



August 2, 2005

The Honorable Magalie R. Salas
Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, D.C. 20426

**Re: California Independent System Operator Corporation
Docket Nos. ER05-1013-____**

Dear Secretary Salas:

Enclosed please find the attached Amendment To Filing And Response Of The California Independent System Operator Corporation To July 13, 2005 Deficiency Letter.

As directed in the Deficiency Letter, enclosed are six copies. In addition, two copies of this filing are enclosed to be date-stamped and returned to our messenger.

Thank you for your attention to this filing.

Yours truly,

/s/ Beth Ann Burns

Beth Ann Burns
Litigation Counsel

Counsel for the California Independent
System Operator Corporation

cc: Brian Dunn, Analyst, Division of Tariffs and Market Development -- West
Service List

**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION**

California Independent System Operator)
Corporation) Docket No. ER05-1013-____

**AMENDMENT TO FILING AND RESPONSE OF
THE CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION
TO JULY 13, 2005 DEFICIENCY LETTER**

I. INTRODUCTION & BACKGROUND

On May 23, 2005, the California Independent System Operator Corporation (“ISO”) and San Diego Gas & Electric Company (“SDG&E”) reached a settlement agreement (“Settlement Agreement”) to resolve a number of matters in litigation between the parties related to the Southwest Power Link (“SWPL”).¹ As part of settling these matters, the ISO and SDG&E entered into the SWPL Operations Agreement, which contains operating requirements applicable to SWPL and provides on a going-forward basis for the shares of SWPL owned by Arizona Public Service Company (“APS”) and Imperial Irrigation District (“IID”) to be treated as non-ISO Controlled Grid, for ISO charges to transactions on the portions of SWPL owned APS and IID (“APS/IID SWPL Transactions”) to be eliminated, and for SDG&E to pay the ISO a Line Operator Charge as compensation for the ISO’s expenses related to the administration of SDG&E’s joint ownership of SWPL. On May 24, 2005, the ISO submitted the SWPL Operations Agreement to the Commission for review in this docket pursuant to Section

¹ Capitalized terms not otherwise defined herein have the meanings set forth in the Master Definitions Supplement, Appendix A to the ISO Tariff.

205 of the Federal Power Act (“FPA”).

On June 8, 2005, the ISO and SDG&E filed with the Commission an Offer of Settlement in the ISO’s 2004 Grid Management Charge (“GMC”) proceeding (Docket Nos. ER04-115-002, *et al.*) insofar as it relates to the reserved issue in that proceeding, i.e., the application of the GMC to APS/IID SWPL Transactions. The SWPL Settlement Agreement and Operations Agreement were provided as attachments to the Offer of Settlement filed in that docket.

On July 13, 2005, the Commission issued a Deficiency Letter in this matter requesting that the ISO provide additional information in order for Commission Staff to process the SWPL Operations Agreement filing. Specifically, the Deficiency Letter seeks further explanation and cost support for two cost components of the SWPL Operations Agreement – the Line Operator Charge and the 0.5% fixed percentage for Transmission Losses.

The ISO submits this response to the Deficiency Letter and, pursuant to Section 205 of the FPA, requests that this response be treated as an amendment to the ISO’s May 24, 2005 filing. In addition, the ISO requests waiver of all remaining filing requirements under Part 35 of the Commission’s regulations, including the information required by 18 C.F.R. § 35.12(b). The agreement at issue in this proceeding is not like a traditional cost-of-service rate schedule under which a public utility provides services to parties unknown at the time of filing. The rates, terms and conditions set forth in the agreement are the result of extensive negotiation by the parties. Accordingly, the Commission should waive any remaining unfulfilled filing requirements of 18 C.F.R. § 35.12 and accept the agreement.

II. RESPONSE TO DEFICIENCY LETTER

The SWPL Operations Agreement is part of a comprehensive settlement of litigation pending in several forums related to the assessment of ISO charges to SDG&E as the Scheduling Coordinator for APS/IID SWPL Transactions. The Line Operator Charge and the transmission loss percentage, which are the subject of the Deficiency Letter, are elements of that settlement. As such, they are the product of settlement negotiations between the ISO and SDG&E. They should be considered by the Commission in that context and accorded due weight as calculations that are mutually-acceptable to the parties.

A. Line Operator Charge

As indicated in the ISO's initial filing in this matter, the SWPL Operations Agreement provides for a new Line Operator Charge to be assessed to SDG&E to compensate the ISO for its capital costs and operating expenses associated with the administration of the joint ownership of SWPL for the benefit of all ISO customers. The Line Operator Charge will be a total of \$1 million for the years 2001 through 2004. For the period from the Effective Date of the SWPL Operations Agreement (requested as June 1, 2005) through 2010, the annual Line Operator Charge will be \$1,577,000, and will thereafter be evaluated annually and adjusted to reimburse the ISO for the forecasted costs associated with such ownership, unless the parties mutually agree to a multi-year calculation.²

The Deficiency Letter requests that the ISO provide the following additional information to support the derivation of the Line Operator Charge:

² See May 24, 2005 filing at p. 4; SWPL Operations Agreement Section 6 and Sch. 2.

Schedule 2 of the proposed SWPL Operations Agreement includes an annual Line Operator Charge of \$1,577,000 for the period from 2005 through 2010 which is intended to compensate the CAISO for its capital costs and operating expenses associated with the administration of the joint ownership of the SWPL for the benefit for all CAISO customers. However, no cost support detailing the derivation of the Line Operator Charge was included in your submittal. Accordingly, please provide cost support including all associated workpapers detailing the derivation of the proposed Line Operator Charge. (at p. 1-2)

In response, the ISO will show that the proposed Line Operator Charge for the period from 2005 through 2010 consists of two cost components that add together to reach the total annual charge contained in the SWPL settlement of \$1,577,000. Those two cost components are GMC and Other Charges, and their derivation is shown on the spreadsheet entitled "Line Operator Charge Calculation", included as Attachment A to this response.

The GMC component is based on total actual GMC related to APS/IID SWPL Transactions in 2004 of \$1,852,000, which is then adjusted to extend to these transactions the 65% discount available through the 2004 Partial Offer of Settlement in Docket No. ER04-115 that was approved by the Commission on February 2, 2005. The 2004 Partial Offer of Settlement had resolved all outstanding issues, except for a single reserved issue – the application of GMC to the APS/IID SWPL Transactions. On June 8, 2005, the ISO and SDG&E filed an Offer of Settlement in that proceeding that resolved that issue as well. The GMC component of the Line Operator Charge is reduced in order to recognize the 65% discount applicable to certain GMC charge types under the 2004 Partial Offer of Settlement. The GMC component is further adjusted by reducing the GMC charge types that are based on uninstructed energy quantities to reflect the level of transmission losses provided in the SWPL Participation Agreements, as discussed in the next section of this response. This results in a GMC component of

\$698,506.

The component for Other Charges represents ISO charge types for Summer Reliability Agreements, Emissions and Start-Up Costs paid to Must Offer Units, Minimum Load Cost Compensation paid to Must Offer Units, Real-Time Redispatch costs associated with Intra-Zonal Congestion, and FERC fees. For the period from ISO start-up (April 1, 1998) through December 31, 2004, these Other Charges accrued to approximately \$5.269 million on APS/IID SWPL Transactions. As part of the SWPL Settlement Agreement, these Other Charges are refunded, and amortized for recovery through the Line Operator Charge over a six-year period, from 2005 through 2010. This amount amortized over six years equates to \$878,000 per year.

The resulting Line Operator Charge, on an annual basis, is the sum of the annualized value of the GMC component of \$698,506 and the Other Charges of \$878,000, which total \$1,577,000.

B. Transmission Losses

The ISO's May 24, 2005 filing in this matter explained that the SWPL Operations Agreement resolves a long-standing issue between the ISO and SDG&E related to the calculation of Transmission Losses. Under Section 5 and Schedule 1 of the agreement, the ISO, for calendar years 2005 through 2008, will apply a fixed percentage of Transmission Losses of 0.5% to all APS/IID SWPL Transactions. Thereafter, the parties will develop a procedure to implement the annual fixed loss calculation percentage that takes into account actual Transmission Losses during the preceding year, based on actual meter data at the ISO Control Area boundary for PaloVerde/Hassayampa, North Gila, and Imperial Valley.

In its Deficiency Letter, the Commission requests the following information related to the Transmission Losses calculation:

Similarly, Schedule 1 of the proposed SWPL Operations Agreement includes a Loss Calculation where the CAISO will apply a 0.5% fixed percentage for Transmission Losses to all Arizona Public Service Company/Imperial Irrigation District SWPL Transactions for the period from 2005 through 2008. However, your submittal does not include any workpapers supporting the Loss Calculation. Please provide workpapers detailing the derivation of the 0.5% fixed percentage for Transmission Losses. (at p. 2).

As previously indicated, the Line Operator Charge and the Transmission Loss percentage are elements of the SWPL Operations Agreement, which is part of a global settlement between the ISO and SDG&E of a number of litigated matters and disputes related to the assessment of ISO charges on APS/IID SWPL Transactions. The calculation and application of the Line Operator Charge and Transmission Loss factor result from the give-and-take negotiations that led to the overall settlement. The Commission should find that they represent a fair and reasonable approach to resolving long-standing issues.

Additional support and justification for the calculation of Transmission Losses in the SWPL Operations Agreement is provided by SDG&E, in the letter attached to this filing as Attachment B. SDG&E, as the majority-owner of the SWPL transmission line, has actual Transmission Loss data for SWPL and other pertinent information related to the determination of transmission losses under the SWPL co-ownership agreements that is not in its entirety available to the ISO. Accordingly, for the purpose of responding to the Commission's Deficiency Letter, SDG&E has provided the information in Attachment B, which discusses actual losses and anticipated changes affecting the transfer capability, and/or operation of SWPL, which could reduce loss levels.

III. Conclusion

For the foregoing reasons, the ISO submits this amendment to its filing and response in support of the Line Operator Charge and Transmission Loss percentage. In addition, the ISO requests waiver of all remaining filing requirements under Part 35 of the Commission's regulations, including the information required by 18 C.F.R. § 35.12(b), and respectfully requests that the Commission expeditiously approve the SWPL Operations Agreement, with an effective date of June 1, 2005 as requested in the initial filing.

IV. Service

A copy of this filing has been served upon all parties on the official service list for the captioned docket. In addition, the ISO has posted this filing on the ISO Home Page.

As directed in the Deficiency Letter, enclosed for filing are six copies of each of the following:

- 1) This amendment to the filing and response to the Deficiency Letter,
- 2) Attachment A – Line Operator Charge Calculation spreadsheet,
- 3) Attachment B -- SDG&E letter and supporting documentation,
- 4) Attachment C -- Notice of Filing suitable for publication in the Federal Register, together with an electronic version of the Notice.

Please contact the undersigned with any questions.

Respectfully submitted,

/s/ Beth Ann Burns

Beth Ann Burns
Litigation Counsel

Charles F. Robinson
General Counsel
Beth Ann Burns
Litigation Counsel
California Independent System
Operator Corporation
151 Blue Ravine Road
Folsom, CA 95630
Tel: (916) 351-4400
Fax: (916) 608-7296
bburns@caiso.com

Kenneth G. Jaffee
Ronald E. Minsk
Swidler Berlin LLP
3000 K Street, N.W
Washington, D.C. 20007
Tel: (202) 424-7500
Fax: (202) 424-7647

Dated: August 2, 2005

Attachment A

Line Operator Charge Calculation

Grid Management Charge (based 2004 Partial Offer of Settlement)¹

GMC Charge Type	Billable Quantities	Rate	Total Amount Invoiced	Discount Factor Applied ²	Final SWPL Settlement Amount
CT 4501 CRS- Peak	-	\$ 106.833	\$ -	65.0%	\$ -
CT 4502 CRS- Off Peak	-	\$ 70.510	\$ -	65.0%	\$ -
CT 4503 CRS-Energy Export	2,137,783	\$ 0.428	\$ 914,330	65.0%	\$ 320,015
CT 4504 CRS-Mohave Exports	-	\$ 0.268	\$ -	65.0%	\$ -
CT 4505 ETS-NE	2,137,783	\$ 0.338	\$ 722,357	65.0%	\$ 252,825
CT 4506 ETS-UE	95,132	\$ 0.712	\$ 67,734	62.5%	\$ 25,400
CT 4511 FS	51,194	\$ 1.179	\$ 60,332	0.0%	\$ 60,332
CT 4512 FS InterSC trades	-	\$ 0.589	\$ -	0.0%	\$ -
CT 4513 PGAB InterSC trades	-	\$ 0.455	\$ -	0.0%	\$ -
CT 4522 CONG	25,808	\$ 0.204	\$ 5,273	0.0%	\$ 5,273
CT 4534/4535/4536 MU	95,132	\$ 0.803	\$ 76,429	62.5%	\$ 28,661
CT 4575 SMCR	12	\$ 500.000	\$ 6,000	0.0%	\$ 6,000
Total			\$ 1,852,455		\$ 698,506

1. The applicable rates are those from the Partial Offer of Settlement in ER04-115-000 filed July 29, 2004 and approved by FERC February 2, 2005 (110 FERC 61,090).
2. 65% discount based on terms from the 2004 Partial Offer of Settlement and 62.5% discount factor based transmission losses at the existing transmission contract value vs. the ISO's calculated value.

Other Charges

Charge Description	Effective Date	Amount Invoiced & to be Refunded (million)
<i>Summer Reliability Agreements</i>	1/2001 to 12/2003	\$0.644
<i>Emissions/Start-up</i>	1/2001 to 12/31/2004	\$0.076
<i>Min Load Cost Compensation</i>	1/2001 to 12/31/2004	\$2.090
<i>Real Time Redispatch</i>	2000 to 12/31/2004	\$2.235
<i>FERC Fee</i>	2001 to 12/31/2004	\$0.224
Total³		\$5.269

³ To be amortized over six (6) years per SWPL Settlement Agreement, thus $\$5.269/6 = \$878,200$ per year.

Line Operator Charge (LOC)

Charges	Total Amount	Annual LOC (million)
GMC	\$0.698	\$0.6985
Other Charges ³	\$5.269	\$0.8782
Total		\$1.577

Attachment B



E. Gregory Barnes
Attorney

101 Ash Street
San Diego, CA 92101

Tel: (619) 699-5019
Fax: (619) 699-5027
gbarnes@sempra.com

August 2 2005

Via E-Mail

Beth Ann Burns
California Independent System Operator Corporation
151 Blue Ravine Road
Folsom, CA 95630
BBurns@caiso.com

Re: FERC Docket No. ER05-1013-000

Dear Ms. Burns:

The Commission's July 13 deficiency letter in the above matter includes a request to support the 0.5% fixed percentage for transmission losses in Schedule 1 of the SWPL Operations Agreement. You and I have agreed that much of the information sought by this portion of the July 13 letter is within the knowledge of SDG&E. Accordingly, I attach the following information responsive to the letter:

A narrative describing the derivation of the 0.5% loss factor in Schedule 1;

Attachment A – SDG&E/IID SWPL Participation Agreement (the “California Agreement”);

Attachment B – SDG&E/APS SWPL Participation Agreement (the “Arizona Agreement”); and

Attachment C – letter agreement re SWPL loss calculation.

I understand you will include this information in the ISO's response to the July 13 letter.

Sincerely,

A handwritten signature in blue ink, which appears to read "E. Gregory Barnes".

E. Gregory Barnes

Attachments

SUPPORT FOR SCHEDULE 1

The Commission's letter requests workpapers detailing the derivation of the 0.5% fixed percentage for Transmission Losses set forth in schedule 1 of the Agreement. This transmission loss figure is a negotiated number based on the following considerations:

(1) actual losses as determined pursuant to the SWPL Agreements¹ governing joint ownership and operation of the line. The aim is to have consistency over time between ISO charges for losses for the subject SWPL schedules and losses reimbursed to SDG&E by APS and IID under the SWPL Agreements. We attach the following to show how the transmission losses are derived under the SWPL Agreements:

Attachment A: California Agreement (voluminous appendices omitted).

Attachment B: Arizona Agreement (voluminous appendices omitted).

Attachment C: letter agreement dated April 27, 2000, containing loss coefficients, methodology and algorithm for computing losses under the SWPL Agreements.

(2) There are very recent and anticipated changes affecting the transfer capability, and/or operation of SWPL, which could affect actual losses on SWPL. Such changes include:

(a) in mid-May of this year, a new transformer began operation at the North Gila substation.

(b) June 2005 completion of Miguel-Mission #2 line will render SWPL historical loss values inaccurate. The ISO will no longer severely decrement the greater than 1,000MW of generation at Imperial Valley to limit congestion. The

¹ See Sections 14.6 of the California Agreement, and 15.6 of the Arizona Agreement. These agreements, filed with the Commission in Docket Nos. ER94-315 and ER94-336, are Attachments A and B to this response. All words with initial capitalization herein are used as defined in the SWPL Operations Agreement unless otherwise indicated.

generation output splits at IV and flows in both directions on SWPL. The counter flow back to Palo Verde will reduce losses for APS and IID.

(c) the future upgrade of Path 49, anticipated for 3Q 2006, which should increase SWPL transfer capability

For the short run, the fixed settlement value of 0.5% should be in the general area of actual future levels. Per Schedule 1, the settlement switches to actual computed values in 2009, at which time we expect to have a reasonable operational history on an upgraded system. This is consistent with the practice under the SWPL Agreements,² and should insure consistency in the long run between ISO loss charges under the SWPL Operations Agreement and losses reimbursed by APS and IID under the SWPL Agreements.

(3) While Schedule 1 is premised on the foregoing considerations, bear in mind that the SWPL Operations Agreement is part of a comprehensive settlement of litigation pending in several forums wherein SDG&E challenged the ISO's authority to charge SDG&E for energy schedules on the APS/IID SWPL Shares.³ Thus, the charge in Schedule 1 is the product of settlement negotiations between the ISO and SDG&E, and is not precedential. Also, this charge, and the SWPL Operations Agreement, does not affect the rights and obligations among the SWPL Participants under the SWPL Agreements, nor does it confer any rights on the ISO with respect to losses supplied to SDG&E under the SWPL Agreements (see, SWPL Operations Agreement sections 5.2 and 12.9).

² The SWPL Agreements provide that parties may request for changes in the loss calculation for changes in the electrical characteristics of the system or as indicated by operating experience. California Agreement, section 14.6.3; Arizona Agreement section 15.6.3.

³ The other portion of this settlement currently before the Commission is the Offer of Settlement in Docket Nos. ER04-115, *et al.*, which provides for certain refunds, and which the presiding judge recently certified to the Commission as uncontested.

Because the ISO is not a party to the SWPL Agreements, the portion of this response providing support for Schedule 1 is based on information provided by San Diego Gas & Electric Company.

IMPERIAL IRRIGATION DISTRICT

AND

SAN DIEGO GAS & ELECTRIC COMPANY

CALIFORNIA TRANSMISSION SYSTEM

PARTICIPATION AGREEMENT

SDG&E Transaction No. 82-0815

IMPERIAL IRRIGATION DISTRICT
AND
SAN DIEGO GAS & ELECTRIC COMPANY
CALIFORNIA TRANSMISSION SYSTEM
PARTICIPATION AGREEMENT

TABLE OF CONTENTS

<u>Section</u>	<u>Caption</u>	<u>Page</u>
1	PARTIES	1
2	RECITALS	1
3	AGREEMENT	2
4	DEFINITIONS	2
5	ADMINISTRATION	5
6	OWNERSHIP OF THE CALIFORNIA TRANSMISSION SYSTEM	7
7	CONSTRUCTION BUDGET	7
8	CONSTRUCTION WORK	8
9	OPERATING AGENT	11
10	CONSTRUCTION COSTS	14
11	OPERATION AND MAINTENANCE COSTS	14
12	ADVANCEMENT OF FUNDS	15
13	ADJUSTMENT FOR PAYMENT OF ACTUAL CONSTRUCTION COSTS	16
14	USE, SCHEDULING, AND LOSSES	16
15	OPERATING EMERGENCY	19
16	TAXES	19
17	BUDGETS AND CAPITAL IMPROVEMENT	20
18	APPENDICES	21
19	INSURANCE	21
20	LIABILITY	22
21	DEFAULTS AND COVENANTS REGARDING PROJECT AGREEMENTS	23

TABLE OF CONTENTS
(Continued)

<u>Section</u>	<u>Caption</u>	<u>Page</u>
22	RELATIONSHIP OF THE PARTIES	23
23	NON-PARTITIONMENT	24
24	SEVERANCE OF IMPROVEMENTS	24
25	RIGHT OF FIRST REFUSAL	24
26	ASSIGNMENT OF INTERESTS	24
27	NOTICES	25
28	DISPUTES	25
29	ARBITRATION	26
30	GOVERNING LAW	27
31	AUTHORIZATIONS AND APPROVALS	27
32	FEES	27
33	ENVIRONMENTAL PROTECTION	27
34	UNCONTROLLABLE FORCES	27
35	BINDING OBLIGATIONS	28
36	NON-DEDICATION OF FACILITIES	29
37	MORTGAGE AND TRANSFER OF INTEREST	29
38	GENERAL PROVISIONS GOVERNING PROJECT AGREEMENTS	29
39	TERM	30
40	EXECUTION	32

IMPERIAL IRRIGATION DISTRICT
AND
SAN DIEGO GAS & ELECTRIC COMPANY
CALIFORNIA TRANSMISSION SYSTEM
PARTICIPATION AGREEMENT

1. PARTIES:

- 1.1 The Parties to this Participation Agreement are Imperial Irrigation District, an irrigation district organized and operating under the laws of the state of California, hereinafter called "IID," and SAN DIEGO GAS & ELECTRIC COMPANY, a California corporation hereinafter called "SDG&E," which are individually referred to and collectively as "Parties."

2. RECITALS:

- 2.1 This agreement is made with reference to the following facts, among others:
- 2.2 APS and SDG&E entered into the Arizona Transmission System Participation Agreement on June 24, 1981.
- 2.3 Subsequent to execution of the Arizona Transmission System Participation Agreement, IID expressed an interest in owning a portion of the Arizona Transmission System and a portion of the California Transmission System.
- 2.4 The Parties recognize that there are mutual benefits, which result from cooperation and coordination in jointly planning, licensing, engineering, constructing, owning and operating a transmission system as compared with doing so separately.
- 2.5 The Parties intend to enter into a separate agreement entitled the Arizona Transmission System Assignment of Interests in order for SDG&E to assign a portion of its ownership interest in the Arizona Transmission System to IID. By letter of March 31, 1983, APS waived its right of first refusal, described in Section 25 of the Arizona Transmission System Participation Agreement, to assignment by SDG&E of an ownership interest in the Arizona Transmission System to IID, which is attached to the Assignment as Appendix A.
- 2.6 The electrical systems of the Parties will be interconnected by the transmission line constructed pursuant to this Participation Agreement and the Parties intend to enter into a separate agreement entitled the Interconnection and Exchange Agreement, to govern the exchange of Power and Energy.
- 2.7 SDG&E desires to build a substation in Imperial Valley, which will provide SDG&E, access to eastern coal power and several geothermal projects, which are planned, or under development in the Imperial Valley.
- 2.8 The Parties desire to enter into this agreement in order to jointly construct, own, and operate the California Transmission System and share in the costs and benefits thereof.

3. AGREEMENT:

3.1 The Parties agree as follows:

4. DEFINITIONS:

The following terms when used herein shall have the meanings specified:

- 4.1 Accounting Practice: Generally accepted accounting principles, in accordance with FERC Accounts.
- 4.2 Administrative Representative: The representative designated by each Party pursuant to Section 5.1.1.
- 4.3 Appendix: Art Appendix to this Participation Agreement, unless otherwise stated.
- 4.4 Arizona Transmission System: That portion of the Miguel Substation to Palo Verde Switchyard 500kV line, which is within the state of Arizona.
- 4.5 California Transmission System: The transmission system described in Appendix A.
- 4.6 Capacity: Electrical rating expressed in megawatts (MW) or megavolt-amperes (MVA).
- 4.7 Capital Improvements: Any Units of Property, land or and rights which are added to the California Transmission System, the betterment of land and land rights or the enlargement or betterment of any Units of Property constituting a part of the California Transmission System, and the replacement of any Units of Property for other Units of Property or the replacement of land or land rights constituting a part of the California Transmission System, irrespective of whether such replacement constitutes an enlargement or betterment of that which it replaces, which additions, betterment's, enlargements, and replacements in accordance with Accounting Practice would be capitalized.
- 4.8 Construction Coordinator: The representative designated by IID pursuant to Section 5.1.3.
- 4.9 Construction Costs: The costs of constructing the California Transmission System, as described in Section 10.
- 4.10 Construction Director: The representative designated by SDG&E pursuant to Section 5.1.2.
- 4.11 Construction Funds: Monies advanced to the Project Manager on behalf of the Parties in accordance with this Participation Agreement.
- 4.12 Construction Insurance: Policies of insurance relating to the California Transmission System during the construction thereof as provided in Section 19.1.
- 4.13 Construction Schedule: The schedule of Construction Work as set forth in Appendix C, or as revised pursuant to Sections 8.3.2 or 8.3.3.

- 4.14 Construction Work: All work undertaken by the Project Manager pursuant to Section 8, including but not limited to, all engineering, design, construction, contract preparation, purchasing, supervision, expediting, accounting, inspection, testing and the placing in service of the California Transmission System.
- 4.15 Date of Firm Operation: The first day on which deliveries of Power and Energy may be scheduled on a firm basis over the California Transmission System as designated by the Construction Director and the Construction Coordinator.
- 4.16 Energy: Megawatt-hour (MWH).
- 4.17 FERC Accounts: The Federal Energy Regulatory Commission's "Uniform System of Accounts Prescribed for Public Utilities and Licensees (Class A and Class B)," in effect as of the date of this Participation Agreement, and as such system of accounts may be in effect from time to time. References in this Participation Agreement to any specific FERC Account number shall mean the FERC Account number in effect as of the effective date of this Participation Agreement or any successor FERC Account.
- 4.18 Final Completion Report: A complete summary of Construction Costs, including surplus equipment disposal, a description of the California Transmission System as constructed and a summary of each Party's contributions to Construction Costs.
- 4.19 Operating Agent: The Party responsible for the performance of Operating Work.
- 4.20 Operating Capability: The capability of the California Transmission System to transmit Power and Energy scheduled by the Parties in each direction between the Yuma Switchyard and the Imperial Valley Switchyard.
- 4.21 Operation Committee: The committee established pursuant to Section 5.1.4.
- 4.22 Operating Costs: The costs of performing Operating Work.
- 4.23 Operating Emergency: An unplanned event or circumstance caused by the failure or threat of failure of the California Transmission System facilities which reduces or may reduce the Operating Capability of the California Transmission System.
- 4.24 Operating Funds: Monies advanced to the Operating Agent on behalf of the Parties in accordance with this Participation Agreement.
- 4.25 Operating Insurance: Policies of insurance relating to the California Transmission System to be procured and maintained as provided in Section 19.2.
- 4.26 Operating Work: All work undertaken by the Operating Agent or the Scheduling Agent pursuant to Project Agreements, including but not limited to, all engineering, contract preparation, purchasing, repair, supervision, training, maintaining, expediting, inspection, testing, protection, facility operation, retirement, use, management, and making Capital Improvements to and for the California Transmission System.
- 4.27 Palo Verde Switchyard: The high voltage switchyard which is associated with the Palo Verde Nuclear Generating Station located west of Phoenix, Arizona.

- 4.28 Participation Agreement: This agreement titled "Imperial Irrigation District and San Diego Gas & Electric Company California Transmission System Participation Agreement."
- 4.29 Power: Megawatts (MW).
- 4.30 Project Agreements: This Participation Agreement and any agreement entered into by the Project Manager in connection with the performance of Construction Work, and any other agreement which the Parties agree to designated as a Project Agreement, as such agreements are originally executed or as they may thereafter be supplemented or amended.
- 4.31 Project Insurance: Construction Insurance and Operating Insurance.
- 4.32 Project Manager: The Party responsible for the performance of Construction Work.
- 4.33 Rated Capability: The transfer capability for resource and transmission planning and reporting purposes of the California Transmission System in either direction between the Yuma Switchyard and the Imperial Valley Switchyard, expressed in megawatts and determined in accordance with Section 14.7.
- 4.34 Request for Funds: The written request of the Project Manager or Operating Agent for funds required for Construction Work or Operating Work.
- 4.35 Request for Information: A request made in writing by one Party upon another Party, specifying the records, documentation or information for which the request is made.
- 4.36 Responsibility for Costs: The percentage of financial liability of each Party for costs of Construction Work and Operating Work for each component of the California Transmission System, which is the same as the percentage ownership established in Section 6.
- 4.37 Scheduled Date of Firm Operation: The target Date of Firm Operation contained in Appendix C or its most recent revision.
- 4.38 Scheduling Agent: The Party responsible for scheduling Power and Energy deliveries over the California Transmission System pursuant to Section 14.4.
- 4.39 Section: A Section of this Participation Agreement, unless otherwise stated.
- 4.40 Units of Property: Units of property as described in the Federal Energy Regulatory Commission's "List of Units of Property for Use in Connection with Uniform System of Accounts Prescribed for Public Utilities and Licensees" in effect as of the date of this Participation Agreement, and as such list may be amended from time to time.
- 4.41 Willful Action: Action taken or not taken by a Party at the direction of its directors, members of its governing bodies or officers affecting its performance under this Participation Agreement, which action:
 - 4.41.1 Is knowingly or intentionally taken or not taken with conscious indifference to the consequences thereof or with intent that injury or damage would result or would probably result therefrom;

- 4.41.2 Has been determined by final arbitration award or final judgment or judicial decree to be a breach of contract under this Participation Agreement and which occurs or continues beyond the time specified in such arbitration award or judgment or judicial decree for curing such default or, if no time to cure is specified therein, occurs or continues thereafter beyond a reasonable time to cure such default;
 - 4.41.3 Is knowingly or intentionally taken or not taken with knowledge that such action constitutes a breach of contract under this Participation Agreement; or
 - 4.41.4 Does not include any act or which is merely involuntary, negligent.
- 4.42 Work Liability: Liability of one or both Parties for damage suffered by anyone other than a Party, whether or not resulting from the negligence of a Party, its directors, officers, employees or any person or entity whose negligence could be imputed to such Party resulting from:
- 4.42.1 The performance of Construction Work or Operating Work; or
 - 4.42.2 The use or ownership of the California Transmission System.

