POWER PURCHASE AGREEMENT

FOR

FIRM CAPACITY AND ENERGY

BETWEEN

COLLINS PINE COMPANY

AND

PACIFIC GAS AND ELECTRIC COMPANY

FIRM CAPACITY AND ENERGY

POWER PURCHASE AGREEMENT

CONTENTS

FIRM CAPACITY AND ENERGY

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BETWEEN

COLLINS PINE COMPANY

AND

PACIFIC GAS AND ELECTRIC COMPANY

COLLINS PINE COMPANY ("Seller"), 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 Facility[1] and during the term of agreement, its Facility shall meet the qualifying facility requirements established as of the effective date of this Agreement by the Federal Energy Regulatory Commission's rules (18 Code of Federal Regulations 292) implementing the Public Utility Regulatory Policies Act of 1978 (16 U.S.C.A. 796, et seq.).

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

ARTICLE 2 PURCHASE OF POWER

(a) Seller shall sell and deliver and PGandE shall purchase and accept delivery of firm capacity and energy at the voltage level of 60 kV as indicated below--

1. Contract capacity - 12,000 kW; and
2. Energy - net energy output[1].

Seller may convert its energy sale option as provided in Section A-3 of Appendix A.

(b) Seller shall provide the firm capacity and energy set forth above from its 12,000 kW
[Nameplate rating of generator(s)]
Facility located at Collins Pine Company, Chester, California in the service area of CP National.

(c) The scheduled operation date of the Facility is Dec. 1985 RH ~~June 1986~~. At the end of each calendar quarter Seller shall give written notice to PGandE of any change in the scheduled operation date. RH

(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 15,000 kW.

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[1] Insert either "net energy output" or "surplus energy output" to show the energy sale option selected by Seller.

(e) The primary energy source for the Facility is lumber mill hog fuel.

(f) If Seller does not begin construction of its Facility by ~~December 1985~~ July 1985, 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 Facility. Such additional facilities shall be installed, owned, and maintained in accordance with the applicable PGandE tariff.

(g) The transformer loss adjustment factor is zero[1].

ARTICLE 3 PURCHASE PRICE

(a) PGandE shall pay Seller for firm capacity at the contract capacity price under Option 2 set forth in Section C-5 of Appendix C. The contract capacity price is derived from PGandE's full avoided costs as approved by the

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[1] 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. This estimated transformer loss figure will be adjusted to a measurement of actual transformer losses performed at Seller's request and expense.

CPUC. PGandE's obligation to pay for the contract capacity shall begin on the actual operation date. Seller elects to have its contract capacity price determined from the firm capacity price schedule in effect on the date of execution of this Agreement[1]. The contract capacity price shall be subject to adjustment as provided for in Appendix D.

(b) PGandE shall pay Seller for energy at prices equal to PGandE's full short run avoided operating costs as approved by the CPUC.

(c) The contract capacity price is applicable to deliveries of capacity beginning after December 30, 1982.

ARTICLE 4 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: Collins Pine Company
P.O. Box 796
Chester, California 96020

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1 Insert either "date of execution of this Agreement" or "the actual operation date".

ARTICLE 5 DESIGNATED SWITCHING CENTER

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

Caribou Powerhouse
Caribou
(916) 283-1013

ARTICLE 6 TERMS AND CONDITIONS

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

Appendix A - GENERAL TERMS AND CONDITIONS

Appendix B - ENERGY PRICES

Appendix C - FIRM CAPACITY PRICE SCHEDULE

Appendix D - ADJUSTMENT OF CAPACITY PAYMENTS IN THE EVENT OF TERMINATION OR REDUCTION

Appendix E - INTERCONNECTION

ARTICLE 7 TERM OF AGREEMENT

This Agreement shall be binding upon execution and remain in effect thereafter for 30 years from the actual operation date; provided, however, that it shall terminate if the actual operation date does not occur 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 effective as of the last date set forth below.

COLLINS PINE COMPANY

BY: ____________________
ROBERT HATHAWAY
Vice President and
Resident Manager

DATE SIGNED: 7-9-84

PACIFIC GAS AND ELECTRIC COMPANY

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

DATE SIGNED: July 12, 1984

APPENDIX A

GENERAL TERMS AND CONDITIONS

CONTENTS

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:

<u>Actual operation date</u> - The day following the day during which all features and equipment of the <u>Facility</u> are demonstrated to PGandE's satisfaction to be capable of operating simultaneously to deliver power continuously into PGandE's system as provided in this Agreement.

<u>Adjusted capacity price</u> - The $/kW-year purchase price from Table B, Appendix C for the period of Seller's actual performance.

<u>Capacity sale reduction</u> - A reduction in the amount of capacity provided or to be provided under this Agreement, other than a temporary reduction during probationary periods under Section C-5.

<u>Contract capacity</u> - That capacity identified in Article 2(a) except as otherwise changed as provided herein.

Contract capacity price - The capacity price applicable for the period from the actual operation date through the term of agreement from either the firm capacity price schedule, Table B of Appendix C, or the successor to Table B in effect on the actual operation date. Seller has indicated its choice of firm capacity price schedule in Article 3(a).

Contract termination - The early termination of this Agreement.

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

Current firm capacity price - The $/kW-year capacity price from the firm capacity price schedule published by PGandE at the time notice of termination or reduction of contract capacity is given, for a term equal to the period from the date of termination or reduction to the end of the term of agreement.

Designated PGandE switching center - That switching center or other PGandE installation identified in Article 5.

Dispatchable - The Facility is operable and can be called upon at any time to increase its deliveries of capacity to any level up to the contract capacity.

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

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

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.

Interconnection facilities - All means required and apparatus installed to interconnect and deliver power from the Facility to the CP National 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 Facility, and (2) the Facility 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 Facility to the PGandE system through the CP National 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 2(c) when the Facility is, by Seller's estimate, expected to produce energy and capacity 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 Facility 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.

<u>Station use</u> - Energy used to operate the <u>Facility's</u> 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.

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

<u>Term of agreement</u> - The period of time during which this Agreement will be in effect as provided in Article 7.

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

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 of interconnection with the CP National system as required for PGandE to receive firm capacity and energy from the Facility. The Facility 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 E, 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 Facility, 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 all 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 ENERGY SALE OPTIONS

A-3.1 General

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

A-3.2 Energy Sale Conversion

(a) Seller is entitled to convert from one option to the other 12 months after execution of this Agreement, and thereafter at least 12 months after the effective date of the most recent conversion, subject to the following conditions:

(1) Seller shall provide PGandE with a written request to convert its energy sale option.

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

(3) Seller shall install and operate equipment required by PGandE to prevent PGandE from serving any part of Seller's load which is served by the Facility and not under contract for PGandE standby service. At Seller's request PGandE shall provide this equipment as special facilities.

(4) If the energy sale conversion results in a capacity sale reduction, the provisions in Appendix D shall apply.

(b) If, as a result of an energy sales conversion, Seller no longer requires the use of interconnection facilities installed and/or operated and maintained by PGandE as special facilities under a Special Facilities Agreement, Seller may reserve these facilities, for its future use, by continuing its performance under its Special Facilities Agreement. If Seller does not wish to reserve such facilities, it may terminate its Special Facilities Agreement.

