

**ATTACHMENT A**

**FIRST AMENDMENT**

**TO THE**

**LONG-TERM ENERGY AND CAPACITY**

**POWER PURCHASE AGREEMENT**

**BETWEEN**

**TRI-DAM POWER AUTHORITY**

**AND**

**PACIFIC GAS AND ELECTRIC COMPANY**

**(PG&E Log No. 16H003)**

This First Amendment is by and between Pacific Gas and Electric Company ("PG&E"), and Tri-Dam Power Authority ("Seller"), referred to herein collectively as the "Parties" and individually as the "Party."

**RECITALS**

WHEREAS, Seller, on June 14, 1984, and PG&E, on July 12, 1984, executed a Standard Offer No. 4, Long-Term Energy and Capacity Power Purchase Agreement (the "Agreement") for a proposed 16,200 kW hydroelectric facility located at Sand Bar Flat Dam, Middle Fork Stanislaus River in Tuolumne County, California, identified by PG&E Log No. 16H003;

WHEREAS, the Parties have had a long-standing dispute regarding the amount of firm capacity to which Seller is entitled under the Agreement;

WHEREAS, Seller filed against PG&E Complaint No. 262023 in San Joaquin Superior Court on September 9, 1993;

WHEREAS, in order to settle their dispute concerning the firm capacity of the Facility, PG&E and Seller wish to amend Article 4, Energy Price and Appendix E, Firm Capacity and add a new Appendix G, Operating Limitations to the Agreement; and

Now, THEREFORE, in exchange for good and valuable consideration, the adequacy of which is hereby acknowledged, the Agreement is hereby amended as follows:

1. Page 6, lines 16 through 17 shall be modified to read:

PG&E shall pay Seller for its net energy output<sup>2</sup> under the energy payment option checked below<sup>3</sup>. For the purpose of calculating energy payments, net energy output delivered shall be increased by a fixed 1.02 multiplier from the effective

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<sup>2</sup> Refer to footnote<sup>2</sup> in original Agreement executed by Seller on 6/14/84 and PG&E on 7/12/84.

<sup>3</sup> Refer to footnote<sup>3</sup> in original Agreement executed by Seller on 6/14/84 and PG&E on 7/12/84.

date of this Amendment until December 31, 2004, unless otherwise agreed upon between the Parties.

2. Page E-4, line 1, insert a new paragraph to read:

(e) If Seller is prevented from meeting the performance requirements because, at PG&E's request, Seller limits the operation of the Facility to facilitate reducing spills at Sand Bar Diversion Dam and enhancing power generation at PG&E's Stanislaus Powerhouse pursuant to Appendix G - Operating Limitations, PG&E shall continue capacity payments. Firm capacity payments shall be calculated as described in Section E-5, as amended.

3. Page E-4, line 1, change "(e)" to "(f)".

4. Page E-4, line 3, change "or (d)" to "(d), or (e)".

5. Page E-7, lines 5 through 11 shall be modified to read:

$$P = \frac{A_1 + A_2}{C \times (B - S) \times (0.8^*)} \quad (\leq 1.0)$$

Where:

$A_1$  = Total kilowatt-hours calculated by multiplying the firm capacity by the sum of all on-peak and partial-peak hours on those days when PG&E requests Seller to limit the operation of the Facility.

$A_2$  = Total kilowatt-hours delivered by Seller during all on-peak and partial-peak hours excluding any energy associated with generation levels greater than the firm capacity on those days when PG&E does not request Seller to limit the operation of the Facility.

6. Page E-8, lines 4 through 8 shall be modified to read:

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 adjusted performance bonus factor (APBF). The APBF is determined as follows:

$$APBF = \frac{PBF_1 \times D_1 + PBF_2 \times D_2}{D_1 + D_2}$$

Where:

$PBF_1$  = 1.145 which is the predetermined performance bonus factor agreed upon between Seller and PG&E for those days in a given month when PG&E requests Seller to limit the operation of the Facility.