5. ADMINISTRATION:

- 5.1 To secure effective cooperation and interchange of information and to provide prompt and orderly consultation between the Parties concerning administrative and technical matters which may arise in connection with the terms and conditions of the Project Agreements, the Parties shall designate the following:
- 5.1.1 One Administrative Representative and an alternate by each Party.
 - 5.1.2 A Construction Director and an alternate by SDG&E.
 - 5.1.3 A Construction Coordinator and an alternate by IID.
 - 5.1.4 An Operating Committee member and an alternate by each Party.
- 5.2 The Administrative Representatives shall, other among things:
- 5.2.1 Provide liaison between the Parties at the vice presidential level.
 - 5.2.2 Supervise generally the Construction Director, Construction Coordinator, Operating Committee, and any other committee or representative established pursuant to the Project Agreements.
 - 5.2.3 Review, discuss and attempt to resolve all disputes referred to them by: (i) the Construction Director or the Construction Coordinator, (ii) the Operating Committee, or (iii) any other committee or representative established by the Project Agreements.

- 5.2.4 Review and approve, modify or otherwise act upon recommendations of the Project Manager, the Operating Agent, or the Scheduling Agent made pursuant to the Project Agreements.
 - 5.2.5 Approve budgets for Construction Work and Operating Work.
 - 5.2.6 Approve the Final Completion Report.
 - 5.2.7 Approve all revisions of Appendix A.
 - 5.2.8 Perform such other duties as may be designated in the Project Agreements.
- 5.3 The Construction Director and the Construction Coordinator shall jointly, among other things.
- 5.3.1 Provide liaison between the Parties with regard to Construction Work.
 - 5.3.2 Perform such other duties as may be designated in the Project Agreements or assigned by the Administrative Representatives.
 - 5.3.3 Provide for the development of procedures for accounting and auditing Construction Costs, and advancement of funds during construction consistent with the provisions of Project Agreements and Accounting practice and develop procedures for making forecasts and Requests for Funds pursuant to Sections 7 and 12.
- 5.4 The Operating Committee shall, among other things:
- 5.4.1 Provide liaison between the Parties with regard to Operating Work.
 - 5.4.2 Perform such other duties as may be designated in the Project Agreements or assigned by the Administrative Representatives.
 - 5.4.3 Provide for the development of procedures for accounting and auditing the costs of Operating Work, and advancement and disbursements of Operating Funds consistent with the provisions of Project Agreements and Accounting Practice and develop procedures for making forecasts and Requests for Funds pursuant to Sections 12 and 17.
- 5.5 Within thirty (30) days after this Participation Agreement is executed, each Party shall designate the representatives established pursuant to Sections 5.1.1 through 5.1.3, and give written notice thereof to the other Party.
- 5.6 One year before the Scheduled Date of Firm Operation, each Party shall designate its respective Operating committee members established pursuant to Section 5.1.4 and give written notice thereof to the other Party.
- 5.7 Each Party shall notify the other Party in writing promptly of any change of its designated representatives.

- 5.8 On the Date of Firm Operation, control of the California Transmission System shall transfer from the Construction Director and Construction coordinator to the Operating Committee.
- 5.9 The Construction Director and Construction Coordinator shall have no responsibilities or authority hereunder following the Administrative Representatives' approval of the Final Completion Report.
- 5.10 All matters pertaining to Construction Work, which must be referred to the Administrative Representatives pursuant to the Project Agreements, shall be reviewed by the Construction Director and Construction Coordinator before such referral to the Administrative Representatives.
- 5.11 All matters pertaining to Operating Work, which must be referred to the Administrative Representatives pursuant to the Project Agreements, shall be reviewed by the Operating Committee before such referral to the Administrative Representatives.
- 5.12 Either Administrative Representative may upon sufficient advance notice call meetings as he deems necessary and shall notify the other Administrative Representative in writing and supply a written agenda for such meetings. The Administrative Representatives or their designated alternates shall attend such meetings and represent their respective Parties. Meetings may be conducted in person or by telephone.
- 5.13 All decisions of each of the Administrative Representatives, the Construction Director and the Construction Coordinator, and the Operating Committee must be unanimous to be effective.
- 5.14 Unless otherwise specifically provided herein, this Participation Agreement does not authorize the Administrative Representatives, Construction Director, Construction Coordinator or Operating Committee to modify any of the terms, covenants, or conditions of the Project Agreements.
- 5.15 The Administrative Representatives shall have the right to establish standing or ad hoc committees needed to administer this Participation Agreement. The authority and duties of any such committee shall be set forth in writing and shall be subject to the provisions of the Project Agreements.
- 5.16 Any expenses incurred by any representative designated pursuant to this Participation Agreement, or on any standing or ad hoc committees, in connection with his duties on such committee shall be paid and borne by the Party whom he represents and shall not be included in Construction Costs or Operating Costs.

6. OWNERSHIP OF THE CALIFORNIA TRANSMISSION SYSTEM:

- 6.1 SDG&E shall own a 85.64% undivided ownership interest and IID shall own a 14.36% undivided ownership interest as tenants in common in the following components of the California Transmission System:
 - 6.1.1 The Imperial Valley - Border 500 kV Line.
 - 6.1.2 The Imperial Valley - Border 500kV Line Termination.
- 6.2 IID shall own a 9.45% undivided ownership interest and SDG&E shall own a 90.55% undivided ownership interest as tenants in common in the Imperial Valley 500kV Breaker Yard.
- 6.3 IID shall own a 14% undivided ownership interest and SDG&E shall own a 867" undivided ownership interest as tenants in common in the Imperial Valley 500/230 kV 500 MVA Transformer.
- 6.4 IID shall own a 387. undivided ownership interest and SDG&E shall own a 62% undivided ownership interest as tenants in common in the Imperial Valley 230 kV Breaker Yard.

7. CONSTRUCTION BUDGET:

- 7.1 The initial budget in Appendix L is approved, and upon determination that the total estimated costs of construction vary from the most recently approved budget by 10% or more, the Project Manager shall develop a revised budget and submit it to the Administrative Representatives for their approval, modification, or other action.
- 7.2 The initial cash flow is included in Appendix M, the Construction Director shall develop, and forward to the Construction Coordinator a revised cash flow within 30 days after a new budget is approved. Such cash flow shall be divided by calendar months through the Scheduled Date of Firm Operation.
- 7.3 Revisions in the budget for Construction Work shall be accompanied by supporting information whenever:
 - 7.3.1 The revision for any work activity category exceeds 110% of the previously approved budget for such work activity category, or
 - 7.3.2 The revision is due to a change in scope of any work activity category.

8. CONSTRUCTION WORK:

- 8.1 The Project Manager for the California Transmission System shall be SDG&E.
- 8.2 IID hereby appoints the Project Manager as its agent, and the Project Manager shall undertake as IID's agent and as principal on its own behalf,

to perform Construction Work and to carry out the duties and responsibilities provided hereunder to be performed by it.

8.3 The Project Manager shall:

- 8.3.1 Submit any change in the description of the California Transmission System contained in Appendix A, to the Administrative Representatives for their review and approval, modification, or other action.
- 8.3.2 Prepare and issue a quarterly progress report which shall contain at least a Construction Schedule, a forecast of expenditures, a report of expenditures to date, and a report of construction progress to date.
- 8.3.3 Submit any proposed change in the Scheduled Date of Firm Operation to the Administrative Representatives for approval.
- 8.3.4 With respect to all aspects of Construction Work, subject to the provisions of Sections 5.2, 5.3, 8.4, and 8.7 negotiate and enter into any agreement for Construction Work, and purchase and procure such equipment, apparatus, machinery, materials, tools, supplies and services as it may deem necessary or useful for the performance and completion of the Construction Work from any source or sources it may select, including IID.
- 8.3.5 Obtain all right-of-way for the California Transmission System.
- 8.3.6 Arrange for placement of Construction Insurance pursuant to Section 19.1.
- 8.3.7 Determine which contractors, if any, shall be required to furnish any portion of the Construction Insurance, other insurance and faithful performance and payment bonds.
- 8.3.8 Assist any insurer in the investigation, adjustment and settlement of any loss or claim arising out of Construction Work.
- 8.3.9 Present and prosecute claims against insurers and indemnities provided Construction Insurance or indemnities in respect of any loss of or damage to any property of the California Transmission System or liability of either Party to third parties covered by Construction Insurance or any indemnity agreement, and to the extent that any such loss, damage or liability is not covered by Construction Insurance or by any indemnity agreement, present and prosecute claims against any parties who may be liable therefor. If the cost of repair, replacement or correction of such loss or damage arising out of a single incident or event exceeds \$100,000 or such other amount as may be set by the Administrative Representatives, the Project Manager shall not settle any claims with respect thereto without the consent and approval of the Administrative Representatives.

- 8.3.10 Subject to the provisions of Section 20 and except as provided in this Section 8.3.10, investigate, adjust, defend and settle claims against either or both Parties arising out of or attributable to Construction Work, or the past or future performance or nonperformance of the obligations and duties of either Party, including the Project Manager, under or pursuant to the Project Agreements, including but not limited to any claim re-suiting from death or injury to persons or damage to property, when said claims are not covered by valid and collectible Construction Insurance or other valid and collectible insurance carried by either Party, and, whenever and to the extent warranted, present and prosecute claims against any third party, including insurers, for any costs, losses and damages incurred in connection with said claims. The Project Manager shall obtain the approval of the Administrative Representatives before any said claim or combination of said claims against either or both Parties arising out of the same transaction or incident is settled for more than \$100,000 or such other amount as may be set by the Administrative Representatives, unless the entire amount of the settlement in excess of said limit is recoverable from an insurer providing Construction Insurance.
- 8.3.11 Execute, administer, perform and enforce all construction agreements in the name of the Project Manager, acting as principal on its own behalf and as agent for IID, in which the Parties shall have undivided interests as tenants in common in proportion to their Responsibility for Costs in the California Transmission System, and furnish a copy of any such agreement to IID upon request.
- 8.3.12 Comply with (i) any and all laws applicable to the performance of Construction Work, including without limitation all applicable laws, rules, and regulations for protection of the health, safety and welfare of the public and environment and all applicable provisions of any workers' compensation laws; and (ii) the terms and conditions of any contract, permit or license relating to the California Transmission System.
- 8.3.13 Expend the Construction Funds in accordance with the terms and conditions of this Participation Agreement.
- 8.3.14 Keep and maintain records of monies received and expended, obligations incurred, credits accrued, estimates of Construction Costs (excluding, subject to Section 16.3, and valorem taxes or payments in lieu thereof and allowance for funds used during construction) and contracts entered into in the performance of Construction Work, and make such records available for inspection and copying by IID at reasonable times and places.

- 8.3.15 Not suffer any liens to remain in effect unsatisfied against the California Transmission System, other than liens permitted under the Project Agreements, liens for taxes or assessments not yet delinquent, liens for labor and material not yet perfected, liens for workers' compensation awards not yet perfected, or undetermined charges or liens incidental to the performance of Construction Work; provided, however, that the Project Manager shall not be required to pay or discharge any such lien as long as it in good faith shall be contesting the same, which contest shall operate during the pendency thereof to prevent the collection or enforcement of such lien so contested.
- 8.3.16 Obtain or cause to be obtained necessary certificates, licenses, permits, and other approval requisite to the performance and completion of Construction Work and initiation of Operating Work.
- 8.3.17 Upon its Request for Information, provide IID with copies of records and information pertaining to the performance of Construction Work. Notwithstanding any provisions in the Project Agreements to the contrary, in the event that the information requested is voluminous, the information shall be made available for inspection and copying at reasonable times and places.
- 8.3.18 Furnish IID any assistance and information reasonably requested and available pertaining to the construction of the California Transmission System.
- 8.3.19 Use its best efforts in performing its responsibilities hereunder to complete Construction Work by the Scheduled Date of Firm Operation.
- 8.3.20 Keep IID fully and promptly advised of significant developments in connection with the progress, performance, cost and completion of Construction Work.
- 8.3.21 Prepare and deliver the Final Completion Report to IID as soon as practicable, but not later than twenty-four (24) months after the date of Firm Operation, unless such time is extended by the Administrative Representatives.
- 8.3.22 Upon his request, provide each representative established hereunder with records and information for his use in performing his responsibilities under the Project Agreements.
- 8.3.23 Construct the California Transmission System so as to comply with the Project Agreements.
- 8.3.24 Conduct tests to verify that specified characteristics of major equipment items have been achieved and, if necessary, make or cause to be made those final equipment modifications necessary to meet the specified requirements.

- 8.3.25 Provide for and enforce any and all warranties on equipment, facilities, materials and services sold to or furnished for the California Transmission System.
- 8.3.26 Conduct such environmental studies as may be necessary to obtain certificates, licenses, permits and other approvals required to perform Construction Work and initiate Operating Work.
- 8.3.27 Approve all press releases concerning the construction of the California Transmission System before they are released.
- 8.3.28 Have full responsibility and authority for employing and organizing the personnel and staff required to complete the Construction Work.
- 8.3.29 Prepare recommendations covering matters to be reviewed and acted upon by the Administrative Representatives or the Construction Director and the Construction Coordinator.
- 8.3.30 Carry out the directives of the Administrative Representatives with respect to the matters set forth in the Project Agreements.
- 8.4 Contracts awarded on a cost reimbursable basis shall include audit clauses providing for the right to audit by the Project Manager.
- 8.5 IID shall provide to the extent possible all assistance required by the Project Manager in performing its obligations hereunder, and the Construction Director and Construction Coordinator shall allocate IID's appropriate costs to Construction Costs according to Accounting Practice and the stipulations of this Agreement.
- 8.6 IID shall, within sixty (60) days after this Participation Agreement becomes effective, submit to the Project Manager in writing any special requirements it may have regarding accounting, records, or information so that all required records may be maintained in the same manner through the construction of the California Transmission System. The Project Manager shall use its best efforts to accommodate said special requirements.
- 8.7 IID shall be responsible for the construction of the Imperial Valley - E1 Centro 230 kV line as described in Appendix A.6 and shall use its best efforts to have the line completed by the Date of Firm Operation.

9. OPERATING AGENT:

- 9.1 The Operating Agent for the California Transmission System shall be SDG&E.
- 9.2 IID hereby appoints the Operating Agent as its agent, and the Operating Agent shall undertake as IID's agent and as principal on its own behalf, to perform operating Work and to carry out the duties and responsibilities provided hereunder to be performed by it.

- 9.3 The Operating Agent shall:
 - 9.3.1 Prepare and submit recommendations to the Administrative Representatives for their review and approval, modification or other action with respect to each of the following matters:
 - 9.3.1.1 The proposed Capital Improvements budget and proposed operation and maintenance budget pursuant to Section 17.
 - 9.3.1.2 The proposed form of written statistical and administrative reports, written budgets, and information and other similar records to be kept by the Operating Agent with respect to Operating Work.
 - 9.3.2 Prepare and submit the following in a timely manner to the Operating Committee for review and approval, modification or other action:
 - 9.3.2.1 The proposed outages of the California Transmission System for scheduled maintenance.
 - 9.3.2.2 A proposed written statement of operating practices and procedures.
 - 9.3.2.3 Proposed procedures for accounting for transmission losses.
 - 9.3.2.4 Proposed procedures for dealing with Operating Emergencies.
 - 9.3.3 Perform Operating Work in accordance with generally accepted practices in the electric utility industry as such practices may be affected by the design and operational characteristics of the California Transmission System, the rights and obligations of the Parties under this Participation Agreement, and any other special circumstances affecting Operating Work.
 - 9.3.4 Contract for, furnish and obtain from any sources it may select, including IID, the services and studies necessary to perform Operating Work pursuant to the Project Agreements. Contracts awarded on a cost reimbursable basis shall include audit clauses Providing for the right to audit by the Operating Agent.
 - 9.3.5 Execute and enforce contracts necessary to perform Operating Work.
 - 9.3.6 Furnish and train the necessary personnel to perform Operating Work.
 - 9.3.7 Comply with (i) any and all laws and regulations applicable to the performance of Operating Work, including all applicable provisions of any workers' compensation laws; and (ii) the terms and conditions of any contract, permit or license relating to the California Transmission System.

- 9.3.8 Purchase and procure, source it may select, apparatus, machinery, through and from any the equipment, tools, materials and supplies necessary to perform Operating Work pursuant to the Project Agreements.
- 9.3.9 Expend Operating Funds in accordance with the terms and conditions of this Participation Agreement.
- 9.3.10 Keep and maintain records of monies received and expended, obligations incurred, credits accrued, and contracts entered into in the performance of Operating Work and make such records available for inspection and copying by IID at reasonable times and places.
- 9.3.11 Not suffer any liens to remain in effect unsatisfied against the California Trans-mission System, other than the liens permitted under the Project Agreements, liens for taxes and assessments not yet delinquent, liens for workers' compensation awards, liens for labor and material not yet perfected, or undetermined charges or liens incidental to the performance of Operating Work; provided, however, that the Operating Agent shall not be required to pay or discharge any such lien as long as it in good faith shall be contesting the same, which contest shall operate during the pendency thereof to prevent the collection or enforcement of such lien so contested.
- 9.3.12 Arrange for the placement and maintenance of Operating Insurance pursuant to Section 19.2.
- 9.3.13 Present and prosecute claims against insurers and indemnitors providing Operating Insurance or indemnities in respect of any loss of or damage to any property of the California Transmission System or liability of either Party to third parties covered by Operating Insurance or by any indemnity agreement, and to the extent that any such loss, damage or liability is not covered by Operating Insurance or by any indemnity agreement, present and prosecute claims against any parties who may be liable therefor. If the cost of repair, replacement or correction of such loss or damage arising out of a single incident or event exceeds \$100,000 or such other amount as may be set by the Administrative Representatives, the Operating Agent shall not settle any claims with respect thereto without the consent and approval of the Administrative Representatives.
- 9.3.14 Subject to the provisions of Section 20 and except as provided in this Section 9.3.14, investigate, adjust, defend and settle claims against either or both Parties arising out of or attributable to Operating Work, or the past or future performance or nonperformance of the obligations and duties of either Party, under or pursuant to this Participation Agreement, including but not limited to any claim resulting from death or injury to persons or damage to property, when said claims are not covered by valid and collectible Operating Insurance or other valid and collectible insurance carried by either Party, and, whenever and to the extent

warranted, present and prosecute claims against any third party, including insurers, for any costs, losses and damages incurred in connection with said claims. The Operating Agent shall obtain the approval of the Administrative Representatives before any said claim or combination of said claims against either or both Parties arising out of the same transaction or incident is settled for more than \$100,000 or such other amount as may be set by the Administrative Representatives, unless the entire amount of the settlement in excess of said limit is recoverable from an insurer providing Operating Insurance.

- 9.3.15 Assist any insurer in the investigation, adjustment and settlement of any loss or claim arising out of Operating Work.
 - 9.3.16 Keep IID fully and promptly advised of material changes in conditions or other material developments affecting the performance of Operating Work, and furnish copies of any notices given or received pursuant to the Project Agreements.
 - 9.3.17 Upon its Request for Information, provide IID with all written statistical and administrative reports, operating reports, written budgets, accounting records and information and other records relating to Operating Work which may be necessary for IID to perform its responsibilities under the Project Agreements.
 - 9.3.18 Upon its Request for Information, provide IID, in reasonable quantity, a copy or copies of any report, record, list, budget, manual, accounting or billing summary, classification of accounts or other documents or revisions of any of the aforesaid items pertinent to this Participation Agreement.
 - 9.3.19 Prepare recommendations covering matters to be reviewed and acted upon by the Administrative Representatives or the Operating Committee.
 - 9.3.20 Carry out the directives of the Administrative Representatives and the Operating Committee with respect to the matters set forth in the Project Agreements.
 - 9.3.21 Perform Operating Work with the objective of permitting each Party to use Under normal operating conditions its share of Capacity in the California Transmission System in a manner, which will not unreasonably affect the operation of the Parties' electric systems or the electric systems of interconnected third parties. This Section 9.3.21 shall not be construed to create rights in or benefit any third party.
 - 9.3.22 Defend title to the California Transmission System held by the Parties.
- 9.4 IID shall provide to the extent possible all assistance required by the Operating Agent in performing its obligations hereunder, and the Operating Committee shall allocate IID's appropriate costs to Operating Costs according to Accounting Practice.

- 9.5 Materials, supplies and spare parts required for maintaining or making emergency repairs on the California Transmission System shall be taken from the Operating Agent's inventories and the charges for such equipment shall include the Operating Agent's normal warehouse loadings.
- 9.6 Notwithstanding any provision in this contract to the contrary, IID shall be responsible for the operation and maintenance of the Imperial Valley - E1 Centro 230 kV Line.

10. CONSTRUCTION COSTS:

- 10.1 Construction Costs of the California Transmission System shall include all payments made and obligations incurred by the Project Manager for or in connection with Construction Work, including, but not limited to, those costs specified in Section 10.2 and in Appendix D.
- 10.2 Construction Costs shall also include all payments made, applicable overheads as described in Appendix D, and obligations incurred by SDG&E for the California Transmission System pursuant to the Arizona - San Diego 500kV Interconnection Letter of Understanding dated November 22, 1978, including any amendments thereto.
- 10.3 The Construction Costs associated with the elimination of the 230/161kV transformer and switchyard at the Imperial Valley Substation are agreed to be Sixty-Two Thousand Nine Hundred Eighty-One Dollars (\$62,981) and shall be borne by IID.
- 10.4 All Construction Costs, except as otherwise specifically provided in this Participation Agreement, shall be shared by the Parties in proportion to their Responsibility for Costs as specified in Appendix B except that all Construction Costs of the Imperial Valley Substation as listed in Appendix A.2 shall be allocated between the Parties as determined in Appendix N.

11. OPERATION AND MAINTENANCE COSTS:

- 11.1 Operation and maintenance costs of the California Transmission System shall include all payments made and obligations incurred by the Operating Agent for or in connection with the performance of Operating Work, including (i) those costs of operating Work specified in Appendix E, and (ii) those costs specified in Section 16 to the extent any tax or payment in lieu thereof is levied against a Party in behalf of both Parties, and in Section 19.2 (excluding workers' compensation expense for the Operating Agent's employees); provided, however, that Construction Costs and Capital Improvement costs shall not be included in operation and maintenance costs.
- 11.2 Operation and maintenance costs of the California Transmission System shall be shared in proportion to each Party's Responsibility for costs as shown in Appendix B except that the Cost of operation and maintenance of the Imperial Valley Substation shall be allocated among the Parties as determined in Appendix N.2.5.

- 11.3 All operation and maintenance costs which cannot be allocated to a specific component or components of the California Transmission System shall be shared by the Parties in proportion to their ownership interests as set forth in Section 6.1.

12. ADVANCEMENT OF FUNDS

- 12.1 Within ten days after the closing of the IID financing sale, IID shall pay SDG&E in immediately available U.S. Federal Funds, Five Million Eight Hundred Thirty-Five Thousand Dollars (\$5,835,000) as reimbursement for that portion of SDG&E's Construction Costs which are attributable to IID's ownership interest of the California Transmission System and in the Project Agreements, including the costs described in Section 10.3. The above payment includes (i) interest computed from the dates of payments by SDG&E of such Construction Costs to the date of such reimbursement at the rate of 16.5% per annum, (ii) a 5% risk payment on both the Construction Costs and the 16.5% interest, and (iii) the Costs set forth in Section 10.3. IID shall pay the risk payment in consideration for the risk of monetary loss associated with SDG&E's costs incurred and committed (sunk costs) in the California Transmission System in order to move the project toward successful completion prior to IID acquiring an ownership interest. The above payment is an estimated amount and is based upon a reimbursement date of May 18, 1983. Once the reimbursement has been made and after the actual Construction Costs up to the date of reimbursement are known, SDG&E shall determine what the payments to SDG&E should have been prorated up to the date of reimbursement, and a cash adjustment payable in immediately available U.S. Federal Funds shall be made between the Parties. The adjustment shall include interest at 16.5% per annum, calculated monthly and prorated by days to the date of reimbursement and shall also include the 5% risk payment. The yearly billing rates calculated, as shown in Appendices F through K, will be used in calculating the Construction A&G; Vacation, Sickness and Holiday; Payroll Tax; and Benefits amounts shareable with IID as part of the Construction Costs expended up through the date of reimbursement.
- 12.2 IID shall, during the course of Construction Work, advance to the Project Manager sufficient funds to enable it to pay Construction Costs so the Project Manager in its capacity as such will not have to advance funds on behalf of IID. This shall be accomplished as follows:
- 12.2.1 On or before the 20th of each month the Project Manager shall forward to IID an estimate of the funds which will be required during the following month and the estimated dates on which such funds will be due.
 - 12.2.2 Each Monday, a Request for Funds shall be forwarded to IID at least five business days before funds are due. IID shall forward the requested funds to the Project Manager's account by a bank wire transfer of U.S. Federal Funds on or before the due date.
 - 12.2.3 On or before the 20th of each month the Project Manager shall forward to IID a statement showing construction costs-to-date at the end of the preceding month.

- 12.3 The Operating Agent shall forward a request for Funds to IDD for its costs of Operating Work each month on an estimated basis on or before the first business day of each month and payment shall be due and payable by the 15th day of such month or within fifteen days of receipt of such bill, whichever is later.
- 12.4 Funds not advanced and immediately available to the Project Manager of the Operating Agent on or before the due date shall be payable with interest accrued at one and one half percent (1 ½%) per month compounded monthly or the maximum legal rate, which ever is less, prorated by days from the due date to the date of payment
- 12.5 Adjustment for actual costs incurred each month shall be reflected in the request for funds for the month following the date such actual costs are determined.
- 12.6 If either Party shall dispute any portion of any amount specified in a Request for Funds, it shall make the total payment specified in the Request for Funds under protest pursuant to Section 21.3.
- 12.7 Upon 30 days written notice, SDG&E shall make available to IID at reasonable times and places its books and records necessary for IID to audit or have audited such books and records with respect to Construction Work or Operating Work. To the extent, such audits reveal over or under payments by a Party, an adjustment shall be made with the next Request for Funds.

13. ADJUSTMENT FOR PAYMENT OF ACTUAL CONSTRUCTION COSTS

- 13.1 Within 30 days after approval of the Final Completion Report pursuant to Section 5.2.6, cash adjustments shall be made between the Parties so that each item of Construction Costs shall be shared by each Party in proportion to its Responsibility for Costs. Any Construction Costs which shall be attributable to more than one component of the California Transmission System shall be equitably allocated by the Project Manager to the components of the California Transmission System, subject to the review and approval of the Construction Director and Construction Coordinator.