If Seller's energy sale conversion results in its discontinuation of its use of PGandE facilities not covered by Seller's Special Facilities Agreement, Seller cannot reserve those facilities for future use. Seller's future use of such facilities shall be contingent upon the availability of such facilities at the time Seller requests such use. If such facilities are not available, Seller shall bear the expense necessary to install, own, and maintain the needed additional facilities in accordance with PGandE's applicable tariff.

(c) PGandE shall process requests for conversion in the order received. The effective date of conversion shall depend on the completion of the changes required to accommodate Seller's energy sale conversion.

A-4 OPERATION

A-4.1 Inspection and Approval

Seller shall not operate the <u>Facility</u> in parallel with PGandE's system until an authorized PGandE representative has inspected the <u>interconnection facilities</u>, and PGandE has given written approval to begin parallel operation. Seller shall notify PGandE of the <u>Facility's</u> start-up date at least 45 days prior to such date. PGandE shall inspect the <u>interconnecting facilities</u> 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-4.2 Facility Operation and Maintenance

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

A-4.3 Point of Delivery

Seller shall, by obtaining wheeling services from CP National, deliver the energy at the point where the electrical conductors of CP National 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 of delivery of Seller's power to the PGandE system is set forth in Appendix E.

A-4.4 Operating Communications

(a) Seller shall maintain operating communications with the <u>designated</u> <u>PGandE</u> <u>switching</u> <u>center</u>. 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 <u>Facility</u>.

(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 <u>Facility</u> 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 <u>designated</u> <u>PGandE</u> <u>switching</u> <u>center</u>, 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 <u>designated</u> <u>PGandE</u> <u>switching</u> <u>center</u>.

(f) If Seller provides <u>dispatchable</u> capacity greater than ten megawatts pursuant to Option 1 in Section C-5 of Appendix C, Seller may be required by PGandE to provide telemetering and control equipment to allow the <u>Facility</u> to respond to system load frequency requirements on digital control from PGandE.

A-4.5 Meter Testing and Inspection

(a) All 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 all 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-4.6 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-5 PAYMENT

PGandE shall mail to Seller not later than 30 days after the end of each monthly billing period (1) a statement showing the capacity and energy 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-6, 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-6 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-4.6 to recompute the amount due from PGandE to Seller for the firm 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-7 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-8 CURTAILMENT OF DELIVERIES AND HYDRO SPILL CONDITIONS

(a) 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 emergencies, forced outages, force majeure, or compliance with prudent electrical practices.

(b) In anticipation of a period of hydro spill conditions, as defined by the CPUC, 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:

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

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.

(c) PGandE shall not be obligated to accept or pay for and may require Seller with a <u>Facility</u> with a nameplate rating of one megawatt or greater to interrupt or reduce deliveries of energy during periods when purchases under this Agreement would result in costs greater than those which PGandE would incur if it did not make such purchases but instead generated an equivalent amount of energy itself.

(d) Whenever possible, PGandE shall give Seller reasonable notice of the possibility that interruption or reduction of deliveries under subsections (a) or (c), above, may be required. 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. Before interrupting or reducing deliveries under subsection (c), above, and before invoking hydro savings prices under subsection (b), 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.

(e) If Seller is selling net energy output to PGandE and simultaneously purchasing its electrical needs from PGandE, energy curtailed pursuant to subsections (b) or (c) above shall not be used by Seller to meet its electrical needs. When Seller elects not to sell energy to PGandE at the hydro savings price pursuant to subsection (b) or when PGandE curtails deliveries of energy pursuant to subsection (c), Seller shall continue to purchase all its electrical needs from PGandE. If Seller is selling surplus energy output to PGandE, subsections (b) or (c) 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.

A-9 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 C-2(c) of Appendix C.

(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-10 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-11 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 or the facilities of CP National, 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-12 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-13 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-14 ASSIGNMENT

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

A-15 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-16 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-17 GOVERNMENTAL JURISDICTION AND AUTHORIZATION

Seller shall obtain any governmental authorizations and permits required for the construction and operation of the <u>Facility</u>. 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-18 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 C-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 4 of this Agreement. Changes in such designation may be made by notice similarly given.

A-19 INSURANCE

A-19.1 General Liability Coverage

(a) Seller shall maintain during the performance hereof, General Liability Insurance[1] of not less than $1,000,000 if the <u>Facility</u> is over 100 kW, $500,000 if the

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

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-19.2 Additional Insurance Provisions

(a) Evidence of coverage described above in Section A-19.1 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 certificates[1] and endorsements to PGandE prior to commencing operation.

(d) All insurance certificates[1], endorsements, cancellations, terminations, alterations, and material changes of such insurance shall be issued and submitted to the following:

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

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

APPENDIX B

ENERGY PRICES

TABLE A

Energy Prices Effective May 1 - July 31, 1984

The energy purchase price calculations which will apply to energy deliveries determined from meter readings taken during May, June and July 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)
May 1 - July 31 (Period A)				
Time of Delivery Basis:				
On-Peak	13,674	5.4152	0.00041	0.07446
Partial-Peak	12,665	5.4152	0.00038	0.06896
Off-Peak	10,119	5.4152	0.00033	0.05513
Seasonal Average (Period A)	11,538	5.4152	0.00036	0.06284

1 Incremental energy rates (Btu/kWh) for Seasonal Period A 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 April 18, 1984 per Advice No. 1261-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[1]
Time Periods

	Monday through Friday[2]	Saturdays[2]	Sundays and Holidays
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. 14 hrs.	8:30 a.m. to 10:30 p.m. 14 hrs.	
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

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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 C

Energy Loss Adjustment Factors[1]

	Transmission	Primary Distribution	Secondary Distribution
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

FIRM CAPACITY PRICE SCHEDULE

CONTENTS

APPENDIX C

FIRM CAPACITY PRICE SCHEDULE

C-1 GENERAL

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

C-2 PERFORMANCE REQUIREMENTS

(a) To receive full capacity payments the Facility must meet the following requirements:

(1) The contract capacity shall be available[1] for all of the on-peak hours[2] 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 availability[1] for each of the peak months and shall exclude any energy associated with generation levels greater than the contract capacity.

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[1] For purposes of Option 1, "available" means either dispatchable by PGandE or actually delivered to PGandE. For purposes of Option 2, "available" means actually delivered to PGandE.

[2] On-peak, partial-peak, and off-peak hours are defined in Table B, Appendix B.

(2) If Seller selects Option 1, the contract capacity shall be dispatchable throughout the year, subject to (i) a monthly allowance for forced outages of 20% of the hours Seller is called upon to deliver power to PGandE and (ii) the allowances for scheduled maintenance outages. Except during the peak months on the PGandE system, Seller may accumulate and apply the 20 percent allowance for forced outages for any consecutive three month period. Seller shall demonstrate that the Facility is fueled by a reliable fuel supply and adequate fuel storage is available to deliver power as requested by PGandE's system dispatcher. Such demonstration could reasonably include documentation of the current availability of the fuel, identification of the source, and production of contracts for its purchase and supply.

(b) If Seller is prevented from meeting the performance requirements because of a forced outage on the PGandE system or a condition set forth in Section A-8, PGandE shall continue capacity payments. Under Option 2, 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. Under Option 2, 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 exteme dry year conditions, PGandE shall continue capacity payments. Extreme dry year conditions are drier than those used to establish contract capacity pursuant to Section C-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 contract capacity obligations. Under Option 1, starting with the month in which Seller cannot provide its contract capacity, payments shall be made under Option 2 for a one-year period, and if at the end of this one-year period Seller is not able to resume the contract capacity due solely to continued extreme dry year conditions, Seller shall continue to receive payments under Option 2 for additional one-year periods as long as such conditions continue to exist.

