.

TABLE E-2

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

<u>Firm Capacity Availability Date</u> (Year)	<u>Number of Years of Firm Capacity Delivery</u>																																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	20	25	30	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	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	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	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	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	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	95	98	101	105	108	111	114	117	120	123	125	128	130	133	135	146	154	160

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

Method 1

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

Method 2

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

E-7 THEORETICAL OPERATION STUDY

Based on the monthly natural flow data developed under Section E-6 a theoretical operation study shall be prepared by Seller. Such a study shall identify the monthly capacity rating in kW and the monthly energy production in kWh for each month of each year. The study shall take into account all relevant operating constraints, limitations, and requirements including but not limited to --

- (1) Release requirements for support of fish life and any other operating constraints imposed on the project;
- (2) Operating characteristics of the proposed equipment of the Facility such as efficiencies, minimum and maximum operating levels, project control procedures, etc.;
- (3) The design characteristics of project facilities such as head losses in penstocks, valves, tailwater elevation levels, etc.; and
- (4) Release requirements for purposes other than power generation such as irrigation, domestic water supply, etc.

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

E-8 DETERMINATION OF AVERAGE DRY YEAR CAPACITY RATINGS

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

E-9 INFORMATION REQUIREMENTS

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

- (1) A summary of the average dry year capacity ratings based on the theoretical operation study as provided in Table E-4;
- (2) A topographic project map which shows the location of all aspects of the Facility and locations of stream gauging stations used to determine natural flow data;
- (3) A discussion of all major factors relevant to project operation;
- (4) A discussion of the methods and procedures used to establish the natural flow data. This discussion shall be in sufficient detail for PGandE to determine that the methods are consistent with those outlined in Section E-6 and are consistent with generally accepted engineering practices; and
- (5) Upon specific written request by PGandE, Seller's theoretical operation study.

E-10 ILLUSTRATIVE EXAMPLE

- (1) Determine natural flows - These flows are developed based on historic stream gauging records and are compiled by month, for a long-term period (normally at least 50 years or more) which covers dry periods which historically occurred in the 1920's and 30's and more recently in 1976 and 77. In all but unusual situations this will require application of hydrological engineering methods to records that are available, primarily from the USGS publication "Water Resources Data for California".
- (2) Perform theoretical operation study - Using the natural flow data compiled under (1) above a theoretical operation study is prepared which determines, for each month of each year, energy generation (kWh) and capacity rating (kW). This study is performed based on the Facility's design, operating capabilities, constraints, etc., and should take into account all factors relevant to project operation. Generally such a study is done by computer which routes the natural flows through project features, considering additions and withdrawals from storage, spill past the project, releases for support of fish life, etc., to determine flow available for generation. Then the generation and capacity amounts are computed based on equipment performance, efficiencies, etc.
- (3) Determine average dry year capacity ratings - After the theoretical project operation study is complete the five years in which the annual generation (kWh) would have been the lowest are identified. Then for each month, the capacity rating (kW) is averaged for the five years to arrive at a monthly average capacity rating. The firm capacity is then set by the Seller based on the monthly average dry year capacity ratings and the performance requirements of this appendix. An example project is shown in the attached completed Table E-4.

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 Characteristics¹:

	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

¹ If Facility has a variable head, operating curves should be provided.

E-11 MINIMUM DAMAGES

- (a) In the event the firm capacity is derated or Seller terminates this Agreement, the quantity by which the firm capacity is derated or the firm capacity shall be used to calculate the payments due PGandE in accordance with Section (d).
- (b) Seller shall be invoiced by PGandE for all amounts due under this section. Payment shall be due within 30 days of the date of invoice.
- (c) If Seller does not make payments pursuant to Section (b), PGandE shall have the right to offset any amounts due it against any present or future payments due Seller.
- (d) Seller shall pay to PGandE:
 - (i) an amount equal to the difference between (a) the firm capacity payments already paid by PGandE, based on the original term of agreement and (b) the total firm capacity payments which PGandE would have paid based on the period of Seller's actual performance using the adjusted firm capacity price. Additionally, Seller shall pay interest, compounded monthly from the date the excess capacity payment was made until the date 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
CONTENTS