14. USE, SCHEDULING, AND LOSSES

- 14.1 For resource and transmission planning and reporting purposes, the Parties shall be entitled to schedule Power and Energy over the transmission system for their respective accounts at the Yuma Switchyard for delivery to the 500 kV Breaker Yard of the Imperial Valley Substation for delivery to the Yuma Switchyard, in the following percentage of Rated Capability:
 - 14.1.1 IID - 14.36%
 - 14.1.2 SDG&E - 85.64%
- 14.2 For operating purposes, the Parties shall be entitled to schedule Power and Energy over the transmission system for their respective accounts at the Yuma Switchyard for delivery to the 500 kV Breaker Yard of the Imperial Valley Substation or at the 500 kV Breaker Yard of the Imperial Valley Substation for delivery to the Yuma Switchyard, in the following percentage of Operating Capability:

- 14.2.1 IID - 14.36%
- 14.2.2 SDG&E - 85.64%
- 14.3 SDG&E shall have the sole right to deliver Power and Energy in either direction over the Imperial Valley - Miguel 500kV Line.
- 14.4 The Scheduling Agent for the California Transmission System shall be SDG&E. The Scheduling Agent shall:
 - 14.4.1 Schedule all Power and Energy deliveries over the California Transmission System.
 - 14.4.2 Prepare and submit the proposed criteria for determining the Operating Capability of the California Transmission System to the Administrative Representatives for their review and approval, modification or other action. Such criteria shall recognize the necessity to maximize the Operating Capability at all times, consistent with prudent electric utility practice, and shall take into account loop flows, equipment outages, emergency conditions and actual operating experience.
 - 14.4.3 At least two months before the Scheduled Date of Firm Operation, prepare and submit to the Operating Committee for review, approval, modification or other action, the proposed procedure for Power and Energy scheduling and accounting.
 - 14.4.4 At least six months before the Scheduled Date of Firm Operation, and from time to time as requested by the Operating Committee, prepare and submit to the Operating Committee for its review, approval, modification or other action, the practices, procedures and operating studies required to determine the Operating Capability. Such practices, procedures and operating studies shall be developed pursuant to the criteria approved pursuant to Section 14.4.2.
 - 14.4.5 Establish and make known on an hourly basis the Operating Capability based on the procedures approved pursuant to Section 14.4.4.
- 14.5 Power and Energy scheduled by the Parties over the transmission system between the Yuma Switchyard and the Imperial Valley Substation shall be scheduled and controlled by the Parties under practices and procedures approved by the Operating Committee. The Scheduling Agent shall receive and deliver or cause to be received and delivered all Power and Energy which a Party has scheduled for its account (i) at the Yuma Switchyard for delivery to the Imperial Valley Substation and (ii) at the Imperial Valley Substation for delivery to the Yuma Switchyard; provided, however, that the quantity of Power and Energy so delivered shall not exceed the Operating Capability.
- 14.6 The procedure for accounting for transmission losses in the California Transmission System shall be developed and approved by the Operating Committee five months prior to the scheduled Date of Firm Operation as follows:

- 14.6.1 A table of loss adjustments for actual Energy deliveries between the Yuma Switchyard and the Imperial Valley substation 230 kV billing meters shall be approved by the Operating Committee prior to the Date of Firm Operation so that net Energy schedules shall be made to reflect average losses, taking into account the direction of actual Energy flows. Such table of loss adjustments shall be based on power flow studies conducted jointly by the Parties and shall take into account line, transformer and shunt reactor losses. Losses shall be scheduled during similar load hours within seven days after such losses are incurred.
- 14.6.2 For Energy accounting purposes the California Transmission System shall be within the SDG&E accounting area and IID shall schedule losses to SDG&E based upon scheduled flows of Power and Energy between the Yuma Switchyard and the Imperial Valley Substation 230 kV billing meters.
- 14.6.3 The table of transmission loss adjustments established by the Parties shall be reviewed upon the request of either Party. Revisions to the table shall be made only when justified by changes in electrical characteristics of the California Transmission System, or when operating experience has demonstrated that the loss adjustments are incorrect.
- 14.7 Prior to the Scheduled Date of Firm Operation the Operating Committee shall prepare and submit to the Administrative Representatives for their review and approval, modification or other action, a recommended Rated Capability. The criteria for determining such capability shall be based on the results of engineering studies. Rated Capability shall be reviewed by the Operating Committee from time to time and approved by the Administrative Representatives.
- 14.8 Each Party shall have the non-exclusive right to use the 500kV portion of the Imperial Valley Substation to transfer all Power and Energy scheduled on its share of the facilities, as specified in Sections 14.1, 14.2 and 14.3.
- 14.9 Each Party shall be entitled to schedule Power and Energy in any one direction through the Imperial Valley 500/230 kV Transformer in proportion to the product of its scheduling rights in such transformer in that direction as set forth below and the operating capability of the transformer as determined by the Operating Agent. The scheduling rights of each Party in the Imperial Valley 500/230 kV Transformer shall as follows:
- | <u>From</u> | <u>To</u> | <u>SDG&E</u> | <u>IID</u> |
|-------------|-----------|------------------|------------|
| 500 kV | 230 kV | 72% | 28% |
| 230 kV | 500 kV | 100% | 0% |
- 14.10 Either Party may, at its expense and upon entering into an agreement with the other Party, make interconnections to the Imperial Valley 500kV Breaker Yard and/or the Imperial Valley 230 kV Breaker Yard. Such agreement shall specify the terms and conditions under which such interconnections may be made.

- 14.11 All transactions between the Parties shall be deemed to take place at the Imperial Valley 230 kV Breaker Yard unless the Parties otherwise agree. Upon mutual agreement, the Parties may use the Imperial Valley 500 kV Breaker Yard, the Yuma Switchyard or the Palo Verde Termination as transaction points.
- 14.12 Planned outages of the California Transmission System for maintenance, repairs, replacements, installation of equipment, investigation or inspection shall be coordinated by the Parties and be scheduled as far in advance as practicable. Planned outages of the California Transmission System shall be scheduled by and have the approval of the Operating Committee. Such planned outages shall not commence without the prior approval of the Parties' dispatchers or schedulers as appropriate, which approval shall not be unreasonably withheld.
- 14.13 Either Party may make non-firm use of unused Operating Capability in addition to its entitlement under Section 14.2 to the extent that unused Operating Capability is determined to be available by the Scheduling Agent; provided, however, that neither Party shall have the right to sell to a third party such non-firm use of unused Operating Capability. This right to use on a non-firm basis shall also extend to the Imperial Valley 500/230 kV Transformer and subject to the same conditions.
- 14.14 A Party which sells Power and Energy to a third party requiring use of Operating Capability in excess of its entitlement listed in Section 14.2, shall pay a charge to the other Party for use of such Capacity in excess of its entitlement, such charge to be negotiated and agreed upon by the Parties. The same charge shall apply to use of scheduling rights in excess of a Party's entitlement pursuant to Section 14.9.
- 14.15 On terms and conditions as may be later negotiated and agreed upon by the Parties, IID shall use its best efforts to provide a transmission path from any geothermal project within IID's service area in which SDG&E has an interest to the Imperial Valley Substation provided such path is available in the sole judgment of IID.
- 14.16 A Party making use of Operating Capability in excess of its entitlement pursuant to Section 14.2, and its scheduling rights in excess of its entitlement pursuant to Section 14.9, shall immediately reduce such schedules to the extent required to accommodate schedules of the other Party and operate within the operating capability.
- 14.17 An IID-SDG&E Communication Agreement shall be developed by the Parties to provide for the communication system which will be required to properly operate the California Transmission System. Such agreement shall define the ownership, rights to use, allocation of costs, and the operation and maintenance of the communication equipment.

15. OPERATING EMERGENCY

- 15.1 If an Operating Emergency occurs, the Operating Agent shall take all steps reasonably necessary to end the Operating Emergency, in accordance with generally accepted practices in the electric utility industry.

- 15.2 As soon as practicable after an Operating Emergency begins, the Operating Agent shall advise IID of its occurrence and nature, the steps taken or to be taken to end it, and an estimate of its duration.
- 15.3 The Operating Agent's costs incurred and charged to maintenance expense to repair, restore, and reconstruct the California Transmission System shall be allocated to the Parties in proportion to their Responsibility for Costs for the components of the California Transmission System being repaired, restored, or reconstructed. Costs incurred by the Operating Agent for Capital Improvements shall be allocated to the Parties in proportion to their Responsibility for Costs in the components of the California Transmission System to which such Capital Improvements are made, and the Operating Agent shall bill the Parties therefor in accordance with Section 12.
- 15.4 After the Operating Emergency ends, the Operating Agent shall submit to lid a summary of the costs incurred to repair, restore, reconstruct or make Capital Improvements, and such other information as may be required by the Operating Committee.

16. TAXES

- 16.1 The Parties shall use their best efforts to have any authority levying any taxes, assessments, or payments in lieu therefor, or making any valuations for the purpose of levying any taxes, assessments, or payments in lieu thereof, on the California Transmission System, or any interest or rights therein, assess them directly against the ownership or beneficial interest of each Party.
- 16.2 All taxes, assessments or payments in lieu thereof levied against each Party's ownership or beneficial interest in the California Transmission System, except those taxes, assessments or payments in lieu thereof levied against an individual Party in behalf of both Parties, shall be the sole responsibility of the Party upon whose ownership or beneficial interest they are levied.
- 16.3 If any property taxes or payments in lieu thereof or any other taxes or assessments are levied or assessed in a manner other than as specified in Section 16.1, the Administrative Representatives shall establish equitable practices and procedures for their apportionment between the Parties; however, it is anticipated that IID, being a public entity and therefor exempt from certain taxes, assessments, or payments in lieu thereof, shall not be responsible for any such taxes, assessments, or payments levied against the ownership or beneficial interest of SDG&E.

17. BUDGETS AND CAPITAL IMPROVEMENTS

- 17.1 At least five months before the Scheduled Date of Firm Operation, and no later than August 1 of each year thereafter, the Operating Agent shall prepare and submit to the Administrative Representatives for their review and approval the proposed budget for Operating Work for the following calendar year.
- 17.2 At least three months before the Scheduled Date of Firm Operation and no later than October 1 of each year thereafter, the Administrative Representatives shall approve a budget for Operating Work for the following calendar year.

- 17.3 IID shall supply any information the Operating Agent requires from it to prepare the proposed budgets.
- 17.4 The Administrative Representatives may at any time approve revisions to the budget for Operating Work.
- 17.5 All proposed expenditures for Capital Improvements, including a contingency allowance for capital expenditures if necessitated by an Operating Emergency, shall be included in the budget for Operating Work. After such budget has been approved by the Administrative Representatives, each Party shall be obligated for the costs incurred thereunder in proportion to its Responsibility for Costs per Appendix B.
- 17.6 The Parties agree to proceed with the design and construction of the Capital Improvement for the California Transmission System that will allow for the installation of series capacitors as described in Budget Project Number 80114 by May 1, 1986, provided, however, that SDG&E may extend this date on the condition that SDG&E provide sufficient transmission service to IID to allow IID to meet its presently contracted firm needs. This date may be changed by the Administrative Representatives. Fifty percent of Budget Project Number 80114 shall be allocated to the California Transmission System. The Parties agree that IID shall pay 14.36% and SDG&E shall pay 85.64% of the allocated cost with each Party receiving its pro rata increase in the Rated Capability and the Operating Capability attributable to the installation of the series capacitors.
- 17.7 All Capital Improvements which are for the sole use or benefit of one Party shall be owned and paid for by such Party.
- 17.8 The Operating Agent shall submit to the Operating Committee annually a forecast of cash requirements by month for the budget year for all Operating Work. Said forecast shall be submitted annually within 30 days after final budget approvals have been made. A revised forecast shall be submitted whenever the budget for Operating Work is revised and approved, or whenever significant changes in monthly expenditures from those previously forecast are anticipated.
- 17.9 The Operating Agent shall be responsible for design and construction of all Capital Improvements.
- 17.10 The cost of Capital Improvements shall be determined in accordance with Appendix E. Units of Property retired from service shall be disposed of by the Operating Agent on the best available terms as soon as practicable, and the proceeds, if any, received therefrom shall be credited or distributed to the Parties in proportion to their Responsibility for Costs associated with such units.

18. APPENDICES

- 18.1 Appendices A through N as they presently appear or as they may be revised are hereby made a part of this Participation Agreement.

19. INSURANCE

- 19.1 Unless otherwise specified by the Administrative Representatives, during the performance of Construction Work the Project Manager shall procure and maintain in force, or cause to be procured and maintained in force, policies of Construction Insurance of the following types:
- 19.1.1 Comprehensive bodily injury, and property damage liability insurance covering Parties and contractors, including automobile liability, contractual liability, and completed operations.
 - 19.1.2 Workers' Compensation and Employer's Liability Insurance, covering employees of the Project Manager and contractors engaged in the performance of Construction Work in a manner sufficient to satisfy applicable statutory requirements. The Project Manager may at its option be a self-insurer or in part for workers' compensation for its own employees.
- 19.2 Unless otherwise specified by the Administrative Representatives, the Operating Agent shall, on or before the date of firm operation of the first component of the California Transmission System to be completed and during the performance of Operating Work, procure and maintain in force, or cause to be procured and maintained in force, policies of Operating Insurance for the Parties of the following types:
- 19.2.1 Physical damage insurance, covering all facilities except transmission towers, conductors and ground wires. Excepted property may be covered at the option of the Operating Agent.
 - 19.2.2 Comprehensive bodily injury, personal injury and property damage liability insurance, including coverage for hazards of automobile liability, contractual liability, owners' and contractors' protective liability and liability products and completed operations.
 - 19.2.3 Workers' Compensation and Employer's Liability Insurance, covering employees of the Operating Agent performing Operating Work, in a manner sufficient to satisfy applicable statutory requirements. The Operating Agent may at its option self-insurer in whole or in part for Workers' Compensation coverage.
- 19.3 Except for Project Insurance described in Sections 19.1.2, and 19.2.3, each Party shall be a named insured, individually and jointly with the other Party, on all Project Insurance, and the policies of Project Insurance referred to in Sections 19.1.1 and 19.2.2 shall include severability of interest provisions.
- 19.4 In lieu of naming the Parties insured in policies described in Section 19.1.1, the Project Manager may require contractors to procure liability coverage, naming the Parties insured therein.
- 19.5 Any deductibles or self-insured retention in Project Insurance shall be apportioned between the Parties on the basis of the ownership in the respective components of the California Transmission System.

- 19.6 Each Party shall have the right to have any mortgagee, trustee or secured party named on all or any of the Project Insurance policies as loss payee or additional insured as its interest may appear, by notice to the Project Manager or Operating Agent which shall specify the name or names of such mortgagee, trustee or secured part and such additional information as may be necessary to permit it to be included on the policy(ies) of Project Insurance.
- 19.7 The Project Manager or Operating Agent shall furnish IID with a certificate of each Project Insurance policy.
- 19.8 Each of the Project Insurance policies shall be endorsed so as to provide that all named insured shall be given the same advance notice of cancellation or material change as that required to be given to the Project Manager or Operating Agent.
- 19.9 Project Insurance policies shall be primary insurance for all purposes. Any other insurance carried by a Party individually shall not participate with Project Insurance as to any loss or claim for which valid and collectible Project Insurance shall apply. Such other insurance shall apply solely as to the individual interest of the Party carrying such other insurance; provided, however, that such Party shall accept any reasonable restrictive endorsement to its separate insurance policies as may be required by an insurer as a condition precedent to the insurance of a policy of Project Insurance.
- 19.10 Notwithstanding the provisions of Section 19.7, if the Parties are unable to agree upon any matters relating to Project Insurance, the Project Manager or Operating Agent, pending the resolution of such disagreement, shall procure or cause to be procured, such policies of Project Insurance as in its judgment are necessary to protect the Parties against the insurable risks set forth in Sections 19.1 and 19.2. During any period of negotiations with an insurer, or other negotiations which are pending at the expiration of coverage of a Project Insurance policy, or if a Project Insurance policy is cancelled, the Project Manager or Operating Agent shall renew or bind policies as an emergency measure or may procure policies of Project Insurance which are identical to those which were cancelled, or may, to the extent possible, secure replacement policies which will provide substantially the same coverage as the policy expiring or cancelled.

20. LIABILITY

- 20.1 Except for liability resulting from Willful Action and subject to the provisions of Sections 20.3 and 20.4, neither Party, its directors, members of its governing bodies, officers, or employees, shall be liable to the other Party for any uninsured loss, damage, claim, cost, charge, or expense of any kind or nature resulting from Construction Work, Operating Work, use or ownership of either Party's electric system or the performance or nonperformance of the obligations of a Party releases and waives any or all right of recovery against the other Party, its directors, members of its governing bodies, officers and employees from any such liability.

- 20.2 Except as provided in Sections 20.3 and 20.4, the costs and expenses of discharging all Work Liability imposed upon either Party for which payment is not made by Project Insurance, shall Be shared and paid for by both Parties in proportion to their respective Responsibility for Costs.
- 20.3 Each Party shall be responsible for any direct, indirect, or consequential damage, loss, claim, cost, charge, or expense that is not covered by Project Insurance and results from its own Willful Action as defined in Section 4.41.2 and shall indemnify and hold harmless the other Party, its directors, members of its governing bodies, officers and employees from any such damage, loss, claim, cost, charge or expense.
- 20.4 Except as provided in Section 20.3, no Party shall be obligated to discharge any liability to the other Party in excess of \$10,000,000 per occurrence for uninsured, indirect or consequential damage, loss, claim, cost, charge or expense resulting from Willful Action. Each Party releases each other Party, its directors, members of its governing bodies, officers and employees from any such liability in excess of \$10,000,000 per occurrence. An occurrence shall be deemed for purposes of this Section 20.4 to be any injury for which a separate claim could be brought in action at law.
- 20.5 The provisions of this Section 20 shall not be construed so as to relieve any insurer of its obligation to pay any insurance proceeds in accordance with the terms and conditions of valid and collectible Project Insurance policies.

21. DEFAULTS AND CONVENANTS REGARDING PROJECT AGREEMENTS

- 21.1 Each Party hereby agrees that it shall pay all monies and carry out all other duties and obligations agreed to be paid and/or performed by it pursuant to all of the terms and conditions set forth and contained in the Project Agreements, and a default by any Party in the covenants and obligations to be kept and performed pursuant to the terms and conditions set forth and contained in any of the Project Agreements shall be an act of default under this Participation Agreement.
- 21.2 If either Party should default, the other Party may give written notice of the existence and nature of the default to the defaulting Party. The defaulting Party shall take all steps necessary to cure such default as promptly and completely as possible.
- 21.3 If a Party disputes the existence or nature of a default asserted in a notice given pursuant to Section 21.2, then such party shall pay the payment or perform the disputed obligation, but may do so under protest. The protest shall be in writing, and shall accompany the disputed payment or precede the performance of the disputed obligation, and shall specify the reasons upon which the protest is based. Payments not made under protest shall be deemed to be correct, except to the extent that periodic or annual audits may reveal over or under payments by a Party, necessitating adjustments. If it is determined that a protesting Party is entitled to a refund of all or any portion of a disputed payment or payments, or is entitled to the reasonable equivalent in money of non-monetary performance of a disputed obligation theretofore made, then, upon such determination, the non-protesting Party shall pay such amount to the protesting Party, together with interest thereon at the rate of one and one-half percent (1-1/2%) per month or the maximum legal rate, whichever is

less, prorated by days, from the date of payment or from the date of completion of performance of a disputed obligation to the date of reimbursement.

22. RELATIONSHIP OF THE PARTIES

- 22.1 The covenants, obligations and liabilities of the Parties are intended to be several and not joint or collective and nothing herein contained shall ever be construed to create an association, joint venture, trust or partnership, or to impose a trust or partnership covenant, obligation or liability on or with regard to either of the Parties. Each Party shall be individually responsible for its own covenants, obligations and liabilities as herein provided. Neither shall be under the control of or shall be deemed to control the other. Neither Party shall be the agent of or have a right or power to bind the other without its express written consent, except as expressly provided in this Participation Agreement.
- 22.2 SDG&E hereby elects to be excluded from the application of Subchapter "K" of Chapter 1 of Subtitle "A" of the Internal Revenue Code of 1954, or such portion or portions thereof as may be permitted or authorized by the Secretary of the Treasury or his delegate insofar as such Subchapter, or any portion or portions thereof, may be applicable to the Parties under this Participation Agreement.

23. NON-PARTITIONMENT

- 23.1 Each Party hereby waives any rights which it may have to partition any component of the California Transmission System or the Project Agreements, whether by partitionment in kind or by sale and division of the proceeds, and further agrees that it will not resort to any action at law or in equity to partition such component or the Project Agreements, and it waives the benefits of all laws that may now or hereafter authorize such partition for a term (i) which shall be coterminous with this Participation Agreement, or (ii) which shall be for such lesser period as may be required under applicable law.

24. SEVERANCE OF IMPROVEMENTS

- 24.1 The Parties agree that all facilities, structures, improvements, equipment and property of whatever kind and nature constructed, placed or affixed on the rights-of-way, easements, patented and leased lands as part of or as a Capital Improvement to the California transmission system, as against all parties and persons whomsoever (including without limitation any party acquiring any interest in the rights-of-way, easements, patented or leased lands or any interest in or lien, claim or encumbrance against any of such facilities, structures, improvements, equipment and property of whatever kind and nature), shall be deemed to be and remain personal property of the Party(ies), not affixed to the realty.

25. RIGHT OF FIRST REFUSAL

- 25.1 Except as provided in Section 37, should either Party desire to sell its ownership in the California Transmission System, or any portion thereof, to any person or entity, the Party desiring to make such sale shall offer to sell it to the other Party before offering to sell it to any third party(ies) at a price and under terms and conditions as may be deemed appropriate by the selling Party.

- 25.2 The Party receiving such an offer shall have 60 days to accept or reject the offer. Acceptance of such an offer shall become effective upon receipt of a written notice to that effect by the offering Party from the other Party.
- 25.3 If (i) the Party receiving such an offer rejects the offer or (ii) no acceptance has been received by the offering Party within 60 days of such offer, the offer shall be deemed terminated and the offering Party may, subsequent to that date, enter into an agreement for the sale of such ownership with any third party(ies) at no less than the same price and under terms and conditions no more favorable to the third party(ies) than those contained in the offer to the other Party.

26. ASSIGNMENT OF INTERESTS

- 26.1 A Party that has acquired or acquires in its name an interest in any real or personal property or contract therefor which is part of the components of the California Transmission System which are designated in Section 6 to be jointly owned as tenants in common shall transfer and assign an undivided interest therein to the other Party so that the ownership and rights of the Parties in such property or contract shall be as provided for in this Participation Agreement and the Project Agreements. Title to real property interests shall be evidenced by a recordable deed. Interests in personal property or contracts shall be evidenced by a document of assignment.

27. NOTICES

- 27.1 Any notice, demand or request provided for in this Participation Agreement or any other Project Agreement shall be in writing and shall be deemed properly served, given or made if delivered in person or sent by first class mail, postage prepaid, to the persons specified below.

27.1.1 Imperial Irrigation District
c/o General Manager 333 East Main Street
P. O. Box 937
Imperial, California 92251

27.1.2 San Diego Gas & Electric Company
c/o Secretary
101 Ash Street
P.O. Box 1831
San Diego, California 92112

28. DISPUTES

- 28.1 If the Construction Director and the Construction Coordinator, or the Operating Committee fail to agree with respect to any matter which they are authorized to determine, approve or otherwise act upon, after 60 days such disagreement shall be referred to the Administrative Representatives for resolution.

- 28.2 If the Administrative Representatives fail to agree with respect to any matter which they are authorized to determine, approve or otherwise act upon within such time as is specified herein, or if no time limit is specified, after 60 days of such disagreement, either Administrative Representative may require that it be referred to higher authority within each Party's organization for resolution.
- 28.3 If a budget is submitted to the Administrative Representative for approval and is not unanimously approved within 120 days, it shall be submitted to higher authorities within each company for approval or resolution.
- 28.4 If a dispute is referred by the Administrative Representatives to higher authority within each company for resolution and no resolution is reached within 30 days, either Party may call for submission of the dispute to arbitration pursuant to Section 29.
- 28.5 If a dispute between the Parties should arise under the Project Agreements prior to the Date of Firm Operation, the Project Manager is authorized and obligated to take such action, consistent with the Project Agreements and generally accepted practice in the electric utility industry applicable to 500kV transmission facilities, as is necessary or appropriate to continue Construction Work consistent with the most recently approved Scheduled Date of Firm Operation
- 28.6 If a dispute between the Parties should arise under the Project Agreements after the Date of Firm Operation concerning Capital Improvements, / the Operating Agent shall delay making such Capital Improvements until the dispute is settled.
- 28.7 If a dispute between the Parties should arise under the Project Agreements after the Date of Firm Operation, the operating Agent is authorized and obligated to take such action, consistent with the Project Agreements and generally accepted practice in the electric utility industry applicable to 500kV transmission facilities, as is necessary or appropriate to repair and maintain the California Transmission System.
- 28.8 The Project Manager or the Operating Agent shall give prior notice to the Parties of any action to be taken pursuant to Sections 28.5 or 28.7.
- 28.9 Any funds which are advanced by the Parties to the Project Manager during the pendency of a dispute shall not be subject to refund except upon a final determination that the expenditures were not made in a manner consistent with the Project Agreements and generally accepted practice in the electric utility industry as such practices relate to electric transmission systems.

29. ARBITRATION

- 29.1 If either Party shall call for submission of a dispute to arbitration pursuant to Section 28.4, such request shall be binding upon the other Party.
- 29.2 The Party calling for arbitration shall give written notice to the other Party, setting forth in such notice in adequate detail the nature of the dispute, the amount or amounts, if any, involved in such dispute, and the remedy sought such arbitration proceedings, and, within twenty (20) days from receipt of such notice, the other Party may, by written response, submit its own statement of the matter at issue and set forth adequate detail additional related matters or issues to be arbitrated.

Thereafter, the Party first submitting its notice of the matter at issue shall have ten (10) days after receipt of the response in which to submit a written rebuttal statement.

- 29.3 Within forty (40) days after delivery of the written notice calling for arbitration pursuant Section 29.2, the Parties shall meet for the purpose of selecting arbitrators. Each Party shall designate an arbitrator. The arbitrators selected shall meet within twenty (20) days after their selection and shall select on additional arbitrator. If the arbitrators selected by the Parties shall fail to select such additional arbitrator within said twenty (20) days period, then they shall request from the American Arbitration Association (or a similar organization if the American Arbitration Association should at that time exist) a list of arbitrators who qualified and eligible to serve as hereinafter provided. The arbitrators selected by the Parties shall take turns striking names from that list and the last name remaining on the list shall be the additional arbitrator. All arbitrators shall be persons skilled and experienced in the field which gives rise to the dispute, and no person shall be eligible for appointment as an arbitrator who is or has been an officer or employee of either of the Parties to the dispute or is otherwise interested in the matter to be arbitrated.
- 29.4 Except as otherwise provided in this Section 29, the arbitration shall be governed by the rules and practices of the American Arbitration Association (or the rules and practice of a similar organization if the American Arbitration Association should not at that time exist) from time to time in force, except that if such rules and practice, as modified herein, shall conflict with state or Federal laws then in force which are specifically applicable to such arbitration proceedings, such laws shall govern.
- 29.5 Included in the issues, which may be submitted to arbitration pursuant to this Section 29 is the issue of whether the right to arbitrate a particular dispute is permitted under the Project Agreements.
- 29.6 The arbitrators shall hear evidence submitted by the respective Parties and may call for additional information, which additional information shall be furnished by the Party having such information. The decision of a majority of the arbitrators shall be binding upon the Parties.
- 29.7 The award of the arbitrators shall contain findings relative to the materiality of the default, the period of time within which the defaulting Party must remedy the default or commence remedial action, and the remedies which may be exercised by the non-defaulting Party in the event the default is not remedied within such period of time.
- 29.8 This agreement to arbitrate shall be specifically enforceable, and the award and findings of the arbitrators shall be final. Any award may be filed with the clerk of any court having jurisdiction over the Party against whom the award is rendered, and upon such filing, such award, to the extent permitted by the laws of the jurisdiction in which said award is filed, shall be specifically enforceable or shall form the basis of a declaratory judgment or other similar relief.

- 29.9 The fees and expenses of the arbitrators shall be shared by the Parties equally, unless the decision of the arbitrators shall specify some other apportionment of such fees and expenses. All other expenses and costs of the arbitration shall be borne by the Party incurring the same.
- 29.10 If either Party shall attempt to carry out the provisions herein set forth in regard to arbitration, and such Party shall not be able to obtain a valid and enforceable arbitration decree, such Party shall be entitled to seek legal remedies in the courts having jurisdiction in the premises, and the provisions of the Project Agreements referring to decision of a board of arbitration, to the extent allowable by law, shall be then deemed applicable to final decisions of such courts.

30. GOVERNING LAW

- 30.1 This Participation Agreement shall be governed by, construed, and enforceable in accordance with the laws of the State of California and the United States of America.

31. AUTHORIZATIONS AND APPROVALS

- 31.1 Each Party shall be responsible for obtaining, at its own expense, its required authorizations and approvals relating to its participation in the construction of the California Transmission System and to its performance of the provisions of this Participation Agreement, from Federal, state or local regulatory authorities having jurisdiction to issue such authorizations and approvals, and each Party shall keep the other informed of its applications therefor.

32. FEES

- 32.1 The Project Manager or Operating Agent shall not receive any fee or profit hereunder.

33. ENVIRONMENTAL PROTECTION

- 33.1 The Project Manager shall design and construct, and the Operating Agent shall operate and maintain, the California Transmission System in conformance with the terms and conditions of any contract, permit or license issued for the construction of the California Transmission System.