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

(1) Seller shall receive the reduced capacity payments as provided in Section C-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 contract capacity pursuant to Section C-4(b).

C-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 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 4, within 24 hours of the original notice, all notices Seller gives personally or by telephone for scheduled maintenance.

C-4 ADJUSTMENTS TO CONTRACT CAPACITY

(a) Seller may increase the contract 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 contract capacity at any time by giving notice thereof to PGandE, subject to the provisions of Appendix D if the reduction occurs after the actual operation date. PGandE may reduce the contract capacity in accordance with Section C-2(e) as a result of appropriate data showing Seller has failed to meet the performance requirements of Section C-2. The amount by which the contract capacity is reduced by PGandE shall be deemed a capacity sale reduction without notice as provided in Section D-3 of Appendix D.

(c) Either Party may request, when it reasonably appears that the capacity of the Facility may have changed for any reason, that a new contract capacity be determined.

C-5 PAYMENT OPTIONS

Seller has two options for calculation of capacity payments and Seller has made its selection in Article 3(a). As used below in this section, month refers to a calendar month. The two options are as follows:

Option 1

When Seller meets the requirements of Section C-2 the monthly payment for capacity will be one-twelfth of the product of the contract capacity price, the contract capacity, the appropriate capacity loss adjustment factor from Table A based on the Facility's interconnection voltage, and the appropriate performance bonus factor, if any, from Table C. Capacity payments will continue during scheduled maintenance outages provided that the provisions of Section C-3 are met.

During a probationary period Seller's monthly payment for capacity shall be determined by substituting for the contract capacity, the capacity at which Seller would have met the performance requirements. In any month during the probationary period that Seller does not meet the performance requirements at whatever capacity was determined for the previous month, Seller's monthly payment for capacity shall be determined by substituting the capacity at which Seller would have met the performance requirements.

The performance bonus factor shall not be applied during a probationary period.

Option 2

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

The PPF is determined by multiplying the contract capacity price by the following Option 2 Allocation Factors[1]:

	Option 2 Allocation Factor	x	Contract Capacity Price	=	PPF ($/kW-month)
Seasonal Period A * 6 mo.	.18540 .166275		148		$ 27.44 $ 24.6087
Seasonal Period B * 6 mo	.01043 .0003917		148		$ 1.54 $ 0.05797

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

* Effective Jan. 1, 1987

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:

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

Where:

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

C = <u>Contract</u> <u>capacity</u> in kilowatts.

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

S = Total on-peak and partial-peak hours during the month <u>Facility</u> 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 <u>Facility</u> is out of service on scheduled maintenance.

D = The number of hours in the month.

---

* 0.8 reflects a 20% allowance for <u>forced</u> <u>outage</u>.

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

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

The monthly payment for capacity is then determined by multiplying the PPF by the MDC, by the appropriate capacity loss adjustment factor presented from Table A, and by the appropriate performance bonus factor, if any, from Table C.

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

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 capacity payment[1] 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. Capacity payments will continue during the outage periods for scheduled maintenance provided that the provisions of Section C-3 are met.

During a probationary period Seller's monthly payment for capacity shall be determined by substituting for the <u>contract capacity</u>, the capacity at which Seller would

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

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

TABLE A

If the <u>Facility</u> is non-remote[1] the capacity loss adjustment factors are as follows:

<u>Interconnection Voltage</u>	<u>Capacity Loss Adjustment Factor</u>
Transmission	~~.989~~ ~~.978~~ .991
Primary Distribution	.991
Secondary Distribution	.991

If the <u>Facility</u> is remote the capacity loss adjustment factor is <u>see footnote 2</u>.[2] The above applicable capacity loss adjustment factor shall be multiplied by such capacity loss adjustment factor with respect to losses through the CP National system as may from time to time be provided to PGandE by CP National.

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[1] As defined by the <u>CPUC</u>.

[2] Seller and PGandE agree that this factor will be determined individually upon completion of a capacity loss adjustment factor study by PGandE.

TABLE B

Firm Capacity Price Schedule

(Levelized $/kW-year)

Actual Operation Date	Term of Agreement																	
(Year)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	20	25	30
1983	72	111	96	88	84	85	88	91	93	96	98	100	102	104	106	115	122	128
1984	156	111	95	88	89	92	95	98	100	103	105	108	110	112	114	124	131	137
1985	60	58	59	66	73	79	84	88	92	95	99	102	104	107	110	121*	127*	135
1986	56	58	69	78	85	90	95	99	103	106	110	113	116	118	121	132	141	148
1987	61	77	88	95	101	105	109	113	117	120	124	127	130	132	135	147	156	163
1988	96	104	110	115*	119	122	126	129	133	136	139	142	145	148	151	163	173	180

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* In its Application for Rehearing and/or Petition for Modification of CPUC Decision 83-12-068 (dated December 22, 1983) filed on February 6, 1984, PGandE requests correction of three numbers which were incorrectly presented in the Firm Capacity Price Schedule included in that decision (p. 349, Table VI-4). The correct number for 1985 for a 20-year contract life should be $120/kW-yr, and for a 25-year contract life should be $129/kW-yr. The correct number for 1988 for a 4-year contract life should be $115/kW-yr. When the CPUC issues an order correcting these numbers, PGandE shall correct the Firm Capacity Price Schedule accordingly.

TABLE C

Performance Bonus Factor

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

DEMONSTRATED 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 capacity factor for each such month shall be calculated in the following manner:

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

Where:

For Option 1

F = Total kilowatt-hours delivered by Seller in any peak month during all on-peak hours that Seller is asked to deliver power to PGandE excluding any energy associated with generation levels greater than the contract capacity.

N = Total on-peak hours that Seller is asked to deliver power to PGandE during the month.

W = Total on-peak hours during the peak month that the Facility is out of service on scheduled maintenance during the on-peak hours that Seller is asked to deliver power to PGandE.

Q = Contract capacity in kilowatts.

For Option 2

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 contract 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 = Contract capacity in kilowatts.

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

(iii) the average of the above arithmetic average capacity factors for the most recent span(s), not to exceed

5, shall be calculated and shall become the Demonstrated Capacity Factor.

To calculate the performance bonus factor for a Demonstrated Capacity Factor not shown in Table D use the following formula:

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

<u>THE FOLLOWING SECTIONS SHALL APPLY ONLY TO HYDROELECTRIC PROJECTS</u>

C-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 C-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.

C-7 THEORETICAL OPERATION STUDY

Based on the monthly natural flow data developed under Section C-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 <u>Facility</u> 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.

C-8 DETERMINATION OF AVERAGE DRY YEAR CAPACITY RATINGS

Based on the results of the theoretical operation study developed under Section C-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 <u>contract capacity</u> shown in Article 2(a) 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.

C-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 D;

(2) A topographic project map which shows the location of all aspects of the <u>Facility</u> 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 C-6 and are consistent with generally accepted engineering practices; and

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

C-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 <u>contract capacity</u> is then set by the Seller based on the monthly average dry year capacity ratings and the performance requirements of Appendix C. An example project is shown in the attached completed Table D.