$PBF_2$  = The current performance bonus factor in effect, if any, from Table E-3, at the time of payment calculation for those days in a given month when PG&E does not request Seller to limit the operation of the Facility. For the interim period

between the effective day of this First Amendment and August 31, 1995,  $PBF_2$  shall be 1.133.

$D_1 =$  The number of days in a given month when PG&E requests Seller to limit the operation of the Facility.

$D_2 =$  The number of days in a given month when PG&E does not request Seller to limit the operation of the Facility.

7. Page E-11, lines 20 through 28 shall be modified to read:

(i) the firm capacity factor during a total of  $N_1$  on-peak hours for each peak month when PG&E requests Seller to limit the operation of the Facility ( $FCF_1$ ) shall be a fixed percentage of 97.33%.

(ii) the firm capacity factor during a total of  $N_2$  on-peak hours for each peak month when PG&E does not request Seller to limit the operation of the Facility ( $FCF_2$ ) shall be calculated in the following manner:

$$FCF_2(\%) = \frac{F_2}{N_2 \times Q} \times 100$$

Where:

$F_2$  = Total kilowatt-hours delivered by Seller during a total of  $N_2$  on-peak hours excluding any energy associated with generation levels greater than the firm capacity in a given peak month when PG&E does not request Seller to limit the operation of the Facility.

$N_1$  = Total number of on-peak hours, excluding those on-peak hours when the Facility is out of service for scheduled maintenance, in a given peak month when PG&E requests Seller to limit the operation of the Facility.

$N_2$  = Total number of on-peak hours, excluding those on-peak hours when the Facility is out of service for scheduled maintenance, in a given peak month when PG&E does not request Seller to limit the operation of the Facility.

8. Page E-12, delete lines 1 through 4.
9. Page E-12, lines 7 through 8 shall be modified to read:

- (iii) the adjusted firm capacity factor (AFCF) for each such peak month shall then be determined as follows:

$$\text{AFCF} = \frac{\text{FCF}_1 \times N_1 + \text{FCF}_2 \times N_2}{N_1 + N_2}$$

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

10. Page E-12, line 10, change "(iii)" to "(v)".

11. Page E-12, line 13 shall be modified to read:

Firm Capacity Factor. However, no past arithmetic average firm capacity factors for any years prior to September 1, 1995, shall be used in calculating this average. September 1, 1995 shall be regarded as a new starting point for this purpose.

12. Add a new Appendix G - Operating Limitations following Appendix F, page F-4.

A true and correct copy of Appendix G is attached hereto as "Exhibit A" and incorporated herein by reference.

13. This First Amendment shall be binding upon execution and remain in effect thereafter until December 31, 2004, unless otherwise agreed upon between the Parties.


14. This First Amendment shall be construed and interpreted in accordance with the laws of the State of California, excluding any choice of law rules that may direct the application of the laws of another jurisdiction.

IN WITNESS WHEREOF, the Parties hereto have caused this First Amendment to be executed by their duly authorized representatives as of the last date written below.

TRI-DAM POWER AUTHORITY


PACIFIC GAS AND ELECTRIC COMPANY

  
ROBERT VAN LIER  
President, Tri-Dam Power Authority

  
E. JAMES MACIAS  
Vice President, Power System

Date: 3/9/95

Date: 4/25/95

  
DONALD B. THOMPSON  
Secretary, Tri-Dam Power Authority

Date: MARCH 9 1995

Approved as to Form

  
Attorney,



# EXHIBIT A

## APPENDIX G

### OPERATING LIMITATIONS

#### G-1 INTRODUCTION

This Appendix G provides details of conditions and procedures under which PG&E may request Seller to, and Seller shall, at PG&E's request, limit the operation of the Facility. The purposes of the operating limitations are to (1) reduce spills at Sand Bar Diversion Dam; and (2) enhance power generation at PG&E's Stanislaus Powerhouse.

This Appendix G shall not in any way amend, modify or supersede the Tri-Dam Project Contract dated July 9, 1952, between PG&E and Oakdale and South San Joaquin Irrigation Districts (jointly known as Tri-Dam Project).