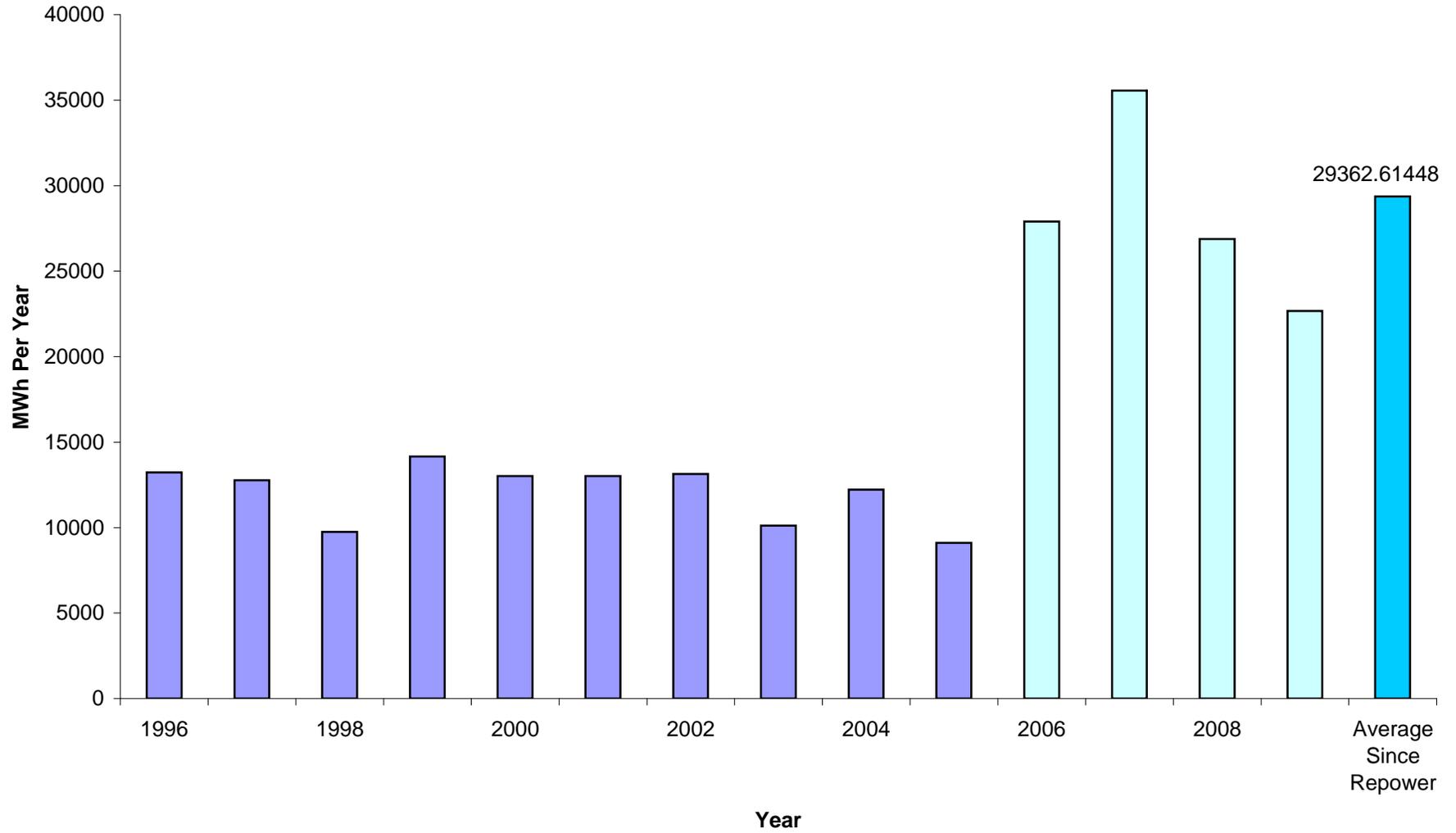
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APPENDIX F
INTERCONNECTION

F-1 INTERCONNECTION TARIFFS

Public Appendix F
Historical Output of Project

Public Appendix F
Historical Production EnXco V Windfarm (PG&E Log No. 06W148)



**PG&E Gas and Electric
Advice Filing List
General Order 96-B, Section IV**

Alcantar & Kahl
Ameresco
Anderson & Poole
Arizona Public Service Company
BART
BP Energy Company
Barkovich & Yap, Inc.
Bartle Wells Associates
Bloomberg New Energy Finance
Boston Properties
Brookfield Renewable Power
C & H Sugar Co.
CA Bldg Industry Association

CAISO
CLECA Law Office
CSC Energy Services
California Cotton Ginners & Growers Assn
California Energy Commission
California League of Food Processors
California Public Utilities Commission
Calpine
Cameron McKenna
Cardinal Cogen
Casner, Steve
Chris, King
City of Glendale
City of Palo Alto
Clean Energy Fuels
Coast Economic Consulting
Commerce Energy
Commercial Energy
Consumer Federation of California
Crossborder Energy

Davis Wright Tremaine LLP
Day Carter Murphy
Defense Energy Support Center

Department of Water Resources
Department of the Army
Dept of General Services
Division of Business Advisory Services
Douglass & Liddell
Downey & Brand
Duke Energy
Dutcher, John
Economic Sciences Corporation
Ellison Schneider & Harris LLP
Foster Farms
G. A. Krause & Assoc.
GLJ Publications
Goodin, MacBride, Squeri, Schlotz & Ritchie
Green Power Institute
Hanna & Morton
Hitachi
International Power Technology
Intestate Gas Services, Inc.
Lawrence Berkeley National Lab
Los Angeles Dept of Water & Power
Luce, Forward, Hamilton & Scripps LLP
MAC Lighting Consulting
MBMC, Inc.
MRW & Associates
Manatt Phelps Phillips
McKenzie & Associates
Merced Irrigation District
Mirant
Modesto Irrigation District
Morgan Stanley
Morrison & Foerster
NRG West
New United Motor Mfg., Inc.

Norris & Wong Associates
North America Power Partners
North Coast SolarResources

Northern California Power Association
Occidental Energy Marketing, Inc.
OnGrid Solar
Praxair
R. W. Beck & Associates
RCS, Inc.
Recon Research
Recurrent Energy
SCD Energy Solutions
SCE
SMUD
SPURR
Santa Fe Jets
Seattle City Light

Sempra Utilities
Sierra Pacific Power Company
Silicon Valley Power
Silo Energy LLC
Southern California Edison Company
Sunshine Design
Sutherland, Asbill & Brennan
Tabors Caramanis & Associates
Tecogen, Inc.
Tiger Natural Gas, Inc.
Tioga Energy
TransCanada
Turlock Irrigation District
U S Borax, Inc.
United Cogen
Utility Cost Management
Utility Specialists
Verizon
Wellhead Electric Company
Western Manufactured Housing
Communities Association (WMA)
eMeter Corporation