EXAMPLE

TABLE D

Summary of Theoretical Operation Study

Project: New Creek 1 Dispatchable: Yes ___ No X

Water Source: West Fork New Creek

Mode of Operation: Run of the river

Type of Turbine: Francis Design Flow: 100 cfs Design Head: 150 feet

Operating Characteristics[1]:

	Flow (cfs)	Head (feet) Gross	Head (feet) Net	Output (kW)	Efficiency (%) Turbine	Efficiency (%) 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[2]
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 Contract Capacity: 410 kW

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

[2] For this to be less than 100%, Facility must be dispatchable.

APPENDIX D

ADJUSTMENT OF CAPACITY PAYMENTS
IN THE EVENT OF TERMINATION OR REDUCTION

CONTENTS

APPENDIX D

ADJUSTMENT OF CAPACITY PAYMENTS

IN THE EVENT OF TERMINATION OR REDUCTION

D-1 GENERAL PROVISIONS

(a) This Appendix shall be applicable in the event there is a contract termination or a capacity sale reduction (each sometimes referred to as "termination" in this Appendix D).

(b) The Parties agree that the amount which PGandE pays Seller for the capacity which Seller makes available to PGandE is based on the agreed value to PGandE of Seller's performance of capacity obligations during the full period of the term of agreement. The Parties further agree that in the event PGandE does not receive such full performance by reason of a termination:

(1) PGandE shall be deemed damaged by reason thereof,

(2) it would be impracticable or extremely difficult to fix the actual damages to PGandE resulting therefrom,

(3) the refunds and payments as provided in Sections D-2 and D-3, as applicable, are in the nature of adjustments in capacity prices and

liquidated damages, and not a penalty, and are fair and reasonable, and

(4) such refunds and payments represent a reasonable endeavor by the Parties to estimate a fair compensation for the reasonable losses that would result from such termination or reduction.

(c) In the event of a capacity sale reduction, the quantity by which the contract capacity is reduced shall be used to calculate the payments due PGandE in accordance with Sections D-2 and D-3, as applicable.

(d) Seller shall be invoiced by PGandE for all refunds and payments due under this Appendix D and the special facilities agreement. From the date of the notice of termination or the date of termination, whichever is earlier, Seller shall pay interest, compounded monthly, on all overdue amounts, at the published Federal Reserve Board three months' Prime Commercial Paper rate.

(e) If Seller does not make payments pursuant to Section D-1(d), PGandE shall have the right to offset any amounts due it against any present or future payments due Seller.

(f) Notices of termination shall be made in accordance with Section A-18 of Appendix A.

D-2 TERMINATION WITH PRESCRIBED NOTICE

In the event Seller terminates this entire Agreement, or all or part of the contract capacity thereof, with the following prescribed written notice:

Amount of Contract Capacity Terminated	Length of Notice Required
1,000 kW or under	3 months
over 1,000 kW through 10,000 kW	9 months
over 10,000 kW through 25,000 kW	12 months
over 25,000 kW through 50,000 kW	36 months
over 50,000 kW through 100,000 kW	48 months
over 100,000 kW	60 months

Then the following provisions shall apply:

(1) With respect to the amount by which the contract capacity is reduced, Seller shall refund to PGandE an amount equal to the difference between (a) the capacity payments already paid by PGandE, based on the original term of agreement and (b) the total capacity payments which PGandE would have paid based on the period of Seller's actual performance using the adjusted capacity price. Additionally, Seller shall pay interest, compounded monthly, on all overpayments, at the published Federal Reserve Board three months' Prime Commercial Paper rate.

(2) From the date PGandE receives the termination notice to the date of actual termination, PGandE shall make capacity payments based on the adjusted capacity price for the amount of contract capacity being terminated.

(3) From the date PGandE receives the termination notice, PGandE shall continue to pay for the amount of contract capacity not being terminated, if any, at the original contract capacity price.

D-3 TERMINATION WITHOUT PRESCRIBED NOTICE

(a) If Seller terminates this Agreement, or all or a part of the contract capacity thereof, without the notice prescribed in Section D-2, the provisions prescribed in Section D-2 will all apply. Additionally:

(b) Seller shall pay PGandE a sum equal to the amount by which the contract capacity is being terminated times the difference between the current firm capacity price on the date of termination for a term equal to the balance of the term of agreement and the contract capacity price, pro-rated for the length of notice given by multiplying by the difference between the prescribed length of notice and the actual notice given, with the difference divided by 12. In the event that the current firm capacity price is less than the contract capacity price, no payment under this Section D-3 shall be due either Party.

This additional payment shall be computed using the following formula:

$$G = CC \times (T - CCP) \times \frac{J - H}{12}$$

Where $G \geqq 0$

and where:

G = additional payment.

CC = the amount by which the contract capacity is being terminated.

T = the current firm capacity price.

CCP = the contract capacity price.

H = the actual number of months notice given.

J = the prescribed length of notice.

D-4 TERMINATION EXAMPLES

These examples demonstrate how to calculate capacity payment adjustments when capacity sales are terminated.

(a) Termination with Prescribed Notice

(1) Example Based on Option 1

Assumptions:

i. Term of agreement is 15 years;

ii. Actual operation date is July 1, 1985;

iii. Prescribed notice is given on July 1, 1986;

iv. Contract capacity to be reduced by 10,000 kW on July 1, 1987; actual performance to be from July 1, 1985 through July 1, 1987[1];

v. The applicable capacity loss adjustment factor is .989; and

vi. No performance bonus for capacity has been earned.

The amount of overpayment (E) made by PGandE to Seller during each monthly billing period is calculated as follows:

$$E = (A - B) \times C \times L \times U$$

Where:

A = contract capacity price per month for the actual operation date (July 1, 1985) and the term of agreement which is 15 years = \$110/kW-yr ÷ 12 mo/yr = \$9.17/kW-mo.

B = adjusted capacity price per month for the actual operation date (July 1, 1984) and a two-year agreement term = \$58/kW-yr ÷ 12 mo/yr = \$4.83/kW-mo.

---

[1] The capacity payment is adjusted upon receiving notice, so no refund is necessary for the last month of the first twelve months of operation and all of the second twelve months (June 1, 1986 to July 1, 1987). Seller performed for eleven months prior to payment adjustment. (Note that due to the 30-day interval between delivery and payment, performance in the twelfth month (June 1986) can be paid for at the adjusted capacity price.

C = amount by which the contract capacity is being reduced = 10,000 kW.

L = capacity loss adjustment factor = .989.

U = performance bonus factor; when Seller does not qualify for a performance bonus factor, as in this example, U is removed from the above calculation of E.

Therefore:

E = ($9.17/kW-mo - $4.83/kW-mo) x 10,000 kW x .989 = $42,923 per month.

Table A shows a step-by-step derivation of the refund Seller owes PGandE for the early termination outlined above. The $497,342 that Seller owes PGandE appears at the lower right-hand corner of the table. All other figures of this table represent intermediate calculation steps.