34. UNCONTROLLABLE FORCES

- 34.1 No Party shall be considered to be in default in the performance of any of its obligations under the Project Agreements (other than obligations of said Party to pay costs and expenses) when a failure of performance shall be due to an uncontrollable force. The term "uncontrollable force" shall be any cause beyond the control of the Party affected, including but not restricted to failure of or threat of failure of facilities, flood, earthquake, tornado, storm, fire, lightning, epidemic, war, riot, civil disturbance or disobedience, labor dispute, labor or material shortage, sabotage, restraint by court order or public authority (whether valid or invalid), or action or non-action by or inability to obtain or keep the necessary authorizations or approvals from any governmental agency or authority, which by exercise of due diligence such Party could not reasonably have been expected to avoid and which by exercise of due diligence it shall be unable to overcome. It is the intent of the

Parties that the principle of Ejusdem Generis shall not be used as a limitation on the term "uncontrollable force" in interpreting or construing this Participation Agreement. Rather the Parties intend a liberal interpretation of that term, and accordingly intend that in questions of assumption of risk or contingencies, whether foreseen or not, the presumption shall be that risks not explicitly assumed by a Party are not assumed by said Party if, in fact, they are uncontrollable even with foresight. Nothing contained herein shall be construed so as to require a Party to settle any strike or labor dispute in which it may be involved. Either Party rendered unable to fulfill any of its obligations under the Project Agreements by reason of an uncontrollable force shall give prompt written notice of such fact to the other Party and shall exercise due diligence to remove such inability with all reasonable dispatch. The term "Party" as used in this Section 34 shall include the Project Manager, Operating Agent and Scheduling Agent in their capacities as such.

35. BINDING OBLIGATIONS

- 35.1 All of the respective covenants and obligations of each of the Parties set forth and contained in the Project Agreements shall bind and shall be and become the respective covenants and obligations of:
 - 35.1.1 Each such Party;
 - 35.1.2 All mortgagees, trustees and secured parties under all present and future mortgages, indentures and deeds of trust and security agreements which are or may become a lien upon any of the interests of the Parties in the California Transmission System; provided, however, that such covenants and obligations shall become binding upon such parties only at the time of taking possession;
 - 35.1.3 All receivers, assignees for the benefit of creditors, bankruptcy trustees and referees of the Party;
 - 35.1.4 All other persons, firms, partnerships or corporations claiming through or under any of the foregoing; and
 - 35.1.5 Any successors or assigns of any of those mentioned in Sections 35.1.1 through 35.1.4.
- 35.2 All of the respective covenants and obligations of each of the Parties set forth and contained in the Project Agreements shall be covenants and obligations running with such Party's respective rights, titles and interests in the California Transmission System and in, to and under the Project Agreements, and shall be for the benefit of the respective rights, titles and interests of the Parties and their respective successors and assigns, in and to the California Transmission System. It is the specific intention of this provision that all such covenants and obligations shall be binding upon any party which acquires any of the rights, titles and interests of any such Party in the California Transmission System or in, to and under the Project Agreements and that all of the above-described persons and groups shall be obligated to use such Party's rights, titles and interests in the California Transmission System and/or in, to or under the Project Agreements for the purpose of discharging its covenants and obligations under the Project Agreements; except

that in the case of a partial assignment the assignee shall only be required to share in the cost of fulfilling the covenants and obligations of the assigning Party in, to and under the Project Agreements to an extent proportionate or attributable to such assignment.

36. NON-DEDICATION OF FACILITIES

36.1 The Parties do not intend to dedicate and nothing in this Participation Agreement or the Project Agreements shall be construed as constituting a dedication by either Party of its properties or facilities, or any part thereof, to the other Party or to the customers of the other Party.

37. MORTGAGE AND TRANSFER OF INTEREST

37.1 Each Party shall have the right to mortgage, create or provide for a security interest in or convey in trust all or a part of its ownership share in the California Transmission System, together with an equal interest in the Project Agreements, to a trustee or trustees under a deed of trust, mortgage or indenture or to a secured party or parties under a security agreement, as security for its present or future bonds or other obligations or securities, and to any successors or assigns thereof, without need for the consent of the other Party and without such mortgagee, trustee or secured party assuming or becoming in any respect obligated to perform any of the obligations of the Party.

37.2 Any mortgagee, trustee, or secured party under present or future deeds of trust, mortgages, indentures or security agreements of either Party, and any successor or assignee thereof, and any receiver, referee or trustee in bankruptcy or reorganization of either Party, and any successor by action of law or otherwise, and any purchaser, transferee or assignee of any of them may, without the consent of the other Party, succeed to and acquire all the rights, titles and interests of such Party in the California Transmission System and the Project Agreements, and may take over possession of or foreclose upon said property, rights, titles and interests of such Party, and in such event shall assume and be obligated fully to perform and discharge all of the obligations of such Party hereunder and under any other Project Agreement.

37.3 Except as provided in Section 25, each Party shall have the right to transfer or assign all or part of its Rated Capability in the California Transmission System, together with an equal interest in the ownership of the California Transmission System and in the Project Agreements, to any person, partnership, corporation, or governmental corporation or agency engaged in the generation, transmission or distribution of energy.

37.4 Except as otherwise provided in Sections 37.1 and 37.2, any successor to the rights, titles and interests of a Party in the California Transmission System, together with an equal interest in the Project Agreements, shall assume and agree fully to perform and discharge all of the obligations hereunder of such Party, and such successor shall notify the other Party in writing of such transfer, assignment or merger, and shall furnish evidence of such transfer, assignment or merger and thereupon shall be considered to be a Party in the California Transmission System and the transferring

Party shall thereupon, without the consent of the other Party, be released from all obligations under the Project Agreements so assumed and agreed to by such successor.

38. GENERAL PROVISIONS GOVERNING PROJECT AGREEMENTS

- 38.1 The Parties agree to negotiate in good faith and to proceed with diligence to obtain all of the Project Agreements between the Parties and between the Parties and other entities.
- 38.2 Each Party agrees, upon request by the other Party, to make, execute and deliver any and all documents reasonably required to implement this Participation Agreement and the Project Agreements.
- 38.3 Each term, covenant and condition of this Participation Agreement and the Project Agreements is deemed to be an independent term, covenant and condition, and the obligation of each Party to perform any or all of the terms, covenants and conditions to be kept and performed by it is not dependent on the performance by the other Party of any or all of the terms, covenants and conditions to be kept and performed by them.
- 38.4 If any of the terms, covenants or conditions of this Participation Agreement or any of the Project Agreements, or the application of any such term, covenant or condition, shall be held invalid as to any person or circumstance by any court having jurisdiction in the premises, all other terms, covenants or conditions of such agreements and their application shall not be affected thereby, but shall remain in force and effect.
- 38.5 The Project Agreements shall be subject to filing with, and to such changes or modifications as may from time to time be directed by, competent regulatory authority, if any, in the exercise of its jurisdiction.
- 38.6 Except as otherwise specifically provided in this Participation Agreement or the Project Agreements, the Parties do not intend to create rights in or to grant remedies to any third party as a beneficiary of this Participation Agreement or the Project Agreements or of any duty, covenant, obligation or undertaking established therein.
- 38.7 Any waiver at any time by any Party of its rights with respect to a default or any other matter arising in connection with this Participation Agreement or a Project Agreement shall not be deemed a waiver with respect to any subsequent default or matter.
- 38.8 All costs or expenses, including all taxes that the Operating Agent is required to pay (but not specifically referred to in other sections of this Participation Agreement), which are incurred by the Operating Agent in connection with the performance of its obligations under this Participation Agreement and which are not specifically allocated to the Parties in accordance with this Participation Agreement shall be equitably allocated among the Parties in a manner to be mutually agreed upon by both Parties.

38.9 Should a change in circumstances, economic factors, or basic technology occur which results or may result in a substantial increase or decrease in the benefits to or expenses incurred by a Party, including the Operating Agent, which such change was not within the reasonable contemplation of the Parties at the time of the execution of this Participation Agreement, the Parties, including the Project Manager or Operating Agent, shall negotiate in good faith in order that an appropriate and equitable adjustment shall be made in the payments to the Project Manager or Operating Agent and in the allocation of expenses among the Parties. Such adjustment shall be fair and equitable as to both the Project Manager or Operating Agent and the other Party. Any dispute under this Section 38.9 shall be subject to arbitration.

39. TERMS

39.1 This Participation Agreement shall become effective when signed by both Parties and shall remain in effect until June 24, 2051.

39.2 Upon termination of this Participation Agreement, the Parties shall have no further obligation to each other hereunder except the following:

39.2.1 Each Party shall be responsible for its Responsibility for Costs incurred up to the date of termination. Any project termination costs (including decommissioning costs) incurred past the date of termination of this Participation Agreement, shall be shared by the Parties in proportion to their respective ownership interests.

39.2.2 The Project Manager or the Operating Agent shall sell the property jointly owned by the Parties pursuant to this Participation Agreement for the maximum reasonable value and the costs of such sale and all income, if any, derived therefrom shall be shared by the Parties in proportion to their respective ownership interests therein.

39.2.3 The Project Manager or the Operating Agent shall offer to sell the jointly owned property to the Parties before offering to sell it to a third party. Each Party shall have the option to purchase a portion of the jointly owned property equal to that Party's percentage ownership interest as defined in Section 6. Should a Party to this Agreement decline to exercise this option, the other Party shall have the right to purchase that interest before it is offered for sale to a third party.


40. EXECUTION:

IN WITNESS WHEREOF, the Parties have caused this Participation Agreement to be executed and effective as Of the 1st day of May 1983

IMPERIAL IRRIGATION DISTRICT

BY 

SAN DIEGO GAS & ELECTRIC COMPANY

BY 

78003

1	
2	
3	
4	
5	
6	
7	
8	
9	
10	ARIZONA PUBLIC SERVICE COMPANY
11	AND
12	SAN DIEGO GAS & ELECTRIC COMPANY
13	ARIZONA TRANSMISSION SYSTEM PARTICIPATION AGREEMENT
14	
15	
16	
17	
18	
19	APS Contract No. 2326-610.00
20	SDG&E Transaction No. 790116
21	
22	
23	
24	
25	
26	

EXACT COPY OF
ORIGINAL SIGNED
CONTRACT

Arizona Public Service Company
San Diego Gas & Electric Company
Arizona Transmission System
Participation Agreement

Table of Contents

<u>Section</u>	<u>Caption</u>	<u>Page</u>
1	PARTIES	1
2	RECITALS	1
3	AGREEMENT	2
4	DEFINITIONS	2
4.1	Accounting Practice	2
4.2	Administrative Representative	2
4.3	Appendix	2
4.4	Arizona Transmission System	2
4.5	California Transmission System	2
4.6	Capacity	2
4.7	Capital Improvements	3
4.8	Construction Account	3
4.9	Construction Coordinator	3
4.10	Construction Costs	3
4.11	Construction Director	3
4.12	Construction Funds	3
4.13	Construction Insurance	3
4.14	Construction Schedule	4
4.15	Construction Work	4
4.16	Date of Approval	4
4.17	Date of Firm Operation	4

	<u>Section</u>	<u>Caption</u>	<u>Page</u>
1			
2		4.18 Division	4
3		4.19 Energy	4
4		4.20 FERC Accounts	4
5		4.21 Final Completion Report	5
6		4.22 Operating Agent	5
7		4.23 Operating Capability	5
8		4.24 Operating Committee	5
9		4.25 Operating Costs	5
10		4.26 Operating Emergency	5
11		4.27 Operating Funds	5
12		4.28 Operating Insurance	6
13		4.29 Operating Work	6
14		4.30 Palo Verde Switchyard	6
15		4.31 Palo Verde Termination	6
16		4.32 Palo Verde - Yuma 500kV Line	6
17		4.33 Participation Agreement	6
18		4.34 Power	6
19		4.35 Project Agreements	6
20		4.36 Project Insurance	7
21		4.37 Project Manager	7
22		4.38 Rated Capability	7
23		4.39 Request for Funds	7
24		4.40 Request for Information	7
25		4.41 Responsibility for Costs	7
26		4.42 Scheduled Date of Firm Operation	7

	<u>Section</u>	<u>Caption</u>	<u>Page</u>
1			
2		4.43 Scheduling Agent	8
3		4.44 Section	8
4		4.45 Sharable Units	8
5		4.46 Units of Property	8
6		4.47 Willful Action	8
7		4.48 Work Liability	9
8		4.49 Yuma - Border 500kV Line	9
9		4.50 Yuma 500kV Breaker Yard	9
10		4.51 Yuma Interconnection Facilities	10
11		4.52 Yuma Switchyard	10
12	5	ADMINISTRATION	10
13	6	OWNERSHIP	14
14	7	CONSTRUCTION BUDGET	15
15	8	CONSTRUCTION WORK	16
16	9	CONSTRUCTION LIAISON	25
17	10	OPERATING AGENT	26
18	11	CONSTRUCTION COSTS	33
19	12	OPERATION AND MAINTENANCE COSTS	35
20	13	ADVANCEMENT OF FUNDS	36
21	14	ADJUSTMENT FOR PAYMENT OF ACTUAL CONSTRUCTION COSTS	38
22	15	USE, SCHEDULING, AND LOSSES	38
23	16	OPERATING EMERGENCY	44
24	17	TAXES	45
25	18	BUDGETS AND CAPITAL IMPROVEMENTS	46
26	19	APPENDICES	48

1	<u>Section</u>	<u>Caption</u>	<u>Page</u>
2	20	INSURANCE	48
3	21	LIABILITY	53
4	22	DEFAULTS AND COVENANTS REGARDING PROJECT AGREEMENTS	54
5	23	NONPARTITIONMENT	56
6	24	SEVERENCE OF IMPROVEMENTS	56
7	25	RIGHT OF FIRST REFUSAL	57
8	26	ASSIGNMENT OF INTERESTS	58
9	27	NOTICES	58
10	28	DISPUTES	58
11	29	ARBITRATION	60
12	30	GOVERNING LAW	64
13	31	AUTHORIZATIONS AND APPROVALS	64
14	32	FEEES	65
15	33	ENVIRONMENTAL PROTECTION	66
16	34	UNCONTROLLABLE FORCES	66
17	35	BINDING OBLIGATIONS	67
18	36	NONDEDICATION OF FACILITIES	69
19	37	MORTGAGE AND TRANSFER OF INTEREST	69
20	38	GENERAL PROVISIONS GOVERNING PROJECT AGREEMENTS	71
22	39	TERM	73
23	40	RELATIONSHIP OF THE PARTIES	75
24	41	EXECUTION	76
25			
26			

1	<u>Appendix</u>	<u>Caption</u>
2	A	Description of the Arizona Transmission System
3	B	Responsibility for Costs
4	C	Construction Schedule
5	D	Construction Costs
6	E	Costs of Operating Work
7	F	List of Project Agreements
8	G	Initial Budget for Construction Work
9	H	Initial Cash Flow
10	I	Right-of-Way Acquisition Practices & Procedures
11	J	Right-of-Way Acquisition Plan
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		

1 ARIZONA PUBLIC SERVICE COMPANY
2 AND
3 SAN DIEGO GAS & ELECTRIC COMPANY
4 ARIZONA TRANSMISSION SYSTEM
5 PARTICIPATION AGREEMENT

6 1. PARTIES:

7 The Parties to this Participation Agreement are ARIZONA PUBLIC
8 SERVICE COMPANY, an Arizona corporation hereinafter called "APS,"
9 and SAN DIEGO GAS & ELECTRIC COMPANY, a California corporation
10 hereinafter called "SDG&E," which are individually referred to
11 as "Party," and collectively as "Parties."

12 2. RECITALS:

13 This agreement is made with reference to the following facts,
14 among others:

15 2.1 SDG&E was conducting environmental studies and actively
16 planning the construction of a 500kV transmission line from
17 the SDG&E - Miguel Substation to the Palo Verde Units 1, 2
18 & 3 Switchyard, via Imperial Valley, when it learned that
19 APS was also conducting environmental studies and actively
20 planning the construction of a 230kV transmission line from
21 the APS Gila Bend Substation to the Yuma area. Subsequent
22 discussions between the Parties resulted in the Parties
23 entering into the "Arizona - San Diego 500kV Interconnec-
24 tion Letter of Understanding," dated November 22, 1978 to
25 jointly study, construct, own and operate a 500kV transmis-
26 sion line which would meet the needs of both Parties.

2.2 The Parties recognize that there are mutual benefits which
result from cooperation and coordination in jointly plan-

1 ning, licensing, engineering, constructing, owning and
2 operating a transmission system as compared with doing so
3 separately.

4 2.3 The electrical systems of the Parties will be intercon-
5 nected by the transmission line constructed pursuant to
6 this Participation Agreement and the Parties intend to
7 enter into a separate agreement to govern the exchange of
8 Power and Energy.

9 3. AGREEMENT:

10 The Parties agree as follows:

11 4. DEFINITIONS:

12 The following terms when used herein shall have the meanings
13 specified:

14 4.1 Accounting Practice: Generally accepted accounting princi-
15 ples, in accordance with FERC Accounts.

16 4.2 Administrative Representative: The representative desig-
17 nated by each Party pursuant to Section 5.1.1.

18 4.3 Appendix: An Appendix to this Participation Agreement,
19 unless otherwise stated.

20 4.4 Arizona Transmission System: The transmission system
21 described in Appendix A.

22 4.5 California Transmission System: That portion of the Miguel
23 Substation to Yuma Switchyard 500kV line which is within
24 the state of California.

25 4.6 Capacity: Electrical rating expressed in megawatts (MW) or
26 megavolt-amperes (MVA).

1	4.7	<u>Capital Improvements</u> : Any Units of Property, land or land
2		rights which are added to the Arizona Transmission System,
3		the betterment of land and land rights or the enlargement
4		or betterment of any Units of Property constituting a part
5		of the Arizona Transmission System, and the replacement of
6		any Units of Property for other Units of Property or the
7		replacement of land or land rights constituting a part of
8		the Arizona Transmission System, irrespective of whether
9		such replacement constitutes an enlargement or betterment
10		of that which it replaces, which additions, betterments,
11		enlargements, and replacements in accordance with Account-
12		ing Practice would be capitalized.
13	4.8	<u>Construction Account</u> : An account used by the Project
14		Manager's accounting department to receive and disburse
15		Construction Funds pursuant to Section 13.
16	4.9	<u>Construction Coordinator</u> : The representative designated by
17		SDG&E pursuant to Section 5.1.3.
18	4.10	<u>Construction Costs</u> : The costs of constructing the Arizona
19		Transmission System, as described in Section 11.
20	4.11	<u>Construction Director</u> : The representative designated by
21		APS pursuant to Section 5.1.2.
22	4.12	<u>Construction Funds</u> : Monies advanced to the Project Manager
23		on behalf of the Parties in accordance with this Participa-
24		tion Agreement.
25	4.13	<u>Construction Insurance</u> : Policies of insurance relating to
26		the Arizona Transmission System during the construction

1	thereof as provided in Section 20.1.
2	4.14 <u>Construction Schedule</u> : The schedule of Construction Work
3	as set forth in Appendix C, or as revised pursuant to
4	Sections 8.3.2 or 8.3.3.
5	4.15 <u>Construction Work</u> : All work undertaken by the Project
6	Manager pursuant to Section 8, including but not limited
7	to, all engineering, design, construction, contract prepa-
8	ration, purchasing, supervision, expediting, accounting,
9	inspection, testing and the placing in service of the
10	Arizona Transmission System.
11	4.16 <u>Date of Approval</u> : The date on which each Party has given
12	written notice to the other Party that all approvals have
13	been received without unacceptable conditions in compliance
14	with the provisions of Section 31.5.
15	4.17 <u>Date of Firm Operation</u> : The first day on which deliveries
16	of Power and Energy may be scheduled on a firm basis over
17	the Arizona Transmission System as designated by the Con-
18	struction Director and the Construction Coordinator.
19	4.18 <u>Division</u> : A group of employees headed by a vice president
20	consisting of all persons on the APS organizational chart
21	which report to him.
22	4.19 <u>Energy</u> : Kilowatt-hours (KWH).
23	4.20 <u>FERC Accounts</u> : The Federal Energy Regulatory Commission's
24	"Uniform System of Accounts Prescribed for Public Utilities
25	and Licensees (Class A and Class B)," in effect as of the
26	date of this Participation Agreement, and as such system of

1	accounts may be in effect from time to time. References in
2	this Participation Agreement to any specific FERC Account
3	number shall mean the FERC Account number in effect as of
4	the effective date of this Participation Agreement or any
5	successor FERC Account.
6	4.21 <u>Final Completion Report</u> : A complete summary of Construc-
7	tion Costs, including surplus equipment disposal, a de-
8	scription of the Arizona Transmission System as constructed
9	and a summary of each Party's contributions to Construction
10	Costs.
11	4.22 <u>Operating Agent</u> : The Party responsible for the performance
12	of Operating Work, except scheduling Power and Energy
13	deliveries over the Arizona Transmission System pursuant to
14	Section 15.4.
15	4.23 <u>Operating Capability</u> : The capability of the Arizona Trans-
16	mission System to transmit Power and Energy scheduled by
17	the Parties in each direction between the Palo Verde
18	Switchyard and the Yuma Switchyard.
19	4.24 <u>Operating Committee</u> : The committee established pursuant to
20	Section 5.1.4.
21	4.25 <u>Operating Costs</u> : The costs of performing Operating Work.
22	4.26 <u>Operating Emergency</u> : An unplanned event or circumstance
23	caused by the failure or threat of failure of the Arizona
24	Transmission System facilities which reduces or may reduce
25	the Operating Capability of the Arizona Transmission System.
26	4.27 <u>Operating Funds</u> : Monies advanced to the Operating Agent on

1	behalf of the Parties in accordance with this Participation
2	Agreement.
3	4.28 <u>Operating Insurance</u> : Policies of insurance relating to the
4	Arizona Transmission System to be procured and maintained
5	as provided in Section 20.2.
6	4.29 <u>Operating Work</u> : All work undertaken by the Operating Agent
7	or the Scheduling Agent pursuant to Project Agreements,
8	including but not limited to, all engineering, contract
9	preparation, purchasing, repair, supervision, training,
10	expediting, inspection, testing, protection, facility
11	operation, retirement, maintenance, use, management, and
12	making Capital Improvements to and for the Arizona Trans-
13	mission System.
14	4.30 <u>Palo Verde Switchyard</u> : The high voltage switchyard which
15	is associated with the Palo Verde Nuclear Generating Sta-
16	tion located west of Phoenix, Arizona.
17	4.31 <u>Palo Verde Termination</u> : A component of the Arizona Trans-
18	mission System described in Appendix A.1.
19	4.32 <u>Palo Verde - Yuma 500kV Line</u> : A component of the Arizona
20	Transmission System described in Appendix A.2.
21	4.33 <u>Participation Agreement</u> : This agreement titled "Arizona
22	Public Service Company and San Diego Gas & Electric Company
23	Arizona Transmission System Participation Agreement."
24	4.34 <u>Power</u> : Kilowatts (KW) or megawatts (MW).
25	4.35 <u>Project Agreements</u> : This Participation Agreement and any
26	agreement entered into by the Project Manager in connection

1	with the performance of Construction Work, and any other
2	agreement which the Parties agree to designate as a Project
3	Agreement, including those agreements listed in Appendix F,
4	as such agreements are originally executed or as they may
5	thereafter be supplemented or amended.
6	4.36 <u>Project Insurance</u> : Construction Insurance and Operating
7	Insurance.
8	4.37 <u>Project Manager</u> : The Party responsible for the performance
9	of Construction Work.
10	4.38 <u>Rated Capability</u> : The transfer capability for resource and
11	transmission planning and reporting purposes of the Arizona
12	Transmission System in either direction between the Palo
13	Verde Switchyard and the Yuma Switchyard, expressed in
14	megawatts and determined in accordance with Section 15.7.
15	4.39 <u>Request for Funds</u> : The written request of the Project
16	Manager or Operating Agent for funds required for
17	Construction Work or Operating Work.
18	4.40 <u>Request for Information</u> : A request made in writing by one
19	Party upon another Party, specifying the records, documen-
20	tation or information for which the request is made.
21	4.41 <u>Responsibility for Costs</u> : The percentage of financial
22	liability of each Party for costs of Construction Work and
23	Operating Work for each component of the Arizona Transmis-
24	sion System, which is the same as the percentage owner-
25	ship established in Section 6.
26	4.42 <u>Scheduled Date of Firm Operation</u> : The target Date of Firm

1	Operation contained in Appendix C or its most recent revision.
2	
3	4.43 <u>Scheduling Agent</u> : The Party responsible for scheduling NOG-RE
4	Power and Energy deliveries over the Arizona Transmission
5	System pursuant to Section 15.4.
6	4.44 <u>Section</u> : A Section of this Participation Agreement, unless
7	otherwise stated.
8	4.45 <u>Sharable Units</u> : Departments which incur costs that are
9	part of the administrative and general expenses which are
10	sharable with the costs of the Arizona Transmission System
11	as defined in Exhibit E-1 to Appendix E.
12	4.46 <u>Units of Property</u> : Units of property as described in the
13	Federal Energy Regulatory Commission's "List of Units of
14	Property for Use in Connection with Uniform System of
15	Accounts Prescribed for Public Utilities and Licensees" in
16	effect as of the date of this Participation Agreement, and
17	as such list may be amended from time to time.
18	4.47 <u>Willful Action</u> : Action taken or not taken by a Party at
19	the direction of its directors or officers affecting its
20	performance under this Participation Agreement, which
21	action:
22	4.47.1 Is knowingly or intentionally taken or not taken
23	with conscious indifference to the consequences
24	thereof or with intent that injury or damage would
25	result or would probably result therefrom;
26	4.47.2 Has been determined by final arbitration award or

1	final judgment or judicial decree to be a breach of
2	contract under this Participation Agreement and
3	which occurs or continues beyond the time specified
4	in such arbitration award or judgment or judicial
5	decree for curing such default or, if no time to
6	cure is specified therein, occurs or continues
7	thereafter beyond a reasonable time to cure such
8	default;
9	4.47.3 Is knowingly or intentionally taken or not taken
10	with knowledge that such action constitutes a
11	breach of contract under this Participation Agree-
12	ment; or
13	4.47.4 Does not include any act or failure to act which is
14	merely involuntary, accidental or negligent.
15	4.48 <u>Work Liability</u> : Liability of one or both Parties for
16	damage suffered by anyone other than a Party, whether or
17	not resulting from the negligence of a Party, its direc-
18	tors, officers, employees or any person or entity whose
19	negligence could be imputed to such Party resulting from:
20	4.48.1 The performance of Construction Work or Operating
21	Work; or
22	4.48.2 The use or ownership of the Arizona Transmission
23	System.
24	4.49 <u>Yuma - Border 500kV Line</u> : A component of the Arizona
25	Transmission System described in Appendix A.4.
26	4.50 <u>Yuma 500kV Breaker Yard</u> : A component of the Arizona

1	Transmission System described in Appendix A.3.4.
2	4.51 <u>Yuma Interconnection Facilities</u> : A component of the Ari-
3	zona Transmission System described in Appendix A.3.3.
4	4.52 <u>Yuma Switchyard</u> : A component of the Arizona Transmission
5	System described in Appendix A.3.
6	5. <u>ADMINISTRATION</u> :
7	5.1 To secure effective cooperation and interchange of informa-
8	tion and to provide prompt and orderly consultation between
9	the Parties concerning administrative and technical matters
10	which may arise in connection with the terms and conditions
11	of the Project Agreements, the Parties hereby establish the
12	following:
13	5.1.1 One Administrative Representative and an alternate
14	shall be designated by each Party.
15	5.1.2 A Construction Director and an alternate shall be
16	designated by APS.
17	5.1.3 A Construction Coordinator and an alternate shall
18	be designated by SDG&E.
19	5.1.4 An Operating Committee member and an alternate
20	shall be designated by each Party.
21	5.2 The Administrative Representatives shall, among other
22	things:
23	5.2.1 Provide liaison between the Parties at the vice
24	presidential level.
25	5.2.2 Supervise generally the Construction Director,
26	Construction Coordinator, and Operating Committee,

1	and any other committee or representative estab-
2	lished pursuant to the Project Agreements.
3	5.2.3 Review, discuss and attempt to resolve all disputes
4	referred to them by: (i) the Construction Director
5	or the Construction Coordinator, (ii) the Operating
6	Committee, or (iii) any other committee or repre-
7	sentative established by the Project Agreements.
8	5.2.4 Review and approve, modify or otherwise act upon
9	recommendations of the Project Manager, the Operat-
10	ing Agent, or the Scheduling Agent made pursuant to
11	the Project Agreements.
12	5.2.5 Approve budgets for Construction Work and Operating
13	Work.
14	5.2.6 Approve the Final Completion Report.
15	5.2.7 Approve all revisions of Appendicies A, F, I, and
16	J.
17	5.2.8 Perform such other duties as may be designated in
18	the Project Agreements.
19	5.3 The Construction Director and the Construction Coordinator
20	shall jointly, among other things:
21	5.3.1 Provide liaison between the Parties with regard to
22	Construction Work.
23	5.3.2 Perform such other duties as may be designated in
24	the Project Agreements or assigned by the Admini-
25	strative Representatives.
26	5.3.3 Provide for the development of procedures for

1 written notice thereof to the other Party.

2 5.7 Each Party shall notify the other Party in writing promptly

3 of any change of its designated representatives.

4 5.8 On the Date of Firm Operation, control of the Arizona

5 Transmission System shall transfer from the Construction

6 Director and Construction Coordinator to the Operating

7 Committee.

8 5.9 The Construction Director and Construction Coordinator

9 shall have no responsibilities or authority hereunder fol-

10 lowing the Administrative Representatives' approval of the

11 Final Completion Report.

12 5.10 All matters pertaining to Construction Work, which must be

13 referred to the Administrative Representatives pursuant to

14 the Project Agreements, shall be reviewed by the Construc-

15 tion Director and Construction Coordinator before such

16 referral to the Administrative Representatives.