#### G-2 BACKGROUND

PG&E's Stanislaus Powerhouse and the Facility are located on the Middle Fork of the Stanislaus River. Outflow from the Facility discharges into the impoundment created by Sand Bar Diversion Dam (the "Impoundment"). The Sand Bar Diversion Dam is a PG&E-owned structure that diverts the river into the intake of PG&E's Stanislaus Powerhouse.

Inflow into the Impoundment includes controlled releases from the Facility, controlled releases from PG&E's Spring Gap Powerhouse, controlled releases and uncontrolled spills from Beardsley Reservoir through Beardsley Afterbay and uncontrolled accretions from the drainage basin between Beardsley Afterbay Dam and the Sand Bar Diversion Dam.

Outflow from the Impoundment includes streamflow diverted into PG&E's Stanislaus Tunnel, controlled instream flow releases downstream of the Sand Bar Diversion Dam and uncontrolled spills.

Due to the small area and small active water storage volume of the Impoundment, any substantial imbalance between inflow and outflow can result in uncontrolled spill over the crest of the Sand Bar Diversion Dam. Peaking operation of the Facility can also cause additional uncontrolled spills at Sand Bar Diversion Dam and reduce energy generation at Stanislaus Powerhouse. Coordinated operation of the Facility under operating limitations has the potential to reduce uncontrolled spills and enhance generation at Stanislaus Powerhouse.

### G-3 OPERATING LIMITATIONS

Subject to the conditions described in Section G-4, PG&E may request one of the following two types of operation limitations which Seller shall implement consistent with PG&E's request.

Maximum Flow Limitation                      Limiting the maximum instantaneous rate of flow of water through the Facility to reduce uncontrolled spills from the Impoundment.

Target Water Level Limitation                Limiting the rate of flow of water through the Facility so as to maintain a specified target water level in the Impoundment.

These two limitations are mutually exclusive. They shall not be imposed simultaneously.

Daily operating limitations shall be effective for the 24 hour period commencing at midnight.

### G-4 CONSTRAINTS ON OPERATING LIMITATIONS

#### G-4.1 General Constraints

The water releases through Donnels and Beardsley powerhouses are scheduled by PG&E in accordance with the terms and conditions of the 1952 Tri-Dam Project Contract. Based on the level of these water releases, PG&E may request that operating limitations described in Sections G-4.2 and G-4.3 be placed on the Facility, provided that the total daily volume of water passing through the Facility remains the same with or without such operating limitations.

#### G-4.2 Maximum Flow Limitation

PG&E and Seller agree that the magnitude of the maximum flow limitations shall not be less than *Sand Bar Theoretical Outflow*<sup>1</sup> minus the projected *Other Sand Bar Inflow*<sup>2</sup>.

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<sup>1</sup> *Sand Bar Theoretical Outflow* is defined as the sum of (1) 525 cfs and (2) FERC mandated instream flow release at Sand Bar Diversion Dam.

<sup>2</sup> *Other Sand Bar Inflow* is the daily peak flow in cfs into Sand Bar Impoundment excluding discharge from the Facility and is defined as follows: (1) discharge from Spring Gap Powerhouse; (2) FERC mandated instream flow releases at Beardsley Afterbay Dam; and (3) accretions between Beardsley Reservoir and Sand Bar Diversion Dam.

### G-4.3 Target Water Level Limitation

PG&E may request Seller to maintain a specified target water level only on days when scheduled *Sand Bar Gross Inflow*<sup>3</sup> is equal to *Sand Bar Theoretical Outflow*.

PG&E and Seller agree that the target water level shall be within 0.5 feet below the overflow crest of Sand Bar Diversion Dam unless otherwise agreed to by the parties.

### G-4.4 Illustrating Examples

The following examples illustrate the above limitations.

#### Example 1 - Maximum Flow Limitation

Beardsley Reservoir outflow is 400 cfs, Spring Gap outflow is 30 cfs. Local accretions are estimated to be 10 cfs. Beardsley Afterbay instream flow release is 135 cfs and Sand Bar Diversion Dam instream flow release is 50 cfs.