TABLE A

(a) Monthly Billing Period[1]	(b) Date of Payment[2]	(c) Amount of Over-Payment[3]	(d) Accumu-lated Over-Payment[4]	(e) Interest Rate[5]	(f) Interest Charge[6] on Accumulated Overpayment (f)=(d)x(e)	(g) Balance[7] (g) = (c)+(d)+(f)
		$	$	%	$	$
7/85	8/30/85	42,923	0	1.2	0	42,923
8/85	9/30/85	42,923	42,923	1.0	429	86,275
9/85	10/30/85	42,923	86,275	0.9	776	129,974
10/85	11/30/85	42,923	129,974	0.8	1,040	173,937
11/85	12/30/85	42,923	173,937	0.7	1,218	218,078
12/85	1/30/86	42,923	218,078	0.8	1,745	262,746
1/86	3/2/86	42,923	262,746	0.9	2,365	308,034
2/86	3/30/86	42,923	308,034	1.0	3,080	354,037
3/86	4/30/86	42,923	354,037	1.1	3,894	400,854
4/86	5/30/86	42,923	400,854	1.2	4,810	448,587
5/86	6/30/86	42,923	448,587	1.3	5,832	497,342

---

[1] The month in which power deliveries were made. For purposes of simplification, the monthly billing period will coincide exactly with each calendar month.

[2] The date on which payment for the monthly billing period stated in column (a) is made.

[3] The amount of overpayment made by PGandE to Seller during each monthly billing period.

[4] The amount of overpayment accumulated up through last month's date of payment.

[5] The interest rate for the period between the date of payment for the previous monthly billing period and the date of payment for this monthly billing period. These interest rates are arbitrarily chosen for use in this example.

[6] The amount of interest charge accrued between the date of payment for the previous monthly billing period and the date of payment for this monthly billing period on the accumulated overpayment balance existing as of the previous monthly billing period's date of payment.

[7] The amount Seller owes PGandE at this stage of the calculation. The balance (g) for a given monthly billing period equals the accumulated overpayment (d) for the monthly billing period immediately following.

(2) Example Based on Option 2

Assumptions:

i. Term of agreement is 15 years;

ii. Actual operation date is April 1, 1985;

iii. Prescribed notice is given on April 1, 1987;

iv. Contract capacity is reduced by 10,000 kW on April 1, 1988; actual performance is from April 1, 1985 through April 1, 1988[1];

v. Scheduled outage for maintenance: 18 days = 432 hours in both November 1985 and November 1986;

vi. The applicable capacity loss adjustment factor is .989; and

vii. Listed below is Seller's Performance Factor (P), the Demonstrated Capacity Factor (Y) in % (when measured), and where applicable, the performance bonus factor (U) earned for each of the monthly billing periods[2] prior to the time capacity payment is adjusted. Also listed below are the number of hours

---

[1] The capacity payment is adjusted upon receiving notice, so no refund is necessary for the last month of the first twenty-four months of operation and all of the last twelve months (March 1, 1987 to April 1, 1988). Seller performed for twenty-three months prior to payment adjustment. [Note that due to the 30-day interval between delivery and payment, performance in the twenty-fourth month (March 1987) can be paid for at the adjusted capacity price.]

[2] For purposes of simplification, the monthly billing period will coincide exactly with each calendar month.

the Facility was out of service for scheduled maintenance (M) and the number of hours in the month (D) for each of these months.

Monthly Billing Period		P	Y	U	M	D
April	1985	.85	-	-	0	720
May	1985	.95	-	-	0	744
June	1985	.90	80	-	0	720
July	1985	1.00	88	-	0	744
August	1985	.90	96	-	0	744
September	1985	1.00	-	1.035*	0	720
October	1985	.96	-	1.035	0	744
November	1985	.98	-	1.035	432	720
December	1985	1.00	-	1.035	0	744
January	1986	1.00	-	1.035	0	744
February	1986	.92	-	1.035	0	672
March	1986	.85	-	1.035	0	744
April	1986	.78	-	1.035	0	720
May	1986	1.00	-	1.035	0	744
June	1986	.94	100	1.035	0	720
July	1986	.95	95	1.035	0	744
August	1986	1.00	92	1.035	0	744
September	1986	1.00	-	1.080**	0	720
October	1986	.93	-	1.080	0	744
November	1986	.84	-	1.080	432	720
December	1986	.88	-	1.080	0	744
January	1987	.94	-	1.080	0	744
February	1987	1.00	-	1.080	0	672

---

* This performance bonus factor was calculated by averaging the Demonstrated Capacity Factors for each of the months of June, July, and August 1985, and then dividing that average by 85(%):

$$U = \frac{80 + 88 + 96}{3} \div 85 = 1.035$$

** This performance bonus factor was calculated by averaging the Demonstrated Capacity Factors for each of the months of June, July, and August 1985, and June, July, and August 1986, and then dividing that average by 85(%):

$$U = \frac{80 + 88 + 96 + 100 + 95 + 92}{6} \div 85 = 1.080$$

The amount of overpayment (E) made by PGandE to Seller during each monthly billing period is calculated as follows:

$$E = [P \times (1 - \frac{M}{D}) \times K \times L \times U \times (A - B) \times C] + [\frac{M}{D} \times R]$$

Where:

P = performance factor.

M = number of hours of scheduled maintenance for that monthly billing period.

D = number of hours in that monthly billing period.

K = allocation factor from Section C-5.

L = capacity loss adjustment factor = .989.

U = performance bonus factor; when Seller does not qualify for a performance bonus factor, U is removed from the above calculation of E.

A = <u>Contract capacity price</u> for the <u>actual operation date</u> (April 1, 1985) and <u>term of agreement</u> which is 15 years = $110/kW-yr.

B = <u>adjusted capacity price</u> for the <u>actual operation date</u> and a three-year agreement term = $59/kW-yr.

C = amount by which the <u>contract capacity</u> is being reduced = 10,000 kW.

R = amount of overpayment for the most recent monthly billing period in the same Seasonal Period (i.e., Seasonal Period A or Seasonal Period B).

The results of the calculations are:

Monthly Billing Period		Amount of Overpayment (E)
April	1985	$ 4,472
May	1985	88,838
June	1985	84,163
July	1985	93,514
August	1985	84,163
September	1985	96,787
October	1985	5,227
November	1985	5,271
December	1985	5,445
January	1986	5,445
February	1986	5,009
March	1986	4,628
April	1986	4,247
May	1986	96,787
June	1986	90,980
July	1986	91,948
August	1986	96,787
September	1986	100,995
October	1986	5,284
November	1986	5,079
December	1986	5,000
January	1987	5,341
February	1987	5,682

Table B shows a step-by-step derivation of the refund Seller owes PGandE for the early termination outlined above. The $1,136,015 that Seller owes PGandE appears at the lower right-hand corner of the table. All other figures of this table represent intermediate calculation steps.