17 5.11 All matters pertaining to Operating Work, which must be

18 referred to the Administrative Representatives pursuant to

19 the Project Agreements, shall be reviewed by the Operating

20 Committee before such referral to the Administrative Repre-

21 sentatives.

22 5.12 Either Administrative Representative may upon sufficient

23 advance notice call meetings as he deems necessary and

24 shall notify the other Administrative Representative in

25 writing and supply a written agenda for such meetings. The

26 Administrative Representatives or their designated alter-

1	following components of the Arizona Transmission System:
2	6.1.1 The Palo Verde Termination.
3	6.1.2 The Palo Verde - Yuma 500kV Line.
4	6.1.3 The Palo Verde - Yuma 500kV Line Termination.
5	6.2 APS shall own a 66.7% undivided interest and SDG&E shall
6	own a 33.3% undivided interest as tenants in common in the
7	Yuma 500kV Breaker Yard.
8	6.3 SDG&E shall solely own the following components of the
9	Arizona Transmission System.
10	6.3.1 The Yuma - Border 500kV Line Termination.
11	6.3.2 The Yuma - Border 500kV Line.
12	6.4 APS shall solely own the Yuma Interconnection Facilities.
13	7. <u>CONSTRUCTION BUDGET:</u>
14	7.1 The initial budget in Appendix G is approved, and upon
15	determination that the total estimated costs of construc-
16	tion exceed the most recently approved budget by 10% or
17	more, the Project Manager shall develop a revised budget
18	and submit it to the Administrative Representatives for
19	their approval, modification, or other action.
20	7.2 The initial cash flow is included in Appendix H and the
21	Construction Director shall develop and forward to the Con-
22	struction Coordinator a revised cash flow in similar form
23	(i) on September 1 of each year during Construction Work,
24	and (ii) within 30 days after a new budget is approved.
25	Such cash flow shall be divided by calendar months through
26	the Scheduled Date of Firm Operation.

1	7.3 Revisions in the budget for Construction Work shall be
2	accompanied by supporting information whenever:
3	7.3.1 The revision for any work activity category exceeds
4	110% of the previously approved budget for such
5	work activity category, or
6	7.3.2 The revision is due to a change in scope of any
7	work activity category.
8	8. <u>CONSTRUCTION WORK:</u>
9	8.1 The Project Manager for the Arizona Transmission System
10	shall be APS.
11	8.2 SDG&E hereby appoints the Project Manager as its agent, and
12	the Project Manager shall undertake as SDG&E's agent and as
13	principal on its own behalf, to perform Construction Work
14	and to carry out the duties and responsibilities provided
15	hereunder to be performed by it.
16	8.3 The Project Manager shall:
17	8.3.1 Submit any change in the description of the Arizona
18	Transmission System contained in Appendix A, to the
19	Administrative Representatives for their review and
20	approval, modification, or other action.
21	8.3.2 Prepare and issue a quarterly progress report which
22	shall contain at least a trend report, a Construc-
23	tion Schedule, a forecast of expenditures, a report
24	of expenditures to date, and a report of construc-
25	tion progress to date.
26	8.3.3 Submit any proposed change in the Scheduled Date of

1	Firm Operation to the Administrative Representa-
2	tives for approval.
3	8.3.4 With respect to all aspects of Construction Work,
4	subject to the provisions of Sections 5.2, 5.3,
5	8.4, and 8.7 negotiate and enter into any agreement
6	for Construction Work, and purchase and procure
7	such equipment, apparatus, machinery, materials,
8	tools, supplies and services as it may deem neces-
9	sary or useful for the performance and completion
10	of the Construction Work from any source or sources
11	it may select, including SDG&E.
12	8.3.5 Obtain all right-of-way for the Arizona Transmis-
13	sion System in accordance with Appendices I and J.
14	8.3.6 Arrange for placement of Construction Insurance
15	pursuant to Section 20.1.
16	8.3.7 Determine which contractors, if any, shall be
17	required to furnish any portion of the Construction
18	Insurance, other insurance and faithful performance
19	and payment bonds.
20	8.3.8 Assist any insurer in the investigation, adjustment
21	and settlement of any loss or claim arising out of
22	Construction Work.
23	8.3.9 Present and prosecute claims against insurers and
24	indemnitors providing Construction Insurance or
25	indemnities in respect of any loss of or damage to
26	any property of the Arizona Transmission System or

1 liability of either Party to third parties covered
2 by Construction Insurance or any indemnity agree-
3 ment, and to the extent that any such loss, damage
4 or liability is not covered by Construction Insur-
5 ance or by any indemnity agreement, present and
6 prosecute claims against any parties who may be
7 liable therefor. If the cost of repair, replace-
8 ment or correction of such loss or damage arising
9 out of a single incident or event exceeds \$100,000
10 or such other amount as may be set by the Admini-
11 strative Representatives, the Project Manager shall
12 not settle any claims with respect thereto without
13 the consent and approval of the Administrative Rep-
14 resentatives.

15 8.3.10 Subject to the provisions of Section 21 and except
16 as provided in this Section 8.3.10, investigate,
17 adjust, defend and settle claims against either or
18 both Parties arising out of or attributable to Con-
19 struction Work, or the past or future performance
20 or nonperformance of the obligations and duties of
21 either Party, including the Project Manager, under
22 or pursuant to the Project Agreements, including
23 but not limited to any claim resulting from death
24 or injury to persons or damage to property, when
25 said claims are not covered by valid and collecti-
26 ble Construction Insurance or other valid and col-

1 lectible insurance carried by either Party, and,
2 whenever and to the extent warranted, present and
3 prosecute claims against any third party, including
4 insurers, for any costs, losses and damages incur-
5 red in connection with said claims. The Project
6 Manager shall obtain the approval of the Admini-
7 strative Representatives before any said claim or
8 combination of said claims against either or both
9 Parties arising out of the same transaction or
10 incident is settled for more than \$100,000 or such
11 other amount as may be set by the Administrative
12 Representatives, unless the entire amount of the
13 settlement in excess of said limit is recoverable
14 from an insurer providing Construction Insurance.

15 8.3.11 Execute, administer, perform and enforce all con-
16 struction agreements in the name of the Project
17 Manager, acting as principal on its own behalf and
18 as agent for SDG&E, in which the Parties shall have
19 undivided interests as tenants in common in propor-
20 tion to their Responsibility for Costs in the
21 Arizona Transmission System, and furnish a copy of
22 any such agreement to SDG&E upon request.

23 8.3.12 Comply with or with the approval of the Administra-
24 tive Representatives, administratively or judicial-
25 ly challenge (i) any and all laws applicable to the
26 performance of Construction Work, including without

1	limitation all applicable laws, rules, and regula-
2	tions for protection of the health, safety and wel-
3	fare of the public and environment and all applic-
4	able provisions of any workmen's compensation laws;
5	and (11) the terms and conditions of any contract,
6	permit or license relating to the Arizona Transmis-
7	sion System.
8	8.3.13 Expend the Construction Funds in accordance with
9	the terms and conditions of this Participation
10	Agreement.
11	8.3.14 Keep and maintain records of monies received and
12	expended, obligations incurred, credits accrued,
13	estimates of Construction Costs (excluding, subject
14	to Section 17.3, ad valorem taxes or payments in
15	lieu thereof and allowance for funds used during
16	construction) and contracts entered into in the
17	performance of Construction Work, and make such
18	records available for inspection and copying by
19	SDG&E at reasonable times and places.
20	8.3.15 Not suffer any liens to remain in effect unsatis-
21	fied against the Arizona Transmission System, other
22	than liens permitted under the Project Agreements,
23	liens for taxes or assessments not yet delinquent,
24	liens for labor and material not yet perfected,
25	liens for workmen's compensation awards not yet
26	perfected, or undetermined charges or liens inci-

1	dental to the performance of Construction Work;
2	provided, however, that the Project Manager shall
3	not be required to pay or discharge any such lien
4	as long as it in good faith shall be contesting the
5	same, which contest shall operate during the pen-
6	dency thereof to prevent the collection or enforce-
7	ment of such lien so contested.
8	8.3.16 Obtain or cause to be obtained necessary construc-
9	tion permits, temporary access rights and other
10	licenses and approvals requisite to the performance
11	and completion of Construction Work and initiation
12	of Operating Work.
13	8.3.17 Develop and negotiate such agreements as shall be
14	required in order to interconnect at the Palo Verde
15	Switchyard. Such agreements shall be approved and
16	executed by the Parties.
17	8.3.18 Upon its Request for Information, provide SDG&E
18	with copies of records and information pertaining
19	to the performance of Construction Work. Notwith-
20	standing any provisions in the Project Agreements
21	to the contrary, in the event that the information
22	requested is voluminous, the information shall be
23	made available for inspection and copying at rea-
24	sonable times and places.
25	8.3.19 Furnish SDG&E any assistance and information rea-
26	sonably requested and available pertaining to the

1	construction of the Arizona Transmission System.
2	8.3.20 Use its best efforts in performing its responsibil-
3	ities hereunder to complete Construction Work by
4	the Scheduled Date of Firm Operation.
5	8.3.21 Keep SDG&E fully and promptly advised of signifi-
6	cant developments in connection with the progress,
7	performance, cost and completion of Construction
8	Work.
9	8.3.22 Prepare and deliver the Final Completion Report to
10	SDG&E as soon as practicable, but not later than
11	twenty-four (24) months after the Date of Firm
12	Operation, unless such time is extended by the
13	Administrative Representatives.
14	8.3.23 Upon his request, provide each representative
15	established hereunder with records and information
16	for his use in performing his responsibilities
17	under the Project Agreements.
18	8.3.24 Construct the Arizona Transmission System so as to
19	comply with the Project Agreements.
20	8.3.25 Conduct tests to verify that specified characteris-
21	tics of major equipment items have been achieved
22	and, if necessary, make or cause to be made those
23	final equipment modifications necessary to meet the
24	specified requirements.
25	8.3.26 Provide for and enforce any and all warranties on
26	equipment, facilities, materials and services sold

1	to or furnished for the Arizona Transmission System.
2	8.3.27 Conduct such environmental studies as the Admini-
3	strative Representatives direct.
4	8.3.28 Approve all press releases concerning the construc-
5	tion of the Arizona Transmission System before they
6	are released.
7	8.3.29 Have full responsibility and authority for employ-
8	ing and organizing the personnel and staff required
9	to complete the Construction Work.
10	8.3.30 Prepare recommendations covering matters to be
11	reviewed and acted upon by the Administrative
12	Representatives or the Construction Director and
13	the Construction Coordinator.
14	8.3.31 Carry out the directives of the Administrative
15	Representatives with respect to the matters set
16	forth in the Project Agreements.
17	8.4 The Construction Director shall prepare and submit the
18	following in a timely manner to the Construction Coordi-
19	nator for review and approval, modification or other action:
20	8.4.1 The bidding, purchasing, and change order proce-
21	dures to be used by the Project Manager for Con-
22	struction Work.
23	8.4.2 The design parameters which define the operating
24	characteristics of the Arizona Transmission System.
25	8.4.3 Any changes with regard to matters described in
26	Sections 8.4.1, 8.4.2 and 8.4.5.

1	8.4.4 A bidders list for any request for bids on equip-
2	ment or services which are anticipated to cost more
3	than \$200,000 shall be submitted at least 15 days
4	prior to mailing to the bidders. The insulators,
5	tower steel, conductors, 500kV breakers, and series
6	and shunt line compensation equipment are all anti-
7	cipated to cost more than \$200,000. Upon receiving
8	the bidders list, the Construction Coordinator
9	shall have 15 days to request any changes in the
10	bidders list. After such time the bidders list
11	shall be deemed approved.
12	8.4.5 The bid evaluation procedure to be used for each of
13	the equipment and services listed in Section 8.4.4.
14	8.5 As soon as the design specifications are available for
15	towers, conductors, shield wires, insulators, breakers, and
16	series and shunt line compensation, the Construction Direc-
17	tor shall forward the respective design specifications to
18	the Construction Coordinator for review and comment.
19	8.6 Contracts awarded on a cost reimbursable basis shall
20	include audit clauses providing for the right to audit by
21	the Project Manager.
22	8.7 The Project Manager shall not enter into construction
23	contracts nor make commitments for equipment or material
24	prior to the Date of Approval without the approval of the
25	Authorized Representatives.
26	8.8 SDG&E shall provide to the extent possible all assistance

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

required by the Project Manager in performing its obligations hereunder, and the Construction Director and Construction Coordinator shall allocate SDG&E's appropriate costs to Construction Costs according to Accounting Practice.

8.9 SDG&E shall, within sixty (60) days after this Participation Agreement becomes effective, submit to the Project Manager in writing any special requirements it may have regarding accounting, records, or information so that all required records may be maintained in the same manner throughout the construction of the Arizona Transmission System. The Project Manager shall use its best efforts to accommodate said special requirements.

9. CONSTRUCTION LIAISON:

9.1 SDG&E may, at its option and entirely at SDG&E expense, assign one person to the project. The person assigned by SDG&E shall be a working member of the project and shall:

9.1.1 Report to a member of the Construction Director's staff.

9.1.2 Submit a monthly report of activities, findings, conclusions and recommendations to the Construction Director.

9.1.3 Follow the Project Manager's rules and guidelines for conduct.

9.1.4 Send the Construction Director copies of all correspondence with SDG&E.

1	9.1.5 Have access to all files and documents pertaining
2	to the Arizona Transmission System to the same
3	extent as the Project Manager's engineers and
4	inspectors.
5	9.2 Upon written notice to SDG&E, the Construction Director may
6	require SDG&E to replace the assigned person. The grounds
7	for such replacement shall be reasonable and shall be
8	clearly stated in the notice.
9	9.3 The Project Manager shall furnish the necessary office
10	materials, services and facilities. Long distance tele-
11	phone costs of the person assigned by SDG&E shall be
12	charged to the Arizona Transmission System.
13	9.4 A project vehicle will be assigned to the person assigned
14	by SDG&E for normal project activities. Transportation to
15	and from San Diego or for off duty use will not be provided
16	by the Project Manager.
17	10. <u>OPERATING AGENT:</u>
18	10.1 The Operating Agent for the Arizona Transmission System
19	shall be APS.
20	10.2 SDG&E hereby appoints the Operating Agent as its agent, and
21	the Operating Agent shall undertake as SDG&E's agent and as
22	principal on its own behalf, to perform Operating Work and
23	to carry out the duties and responsibilities provided here-
24	under to be performed by it.
25	10.3 The Parties recognize that Salt River Project Agricultural
26	Improvement and Power District is the operating agent of

1 the Palo Verde Switchyard and will operate the Palo Verde
2 Termination pursuant to the proposed interconnection agree-
3 ment to be executed between the Arizona Nuclear Power
4 Project participants and the Parties.

5 10.4 The Operating Agent shall:

6 10.4.1 Prepare and submit recommendations to the Admini-
7 strative Representatives for their review and
8 approval, modification or other action with respect
9 to each of the following matters:

10 10.4.1.1 The proposed Capital Improvements budget
11 and proposed operation and maintenance
12 budget pursuant to Section 18.

13 10.4.1.2 The proposed form of written statistical
14 and administrative reports, written bud-
15 gets, and information and other similar
16 records to be kept by the Operating Agent
17 with respect to Operating Work.

18 10.4.2 Prepare and submit the following in a timely manner
19 to the Operating Committee for review and approval,
20 modification or other action:

21 10.4.2.1 The proposed outages of the Arizona Trans-
22 mission System for scheduled maintenance.

23 10.4.2.2 A proposed written statement of operating
24 practices and procedures.

25 10.4.2.3 Proposed procedures for accounting for
26 transmission losses.

1	10.4.2.4 Proposed procedures for dealing with
2	Operating Emergencies.
3	10.4.3 Perform Operating Work in accordance with gener-
4	ally accepted practices in the electric utility
5	industry as such practices may be affected by the
6	design and operational characteristics of the
7	Arizona Transmission System, the rights and obli-
8	gations of the Parties under this Participation
9	Agreement, and any other special circumstances
10	affecting Operating Work.
11	10.4.4 Contract for, furnish and obtain from any sources
12	it may select, including SDG&E, the services and
13	studies necessary to perform Operating Work pur-
14	suant to the Project Agreements. Contracts award-
15	ed on a cost reimbursable basis shall include audit
16	clauses providing for the right to audit by the
17	Project Manager.
18	10.4.5 Execute and enforce contracts necessary to perform
19	Operating Work.
20	10.4.6 Furnish and train the necessary personnel to per-
21	form Operating Work.
22	10.4.7 Comply with or with the approval of the Administra-
23	tive Representatives, administratively or judicial-
24	ly challenge (i) any and all laws and regulations
25	applicable to the performance of Operating Work,
26	including all applicable provisions of any work-

1	men's compensation laws; and (ii) the terms and
2	conditions of any contract, permit or license
3	relating to the Arizona Transmission System.
4	10.4.8 Purchase and procure, through and from any source
5	it may select, the equipment, apparatus, machin-
6	ery, tools, materials and supplies necessary to
7	perform Operating Work pursuant to the Project
8	Agreements.
9	10.4.9 Expend Operating Funds in accordance with the terms
10	and conditions of this Participation Agreement.
11	10.4.10 Keep and maintain records of monies received and
12	expended, obligations incurred, credits accrued,
13	and contracts entered into in the performance of
14	Operating Work and make such records available for
15	inspection and copying by SDG&E at reasonable times
16	and places.
17	10.4.11 Not suffer any liens to remain in effect unsatis-
18	fied against the Arizona Transmission System, other
19	than the liens permitted under the Project Agree-
20	ments, liens for taxes and assessments not yet
21	delinquent, liens for workmen's compensation
22	awards, liens for labor and material not yet per-
23	formed, or undetermined charges or liens inciden-
24	tial to the performance of Operating Work; provid-
25	ed, however, that the Operating Agent shall not be
26	required to pay or discharge any such lien as long

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

as it in good faith shall be contesting the same,
which contest shall operate during the pendency
thereof to prevent the collection or enforcement of
such lien so contested.

10.4.12 Arrange for the placement and maintenance of Oper-
ating Insurance pursuant to Section 20.2.

10.4.13 Present and prosecute claims against insurers and
indemnitors providing Operating Insurance or
indemnities in respect of any loss of or damage to
any property of the Arizona Transmission System or
liability of either Party to third parties covered
by Operating Insurance or by any indemnity agree-
ment, and to the extent that any such loss, damage
or liability is not covered by Operating Insurance
or by any indemnity agreement, present and prose-
cute claims against any parties who may be liable
therefor. If the cost of repair, replacement or
correction of such loss or damage arising out of a
single incident or event exceeds \$100,000 or such
other amount as may be set by the Administrative
Representatives, the Operating Agent shall not
settle any claims with respect thereto without the
consent and approval of the Administrative Repre-
sentatives.

10.4.14 Subject to the provisions of Section 21 and except
as provided in this Section 10.4.14, investigate,

1 adjust, defend and settle claims against either or
2 both Parties arising out of or attributable to
3 Operating Work, or the past or future performance
4 or nonperformance of the obligations and duties of
5 either Party, under or pursuant to this Participa-
6 tion Agreement, including but not limited to any
7 claim resulting from death or injury to persons or
8 damage to property, when said claims are not cov-
9 ered by valid and collectible Operating Insurance
10 or other valid and collectible insurance carried by
11 either Party, and, whenever and to the extent war-
12 ranted, present and prosecute claims against any
13 third party, including insurers, for any costs,
14 losses and damages incurred in connection with said
15 claims. The Operating Agent shall obtain the
16 approval of the Administrative Representatives
17 before any said claim or combination of said claims
18 against either or both Parties arising out of the
19 same transaction or incident is settled for more
20 than \$100,000 or such other amount as may be set by
21 the Administrative Representatives, unless the
22 entire amount of the settlement in excess of said
23 limit is recoverable from an insurer providing
24 Operating Insurance.

25 10.4.15 Assist any insurer in the investigation, adjust-
26 ment and settlement of any loss or claim arising

1	out of Operating Work.
2	10.4.16 Keep SDG&E fully and promptly advised of material
3	changes in conditions or other material develop-
4	ments affecting the performance of Operating Work,
5	and furnish copies of any notices given or receiv-
6	ed pursuant to the Project Agreements.
7	10.4.17 Upon its Request for Information, provide SDG&E
8	with all written statistical and administrative
9	reports, operating reports, written budgets,
10	accounting records and information and other
11	records relating to Operating Work which may be
12	necessary for SDG&E to perform its responsibili-
13	ties under the Project Agreements.
14	10.4.18 Upon its Request for Information, provide SDG&E, in
15	reasonable quantity, a copy or copies of any
16	report, record, list, budget, manual, accounting or
17	billing summary, classification of accounts or
18	other documents or revisions of any of the afore-
19	said items pertinent to this Participation Agree-
20	ment.
21	10.4.19 Prepare recommendations covering matters to be
22	reviewed and acted upon by the Administrative
23	Representatives or the Operating Committee.
24	10.4.20 Carry out the directives of the Administrative
25	Representatives and the Operating Committee with
26	respect to the matters set forth in the Project

1	Agreements.
2	10.4.21 Perform Operating Work with the objective of per-
3	mitting each Party to use under normal operating
4	conditions its share of Capacity in the Arizona
5	Transmission System in a manner which will not
6	unreasonably affect the operation of the Parties'
7	electric systems or the electric systems of inter-
8	connected third parties. This Section 10.4.21
9	shall not be construed to create rights in or
10	benefit any third party.
11	10.4.22 Defend title to the Arizona Transmission System
12	held by the Parties.
13	10.5 SDG&E shall provide to the extent possible all assistance
14	required by the Operating Agent in performing its obliga-
15	tions hereunder, and the Operating Committee shall allo-
16	cate SDG&E's appropriate costs to Operating Costs according
17	to Accounting Practice.
18	10.6 Materials, supplies and spare parts required for maintain-
19	ing or making emergency repairs on the Arizona Transmission
20	System shall be taken from the Project Manager's inventor-
21	ies and the charges for such equipment shall include the
22	Project Manager's normal warehouse loadings.
23	11. <u>CONSTRUCTION COSTS:</u>
24	11.1 Construction Costs of the Arizona Transmission System shall
25	include all payments made and obligations incurred by the
26	Project Manager for or in connection with Construction Work,

1 including, but not limited to, those costs specified in
2 Section 11.2 and in Appendix D.

3 11.2 Construction Costs shall also include all payments made and
4 obligations incurred by the Project Manager pursuant to the
5 Arizona - San Diego 500kV Interconnection Letter of Under-
6 standing dated November 22, 1978, including any amendments
7 thereto. Such costs shall include an A & G loading of 1%
8 of Construction Costs as calculated in Appendix D.1.13,
9 booked up to and including the month in which this Partici-
10 pation Agreement becomes effective. Thereafter, the A & G
11 loading on Construction Costs shall be the rate determined
12 in Appendix E.9.

13 11.3 All Construction Costs, except as otherwise specifically
14 provided in this Participation Agreement, shall be shared
15 by the Parties in proportion to their Responsibility for
16 Costs specified in Appendix B.

17 11.4 All Construction Costs which cannot be allocated to a
18 specific component or components of the Arizona Transmis-
19 sion System shall be shared by the Parties in proportion to
20 the number of 500kV line miles and the percent ownership as
21 shown in the following example:

22 EXAMPLE:

23 The Palo Verde - Yuma 500kV Line = 118 Miles

24 The Yuma - Border 500kV Line = 6 Miles

25 The APS Cost Allocation = $\frac{118 \text{ Miles} \times 11\%}{124 \text{ Miles}} = \underline{10.47\%}$

26

1	SDG&E Cost Allocation = $\frac{118 \text{ Miles} \times 89\% + 6 \text{ Miles} \times 100\%}{124 \text{ Miles}}$ =
2	<u>89.53%</u>
3	11.5 The cost of land, fencing, site preparation and all other
4	costs of constructing the Yuma Switchyard which are not
5	directly associated with a specific component listed in
6	Appendix A.3.1 through A.3.4, shall be allocated between the
7	Parties as follows:
8	APS - 66.7% SDG&E - 33.3%
9	12. <u>OPERATION AND MAINTENANCE COSTS:</u>
10	12.1 Operation and maintenance costs of the Arizona Transmission
11	System shall include all payments made and obligations
12	incurred by the Operating Agent for or in connection with
13	the performance of Operating Work, including (i) those costs
14	of Operating Work specified in Appendix E, and (ii) those
15	costs specified in Section 17 to the extent any tax or pay-
16	ment in lieu thereof is levied against a Party in behalf of
17	both Parties, and in Section 20.2 (excluding workmen's com-
18	pensation expense for the Operating Agent's employees);
19	provided, however, that Construction Costs and Capital
20	Improvement costs shall not be included in operation and
21	maintenance costs.
22	12.2 Cost of operation and maintenance of the Arizona Transmis-
23	sion System shall be shared in proportion to each Party's
24	Responsibility for Costs as shown in Appendix B.
25	12.3 All Operating Costs which cannot be allocated to a specific
26	component or components of the Arizona Transmission System

1 SDG&E at reasonable times and places its books and records
2 necessary for SDG&E to audit or have audited such books and
3 records with respect to Construction Work or Operating
4 Work. To the extent such audits reveal over or under
5 payments by a Party an adjustment shall be made with the
6 next Request for Funds.

7 **14. ADJUSTMENT FOR PAYMENT OF ACTUAL CONSTRUCTION COSTS:**

8 Within 30 days after approval of the Final Completion Report
9 pursuant to 5.2.6, cash adjustments shall be made between the
10 Parties so that each item of Construction Costs shall be shared by
11 each Party in proportion to its Responsibility for Costs. Any
12 Construction Costs which shall be attributable to more than one
13 component of the Arizona Transmission System shall be equitably
14 allocated by the Project Manager to the components of the Arizona
15 Transmission System, subject to the review and approval of the
16 Construction Director and Construction Coordinator.

17 **15. USE, SCHEDULING, AND LOSSES:**

18 **15.1** For resource and transmission planning and reporting
19 purposes, the Parties shall be entitled to schedule Power
20 and Energy over the Arizona Transmission System for their
21 respective accounts at the Palo Verde Switchyard for deliv-
22 ery to the Yuma Switchyard, or at the Yuma Switchyard for
23 delivery to the Palo Verde Switchyard, in the following
24 percentage of Rated Capability:

25 15.1.1 APS - 11%

26 15.1.2 SDG&E - 89%

1	15.2	For operating purposes, the Parties shall be entitled to
2		schedule Power and Energy over the Arizona Transmission
3		System for their respective accounts at the Palo Verde
4		Switchyard for delivery to the Yuma Switchyard, or at the
5		Yuma Switchyard for delivery to the Palo Verde Switchyard,
6		in the following percentage of Operating Capability:
7	15.2.1	APS - 11%
8	15.2.2	SDG&E - 89%
9	15.3	SDG&E shall have the sole right to deliver Power and Energy
10		in either direction over the Yuma - Border 500kV Line.
11	15.4	The Scheduling Agent for the Arizona Transmission System
12		shall be SDG&E. The Scheduling Agent shall:
13	15.4.1	Schedule all Power and Energy deliveries over the
14		Arizona Transmission System.
15	15.4.2	Prepare and submit the proposed criteria for deter-
16		mining the Operating Capability of the Arizona
17		Transmission System to the Administrative Represen-
18		tatives for their review and approval, modification
19		or other action. Such criteria shall recognize the
20		necessity to maximize the Operating Capability at
21		all times, consistent with prudent electric utility
22		practice, and shall take into account loop flows,
23		equipment outages, emergency conditions and actual
24		operating experience.
25	15.4.3	At least two months before the Scheduled Date of
26		Firm Operation, prepare and submit to the Operating

1	
2	
3	Committee for review, approval, modification or
4	other action, the proposed procedure for Power and
5	Energy scheduling and accounting.
6	15.4.4 At least six months before the Scheduled Date of
7	Firm Operation, and from time to time as requested
8	by the Operating Committee, prepare and submit to
9	the Operating Committee for its review, approval,
10	modification or other action, the practices, proce-
11	dures and operating studies required to determine
12	the Operating Capability. Such practices, proce-
13	dures and operating studies shall be developed pur-
14	suant to the criteria approved pursuant to Section
15	15.4.2.
16	15.4.5 Establish and make known on an hourly basis the
17	Operating Capability based on the procedures
18	approved pursuant to Section 15.4.4.
19	15.5 Power and Energy scheduled by the Parties over the Arizona
20	Transmission System between the Palo Verde Switchyard and
21	the Yuma Switchyard shall be scheduled and controlled by the
22	Parties under practices and procedures approved by the
23	Operating Committee. The Scheduling Agent shall receive and
24	deliver or cause to be received and delivered all Power and
25	Energy which a Party has scheduled for its account (i) at
26	the Palo Verde Switchyard for delivery to the Yuma
	Switchyard and (ii) at the Yuma Switchyard for delivery to
	the Palo Verde Switchyard; provided, however, that the

1 quantity of Power and Energy so delivered shall not exceed
2 the Operating Capability.