Gross inflow is less than theoretical outflow so PG&E may request a maximum flow limitation of 400 cfs calculated as follows:

#### Sand Bar Gross Inflow (GI)

Beardsley Reservoir Outflow	=	400 cfs
Spring Gap Outflow	=	30 cfs
<u>Accretions</u>	=	<u>10 cfs</u>
GI	=	440 cfs

#### Sand Bar Theoretical Outflow (TO)

Stanislaus Tunnel Diversion	=	525 cfs
<u>Sand Bar Dam Instream Flow</u>	=	<u>50 cfs</u>
TO	=	575 cfs

Since GI (440 cfs) < TO (575 cfs), therefore a maximum flow limitation may be requested.

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<sup>3</sup> *Sand Bar Gross Inflow* is defined as the sum of the following daily average flows in cfs: (1) discharge from Beardsley Reservoir; (2) discharge from Spring Gap Powerhouse; and (3) accretions between Beardsley Reservoir and Sand Bar Diversion Dam.

Other Sand Bar Inflow (OI)

Beardsley Afterbay Instream Flow	=	135 cfs
Spring Gap Outflow	=	30 cfs
<u>Accretions</u>	=	<u>10 cfs</u>
OI	=	175 cfs

Maximum Flow Limitation = TO (575 cfs) - OI (175 cfs) = 400 cfs

Example 2 - No Limitation

Beardsley Reservoir outflow is 550 cfs, Spring Gap outflow is 40 cfs. Local accretions are estimated to be 10 cfs. Beardsley Afterbay instream flow release is 135 cfs and Sand Bar Dam instream flow release is 50 cfs.

No limitation applies because gross inflow exceeds theoretical outflow.

Sand Bar Gross Inflow (GI)

Beardsley Reservoir Outflow	=	550 cfs
Spring Gap Outflow	=	40 cfs
<u>Accretions</u>	=	<u>10 cfs</u>
GI	=	600 cfs

Sand Bar Theoretical Outflow (TO)

Stanislaus Tunnel Diversion	=	525 cfs
<u>Sand Bar Dam Instream Flow</u>	=	<u>50 cfs</u>
TO	=	575 cfs

Since GI (600 cfs) > TO (575 cfs), therefore no maximum flow limitation or target water level limitation may be requested.

Example 3 - Target Water Level Limitation

Beardsley Reservoir outflow is 525 cfs, Spring Gap outflow is 40 cfs. Local accretions are estimated to be 10 cfs. Beardsley Afterbay instream flow release is 135 cfs and Sand Bar Diversion Dam instream flow release is 50 cfs.

Gross inflow and theoretical outflow are balanced so that a target water level limitation may be requested.

Sand Bar Gross Inflow (GI)

Beardsley Reservoir Outflow	=	525 cfs
Spring Gap Outflow	=	40 cfs
<u>Accretions</u>	=	<u>10 cfs</u>
GI	=	575 cfs

Sand Bar Theoretical Outflow (TO)

Stanislaus Tunnel Diversion	=	525 cfs
<u>Sand Bar Dam Instream Flow</u>	=	<u>50 cfs</u>
TO	=	575 cfs

Since GI (575 cfs) = TO (575 cfs), therefore PG&E may request a target water level limitation within 0.5 feet below the overflow crest of Sand Bar Diversion Dam.

Target Flow Rate

TO	=	575 cfs
Spring Gap Outflow	=	-40 cfs
Accretions	=	-10 cfs
<u>Beardsley Afterbay Instream Flow</u>	=	<u>-135 cfs</u>
Target Flow Rate	=	390 cfs

G-5 PERFORMANCE REQUIREMENTS

If there is a spill at Sand Bar Diversion Dam and the tolerance levels described below in Sections G-5.1 and G-5.2 are being exceeded during a period of spill, Seller shall be held in non-compliance. *Spill* is defined as any water in excess of PG&E's fishwater release plus five percent (5%) as measured by PG&E's gage immediately downstream of Sand Bar Diversion Dam.