TABLE B

(a)	(b)	(c)	(d)	(e)	(f)	(g)
Monthly Billing Period[1]	Date of Payment[2]	Amount of Over-Payment[3]	Accumulated Over-Payment[4]	Interest Rate[5]	Interest Charge[6] on Accumulated Overpayment (f)=(d)x(e)	Balance[7] (g) = (c)+(d)+(f)
		$	$	%	$	$
4/85	5/30/85	4,472	0	1.3	0	4,472
5/85	6/30/85	88,838	4,472	1.4	63	93,373
6/85	7/30/85	84,163	93,373	1.3	1,214	178,750
7/85	8/30/85	93,514	178,750	1.2	2,145	274,409
8/85	9/30/85	84,163	274,409	1.0	2,744	361,316
9/85	10/30/85	96,787	361,316	0.9	3,252	461,355
10/85	11/30/85	5,227	461,355	0.8	3,691	470,273
11/85	12/30/85	5,271	470,273	0.7	3,292	478,836
12/85	1/30/86	5,445	478,836	0.8	3,831	488,112
1/86	3/2/86	5,445	488,112	0.9	4,393	497,950
2/86	3/30/86	5,009	497,950	1.0	4,980	507,939
3/86	4/30/86	4,628	507,939	1.1	5,587	518,154
4/86	5/30/86	4,247	518,154	1.2	6,218	528,619
5/86	6/30/86	96,787	528,619	1.3	6,872	632,278
6/86	7/30/86	90,980	632,278	1.4	8,852	732,110
7/86	8/30/86	91,948	732,110	1.4	10,250	834,308
8/86	9/30/86	96,787	834,308	1.3	10,846	941,941
9/86	10/30/86	100,995	941,941	1.2	11,303	1,054,239
10/86	11/30/86	5,284	1,054,239	1.0	10,542	1,070,065
11/86	12/30/86	5,079	1,070,065	1.1	11,771	1,086,915
12/86	1/30/87	5,000	1,086,915	1.1	11,956	1,103,871
1/87	3/2/87	5,341	1,103,871	1.0	11,039	1,120,251
2/87	3/30/87	5,682	1,120,251	0.9	10,082	1,136,015

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[1] The month in which power deliveries were made. For purposes of simplification, the monthly billing period will coincide exactly with each calendar month.

[2] The date on which payment for the monthly billing period stated in column (a) is made.

[3] The amount of overpayment made by PGandE to Seller during each monthly billing period.

[4] The amount of overpayment accumulated up through last month's date of payment.

[5] The interest rate for the period between the date of payment for the previous monthly billing period and the date of payment for this monthly billing period. These interest rates are arbitrarily chosen for use in this example.

[6] The amount of interest charge accrued between the date of payment for the previous monthly billing period and the date of payment for this monthly billing period on the accumulated overpayment balance existing as of the previous monthly billing period's date of payment.

[7] The amount Seller owes PGandE at this stage of the calculation. The balance (g) for a given monthly billing period equals the accumulated overpayment (d) for the monthly billing period immediately following.

(b) Termination without Prescribed Notice

If Seller terminates without prescribed notice, Seller will owe PGandE a refund [the calculation of which is described in Sections D-4(a)(1) and D-4(a)(2) of this example] and payment (G). This example demonstrates how the payment (G) is calculated. Assumptions:

i. Term of agreement is 15 years;

ii. Actual operation date is July 1, 1985;

iii. Notice is given on January 1, 1990; and

iv. Contract capacity is to be reduced by 10,000 kW on July 1, 1990; actual performance is from July 1, 1985 through July 1, 1990.

The payment (G) is calculated as follows:

$$G = CC \times (T - CCP) \times \left(\frac{J-H}{12}\right) \qquad G \geqq 0$$

Where:

CC = The amount of contract capacity being terminated = 10,000 kW.

T = the current firm capacity price $140/kW-yr is arbitrarily chosen for use in this example for a July 1, 1990 Operation Date and 10-year agreement term.

CCP = the contract capacity price = $110/kW-yr.

H = the actual number of months notice given = six months.

J = the prescribed notice = twelve months.

The sample calculation is:

$$G = CC \times (T - CCP) \times \left(\frac{J-H}{12}\right)$$

$$G = 10{,}000\ \text{kW} \times (\$140/\text{kW-yr} - \$110/\text{kW-yr}) \times \left(\frac{12\ \text{mos.} - 6\ \text{mos.}}{12\ \text{mos./yr}}\right)$$

$$G = \underline{\underline{\$150{,}000}}$$

APPENDIX E

INTERCONNECTION

CONTENTS

RULE NO. 21 -- NONUTILITY-OWNED PARALLEL GENERATION (T)

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

A. GENERAL

1. The type of interconnection and voltage available at any location and the Utility's specific interconnection requirements shall be determined by inquiry at the Utility's local office.

2. The Utility's distribution and transmission lines which are an integral part of its overall system are distinguished by the voltages at which they are operated. Distribution lines are operated at voltages below 60 kv and transmission lines are operated at voltages 60 kv and higher. (N) (N)

3. The Power Producer (Producer) shall ascertain and be responsible for compliance with the requirements of all governmental authorities having jurisdiction.

4. The Producer shall sign the Utility's written form of power purchase agreement or parallel operation agreement before connecting or operating a generating source in parallel with the Utility's system.

5. The Producer shall be fully responsible for the costs of designing, installing, owning, operating and maintaining all interconnection facilities defined in Section B.1.

6. The Producer shall submit to the Utility, for the Utility's review and written acceptance, equipment specifications and detailed plans for the installation of all interconnection facilities to be furnished by the Producer prior to their purchase or installation. The Utility's review and written acceptance of the Producer's equipment specifications and detailed plans shall not be construed as confirming or endorsing the Producer's design or as warranting the equipment's safety, durability or reliability. The Utility shall not, by reason of such review or lack of review, be responsible for strength, details of design adequacy, or capacity of equipment built pursuant to such specifications, nor shall the Utility acceptance be deemed an endorsement of any such equipment.

7. No generating source shall be operated in parallel with the Utility's system until the interconnection facilities have been inspected by the Utility and the Utility has provided written approval to the Producer.

8. Only duly authorized employees of the Utility are allowed to connect Producer-installed interconnection facilities to, or disconnect the same from, the Utility's overhead or underground lines.

B. INTERCONNECTION FACILITIES

1. GENERAL: Interconnection facilities are all means required, and apparatus installed, to interconnect the Producer's generation with the Utility's system. Where the Producer desires to sell power to the Utility, interconnection facilities are also all means required, and apparatus installed, to enable the Utility to receive power deliveries from the Producer. Interconnection facilities may include, but are not limited to:
   a. connection, transformation, switching, metering, communications, control, protective and safety equipment; and
   b. any necessary additions to and reinforcements of the Utility's system by the Utility.

2. METERING
   a. A Producer desiring to sell power to the Utility shall provide, install, own and maintain all facilities necessary to accommodate metering equipment specified by the Utility. Such metering equipment may include meters, telemetering (applicable where deliveries to the Utility exceed 10 MW) and other recording and communications devices as may be required for the reporting of power delivery data to the Utility. Except as provided for in Section B.2.b following, the Utility shall provide, install, own and maintain all metering equipment as special facilities in accordance with Section F. (T)

(Continued)

RULE NO. 21 -- NONUTILITY-OWNED PARALLEL GENERATION (Cont'd.) (T)

B. INTERCONNECTION FACILITIES (continued)

2. METERING

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

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

3. CONTROL, PROTECTION AND SAFETY EQUIPMENT

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

b. Listed below are the various devices and features generally required by the Utility as a prerequisite to parallel operation of the Producer's generation:

CONTROL, PROTECTION AND SAFETY EQUIPMENT GENERAL REQUIREMENTS[1]

Device or Feature	GENERATOR SIZE: 10 kw or Less	11 kw to 40 kw	41 kw to 100 kw	101 kw to 400 kw	401 kw to 1,000 kw	Over 1,000 kw
Dedicated Transformer[2]	-	X	X	X	X	X
Interconnection Disconnect Device	X	X	X	X	X	X
Generator Circuit Breaker	X	X	X	X	X	X
Over-voltage Protection	X	X	X	X	X	X
Under-voltage Protection	-	-	X	X	X	X
Under/Over-frequency Protection	X	X	X	X	X	X
Ground Fault Protection	-	-	X	X	X	X
Over-current Relay w/Voltage Restraint	-	-	-	-	X	X
Synchronizing[3]	Manual	Manual	Manual	Manual	Manual	Automatic
Power Factor or Voltage Regulation			X	X	X	X (T)

c. DISCONNECT DEVICE: The Producer shall provide, install, own and maintain the interconnection disconnect device required by Section B.3.b at a location readily accessible to the Utility. Such device shall normally be located near the Utility's meter or meters for sole operation by the Utility. The interconnection disconnect device and its precise location shall be specified by the Utility. At the Producer's option and request, the Utility will provide, install, own and maintain the disconnect device on the Utility's system as special facilities in accordance with Section F.