3 15.6 The procedure for accounting for transmission losses in the
4 Arizona Transmission System shall be developed and approved
5 by the Operating Committee five months prior to the Sched-
6 uled Date of Firm Operation as follows:

7 15.6.1 A table of loss adjustments for actual Energy
8 deliveries between the Palo Verde Switchyard and the
9 Yuma Switchyard 69kV billing meters shall be
10 approved by the Operating Committee prior to the
11 Date of Firm Operation so that net Energy schedules
12 shall be made to reflect average losses, taking into
13 account the direction of actual Energy flows. Such
14 table of loss adjustments shall be based on power
15 flow studies conducted jointly by the Parties and
16 shall take into account line, transformer and shunt
17 reactor losses. Losses shall be scheduled during
18 similar load hours within seven days after such
19 losses are incurred.

20 15.6.2 For Energy accounting purposes the Arizona Trans-
21 mission System shall be within the SDG&E accounting
22 area and APS shall schedule to SDG&E losses based
23 upon actual flows of Power and Energy at the Yuma
24 Switchyard 69kV metering point.

25 15.6.3 The table of transmission loss adjustments estab-
26 lished by the Parties shall be reviewed upon the

1	request of either Party. Revisions to the table
2	shall be made only when justified by changes in
3	electrical characteristics of the Arizona Transmis-
4	sion System, or when operating experience has dem-
5	onstrated that the loss adjustments are incorrect.
6	15.7 At least five months before the Scheduled Date of Firm
7	Operation the Operating Committee shall prepare and submit
8	to the Administrative Representatives for their review and
9	approval, modification or other action, a recommended Rated
10	Capability. The criteria for determining such capability
11	shall be based on the results of engineering studies. Rated
12	Capability shall be reviewed by the Operating Committee from
13	time to time and approved by the Administrative Representa-
14	tives.
15	15.8 Each Party shall have the non-exclusive right to use the
16	500kV portion of the Yuma Switchyard to transfer all Power
17	and Energy scheduled on its share of the Arizona Transmis-
18	sion System, as specified in Sections 15.1, 15.2 and 15.3.
19	15.9 Either Party may, at its expense and upon entering into an
20	agreement with the other Party, make interconnections to the
21	Yuma 500kV Breaker Yard. Such agreement shall specify the
22	terms and conditions under which such interconnections may
23	be made.
24	15.10 All transactions between the Parties shall be deemed to take
25	place at the Palo Verde Termination unless the Parties
26	otherwise agree. Upon mutual agreement, the Parties may use

1	the Yuma Switchyard 69kV metering point as a transaction
2	point.
3	15.11 Planned outages of the Arizona Transmission System for main-
4	tenance, repairs, replacements, installation of equipment,
5	investigation or inspection shall be coordinated by the
6	Parties and be scheduled as far in advance as practicable.
7	Planned outages of the Arizona Transmission System shall be
8	scheduled by and have the approval of the Operating Commit-
9	tee. Such planned outages shall not commence without the
10	prior approval of the Parties' load supervisors, resource
11	coordinators or schedulers as appropriate, which approval
12	shall not be unreasonably withheld.
13	15.12 Power flows over the Arizona Transmission System shall be
14	measured by metering equipment at the Palo Verde Termination
15	and the Yuma Switchyard. Such metering equipment shall be
16	maintained by, or caused to be maintained by, the Operating
17	Agent.
18	15.13 The Operating Agent shall periodically calibrate and test
19	all meters installed pursuant to this Participation Agree-
20	ment. In so doing, the Operating Agent shall follow the
21	practices and procedures approved by the Operating Commit-
22	tee.
23	15.14 Either Party may make non-firm use of unused Operating Capa-
24	bility in addition to its entitlement under Section 15.2 to
25	the extent that unused Operating Capability is determined to
26	be available by the Scheduling Agent; provided, however,

1	that neither Party shall have the right to sell to a third
2	party such non-firm use of unused Operating Capability.
3	15.15 A Party which sells Power and Energy to a third party
4	requiring use of Operating Capability in excess of its
5	entitlement listed in Section 15.2, shall pay a wheeling
6	charge to the other Party for use of such Capacity in excess
7	of its entitlement.
8	15.16 A Party making use of Operating Capability in excess of its
9	entitlement pursuant to Section 15.2, shall immediately
10	reduce such schedules to the extent required to accommodate
11	schedules of the other Party and operate within the Operat-
12	ing Capability.
13	15.17 An APS-SDG&E Communication Agreement shall be developed by
14	the Parties to provide for the communication system which
15	will be required to properly operate the Arizona Transmis-
16	sion System. Such agreement shall define the ownership,
17	rights to use, allocation of costs, and the operation and
18	maintenance of the communication equipment.
19	16. <u>OPERATING EMERGENCY:</u>
20	16.1 If an Operating Emergency occurs, the Operating Agent shall
21	take all steps reasonably necessary to end the Operating
22	Emergency, in accordance with generally accepted practices
23	in the electric utility industry.
24	16.2 As soon as practicable after an Operating Emergency begins,
25	the Operating Agent shall advise SDG&E of its occurrence and
26	nature, the steps taken or to be taken to end it, and an

1 estimate of its duration.

2 16.3 The Operating Agent's costs incurred and charged to mainte-
3 nance expense to repair, restore, and reconstruct the Ari-
4 zona Transmission System shall be allocated to the Parties
5 in proportion to their Responsibility for Costs for the
6 components of the Arizona Transmission System being repair-
7 ed, restored, or reconstructed. Costs incurred by the
8 Operating Agent for Capital Improvements shall be allocated
9 to the Parties in proportion to their Responsibility for
10 Costs in the components of the Arizona Transmission System
11 to which such Capital Improvements are made, and the Oper-
12 ating Agent shall bill the Parties therefor in accordance
13 with Section 13.

14 16.4 After the Operating Emergency ends, the Operating Agent
15 shall submit to SDG&E a summary of the costs incurred to
16 repair, restore, reconstruct or make Capital Improvements,
17 and such other information as may be required by the Oper-
18 ating Committee.

19 17. TAXES:

20 17.1 The Parties shall use their best efforts to have any author-
21 ity levying any taxes, assessments, or payments in lieu
22 thereof, or making any valuations for the purpose of levying
23 any taxes, assessments, or payments in lieu thereof, on the
24 Arizona Transmission System, or any interest or rights
25 therein, assess them directly against the ownership or bene-
26 ficial interest of each Party.

1 17.2 All taxes, assessments or payments in lieu thereof levied
2 against each Party's ownership or beneficial interest in the
3 Arizona Transmission System, except those taxes, assessments
4 or payments in lieu thereof levied against an individual
5 Party in behalf of both Parties, shall be the sole responsi-
6 bility of the Party upon whose ownership or beneficial
7 interest they are levied.

8 17.3 If any property taxes or payments in lieu thereof or any
9 other taxes or assessments are levied or assessed in a
10 manner other than as specified in Section 17.1, the Admini-
11 strative Representatives shall establish equitable prac-
12 tices and procedures for their apportionment between the
13 Parties.

14 18. BUDGETS AND CAPITAL IMPROVEMENTS:

15 18.1 At least five months before the Scheduled Date of Firm Oper-
16 ation, and no later than August 1 of each year thereafter,
17 the Operating ^{APC} Agent shall prepare and submit to the Admini-
18 strative Representatives for their review and approval the
19 proposed budget for Operating Work for the following calen-
20 dar year.

21 18.2 At least three months before the Scheduled Date of Firm
22 Operation and no later than October 1 of each year there-
23 after, the Administrative Representatives shall approve a
24 budget for Operating Work for the following calendar year.

25 18.3 SDG&E shall supply any information the Operating Agent
26 requires from it to prepare the proposed budgets.

1	18.4	The Administrative Representatives may at any time approve
2		revisions to the budget for Operating Work.
3	18.5	All proposed expenditures for Capital Improvements, includ-
4		ing a contingency allowance for capital expenditures if
5		necessitated by an Operating Emergency, shall be included in
6		the budget for Operating Work. After such budget has been
7		approved by the Administrative Representatives, each Party
8		shall be obligated for the costs incurred thereunder in
9		proportion to its Responsibility for Costs.
10	18.6	All Capital Improvements which are for the sole use or bene-
11		fit of one Party shall be owned and paid for by such Party.
12	18.7	The Operating Agent shall submit to the Operating Committee
13		annually a forecast of cash requirements by month for the
14		budget year for all Operating Work. Said forecast shall be
15		submitted annually within 30 days after final budget approv-
16		als have been made. A revised forecast shall be submitted
17		whenever the budget for Operating Work is revised and
18		approved, or whenever significant changes in monthly expan-
19		ditures from those previously forecast are anticipated.
20	18.8	The Operating Agent shall be responsible for the design and
21		construction of all Capital Improvements.
22	18.9	The cost of Capital Improvements shall be determined in
23		accordance with Appendix E.
24	18.10	Units of Property retired from service shall be disposed of
25		by the Operating Agent on the best available terms as soon
26		as practicable, and the proceeds, if any, received therefrom

1 shall be credited or distributed to the Parties in propor-
2 tion to their Responsibility for Costs associated with such
3 units.

4 19. APPENDICES:

5 Appendices A through J as they presently appear or as they may be
6 revised are hereby made a part of this Participation Agreement.

7 20. INSURANCE:

8 20.1 Unless otherwise specified by the Administrative Representa-
9 tives, during the performance of Construction Work the
10 Project Manager shall procure and maintain in force, or
11 cause to be procured and maintained in force, policies of
12 Construction Insurance of the following types:

13 20.1.1 Comprehensive bodily injury, personal injury and
14 property damage liability insurance covering the
15 Parties and contractors, including automobile lia-
16 bility, contractual liability, owners' and contrac-
17 tors' protective liability and liability for pro-
18 ducts and completed operations.

19 20.1.2 All Risk Builder's Risk Insurance, covering the
20 Arizona Transmission System and Construction Work.
21 Such insurance shall apply to all Construction Work
22 and to materials while in transit and while stored
23 at the job site and shall afford coverage from the
24 beginning of Construction Work until the Final Com-
25 pletion Report is filed.

26 20.1.3 All Risk Contractor's Equipment Insurance, covering

1	owned, hired or furnished equipment used in connection with the performance of Construction Work for which the Parties are responsible.
2	
3	
4	20.1.4 Employee Dishonesty Bond, covering employees of the Project Manager while engaged in Construction Work.
5	
6	20.1.5 Workmen's Compensation and Employer's Liability Insurance, including all states endorsement covering employees of the Project Manager and contractors engaged in the performance of Construction Work.
7	
8	The Project Manager may at its option be a self-insurer in whole or in part for workmen's compensation for its own employees.
9	
10	
11	
12	
13	20.2 Unless otherwise specified by the Administrative Representatives, the Operating Agent shall, on or before the date of firm operation of the first component of the Arizona Transmission System to be completed and during the performance of Operating Work, procure and maintain in force, or cause to be procured and maintained in force, policies of Operating Insurance for the Parties of the following types:
14	
15	
16	
17	
18	
19	
20	20.2.1 Physical damage insurance, covering all facilities except transmission towers, conductors and ground wires. Coverage for facilities at the Palo Verde Termination may include coverage for nuclear contamination. Excepted property may be covered at the option of the Operating Agent.
21	
22	
23	
24	
25	
26	20.2.2 Comprehensive bodily injury, personal injury and

1	property damage liability insurance, including
2	coverage for hazards of automobile liability, con-
3	tractual liability, owners' and contractors protec-
4	tive liability and liability for products and com-
5	pleted operations.
6	20.2.3 Workmen's Compensation and Employer's Liability
7	Insurance, covering employees of the Operating Agent
8	performing Operating Work, in a manner sufficient to
9	satisfy applicable statutory requirements. The
10	Operating Agent may at its option be a self-insurer
11	in whole or in part for Workmen's Compensation
12	coverage.
13	20.2.4 Employee Dishonesty Bond covering dishonest or
14	fraudulent acts committed by employees of the Oper-
15	ating Agent while performing Operating Work.
16	20.3 Except for Project Insurance described in Sections 20.1.3,
17	20.1.4, 20.1.5, 20.2.3, and 20.2.4 each Party shall be a
18	named insured, individually and jointly with the other
19	Party, on all Project Insurance, and the policies of Project
20	Insurance referred to in Sections 20.1.1 and 20.2.2 shall
21	include severability of interest provisions.
22	20.4 In lieu of naming the Parties insured in policies described
23	in Section 20.1.1, the Project Manager may require contrac-
24	tors to procure owners' protective liability coverage, nam-
25	ing the Parties insureds therein.
26	20.5 Any deductibles or self-insured retentions in Project Insur-

1 ance shall be apportioned between the Parties on the basis
2 of the ownership in the respective components of the Arizona
3 Transmission System, except that the deductible or self-
4 insured retention under any workmen's compensation insurance
5 carried for officers and employees of the Project Manager
6 and Operating Agent shall be apportioned in the manner
7 specified in Section E.7 of Appendix E.

8 20.6 Each Party shall have the right to have any mortgagee,
9 trustee or secured party named on all or any of the Project
10 Insurance policies as loss payee or additional insured as
11 its interest may appear, by notice to the Project Manager or
12 Operating Agent which shall specify the name or names of
13 such mortgagee, trustee or secured party and such additional
14 information as may be necessary to permit it to be included
15 on the policy(ies) of Project Insurance.

16 20.7 The Project Manager or Operating Agent shall furnish SDG&E
17 with a certificate of each Project Insurance policy,
18 together with a line sheet therefor (and any subsequent
19 amendments) naming the insurers and underwriters and the
20 extent of their participation. Said Project Insurance
21 policies are subject to the approval of SDG&E and shall not
22 be modified or changed by the Project Manager or the Operat-
23 ing Agent without written approval of SDG&E, except for
24 minor or insubstantial modifications or changes.

25 20.8 Each of the Project Insurance policies shall be endorsed so
26 as to provide that all named insureds shall be given the

1	same advance notice of cancellation or material change as
2	that required to be given to the Project Manager or Operat-
3	ing Agent.
4	20.9 Project Insurance policies shall be primary insurance for
5	all purposes and shall be so endorsed. Any other insurance
6	carried by a Party individually shall not participate with
7	Project Insurance as to any loss or claim for which valid
8	and collectible Project Insurance shall apply. Such other
9	insurance shall apply solely as to the individual interest
10	of the Party carrying such other insurance; provided, how-
11	ever, that such Party shall accept any reasonable restric-
12	tive endorsement to its separate insurance policies as may
13	be required by an insurer as a condition precedent to the
14	issuance of a policy of Project Insurance.
15	20.10 Notwithstanding the provisions of Section 20.7, if the
16	Parties are unable to agree upon any matters relating to
17	Project Insurance, the Project Manager or Operating Agent,
18	pending the resolution of such disagreement, shall procure
19	or cause to be procured, such policies of Project Insurance
20	as in its judgment are necessary to protect the Parties
21	against the insurable risks set forth in Sections 20.1 and
22	20.2. During any period of negotiations with an insurer, or
23	other negotiations which are pending at the expiration of
24	coverage of a Project Insurance policy, or if a Project
25	Insurance policy is cancelled, the Project Manager or Oper-
26	ating Agent shall renew or bind policies as an emergency

1 measure or may procure policies of Project Insurance which
2 are identical to those which were cancelled, or may, to the
3 extent possible, secure replacement policies which will
4 provide substantially the same coverage as the policy expir-
5 ing or cancelled.

6 21. LIABILITY:

7 21.1 Except for liability resulting from Willful Action and
8 subject to the provisions of Section 21.3 and 21.4, neither
9 Party, its directors, officers, or employees, shall be lia-
10 ble to the other Party for any uninsured loss, damage,
11 claim, cost, charge, or expense of any kind or nature
12 resulting from Construction Work, Operating Work, use or
13 ownership of either Party's electric system or the perfor-
14 mance or nonperformance of the obligations of a Party under
15 this Participation Agreement, and each Party releases and
16 waives any or all right of recovery against the other Party,
17 its directors, officers and employees from any such
18 liability.

19 21.2 Except as provided in Sections 21.3 and 21.4, the costs and
20 expenses of discharging all Work Liability imposed upon
21 either Party for which payment is not made by Project
22 Insurance, shall be shared and paid for by both Parties in
23 proportion to their respective Responsibility for Costs.

24 21.3 Each Party shall be responsible for any direct, indirect, or
25 consequential damage, loss, claim, cost, charge, or expense
26 that is not covered by Project Insurance and results from

1	28.6	If a dispute between the Parties should arise under the Project Agreements after the Date of Firm Operation concerning Capital Improvements, the Operating Agent shall delay making such Capital Improvements until the dispute is settled.
2		
3		
4		
5	28.7	If a dispute between the Parties should arise under the Project Agreements after the Date of Firm Operation, the Operating Agent is authorized and obligated to take such action, consistent with the Project Agreements and generally accepted practice in the electric utility industry applicable to 500kV transmission facilities, as is necessary or appropriate to repair and maintain the Arizona Transmission System.
6		
7		
8		
9		
10		
11		
12		
13	28.8	The Project Manager or the Operating Agent shall give prior notice to the Parties of any action to be taken pursuant to Sections 28.5 or 28.7.
14		
15		
16	28.9	Any funds which are advanced by the Parties to the Project Manager during the pendency of a dispute shall not be subject to refund except upon a final determination that the expenditures were not made in a manner consistent with the Project Agreements and generally accepted practice in the electric utility industry as such practices relate to electric transmission systems.
17		
18		
19		
20		
21		
22		
23	29.	<u>ARBITRATION:</u>
24	29.1	If either Party shall call for submission of a dispute to arbitration pursuant to Section 28.4, such request shall be binding upon the other Party.
25		
26		

1 29.2 The Party calling for arbitration shall give written notice
2 to the other Party, setting forth in such notice in adequate
3 detail the nature of the dispute, the amount or amounts, if
4 any, involved in such dispute, and the remedy sought by such
5 arbitration proceedings, and, within twenty (20) days from
6 receipt of such notice, the other Party may, by written
7 response, submit its own statement of the matter at issue
8 and set forth in adequate detail additional related matters
9 or issues to be arbitrated. Thereafter, the Party first
10 submitting its notice of the matter at issue shall have ten
11 (10) days after receipt of the response in which to submit a
12 written rebuttal statement.

13 29.3 Within forty (40) days after delivery of the written notice
14 calling for arbitration pursuant to Section 29.2, the Par-
15 ties shall meet for the purpose of selecting arbitrators.
16 Each Party shall designate an arbitrator. The arbitrators
17 so selected shall meet within twenty (20) days after their
18 selection and shall select one additional arbitrator. If
19 the arbitrators selected by the Parties shall fail to select
20 such additional arbitrator within said twenty (20) day per-
21 iod, then they shall request from the American Arbitration
22 Association (or a similar organization if the American Arbi-
23 tration Association should not at the time exist) a list of
24 arbitrators who are qualified and eligible to serve as here-
25 inafter provided. The arbitrators selected by the Parties
26 shall take turns striking names from that list and the last

1	name remaining on the list shall be the additional arbitra-
2	tor. All arbitrators shall be persons skilled and experi-
3	enced in the field which gives rise to the dispute, and no
4	person shall be eligible for appointment as an arbitrator
5	who is or has been an officer or employee of either of the
6	Parties to the dispute or is otherwise interested in the
7	matter to be arbitrated.
8	29.4 Except as otherwise provided in this Section 29, the arbi-
9	tration shall be governed by the rules and practices of the
10	American Arbitration Association (or the rules and practice
11	of a similar organization if the American Arbitration Asso-
12	ciation should not at that time exist) from time to time in
13	force, except that if such rules and practice, as modified
14	herein, shall conflict with state or Federal laws then in
15	force which are specifically applicable to such arbitration
16	proceedings, such laws shall govern.
17	29.5 Included in the issues which may be submitted to arbitration
18	pursuant to this Section 29 is the issue of whether the
19	right to arbitrate a particular dispute is permitted under
20	the Project Agreements.
21	29.6 The arbitrators shall hear evidence submitted by the respec-
22	tive Parties and may call for additional information, which
23	additional information shall be furnished by the Party hav-
24	ing such information. The decision of a majority of the
25	arbitrators shall be binding upon the Parties.
26	29.7 The award of the arbitrators shall contain findings relative

1 to the materiality of the default, the period of time within
2 which the defaulting Party must remedy the default or com-
3 mence remedial action, and the remedies which may be exer-
4 cised by the non-defaulting Party in the event the default
5 is not remedied within such period of time.

6 29.8 This agreement to arbitrate shall be specifically enforce-
7 able, and the award and findings of the arbitrators shall be
8 final and binding upon the Parties to the extent permitted
9 by applicable law. Any award may be filed with the clerk of
10 any court having jurisdiction over the Party against whom
11 the award is rendered, and upon such filing, such award, to
12 the extent permitted by the laws of the jurisdiction in
13 which said award is filed, shall be specifically enforceable
14 or shall form the basis of a declaratory judgment or other
15 similar relief.

16 29.9 The fees and expenses of the arbitrators shall be shared by
17 the Parties equally, unless the decision of the arbitrators
18 shall specify some other apportionment of such fees and
19 expenses. All other expenses and costs of the arbitration
20 shall be borne by the Party incurring the same.

21 29.10 If either Party shall attempt to carry out the provisions
22 herein set forth in regard to arbitration, and such Party
23 shall not be able to obtain a valid and enforceable arbitra-
24 tion decree, such Party shall be entitled to seek legal
25 remedies in the courts having jurisdiction in the premises,
26 and the provisions of the Project Agreements referring to

1	decision of a board of arbitration, to the extent allowable
2	by law, shall be then deemed applicable to final decisions
3	of such courts.
4	30. <u>GOVERNING LAW:</u>
5	This Participation Agreement shall be governed by and construed
6	and enforceable in accordance with the laws of the State of
7	Arizona.
8	31. <u>AUTHORIZATIONS AND APPROVALS:</u>
9	31.1 Each Party shall be responsible for obtaining, at its own
10	expense, its required authorizations and approvals relating
11	to its participation in the construction of the Arizona
12	Transmission System and to its performance of the provisions
13	of this Participation Agreement, from Federal, state or
14	local regulatory authorities having jurisdiction to issue
15	such authorizations and approvals, and each Party shall keep
16	the other informed of its applications therefor.
17	31.2 The Project Manager shall use its best efforts to obtain the
18	following prior to March 1, 1982:
19	31.2.1 A Certificate of Environmental Compatibility for the
20	Arizona Transmission System issued by the Arizona
21	Corporation Commission.
22	31.2.2 Approval of the Final Environmental Statement for
23	the Arizona Transmission System by the U. S. Bureau
24	of Land Management.
25	31.3 SDG&E shall use its best efforts to obtain the following
26	prior to March 1, 1982:

1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	32. <u>FEES:</u>
24	The Project Manager or Operating Agent shall not receive any fee
25	or profit hereunder.
26	

31.3.1 A Certificate of Public Convenience and Necessity for the California Transmission System issued by the California Public Utilities Commission.

31.3.2 Approval of the Final Environmental Statement for the California Transmission System by the U. S. Bureau of Land Management.

31.4 The expenses incurred in acquiring the items described in Section 31.2 shall be a part of Construction Costs.

31.5 Within ten (10) days after each approval in Sections 31.2 and 31.3 has been issued to the requesting Party, such Party shall give written notice to the other Party that it has received such approval and shall state whether or not such approval has conditions which are unacceptable to it. Within ten (10) days of receiving the notice from the first Party, the second Party shall likewise give notice to the first Party whether or not such approval has conditions which are unacceptable to it. If an approval has conditions unacceptable to either Party, the Parties shall negotiate in good faith terms and conditions to mitigate such unacceptable conditions; provided, however, that no Party shall be required to agree to any term or condition which is unacceptable to it.

1 33. ENVIRONMENTAL PROTECTION:

2 The Project Manager shall design and construct the Arizona Trans-
3 mission System in conformance with the terms and conditions of any
4 contract, permit, or license required for the construction of the
5 Arizona Transmission System.

6 34. UNCONTROLLABLE FORCES:

7 No Party shall be considered to be in default in the performance
8 of any of its obligations under the Project Agreements (other than
9 obligations of said Party to pay costs and expenses) when a fail-
10 ure of performance shall be due to an uncontrollable force. The
11 term "uncontrollable force" shall be any cause beyond the control
12 of the Party affected, including but not restricted to failure of
13 or threat of failure of facilities, flood, earthquake, tornado,
14 storm, fire, lightning, epidemic, war, riot, civil disturbance or
15 disobedience, labor dispute, labor or material shortage, sabotage,
16 restraint by court order or public authority (whether valid or
17 invalid), and action or non-action by or inability to obtain or
18 keep the necessary authorizations or approvals from any governmen-
19 tal agency or authority, which by exercise of due diligence such
20 Party could not reasonably have been expected to avoid and which
21 by exercise of due diligence it shall be unable to overcome. It
22 is the intent of the Parties that the principle of Ejusdem Generis
23 shall not be used as a limitation on the term "uncontrollable
24 force" in interpreting or construing this Participation Agree-
25 ment. Rather the Parties intend a liberal interpretation of that
26 term, and accordingly intend that in questions of assumption of

1 risk or contingencies, whether foreseen or not, the presumption
2 shall be that risks not explicitly assumed by a Party are not
3 assumed by said Party if, in fact, they are uncontrollable even
4 with foresight. Nothing contained herein shall be construed so as
5 to require a Party to settle any strike or labor dispute in which
6 it may be involved. Either Party rendered unable to fulfill any
7 of its obligations under the Project Agreements by reason of an
8 uncontrollable force shall give prompt written notice of such fact
9 to the other Party and shall exercise due diligence to remove such
10 inability with all reasonable dispatch. The term "Party" as used
11 in this Section 34 shall include the Project Manager, Operating
12 Agent and Scheduling Agent in their capacities as such.

13 **35. BINDING OBLIGATIONS:**

14 35.1 All of the respective covenants and obligations of each of
15 the Parties set forth and contained in the Project Agree-
16 ments shall bind and shall be and become the respective
17 covenants and obligations of:

18 35.1.1 Each such Party;

19 35.1.2 All mortgagees, trustees and secured parties under
20 all present and future mortgages, indentures and
21 deeds of trust and security agreements which are or
22 may become a lien upon any of the interests of the
23 Parties in the Arizona Transmission System; provid-
24 ed, however, that such covenants and obligations
25 shall become binding upon such parties only at the
26 time of taking possession;

1	35.1.3 All receivers, assignees for the benefit of credi-
2	tors, bankruptcy trustees and referees of the Party;
3	35.1.4 All other persons, firms, partnerships or corpora-
4	tions claiming through or under any of the fore-
5	going; and
6	35.1.5 Any successors or assigns of any of those mentioned
7	in Sections 35.1.1 through 35.1.4.
8	35.2 All of the respective covenants and obligations of each of
9	the Parties set forth and contained in the Project Agree-
10	ments shall be covenants and obligations running with such
11	Party's respective rights, titles and interests in the Ari-
12	zona Transmission System and in, to and under the Project
13	Agreements, and shall be for the benefit of the respective
14	rights, titles and interests of the Parties and their
15	respective successors and assigns, in and to the Arizona
16	Transmission System. It is the specific intention of this
17	provision that all such covenants and obligations shall be
18	binding upon any party which acquires any of the rights,
19	titles and interests of any such Party in the Arizona Trans-
20	mission System or in, to and under the Project Agreements
21	and that all of the above-described persons and groups shall
22	be obligated to use such Party's rights, titles and interest
23	in the Arizona Transmission System and/or in, to or under
24	the Project Agreements for the purpose of discharging its
25	covenants and obligations under the Project Agreements;
26	except that in the case of a partial assignment the assignee

1 shall only be required to share in the cost of fulfilling
2 the covenants and obligations of the assigning Party in, to
3 and under the Project Agreements to an extent proportionate
4 or attributable to such assignment.

5 36. NONDEDICATION OF FACILITIES:

6 The Parties do not intend to dedicate and nothing in this Partici-
7 pation Agreement or the Project Agreements shall be construed as
8 constituting a dedication by either Party of its properties or
9 facilities, or any part thereof, to the other Party or to the
10 customers of the other Party.

11 37. MORTGAGE AND TRANSFER OF INTEREST:

12 37.1 Each Party shall have the right to mortgage, create or pro-
13 vide for a security interest in or convey in trust all or a
14 part of its ownership share in the Arizona Transmission
15 System, together with an equal interest in the Project
16 Agreements, to a trustee or trustees under a deed of trust,
17 mortgage or indenture or to a secured party or parties under
18 a security agreement, as security for its present or future
19 bonds or other obligations or securities, and to any succes-
20 sors or assigns thereof, without need for the consent of the
21 other Party and without such mortgagee, trustee or secured
22 party assuming or becoming in any respect obligated to per-
23 form any of the obligations of the Party.

24 37.2 Any mortgages, trustee, or secured party under present or
25 future deeds of trust, mortgages, indentures or security
26 agreements of either Party, and any successor or assignee

1 thereof, and any receiver, referee or trustee in bankruptcy
2 or reorganization of either Party, and any successor by
3 action of law or otherwise, and any purchaser, transferee or
4 assignee of any of them may, without the consent of the
5 other Party, succeed to and acquire all the rights, titles
6 and interests of such Party in the Arizona Transmission Sys-
7 tem and the Project Agreements, and may take over possession
8 of or foreclose upon said property, rights, titles and
9 interests of such Party, and in such event shall assume and
10 be obligated fully to perform and discharge all of the obli-
11 gations of such Party hereunder and under any other Project
12 Agreement.