G-5.1 Maximum Flow Limitations

During periods when a maximum flow rate limitation is in effect, flow rates through the Facility shall not exceed one hundred and five percent (105%) of the maximum flow limitation for longer than one continuous hour or cumulatively for more than two hours in any 24-hour period when limitation is in effect. If Seller has exceeded the amount set forth above but spill has not occurred at Sand Bar Diversion Dam then Seller shall be deemed to be in compliance.

## G-5.2 Target Water level Limitations

During periods when a target water level limitation is in effect, the water level at Sand Bar Diversion Dam shall not vary by more than  $\pm 0.5$  feet in elevation from the water level specified by PG&E for longer than one continuous hour or cumulatively for more than two hours in any 24-hour period when a limitation is in effect. If the water level varies by more than 0.5 feet, but the Facility's maximum instantaneous flow rates have been within  $\pm 10\%$  of the target flow rate as specified by PG&E in its target water level limitation request, Seller shall be deemed to be in compliance.

## G-6 COMMUNICATION PROCEDURES

G-6.1 The daily operations of the Facility shall be from 0001 to 2400 hours. PG&E shall provide an operating limitation request by 1600 hours for the following day. PG&E's requests for limitations will be communicated by telephone to Seller's Strawberry Operations Control Center and confirmed by sending a standard request form by facsimile within one hour of the telephone request. Seller shall acknowledge receipt of the request by return facsimile within one hour of receipt of the facsimile from PG&E.

G-6.2 The standard request form shall include PG&E's best projections for the operations of Spring Gap Powerhouse, Beardsley Powerhouse, and Stanislaus Tunnel for the limited day in peak and average daily flows in cubic feet per second. PG&E's projections for the operations of these facilities to Seller are for informational purposes only and shall not in any way limit PG&E's rights to deviate from the projected operations of these facilities.

G-6.3 With the exception of emergencies, PG&E is entitled to only one request for limitation per operating day. The parties can mutually agree to further limitations, however, Seller is under no obligation to agree to additional requests.

G-6.4 If no request for limitation is received by Seller from PG&E by 1600 hours, then the limitation, if any, from the previous day shall continue to be in effect. If the previous day was not a limited day, and PG&E does not request Seller by 1600 hours to limit operations, the following day shall be deemed an unlimited day.

## G-7 HYDROLOGICAL DATA

G-7.1 Seller shall provide PG&E access, at PG&E's expense, to the following real-time hydrologic data:

- Instantaneous water flow rate through the Facility.
- Instantaneous water flow rate through Beardsley Powerhouse.
- Water surface elevation at Beardsley Afterbay.
- Instream flow below Beardsley Afterbay.

PG&E shall provide Seller access, at Seller's expense, to the following real-time hydrologic data:

- Instantaneous water flow rate through Stanislaus Tunnel.
- Instantaneous water flow rate through Spring Gap Powerhouse.
- Water surface elevation at the Impoundment.
- Instream flow below Sand Bar Diversion Dam.

**G-7.2** Each party to the Agreement grants the other party access to its facilities for the purpose of installing equipment necessary to transmit the information set forth in Section G-7.1. Any equipment installed under this Section G-7.2 shall be used only to transmit or convey the information described in Section G-7.1. A party shall not use said equipment to transmit or convey any other information obtained from the other party without the express written permission of such other party. This Section G-7.2 does not grant either party a right of access to the other party's facilities except as required to implement Section G-7.1. Each party shall be responsible for both its own access to the other party's facility and for the security of its equipment located on or in the other party's facility. Neither party shall insure the property of the other located at its facility against damage or loss from any cause whatsoever.

**G-7.3** 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 any person, including but not limited to employees of either party, and any property damage, including but not limited to the property of either party, resulting from or arising out of 1) the authorized presence of one party's communications equipment or facilities on or in property owned or controlled by the other party and 2) the authorized presence of one party's employees or agents on or in property owned or controlled by the other party. For the purpose of applying this indemnification, authorization for the presence of equipment or employees and agents shall be determined in accordance with the terms of Section G-7.2.