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

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

[3] This is a requirement for synchronous and other types of generators with stand-alone capability. For all such generators, the Utility will also require the installation of "reclose blocking" features on its system to block certain operations of the Utility's automatic line restoration equipment. (T)

(Continued)

RULE NO. 21 -- NONUTILITY-OWNED PARALLEL GENERATION (Cont'd.) (T)

B. INTERCONNECTION FACILITIES (continued)

4. UTILITY SYSTEM ADDITIONS AND REINFORCEMENTS

a. Except as provided for in Section B.5, all additions to and reinforcements of the Utility's system necessary to interconnect with and receive power deliveries from the Producer's generation will be provided, installed, owned and maintained by the Utility as special facilities in accordance with Section F. Such additions and reinforcements may include the installation of a Utility distribution or transmission line extension or the increase of capacity in the Utility's existing distribution or transmission lines. The Utility shall determine whether any such additions or reinforcements shall include an increment of additional capacity for the Utility's use in furnishing service to its customers. If so, then the costs of providing, installing, owning and maintaining such additional capacity shall be borne by the Utility and/or its customers in accordance with the Utility's applicable tariffs on file with and authorized by the California Public Utilities Commission (Commission). (N)

b. The Producer shall advance to the Utility its estimated costs of performing a preliminary or detailed engineering study as may be reasonably required to identify any Producer related Utility system additions and reinforcements. Where such preliminary or detailed engineering study involves analysis of the Utility's transmission lines (60 kv and higher), the Utility shall complete its study within twelve calendar months of receiving all necessary plans and specifications from the Producer.

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

6. COSTS OF FUTURE UTILITY SYSTEM ALTERATIONS: The Producer shall be responsible for the costs of only those future Utility system alterations which are directly related to the Producer's presence or necessary to maintain the Producer's interconnection in accordance with the Utility's applicable operating, metering and equipment publication in effect when the Producer and the Utility entered into a written form of power purchase agreement. Alterations made at the Producer's expense shall specifically exclude increases of existing line capacity necessary to accommodate the other Producers or Utility customers. Such alterations may, however, include relocation or undergrounding of the Utility's distribution or transmission lines as may be ordered by a governmental authority having jurisdiction.

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

(Continued)

RULE NO. 21 -- NONUTILITY-OWNED PARALLEL GENERATION (Cont'd.) (T)

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

D. OPERATION

1. PREPARALLEL INSPECTION: In accordance with Section A.7, the Utility will inspect the Producer's interconnection facilities prior to providing it with written authorization to commence parallel operation. Such inspection shall determine whether or not the Producer has installed certain control, protective and safety equipment to the Utility's specifications. Where the Producer's generation has a rated output in excess of 100 kw, the Producer shall pay the Utility its estimated costs of performing the inspection. (N)

2. JURISDICTION OF THE UTILITY'S SYSTEM DISPATCHER: The Producer's generation while operating in parallel with the Utility's system is at all times under the jurisdiction of the Utility's system dispatcher. The system dispatcher shall normally delegate such control to the Utility's designated switching center.

3. COMMUNICATIONS: The Producer shall maintain telephone service from the local telephone company to the location of the Producer's generation. In the event such location is remote or unattended, telephone service shall be provided to the nearest building normally occupied by the Producer's generator operator. The Utility and the Producer shall maintain operating communications through the Utility's designated switching center.

4. GENERATOR LOG: The Producer shall at all times keep and maintain a detailed generator operations log. Such log shall include, but not be limited to, information on unit availability, maintenance outages, circuit breaker trip operations requiring manual reset and unusual events. The Utility shall have the right to review the Producer's log.

5. REPORTING ABNORMAL CONDITIONS: The Utility shall advise the Producer of abnormal conditions which the Utility has reason to believe could affect the Utility's operating conditions or procedures. The Producer shall keep the Utility similarly informed.

6. POWER FACTOR: The Producer shall furnish reactive power as may be reasonably required by the Utility. (D)

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

E. INTERFERENCE WITH SERVICE AND COMMUNICATION FACILITIES

1. GENERAL: The Utility reserves the right to refuse to connect to any new equipment or to remain connected to any existing equipment of a size or character that may be detrimental to the Utility's operations or service to its customers.

(Continued)

RULE NO. 21 -- NONUTILITY-OWNED PARALLEL GENERATION (Cont'd.) (T)

E. INTERFERENCE WITH SERVICE AND COMMUNICATION FACILITIES (continued)

2. The Producer shall not operate equipment that superimposes upon the Utility's system a voltage or current which causes interference with the Utility's operations, service to the Utility's customers or interference to communication facilities. If the Producer causes service interference to others, the Producer must diligently pursue and take corrective action at the Producer's expense after being given notice and reasonable time to do so by the Utility. If the Producer does not take timely corrective action, or continues to operate the equipment causing the interference without restriction or limit, the Utility may, without liability, disconnect the Producer's equipment from the Utility's system until a suitable permanent solution provided by the Producer is operational at the Producer's expense.

F. SPECIAL FACILITIES

1. Where the Producer requests the Utility to furnish interconnection facilities or where it is necessary to make additions to or reinforcements of the Utility's system and the Utility agrees to do so, such facilities shall be deemed to be special facilities and the costs thereof shall be borne by the Producer, including such continuing ownership costs as may be applicable.

2. Special facilities are (a) those facilities installed at the Producer's request which the Utility does not normally furnish under its tariff schedules, or (b) a prorata portion of existing facilities requested by the Producer, allocated for the sole use of such Producer, which would not normally be allocated for such sole use. Unless otherwise provided by the Utility's filed tariff schedules, special facilities will be installed, owned and maintained or allocated by the Utility as an accommodation to the Producer only if acceptable for operation by the Utility and the reliability of service to the Utility's customers is not impaired.