13 37.3 Except as provided in Section 25, each Party shall have the
14 right to transfer or assign all or part of its Rated Capa-
15 bility in the Arizona Transmission System, together with an
16 equal interest in the ownership of the Arizona Transmission
17 System and in the Project Agreements, to any person, part-
18 nership, corporation, or governmental corporation or agency
19 engaged in the generation, transmission or distribution of
20 energy.

21 37.4 Except as otherwise provided in Sections 37.1 and 37.2, any
22 successor to the rights, titles and interests of a Party in
23 the Arizona Transmission System, together with an equal
24 interest in the Project Agreements, shall assume and agree
25 fully to perform and discharge all of the obligations here-
26 under of such Party, and such successor shall notify the

1 other Party in writing of such transfer, assignment or mer-
2 ger, and shall furnish evidence of such transfer, assignment
3 or merger and thereupon shall be considered to be a Party in
4 the Arizona Transmission System and the transferring Party
5 shall thereupon, without the consent of the other Party, be
6 released from all obligations under the Project Agreements
7 so assumed and agreed to by such successor.

8 **38. GENERAL PROVISIONS GOVERNING PROJECT AGREEMENTS:**

9 38.1 The Parties agree to negotiate in good faith and to proceed
10 with diligence to obtain all of the Project Agreements be-
11 tween the Parties and between the Parties and other entities.

12 38.2 Each Party agrees, upon request by the other Party, to make,
13 execute and deliver any and all documents reasonably requir-
14 ed to implement this Participation Agreement and the Project
15 Agreements.

16 38.3 Each term, covenant and condition of this Participation
17 Agreement and the Project Agreements is deemed to be an
18 independent term, covenant and condition, and the obligation
19 of each Party to perform any or all of the terms, covenants
20 and conditions to be kept and performed by it is not depen-
21 dent on the performance by the other Party of any or all of
22 the terms, covenants and conditions to be kept and performed
23 by them.

24 38.4 If any of the terms, covenants or conditions of this Parti-
25 cipation Agreement or any of the Project Agreements, or the
26 application of any such term, covenant or condition, shall

1 be held invalid as to any person or circumstance by any
2 court having jurisdiction in the premises, all other terms,
3 covenants or conditions of such agreements and their appli-
4 cation shall not be affected thereby, but shall remain in
5 force and effect.

6 38.5 The Project Agreements shall be subject to filing with, and
7 to such changes or modifications as may from time to time be
8 directed by, competent regulatory authority, if any, in the
9 exercise of its jurisdiction.

10 38.6 Except as otherwise specifically provided in this Participa-
11 tion Agreement or the Project Agreements, the Parties do not
12 intend to create rights in or to grant remedies to any third
13 party as a beneficiary of this Participation Agreement or
14 the Project Agreements or of any duty, covenant, obligation
15 or undertaking established therein.

16 38.7 Any waiver at any time by any Party of its rights with
17 respect to a default or any other matter arising in connec-
18 tion with this Participation Agreement or a Project Agree-
19 ment shall not be deemed a waiver with respect to any subse-
20 quent default or matter.

21 38.8 All costs or expenses, including all taxes that the Operat-
22 ing Agent is required to pay (but not specifically referred
23 to in other sections of this Participation Agreement), which
24 are incurred by the Operating Agent in connection with the
25 performance of its obligations under this Participation
26 Agreement and which are not specifically allocated to the

1	Parties in accordance with this Participation Agreement
2	shall be equitably allocated among the Parties in a manner
3	to be mutually agreed upon by both Parties.
4	38.9 Should a change in circumstances, economic factors, or basic
5	technology occur which results or may result in a substan-
6	tial increase or decrease in the benefits to or expenses
7	incurred by a Party, including the Operating Agent, which
8	such change was not within the reasonable contemplation of
9	the Parties at the time of the execution of this Participa-
10	tion Agreement, the Parties, including the Project Manager
11	or Operating Agent, shall negotiate in good faith in order
12	that an appropriate and equitable adjustment shall be made
13	in the payments to the Project Manager or Operating Agent
14	and in the allocation of expenses among the Parties. Such
15	adjustment shall be fair and equitable as to both the Pro-
16	ject Manager or Operating Agent and the other Party. Any
17	dispute under this Section 38.9 shall be subject to arbitra-
18	tion.
19	39. <u>TERM:</u>
20	39.1 This Participation Agreement shall become effective when
21	signed by the Parties and shall have a term of seventy (70)
22	years from its effective date unless terminated earlier
23	pursuant to Section 39.3 or 39.4.
24	39.2 This Participation Agreement supersedes and cancels the
25	Arizona - San Diego 500kV Interconnection Letter of
26	Understanding dated November 22, 1978.

1	39.3 This Participation Agreement shall terminate on March 1,
2	1982 unless the Parties have given written notice that each
3	certificate or approval in Sections 31.2 and 31.3 has been
4	issued without conditions which are unacceptable to both
5	Parties.
6	39.4 If any certificate or approval in Sections 31.2 or 31.3 has
7	been issued with conditions which are unacceptable to a
8	Party and the Parties have been unable to agree within sixty
9	(60) days after such issuance to terms and conditions to
10	mitigate the unacceptable conditions, then either Party may
11	give written notice to terminate this Participation Agree-
12	ment. Thirty (30) days after such notice to terminate, this
13	Participation Agreement shall terminate.
14	39.5 Upon termination of this Participation Agreement, the Par-
15	ties shall have no further obligation to each other here-
16	under except the following:
17	39.5.1 Each Party shall be responsible for its Responsibil-
18	ity for Costs incurred up to the date of termina-
19	tion, and
20	39.5.2 The Project Manager or the Operating Agent shall
21	sell the property jointly owned by the Parties
22	pursuant to this Participation Agreement for the
23	maximum reasonable value and the costs of such sale
24	and all income, if any, derived therefrom shall be
25	shared by the Parties in proportion to their respec-
26	tive ownership interests therein.

1 40. RELATIONSHIP OF THE PARTIES:

2 40.1 The covenants, obligations and liabilities of the Parties
3 are intended to be several and not joint or collective and
4 nothing herein contained shall ever be construed to create
5 an association, joint venture, trust or partnership, or to
6 impose a trust or partnership covenant, obligation or lia-
7 bility on or with regard to either of the Parties. Each
8 Party shall be individually responsible for its own cove-
9 nants, obligations and liabilities as herein provided.
10 Neither shall be under the control of or shall be deemed to
11 control the other. Neither Party shall be the agent of or
12 have a right or power to bind the other without its express
13 written consent, except as expressly provided in this Parti-
14 cipation Agreement.

15 40.2 The Parties hereby elect to be excluded from the application
16 of Subchapter "K" of Chapter 1 of Subtitle "A" of the Inter-
17 nal Revenue Code of 1954, or such portion or portions there-
18 of as may be permitted or authorized by the Secretary of the
19 Treasury or his delegate insofar as such Subchapter, or any
20 portion or portions thereof, may be applicable to the Par-
21 ties under this Participation Agreement.

22 /

23 /

24 /

25 /

26 /

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

41. EXECUTION:

IN WITNESS WHEREOF, the Parties have caused this Participation Agreement to be executed and effective as of the 24th day of June 1981.

APPROVED AS TO FORM
APS L.P. Agreement
By J.L. Parrish
Date 6-23-81

ARIZONA PUBLIC SERVICE COMPANY

By Keith L. ...
President

SAN DIEGO GAS & ELECTRIC COMPANY

By ...
Chairman Of The Board
and Chief Executive Officer



PO. BOX 1831 • SAN DIEGO, CA 92112-4150 • 619/696-2000

81-050.04.04
FILE NO. 78-003.04.04

April 27, 2000

Mr. Rex Stulting
Arizona Public Service Company
400 N. 5th Street, MS 2259
Phoenix, AZ 85004

Mr. Frank Barbera
Assistant Power Manager
P. O. Box 937
Imperial, CA 92251

Gentlemen:

Attached for your consideration are the loss coefficients for the Arizona and California transmission system.

As you know, we conducted a review of the transmission loss procedure and the methodology being used to determine losses. That review pointed out the fact that we had incorrectly calculated losses for a considerable period of time and corrections were needed posthaste.

We have corrected our procedure and methodology to determine losses, as indicated on the attached Table of Loss Coefficients for Palo Verde – North Gila and North Gila – Imperial Valley.

While this correction results in an increase of power and energy scheduled to SDG&E for energy losses, it does not attempt to balance the energy losses with the methodology in use by the California Independent System Operator, as we have discussed.

Should you have any technical questions regarding the methodology or loss calculations, please contact Lu Kondragunta at 619.725.8710. Any other question should be directed to me at 619.725.8639 or Betty Cash-Hunter at 619.725.8688.

Sincerely,

S. Ali Yari
Manager, Grid Operation Services

cc: B. Cash-Hunter
L. Kondragunta

ARIZONA TRANSMISSION SYSTEM
OPERATING PROCEDURE NO. 2
TRANSMISSION LOSS ACCOUNTING
(Revised May 2000)

In accordance with Paragraph 10.4.2 of the Arizona Transmission System Participation Agreement, this procedure is agreed to for calculating, scheduling and accounting for transmission losses on the Arizona Transmission System.

Transmission Loss Determination

Transmission losses will be determined based on actual flows per the Attachments. Linear interpolation will be used between table points. Transmission loss responsibility will be based upon actual meter readings. No load loss responsibility will be proportional to the participants entitlement in the Arizona Transmission System.

Transmission Loss Scheduling

Transmission loss responsibility schedules will be established by SDG&E and agreed to in advance by each participant. It is intended that the loss schedules will approximate the total losses on the transmission system and the deviation between actual losses and scheduled losses will be a minimum. Advanced loss schedules shall be based on historical data when available. All advanced loss schedules will be firm and are not subject to change during the actual daily operations.

SDG&E will receive schedules of power and energy for losses at Palo Verde or mutually agreed to points of delivery.

Transmission Loss Accounting

SDG&E will contact each participant and affected control area and check and verify, after the fact, daily transmission loss schedules.

SDG&E will provide each participant with a monthly accounting of transmission losses including loss responsibility and loss schedules.

Procedure Review and Revision

SDG&E will periodically, or at the request of the other participants, check actual losses on the Arizona Transmission System for the purpose of reviewing and revising, if applicable, Attachments 1, 2 & 3.

This entire procedure is subject to periodic review and revision.

APPROVED:

ARIZONA PUBLIC SERVICE COMPANY
CB Ouse

DATE 7/5/00

SAN DIEGO GAS & ELECTRIC COMPANY
[Signature]

DATE 5/11/00

IMPERIAL IRRIGATION DISTRICT COMPANY
Frank Barber

DATE 6/20/00

ATTACHMENT #1

NO LOAD LOSS FACTOR TABLES

(Loss Responsibility = Losses (MW) x Ownership %)

Palo Verde - N. Gila 500kV Transmission Line No Load Losses Equal:
119kW = 0.119 MW

	<u>Ownership %</u>	<u>Responsibility</u>
SDG&E	76.22%	0.091 MW
APS	11 %	0.013 MW
IID	12.78%	0.015 MW

N. Gila Transformer Bank 4 No Load Losses Equal:
101kW = 0.101 MW

	<u>Ownership %</u>	<u>Responsibility</u>
APS	100 %	.101 MW

N. Gila - Imperial Valley 500kV Transmission Line ^{NO LOAD} Losses Equal:
45kW = 0.045 MW

	<u>Ownership %</u>	<u>Responsibility</u>
SDG&E	85.64%	0.039 MW
IID	14.36%	0.006 MW

Imperial Valley Transformer Bank 80 No Load Losses Equal:
176kW = 0.176 MW

	<u>Ownership %</u>	<u>Responsibility</u>
SDG&E	86 %	0.151 MW
IID	14 %	0.025 MW

ATTACHMENT #2

TRANSFORMER BANK LOSS FACTOR TABLES

N. GILA BANK 4 TRANSFORMER LOSSES

<u>FLOW* (MWh)</u>	<u>NG BANK 4 LOSSES (MWh)</u>
50	0.02
100	0.07
150	0.16
200	0.28

Loss 3

* as measured at N. Gila 69kV bus.

IMPERIAL VALLEY BANK 80 TRANSFORMER LOSSES

<u>FLOW** (MWh)</u>	<u>IV BANK 80 LOSSES (MWh)</u>
50	0.01
100	0.03
150	0.07
200	0.13

Loss 4

** as measured at Imperial Valley 230kV bus

ATTACHMENT # 3

TRANSMISSION LINE LOSS FACTOR TABLES

Mw Flow	Palo Verde - North Gila Coeffs Using 2nd Order Regression
0	0
100	0.04
200	0.28
300	0.72
400	1.36
500	2.2
600	3.24
700	4.48
800	5.92
900	7.56
1000	9.4
1100	11.44
1200	13.68
1300	16.12
1400	18.76
1500	21.6
1600	24.64
1700	27.88

N. GILA - IMPERIAL VALLEY 500KV LINE LOSSES

Mw Flow	North Gila - Imperial Valley Coeffs Using 2nd Order Regression
0	0
100	0.03
200	0.22
300	0.57
400	1.08
500	1.75
600	2.58
700	3.57
800	4.72
900	6.03
1000	7.5
1100	9.13
1200	10.92
1300	12.87
1400	14.98
1500	17.25
1600	19.68
1700	22.27

ATTACHMENT #4

FLOW VALUE COMPONENTS (see Figure #1)

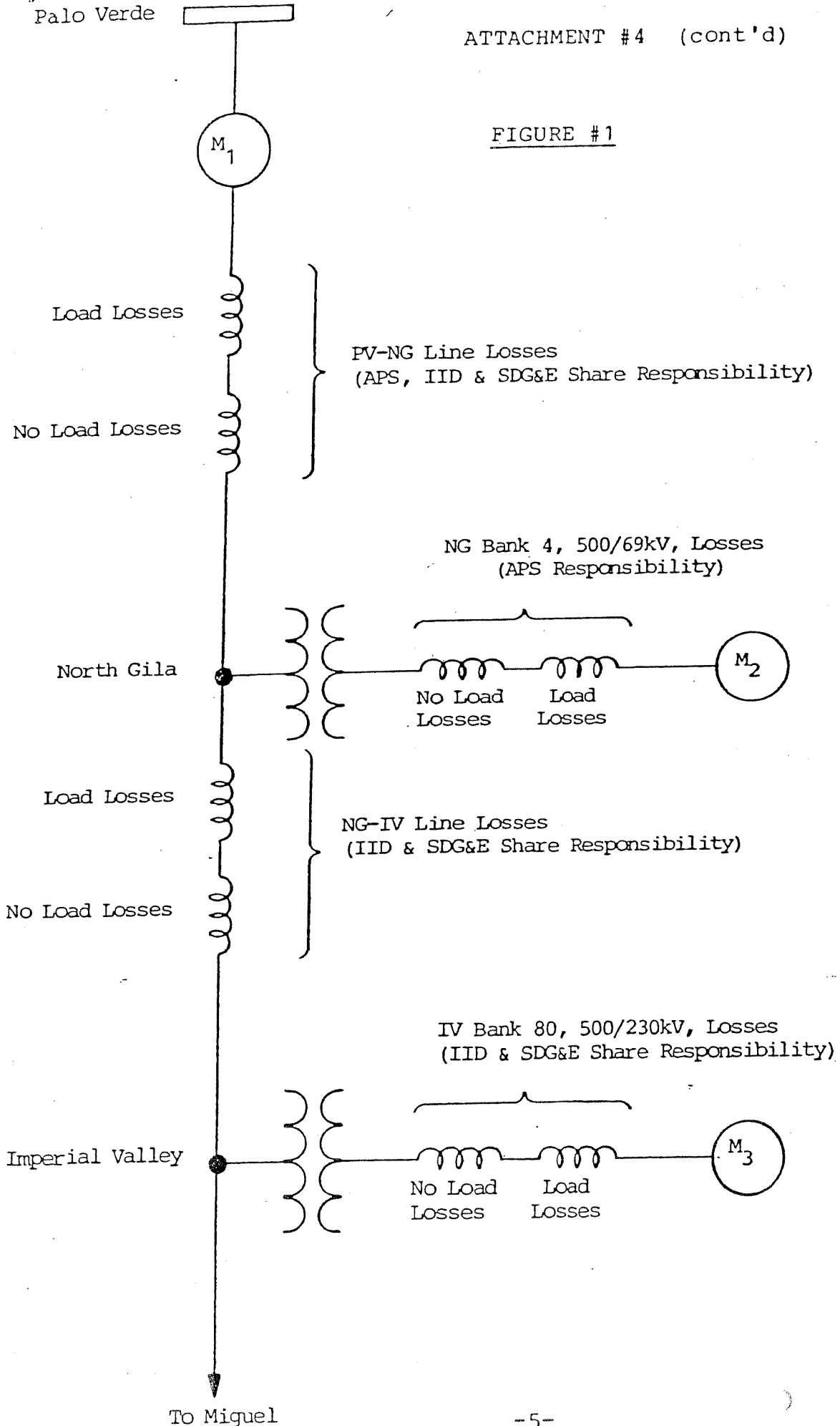
1. APS's flow from Palo Verde (PV) - North Gila (NG) equals:
 - 1.1 APS's metered flow at NG
 - 1.2 APS's NG Transformer Bank 4 Load Losses
 - 1.3 APS's NG Transformer Bank 4 No Load Losses
 - 1.4 APS's share of the PV-NG Transmission Line No Load Losses
 - 1.5 APS's share of the PV-NG Transmission Line Load Losses

2. IID's flow from North Gila (NG) - Imperial Valley (IV) equals:
 - 2.1 IID's metered flow at IV
 - 2.2 IID's share of IV Transformer Bank 80 Load Losses
 - 2.3 IID's share of IV Transformer Bank 80 No Load Losses
 - 2.4 IID's share of the NG-IV Transmission Line No Load Losses
 - 2.5 IID's share of the NG-IV Transmission Line Load Losses

3. IID's flow from PV-NG equals:
 - 3.1 IID's flow from NG-IV
 - 3.2 IID's share of the PV-NG Transmission Line No Load Losses
 - 3.3 IID's share of the PV-NG Transmission Line Load Losses

Palo Verde

FIGURE #1



LOSS COEFFICIENTS OF

PALO VERDE - NORTH GILA and NORTH GILA - IMPERIAL VALLEY SECTION OF SWPL

Mw Flow	Palo Verde - North Gila Coeffs Using 2nd Order Regression	North Gila - Imperial Valley Coeffs Using 2nd Order Regression
0	0	0
100	0.04	0.03
200	0.28	0.22
300	0.72	0.57
400	1.36	1.08
500	2.2	1.75
600	3.24	2.58
700	4.48	3.57
800	5.92	4.72
900	7.56	6.03
1000	9.4	7.5
1100	11.44	9.13
1200	13.68	10.92
1300	16.12	12.87
1400	18.76	14.98
1500	21.6	17.25
1600	24.64	19.68
1700	27.88	22.27

Algorithm to compute the APS and IID losses

1. Read in the hourly metered flows of
 - i. APS at the 69 kV end of NG BK4
 - ii. IID at the 230 kV end of IV BK 80
 - iii. The PV-NG flow at PV 500 kV for this hour.
2. Compute the losses of NG BK4.
 - i. Compute NG BK4 losses due to APS metered flow by using interpolation per attachment #2 of ATS operating procedure No. 2
 - ii. Find no load losses of NG BK4 obtained per attachment #1 of ATS operating procedure No.2
 - iii. Add the above losses and get the total NG BK 4 losses..
3. Compute the APS share of the flow
 - i. Add the NG BK4 losses to the metered flow of APS
4. Compute the losses of IV BK 80
 - i. Compute the IV BK 80 losses due to IID metered flow by using the interpolation per attachment #1 of CTS operating procedure No. 2
 - ii. Get the no load losses of IV BK80 per attachment #1 of ATS operating procedure No. 2
 - iii. Add the above losses to get the total losses of IV BK 80.
5. Calculate the IID share of the flow.
 - i. Add the IV BK80 losses to the metered IID flow.
6. Compute the flow on the NG –IV section
 - i. Subtract APS share of flow from the metered PV-NG flow.
7. Calculate the NG – IV losses.
 - i. Use linear interpolation and the loss coefficients given in the attached spreadsheet.
8. Calculate the IID share of NG-IV losses
 - i. $\text{IID share of NG-IV losses} = \text{NG-IV Losses} * (\text{IID share of the flow} / \text{Flow on NG-IV section})$
 - ii. Add the IID share of no load losses of NG-IV section (obtained per attachment #1 of APS Operating procedure No. 2) to the above losses.
9. Compute the IID share of flow on PV-NG section
 - i. Add the IID share of NG-IV losses to the IID share of flow (Step 5)
10. Find the losses on PV-NG section
 - i. Use linear interpolation and the loss coefficients given in the attached spreadsheet.
11. Compute the APS and IID shares of losses on PV-NG section
 - i. $\text{APS share of PV-NG losses} = \text{APS Share of No Load losses of PV-NG section (obtained per attachment \#1 of APS Operating procedure No. 2)} + (\text{Losses on PV-NG section} * (\text{APS share of flow} + \text{SDG\&E share of YUMA Cogeneration}) / \text{PV-NG metered flow}.$

Algorithm to compute the APS and IID losses

- ii. IID share of PV-NG losses = IID Share of No Load losses of PV-NG section (obtained per attachment #1 of APS Operating procedure No. 2) + Losses on PV-NG section * (IID share of flow on PV-NG section)/PV-NG metered flow
12. Compute the total losses of APS
 - i. APS total losses for this hour = NG BK4 losses + APS share of PV-NG losses
13. Calculate the total losses of IID
 - i. IID total losses for this hour = IV BK 80 losses + IID share of NG-IV losses + IID share of PV-NG losses.
14. Calculate the accumulated losses of APS and IID
 - i. APS acc. losses = APS acc. Losses + APS total losses for this hour
 - ii. IID acc. losses = IID acc. Losses + IID total losses for this hour
15. Go to step 1 to read next hour data

EPCL PROGRAM FOR USE IN GE PSLF TO COMPUTE IID AND APS LOSSES

```
/* This is .EPCL program to be used in GE PSLF */
/* This program computes the IID and APS losses */
/* The input to the program is in a formatted text file "*.prn" */
/* The input data are */
/* 1) The metered PLV-NG flow at PLV; 2) The metered flow on NG BK4 */
/* 3) the metered flow on TL 230 S (IV - ELC 230 kV line)*/
/* and the metered YUMA Cogen */
/* The loss coefficients are defined in tables given below */
/* The output is in two files called "iidout.csv" and "apsout.csv" */
/* This program and the coefficients were developed by */
/* Dr. Lu V. Kondragunta; Grid Operation Services; SDG&E */
```

```
dim *inbuf[1][200]
dim #pvngflo[20], #pvngcoef[20], #ngivflo[20], #ngivcoef[20]
dim #ngbk4flo[10], #ngbk4coef[10], #mlbk80flo[10], #mlbk80coef[10]
```

```
$c = ","
$iidout = "iidout.csv"
$apsout = "apsout.csv"
```

```
@ret = openlog($iidout)
if (@ret < 0)
    logterm(" cannot open the output ifle ", $iidout, "<")
endif
@ret = openlog($apsout)
if (@ret < 0)
    logterm(" cannot open the output ifle ", $apsout, "<")
endif
```

```
@iid_bk80_noload_los = 0.025
@iid_pvng_noload_los = 0.015
@iid_ngiv_noload_los = 0.006
```

```
@aps_bk4_noload_los = 0.101
@aps_pvng_nld_los = 0.013
```

```
#pvngflo[0] = 100
#pvngflo[1] = 200
#pvngflo[2] = 300
#pvngflo[3] = 400
#pvngflo[4] = 500
#pvngflo[5] = 600
#pvngflo[6] = 700
#pvngflo[7] = 800
#pvngflo[8] = 900
#pvngflo[9] = 1000
#pvngflo[10] = 1100
#pvngflo[11] = 1200
#pvngflo[12] = 1300
#pvngflo[13] = 1400
#pvngflo[14] = 1500
#pvngflo[15] = 1600
#pvngflo[16] = 1700
```

```
#pvngcoef[0] = 0.04
#pvngcoef[1] = 0.28
```

EPCL PROGRAM FOR USE IN GE PSLF TO COMPUTE IID AND APS LOSSES

```
#pvngcoef[2] = 0.72  
#pvngcoef[3] = 1.36  
#pvngcoef[4] = 2.2  
#pvngcoef[5] = 3.24  
#pvngcoef[6] = 4.48  
#pvngcoef[7] = 5.92  
#pvngcoef[8] = 7.56  
#pvngcoef[9] = 9.4  
#pvngcoef[10] = 11.44  
#pvngcoef[11] = 13.68  
#pvngcoef[12] = 16.12  
#pvngcoef[13] = 18.76  
#pvngcoef[14] = 21.6  
#pvngcoef[15] = 24.64  
#pvngcoef[16] = 27.88
```

```
#ngivflo[0] = 100  
#ngivflo[1] = 200  
#ngivflo[2] = 300  
#ngivflo[3] = 400  
#ngivflo[4] = 500  
#ngivflo[5] = 600  
#ngivflo[6] = 700  
#ngivflo[7] = 800  
#ngivflo[8] = 900  
#ngivflo[9] = 1000  
#ngivflo[10] = 1100  
#ngivflo[11] = 1200  
#ngivflo[12] = 1300  
#ngivflo[13] = 1400  
#ngivflo[14] = 1500  
#ngivflo[15] = 1600  
#ngivflo[16] = 1700
```

```
#ngivcoef[0] = 0.03  
#ngivcoef[1] = 0.22  
#ngivcoef[2] = 0.57  
#ngivcoef[3] = 1.08  
#ngivcoef[4] = 1.75  
#ngivcoef[5] = 2.58  
#ngivcoef[6] = 3.57  
#ngivcoef[7] = 4.72  
#ngivcoef[8] = 6.03  
#ngivcoef[9] = 7.5  
#ngivcoef[10] = 9.13  
#ngivcoef[11] = 10.92  
#ngivcoef[12] = 12.87  
#ngivcoef[13] = 14.98  
#ngivcoef[14] = 17.25  
#ngivcoef[15] = 19.68  
#ngivcoef[16] = 22.27
```

```
#ngbk4flo[0] = 50  
#ngbk4flo[1] = 100  
#ngbk4flo[2] = 150  
#ngbk4flo[3] = 200
```

EPCL PROGRAM FOR USE IN GE PSLF TO COMPUTE IID AND APS LOSSES

```

#ngbk4flo[4] = 250
#ngbk4flo[5] = 300

#ngbk4coef[0] = 0.02
#ngbk4coef[1] = 0.07
#ngbk4coef[2] = 0.16
#ngbk4coef[3] = 0.28
#ngbk4coef[4] = 0.42
#ngbk4coef[5] = 0.58

#mlbk80flo[0] = 50
#mlbk80flo[1] = 100
#mlbk80flo[2] = 150
#mlbk80flo[3] = 200
#mlbk80flo[4] = 250
#mlbk80flo[5] = 300

#mlbk80coef[0] = 0.01
#mlbk80coef[1] = 0.03
#mlbk80coef[2] = 0.07
#mlbk80coef[3] = 0.13
#mlbk80coef[4] = 0.21
#mlbk80coef[5] = 0.31

$infile = "TIE0003.PRN"
@ret = setinput($infile)
if (@ret < 0)
    logterm ("cannot open the input file ", $infile, " Quitting <")
end
endif
@ret = inline($infile, *inbuf[0])          /* this is the heading */
@hour= 0
@iid_toatl = 0
@aps_total = 0
logprint($apsout, "Hour", $c, "Hour_Date", $c, "APS_Meter", $c,
"BK4_Los", $c, "PVNG_Flo", $c)
logprint($apsout, "YCGen", $c, "APS_Flo", $c, "PVNG_Los", $c, "APS_PVNG_Los", $c,
"APS_Tot_Los <")

logprint($iidout, "Hour", $c, "Hour&Date", $c, "IID_Meeter", $c,
"PVNG_Flo", $c, "APS_Flo", $c)
logprint($iidout, "BK80_Los", $c, "IID_Flo", $c, "NGIV_Flo", $c, "NGIV_Los", $c)
logprint($iidout, "IID_NGIV_Los", $c, "IID_PVNG_Los", $c, "IID_Tot_Los <")

label RDNXTHOUR
@ret = inline($infile, *inbuf[0])
if (@ret <=0)
    logterm ("reached end of file. Processing over <")
    goto ENDPROC
endif
@hour = @hour + 1
logbuf($date, *inbuf[0][0]:27)
logbuf($mlcfe, *inbuf[0][29]:5)
logbuf($ivcfe, *inbuf[0][37]:5)
logbuf($iviid, *inbuf[0][45]:5)
logbuf($sosce, *inbuf[0][52]:6)