3. Special Facilities will be furnished under the terms and conditions of the Utility's "Agreement for Installation or Allocation of Special Facilities for Parallel Operation of Nonutility-owned Generation and/or Electrical Standby Service" (Form 79-280, effective June 1984) and its Appendix A, "Detail of Special Facilities Charges" (Form 79-702, effective June 1984). Prior to the Producer signing such an agreement, the Utility shall provide the Producer with a breakdown of special facilities costs in a form having detail sufficient for the information to be reasonably understood by the Producer. The special facilities agreement will include, but is not limited to, a binding quotation of charges to the Producer and the following general terms and conditions: (N)

   a. Where facilities are installed by the Utility for the Producer's use as special facilities, the Producer shall advance to the Utility its estimated installed cost of the special facilities. The amount advanced is subject to the monthly ownership charge applicable to customer-financed special facilities as set forth in Section I of the Utility's Rule No. 2. (T)

   b. At the Producer's option, and where such Producer's generation is a qualifying facility[4] and the Producer has established credit worthiness to the Utility's satisfaction, the Utility shall finance those special facilities it deems to be removable and reusable equipment. Such equipment shall include, but not be limited to, transformation, disconnection and metering equipment.

   c. Existing facilities allocated for the Producer's use as special facilities and removable and reusable equipment financed by the Utility in accordance with Section F.3.b are subject to the monthly ownership charge applicable to Utility-financed special facilities as set forth in Section I of Rule 2. (T)

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

(Continued)

RULE NO. 21 -- NONUTILITY-OWNED PARALLEL GENERATION (Cont'd.) (T)

F. SPECIAL FACILITIES (continued)

d. Where the Producer elects to install and deed to the Utility an extension of the Utility's distribution or transmission lines for use as special facilities in accordance with Section B.5, the Utility's estimate of the installed cost of such extension shall be subject to the monthly ownership charge applicable to customer-financed special facilities as set forth in Section I of the Rule No. 2.

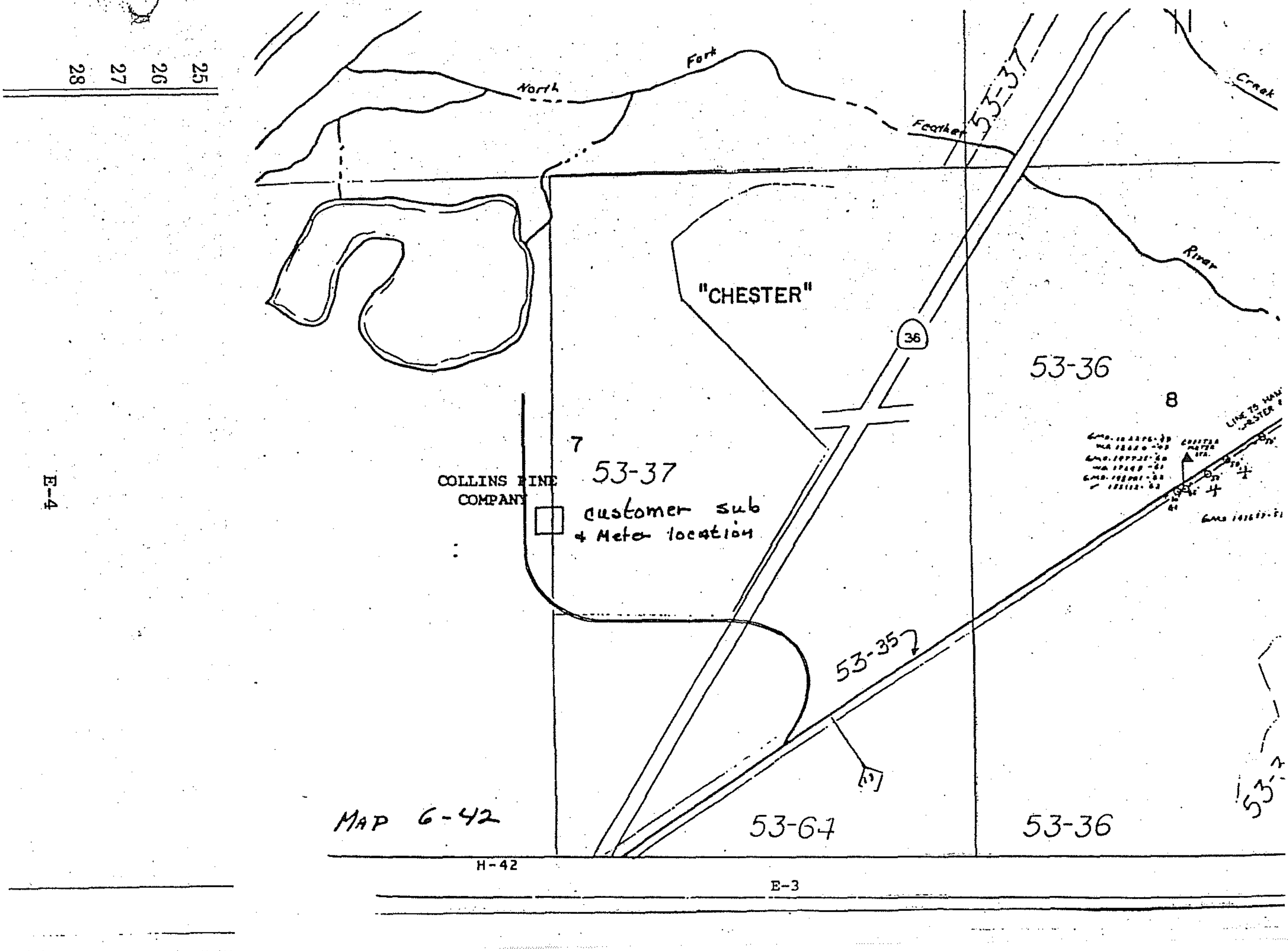
4. Where payment or collection of continuing monthly ownership charges is not practicable, the Producer shall be required to make an equivalent one-time payment in lieu of such monthly charges. (T)

5. Costs of special facilities borne by the Producer may be subject to downward adjustment when such special facilities are used to furnish permanent service to a customer of the Utility. This adjustment will be based upon the extension allowance or other such customer allowance which the Utility would have utilized under its then applicable tariffs if the special facilities did not otherwise exist. In no event shall such adjustment exceed the original installed cost of that portion of the special facilities used to serve a new customer. An adjustment, where applicable, will consist of a refund applied to the Producer's initial payment for special facilities and/or a corresponding reduction of the ownership charge. (N)

G. EXCEPTIONAL CASES: Where the application of this rule appears impractical or unjust, the Producer may refer the matter to the Commission for special ruling or for the approval of special conditions.

H. INCORPORATION INTO POWER PURCHASE AGREEMENTS: Pursuant to Decision No. 83-10-093, if in accordance with Section A.4 the Producer enters into a written form of power purchase agreement with Utility, a copy of the Rule No. 21 in effect on the date of execution will be appended to, and incorporated by reference into, such power purchase agreement. The Rule appended to such power purchase agreement shall then be applicable for the term of the Producer's power purchase agreement with the Utility. Subsequent revisions to this rule shall not be incorporated into the rule appended to such power purchase agreement. (N)

. The point of delivery will be the Ches Metering Station.
. The point of metering will be the Coll Pine Company Plant location.



E-3 INTERCONNECTION FACILITIES FOR WHICH SELLER IS RESPONSIBLE

The Seller requests, and PGandE consents, that this listing of facilities not be filled in at the time of executing this Agreement, because the Seller recognizes that the information is not yet available to make a final determination of the listing of facilities to be inserted here.

The listing of <u>interconnection</u> <u>facilities</u> for which Seller is responsible to PGandE shall be inserted as Section E-3 to this Agreement upon completion of the special facilities agreement between Seller and PGandE.