```

EPCL PROGRAM FOR USE IN GE PSLF TO COMPUTE IID AND APS LOSSES

```

logbuf($ngplv, *inbuf[0][61]:5)
logbuf($plvswpl, *inbuf[0][68]:7)
logbuf($ycaqf, *inbuf[0][77]:5)

@mlcfe      = abs(atoi($mlcfe) )
@ivcfe      = abs(atoi($ivcfe))
@iviid      = abs(atoi($iviid) )
@sosce      = abs(atoi($sosce) )
@ngplv      = abs(atoi($ngplv) )
@plvswpl    = abs(atoi($plvswpl))
@ycaqf      =abs(atoi($ycaqf) )

/*
logterm(@hour:3, ">",$date:27, ">", @mlcfe:4:0, ">", @ivcfe:4:0, ">",
@iviid:4:0, ">")
logterm(@sosce:6:0, ">", @ngplv:4:0, ">,@plvswpl:6:0, ">", @ycaqf:4:0, "<")
*/

if (@plvswpl = 0 )
    logterm(" the recorded flows are zero. Will read next hour <")
    ogterm(@hour:3, ">",$date:27, ">", @mlcfe:4:0, ">", @ivcfe:4:0, ">",
@iviid:4:0, ">")
    logterm(@sosce:6:0, ">", @ngplv:4:0, ">,@plvswpl:6:0, ">", @ycaqf:4:0,
"<")
    /* goto RDNXTHOUR */
endif
if (@plvswpl >= 1400)
    logterm(" The SWPL flow is more than 1400 Mva. Will skip and goto next
hour <")
    logterm(@hour:3, ">",$date:27, ">", @mlcfe:4:0, ">", @ivcfe:4:0, ">",
@iviid:4:0, ">")
    logterm(@sosce:6:0, ">", @ngplv:4:0, ">,@plvswpl:6:0, ">", @ycaqf:4:0,
"<")
    goto RDNXTHOUR
endif

compute the NG BK4 losses due to APS flow */
@apsflow = @ngplv
@ia = mod(@apsflow,50)
@ia = @apsflow - @ia
@ia = round(@ia/50, 0) -1
if(@ia <0)
    @ia = 0
endif

@aps_bk4_los = #ngbk4coef[@ia] + (#ngbk4coef[@ia+1] - #ngbk4coef[@ia] ) * (
(@apsflow - #ngbk4flo[@ia])/50 )
@aps_bk4_los= @aps_bk4_los + @aps_bk4_noload_los

@apsflow1 = @apsflow + @aps_bk4_los

@pvng_flow= @plvswpl
@ngiv_flow = @pvng_flow- @apsflow
if (@ngiv_flow < 0)
    @ngiv_flow = abs(@ngiv_flow)
endif
/*

```

EPCL PROGRAM FOR USE IN GE PSLF TO COMPUTE IID AND APS LOSSES

```

if(@ngiv_flow = 0)
    logterm(" hour = ", @hour:4:0, "      @pvng_flow = ", @pvng_flow:7:2, "
@apsflow = ", @apsflow:7:2, " @ngiv_flow =", @ngiv_flow:7:2, "<" )
    @ret = epcl("pause.p")
endif
*/
@apsflow = @apsflow1 + @ycaqf
                                                                    /* compute losses

on PV - NG section */
if (@plvswpl != 0)
    @ipv =mod(@pvng_flow,100)
    @ipv = @pvng_flow- @ipv
    @ipv = round(@ipv/100, 0) -1
    if (@ipv < 0)
        @ipv = 0
    endif
    @pvng_los = #pvngcoef[@ipv] + (#pvngcoef[@ipv+1]-#pvngcoef[@ipv])*
((@pvng_flow- #pvngflo[@ipv])/100 )
else
    @pvng_los = 0
endif

if(@pvng_flow != 0)
    @aps_pvng_los = @pvng_los * (@apsflow / @pvng_flow)
    /*share of aps  in pv-nglosses */
    @aps_pvng_los = @aps_pvng_los + @aps_pvng_nld_los
else
    @aps_pvng_los
endif
@aps_tot_los = @aps_pvng_los + @aps_bk4_los

@iidflow = @iviid
@ii = mod(@iidflow,50)
@ii = @iidflow - @ii
@ii = round(@ii/50, 0) - 1
if (@ii < 0)
    @ii = 0
endif

@iid_bk80_los = #mlbk80coef[@ii] + (#mlbk80coef[@ii + 1] - #mlbk80coef[@ii]) *
((@iidflow -#mlbk80flo[@ii])/50 )
@iid_bk80_los = @iid_bk80_los + @iid_bk80_noload_los

@iidflow = @iidflow + @iid_bk80_los

@ing = mod(@ngiv_flow,100)
@ing = @ngiv_flow - @ing
@ing = round(@ing/100, 0) -1
if (@ing < 0)
    @ing = 0
endif

@ngiv_los = #ngivcoef[@ing] + (#ngivcoef[@ing +1]-#ngivcoef[@ing])*
((@ngiv_flow - #ngivflo[@ing])/100)

@iid_ngiv_los = @ngiv_los * (@iidflow/@ngiv_flow )

```


EPCL PROGRAM FOR USE IN GE PSLF TO COMPUTE IID AND APS LOSSES

```

@iid_ngiv_los = @iid_ngiv_los + @iid_ngiv_noload_los

@iidflow = @iidflow + @iid_ngiv_los

if (@pvng_flow != 0)
    @iid_pvng_los = @pvng_los * (@iidflow/@pvng_flow)
    @iid_pvng_los = @iid_pvng_los + @iid_pvng_noload_los
else
    @iid_pvng_los = 0
endif

@iid_tot_los = @iid_bk80_los + @iid_ngiv_los + @iid_pvng_los

@iid_toatl = @iid_toatl + @iid_tot_los
@aps_total = @aps_total + @aps_tot_los

logterm(@hour:3:0, ">", $date:27, ">", @ngplv:8, ">", @aps_bk4_los:6:4, ">",
@plvswpl:6:0, ">")
logterm(@ycaqf:4:0, ">", @apsflow:4:0, ">", @pvng_los:6:4, ">",
@aps_pvng_los:6:4, ">", @aps_tot_los:6:4, "<")
logterm("<<")

logprint($apsout, @hour:3:0, $c, $date:27, $c, @ngplv:8, $c, @aps_bk4_los:6:4,
$c, @plvswpl:6:0, $c)
logprint($apsout, @ycaqf:4:0, $c, @apsflow:4:0, $c, @pvng_los:6:4, $c,
@aps_pvng_los:6:4, $c, @aps_tot_los:6:4, "<")

logterm(@hour:3:0, ">", $date:27, ">", @iviid:8, ">", @pvng_flow:6:0, ">",
@apsflow1:4:1, ">")
logterm(@iid_bk80_los:6:4, ">", @iidflow:4:1, ">", @ngiv_flow:6:1, ">",
@ngiv_los:6:4, ">")
logterm(@iid_ngiv_los:6:4, ">", @iid_pvng_los:6:4, ">", @iid_tot_los:6:4, "<")

logprint($iidout, @hour:3:0, $c, $date:27, $c, @iviid:8, $c, @pvng_flow:6:0, $c,
@apsflow1:4:1, $c)
logprint($iidout, @iid_bk80_los:6:4, $c, @iidflow:4:1, $c, @ngiv_flow:6:1, $c,
@ngiv_los:6:4, $c)
logprint($iidout, @iid_ngiv_los:6:4, $c, @iid_pvng_los:6:4, $c, @iid_tot_los:6:4,
"<")

goto RDNXTHOUR

label ENDPROC

logterm ("APS Toatl Losses = ", @aps_total:9:2, "<")
logterm ("IID Total Losses = ", @iid_toatl:9:2, "<")
logprint($apsout, "APS Toatl Losses = ", @aps_total:9:2, "<")
logprint($iidout, "IID Total Losses = ", @iid_toatl:9:2, "<")
close($apsout)
close($iidout)
end

```

CALIFORNIA TRANSMISSION SYSTEM
OPERATING PROCEDURE NO. 2
TRANSMISSION LOSS ACCOUNTING
(Revised May 2000)

In accordance with Paragraph 14.6 of the California Transmission System Participation Agreement, this procedure is agreed to for calculating, scheduling and accounting for transmission losses on the California Transmission System.

Loss Determination

Transmission and transformer losses will be determined based on "actual"* flows Attachment #1. Linear interpolation will be used between table points. Transmission loss responsibility will be based upon actual meter readings. No-load loss responsibility will be proportional to the participants entitlement in the California Transmission System.

- * The "actual" flow from North Gila Switchyard to the Imperial Valley Switchyard is calculated as follows:

North Gila to Imperial Valley flow = flow as metered at Palo Verde – flow as metered at North Gila 69kV bus – calculated losses in Bank 4 at N. Gila.

Loss Scheduling

Loss responsibility schedules will be established by SDG&E and agreed to in advance by each participant. It is intended that the loss schedules will approximate the total losses on the transmission system and the deviation between actual losses and scheduled losses will be a minimum. Advanced loss schedules shall be based on historical data when available. All advanced loss schedules will be firm and are not subject to change during the actual daily operations.

SDG&E will receive schedules of power and energy for losses at mutually agreed to points of delivery.

Loss Accounting

SDG&E will contact each participant and affected control area and check and verify, after the fact, daily transmission loss schedules.

TRANSMISSION LOSS ACCOUNTING

Procedure Review and Revision

SDG&E will periodically, or at the request of the other participants, check actual losses on California Transmission System for the purpose of reviewing and revising, if applicable, Attachment 1.

This entire procedure is subject to periodic review and revision.

APPROVED:

IMPERIAL IRRIGATION DISTRICT

Frank Barber
DATE 6/20/00

SAN DIEGO GAS & ELECTRIC COMPANY

[Signature]
DATE 5/11/00

ATTACHMENT #1

LOSS FACTOR TABLE

Mw Flow	Palo Verde - North Gila Coeffs Using 2nd Order Regression
0	0
100	0.04
200	0.28
300	0.72
400	1.36
500	2.2
600	3.24
700	4.48
800	5.92
900	7.56
1000	9.4
1100	11.44
1200	13.68
1300	16.12
1400	18.76
1500	21.6
1600	24.64
1700	27.88

IMPERIAL VALLEY BANK 80 TRANSFORMER LOSSES

<u>FLOW** (MW)</u>	<u>LOSSES (MW)</u>
50	0.01
100	0.03
150	0.07
200	0.13

** as measured at Imperial Valley 230 kV bus

N. GILA - IMPERIAL VALLEY 500 KV NO-LOAD LOSSES

45 KW

IMPERIAL VALLEY BANK 80 NO-LOAD LOSSES

176 KW

LOSS COEFFICIENTS OF

PALO VERDE - NORTH GILA and NORTH GILA - IMPERIAL VALLEY SECTION OF SWPL

Mw Flow	Palo Verde - North Gila Coeffs Using 2nd Order Regression	North Gila - Imperial Valley Coeffs Using 2nd Order Regression
0	0	0
100	0.04	0.03
200	0.28	0.22
300	0.72	0.57
400	1.36	1.08
500	2.2	1.75
600	3.24	2.58
700	4.48	3.57
800	5.92	4.72
900	7.56	6.03
1000	9.4	7.5
1100	11.44	9.13
1200	13.68	10.92
1300	16.12	12.87
1400	18.76	14.98
1500	21.6	17.25
1600	24.64	19.68
1700	27.88	22.27

Algorithm to compute the APS and IID losses

1. Read in the hourly metered flows of
 - i. APS at the 69 kV end of NG BK4
 - ii. IID at the 230 kV end of IV BK 80
 - iii. The PV-NG flow at PV 500 kV for this hour.
2. Compute the losses of NG BK4.
 - i. Compute NG BK4 losses due to APS metered flow by using interpolation per attachment #2 of ATS operating procedure No. 2
 - ii. Find no load losses of NG BK4 obtained per attachment #1 of ATS operating procedure No.2
 - iii. Add the above losses and get the total NG BK 4 losses..
3. Compute the APS share of the flow
 - i. Add the NG BK4 losses to the metered flow of APS
4. Compute the losses of IV BK 80
 - i. Compute the IV BK 80 losses due to IID metered flow by using the interpolation per attachment #1 of CTS operating procedure No. 2
 - ii. Get the no load losses of IV BK80 per attachment #1 of ATS operating procedure No. 2
 - iii. Add the above losses to get the total losses of IV BK 80.
5. Calculate the IID share of the flow.
 - i. Add the IV BK80 losses to the metered IID flow.
6. Compute the flow on the NG –IV section
 - i. Subtract APS share of flow from the metered PV-NG flow.
7. Calculate the NG – IV losses.
 - i. Use linear interpolation and the loss coefficients given in the attached spreadsheet.
8. Calculate the IID share of NG-IV losses
 - i. IID share of NG-IV losses = NG-IV Losses* (IID share of the flow/Flow on NG-IV section)
 - ii. Add the IID share of no load losses of NG-IV section (obtained per attachment #1 of APS Operating procedure No. 2) to the above losses.
9. Compute the IID share of flow on PV-NG section
 - i. Add the IID share of NG-IV losses to the IID share of flow (Step 5)
10. Find the losses on PV-NG section
 - i. Use linear interpolation and the loss coefficients given in the attached spreadsheet.
11. Compute the APS and IID shares of losses on PV-NG section
 - i. APS share of PV-NG losses = APS Share of No Load losses of PV-NG section (obtained per attachment #1 of APS Operating procedure No. 2) + (Losses on PV-NG section*(APS share of flow + SDG&E share of YUMA Cogeneration) / PV-NG metered flow.

Algorithm to compute the APS and IID losses

- ii. IID share of PV-NG losses = IID Share of No Load losses of PV-NG section (obtained per attachment #1 of APS Operating procedure No. 2) + Losses on PV-NG section * (IID share of flow on PV-NG section)/PV-NG metered flow
- 12. Compute the total losses of APS
 - i. APS total losses for this hour = NG BK4 losses + APS share of PV-NG losses
- 13. Calculate the total losses of IID
 - i. IID total losses for this hour = IV BK 80 losses + IID share of NG-IV losses + IID share of PV-NG losses.
- 14. Calculate the accumulated losses of APS and IID
 - i. APS acc. losses = APS acc. Losses + APS total losses for this hour
 - ii. IID acc. losses = IID acc. Losses + IID total losses for this hour
- 15. Go to step 1 to read next hour data

EPCL PROGRAM FOR USE IN GE PSLF TO COMPUTE IID AND APS LOSSES

```
/* This is .EPCL program to be used in GE PSLF */
/* This program computes the IID and APS losses */
/* The input to the program is in a formatted text file "*.prn" */
/* The input data are */
/* 1) The metered PLV-NG flow at PLV; 2) The metered flow on NG BK4 */
/* 3) the metered flow on TL 230 S (IV - ELC 230 kV line)*/
/* and the metered YUMA Cogen */
/* The loss coefficients are defined in tables given below */
/* The output is in two files called "iidout.csv" and "apsout.csv" */
/* This program and the coefficients were developed by */
/* Dr. Lu V. Kondragunta; Grid Operation Services; SDG&E */
```

```
dim *inbuf[1][200]
dim #pvngflo[20], #pvngcoef[20], #ngivflo[20], #ngivcoef[20]
dim #ngbk4flo[10], #ngbk4coef[10], #mlbk80flo[10], #mlbk80coef[10]
```

```
$c = ","
$iidout = "iidout.csv"
$apsout = "apsout.csv"
```

```
@ret = openlog($iidout)
if (@ret < 0)
    logterm(" cannot open the output ifle ", $iidout, "<")
endif
@ret = openlog($apsout)
if (@ret < 0)
    logterm(" cannot open the output ifle ", $apsout, "<")
endif
```

```
@iid_bk80_noload_los = 0.025
@iid_pvng_noload_los = 0.015
@iid_ngiv_noload_los = 0.006
```

```
@aps_bk4_noload_los = 0.101
@aps_pvng_nld_los = 0.013
```

```
#pvngflo[0] = 100
#pvngflo[1] = 200
#pvngflo[2] = 300
#pvngflo[3] = 400
#pvngflo[4] = 500
#pvngflo[5] = 600
#pvngflo[6] = 700
#pvngflo[7] = 800
#pvngflo[8] = 900
#pvngflo[9] = 1000
#pvngflo[10] = 1100
#pvngflo[11] = 1200
#pvngflo[12] = 1300
#pvngflo[13] = 1400
#pvngflo[14] = 1500
#pvngflo[15] = 1600
#pvngflo[16] = 1700
```

```
#pvngcoef[0] = 0.04
#pvngcoef[1] = 0.28
```


EPCL PROGRAM FOR USE IN GE PSLF TO COMPUTE IID AND APS LOSSES

```
#pvngcoef[2] = 0.72
#pvngcoef[3] = 1.36
#pvngcoef[4] = 2.2
#pvngcoef[5] = 3.24
#pvngcoef[6] = 4.48
#pvngcoef[7] = 5.92
#pvngcoef[8] = 7.56
#pvngcoef[9] = 9.4
#pvngcoef[10] = 11.44
#pvngcoef[11] = 13.68
#pvngcoef[12] = 16.12
#pvngcoef[13] = 18.76
#pvngcoef[14] = 21.6
#pvngcoef[15] = 24.64
#pvngcoef[16] = 27.88
```

```
#ngivflo[0] = 100
#ngivflo[1] = 200
#ngivflo[2] = 300
#ngivflo[3] = 400
#ngivflo[4] = 500
#ngivflo[5] = 600
#ngivflo[6] = 700
#ngivflo[7] = 800
#ngivflo[8] = 900
#ngivflo[9] = 1000
#ngivflo[10] = 1100
#ngivflo[11] = 1200
#ngivflo[12] = 1300
#ngivflo[13] = 1400
#ngivflo[14] = 1500
#ngivflo[15] = 1600
#ngivflo[16] = 1700
```

```
#ngivcoef[0] = 0.03
#ngivcoef[1] = 0.22
#ngivcoef[2] = 0.57
#ngivcoef[3] = 1.08
#ngivcoef[4] = 1.75
#ngivcoef[5] = 2.58
#ngivcoef[6] = 3.57
#ngivcoef[7] = 4.72
#ngivcoef[8] = 6.03
#ngivcoef[9] = 7.5
#ngivcoef[10] = 9.13
#ngivcoef[11] = 10.92
#ngivcoef[12] = 12.87
#ngivcoef[13] = 14.98
#ngivcoef[14] = 17.25
#ngivcoef[15] = 19.68
#ngivcoef[16] = 22.27
```

```
#ngbk4flo[0] = 50
#ngbk4flo[1] = 100
#ngbk4flo[2] = 150
#ngbk4flo[3] = 200
```

EPCL PROGRAM FOR USE IN GE PSLF TO COMPUTE IID AND APS LOSSES

```

#ngbk4flo[4] = 250
#ngbk4flo[5] = 300

#ngbk4coef[0] = 0.02
#ngbk4coef[1] = 0.07
#ngbk4coef[2] = 0.16
#ngbk4coef[3] = 0.28
#ngbk4coef[4] = 0.42
#ngbk4coef[5] = 0.58

#mlbk80flo[0] = 50
#mlbk80flo[1] = 100
#mlbk80flo[2] = 150
#mlbk80flo[3] = 200
#mlbk80flo[4] = 250
#mlbk80flo[5] = 300

#mlbk80coef[0] = 0.01
#mlbk80coef[1] = 0.03
#mlbk80coef[2] = 0.07
#mlbk80coef[3] = 0.13
#mlbk80coef[4] = 0.21
#mlbk80coef[5] = 0.31

$infile = "TIE0003.PRN"
@ret = setinput($infile)
if (@ret < 0)
    logterm ("cannot open the input file ", $infile, " Quitting <")
end

endif
@ret = inline($infile, *inbuf[0])          /* this is the heading */
@hour = 0
@iid_toatl = 0
@aps_total = 0
logprint($apsout, "Hour", $c, "Hour_Date", $c, "APS_Meter", $c,
"BK4_Los", $c, "PVNG_Flo", $c)
logprint($apsout, "YCGen", $c, "APS_Flo", $c, "PVNG_Los", $c, "APS_PVNG_Los", $c,
"APS_Tot_Los <")

logprint($iidout, "Hour", $c, "Hour&Date", $c, "IID_Meeter", $c,
"PVNG_Flo", $c, "APS_Flo", $c)
logprint($iidout, "BK80_Los", $c, "IID_Flo", $c, "NGIV_Flo", $c, "NGIV_Los", $c)
logprint($iidout, "IID_NGIV_Los", $c, "IID_PVNG_Los", $c, "IID_Tot_Los <")

label RDNXTHOUR
@ret = inline($infile, *inbuf[0])
if (@ret <= 0)
    logterm ("reached end of file. Processing over <")
    goto ENDPROC
endif
@hour = @hour + 1
logbuf($date, *inbuf[0][0]:27)
logbuf($mlcfe, *inbuf[0][29]:5)
logbuf($ivcfe, *inbuf[0][37]:5)
logbuf($iviid, *inbuf[0][45]:5)
logbuf($sosce, *inbuf[0][52]:6)

```

EPCL PROGRAM FOR USE IN GE PSLF TO COMPUTE IID AND APS LOSSES

```

logbuf($ngplv, *inbuf[0][61]:5)
logbuf($plvswpl, *inbuf[0][68]:7)
logbuf($ycaqf, *inbuf[0][77]:5)

@mlcfe      = abs( atof($mlcfe) )
@ivcfe     = abs( atof($ivcfe) )
@iviid     = abs( atof($iviid) )
@sosce     = abs( atof($sosce) )
@ngplv     = abs( atof($ngplv) )
@plvswpl   = abs( atof($plvswpl) )
@ycaqf     = abs( atof($ycaqf) )

/*
logterm(@hour:3, ">", $date:27, ">", @mlcfe:4:0, ">", @ivcfe:4:0, ">",
@iviid:4:0, ">")
logterm(@sosce:6:0, ">", @ngplv:4:0, ">", @plvswpl:6:0, ">", @ycaqf:4:0, "<")
*/

if (@plvswpl = 0 )
    logterm(" the recorded flows are zero. Will read next hour <")
    ogterm(@hour:3, ">", $date:27, ">", @mlcfe:4:0, ">", @ivcfe:4:0, ">",
@iviid:4:0, ">")
    logterm(@sosce:6:0, ">", @ngplv:4:0, ">", @plvswpl:6:0, ">", @ycaqf:4:0,
"<")
    /* goto RDNXTHOUR */
endif
if (@plvswpl >= 1400)
    logterm(" The SWPL flow is more than 1400 Mva. Will skip and goto next
hour <")
    logterm(@hour:3, ">", $date:27, ">", @mlcfe:4:0, ">", @ivcfe:4:0, ">",
@iviid:4:0, ">")
    logterm(@sosce:6:0, ">", @ngplv:4:0, ">", @plvswpl:6:0, ">", @ycaqf:4:0,
"<")
    goto RDNXTHOUR
endif

compute the NG BK4 losses due to APS flow */
@apsflow = @ngplv
@ia = mod(@apsflow, 50)
@ia = @apsflow - @ia
@ia = round(@ia/50, 0) -1
if(@ia < 0)
    @ia = 0
endif

@aps_bk4_los = #ngbk4coef[@ia] + (#ngbk4coef[@ia+1] - #ngbk4coef[@ia] ) * (
(@apsflow - #ngbk4flo[@ia])/50 )
@aps_bk4_los = @aps_bk4_los + @aps_bk4_noload_los

@apsflow1 = @apsflow + @aps_bk4_los

@pvng_flow = @plvswpl
@ngiv_flow = @pvng_flow - @apsflow
if (@ngiv_flow < 0)
    @ngiv_flow = abs(@ngiv_flow)
endif
/*

```

EPCL PROGRAM FOR USE IN GE PSLF TO COMPUTE IID AND APS LOSSES

```

if(@ngiv_flow = 0)
    logterm(" hour = ", @hour:4:0, "    @pvng_flow = ", @pvng_flow:7:2, "
@apsflow = ", @apsflow:7:2, "    @ngiv_flow = ", @ngiv_flow:7:2, "<" )
    @ret = epcl("pause.p")
endif
*/
@apsflow = @apsflow1 + @ycaqf

                                                                    /* compute losses

on PV - NG section */
if (@plvswpl != 0)
    @ipv = mod(@pvng_flow,100)
    @ipv = @pvng_flow - @ipv
    @ipv = round(@ipv/100, 0) - 1
    if (@ipv < 0)
        @ipv = 0
    endif
    @pvng_los = #pvngcoef[@ipv] + (#pvngcoef[@ipv+1]-#pvngcoef[@ipv])*
((@pvng_flow - #pvngflo[@ipv])/100 )
else
    @pvng_los = 0
endif

if(@pvng_flow != 0)
    @aps_pvng_los = @pvng_los * (@apsflow / @pvng_flow)
    /*share of aps   in pv-nglosses */
    @aps_pvng_los = @aps_pvng_los + @aps_pvng_nld_los
else
    @aps_pvng_los
endif
@aps_tot_los = @aps_pvng_los + @aps_bk4_los

@iidflow = @iviid
@ii = mod(@iidflow,50)
@ii = @iidflow - @ii
@ii = round(@ii/50, 0) - 1
if (@ii < 0)
    @ii = 0
endif

@iid_bk80_los = #mlbk80coef[@ii] + (#mlbk80coef[@ii + 1] - #mlbk80coef[@ii]) *
((@iidflow - #mlbk80flo[@ii])/50 )
@iid_bk80_los = @iid_bk80_los + @iid_bk80_noload_los

@iidflow = @iidflow + @iid_bk80_los

@ing = mod(@ngiv_flow,100)
@ing = @ngiv_flow - @ing
@ing = round(@ing/100, 0) - 1
if (@ing < 0)
    @ing = 0
endif

@ngiv_los = #ngivcoef[@ing] + (#ngivcoef[@ing + 1]-#ngivcoef[@ing])*
((@ngiv_flow - #ngivflo[@ing])/100)

@iid_ngiv_los = @ngiv_los * (@iidflow/@ngiv_flow )

```

EPCL PROGRAM FOR USE IN GE PSLF TO COMPUTE IID AND APS LOSSES

```

@iid_ngiv_los = @iid_ngiv_los + @iid_ngiv_noload_los

@iidflow = @iidflow + @iid_ngiv_los

if (@pvng_flow != 0)
    @iid_pvng_los = @pvng_los * (@iidflow/@pvng_flow)
    @iid_pvng_los = @iid_pvng_los + @iid_pvng_noload_los
else
    @iid_pvng_los = 0
endif

@iid_tot_los = @iid_bk80_los + @iid_ngiv_los + @iid_pvng_los

@iid_toatl = @iid_toatl + @iid_tot_los
@aps_total = @aps_total + @aps_tot_los

logterm(@hour:3:0, ">", $date:27, ">", @ngplv:8, ">", @aps_bk4_los:6:4, ">",
@plvswpl:6:0, ">")
logterm(@ycaqf:4:0, ">", @apsflow:4:0, ">", @pvng_los:6:4, ">",
@aps_pvng_los:6:4, ">", @aps_tot_los:6:4, "<")
logterm ("<<")

logprint($apsout, @hour:3:0, $c, $date:27, $c, @ngplv:8, $c, @aps_bk4_los:6:4,
$c, @plvswpl:6:0, $c)
logprint($apsout, @ycaqf:4:0, $c, @apsflow:4:0, $c, @pvng_los:6:4, $c,
@aps_pvng_los:6:4, $c, @aps_tot_los:6:4, "<")

logterm(@hour:3:0, ">", $date:27, ">", @iviid:8, ">", @pvng_flow:6:0, ">",
@apsflowl:4:1, ">")
logterm(@iid_bk80_los:6:4, ">", @iidflow:4:1, ">", @ngiv_flow:6:1, ">",
@ngiv_los:6:4, ">")
logterm(@iid_ngiv_los:6:4, ">", @iid_pvng_los:6:4, ">", @iid_tot_los:6:4, "<")

logprint($iidout, @hour:3:0, $c, $date:27, $c, @iviid:8, $c, @pvng_flow:6:0, $c
@apsflowl:4:1, $c)
logprint($iidout, @iid_bk80_los:6:4, $c, @iidflow:4:1, $c, @ngiv_flow:6:1, $c,
@ngiv_los:6:4, $c)
logprint($iidout, @iid_ngiv_los:6:4, $c, @iid_pvng_los:6:4, $c, @iid_tot_los:6:
"<")

goto RDNXTHOUR

label ENDPROC

logterm ("APS Toatl Losses = ", @aps_total:9:2, "<")
logterm ("IID Total Losses = ", @iid_toatl:9:2, "<")
logprint($apsout, "APS Toatl Losses = ", @aps_total:9:2, "<")
logprint($iidout, "IID Total Losses = ", @iid_toatl:9:2, "<")
close($apsout)
close($iidout)
end

```

Attachment C

Certificate of Service

I hereby certify that I have this day served a copy of this document upon all parties listed on the official service list compiled by the Secretary in the above-captioned proceedings, in accordance with the requirements of Rule 2010 of the Commission's Rules of Practice and Procedure (18 C.F.R. § 385.2010). Dated this 2nd day of August in the year 2005, at Folsom, in the State of California.

/s/ Beth Ann Burns

Beth Ann Burns