

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

San Diego Gas & Electric Company) Docket No. ER03-217-000

**MOTION TO INTERVENE AND COMMENTS OF THE
CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION**

Pursuant to Rules 211 and 214 of the Rules of Practice and Procedure of the Federal Energy Regulatory Commission ("Commission"), 18 C.F.R. §§ 385.211 and 385.214, and the Commission's December 3, 2002 Notice of Filing, the California Independent System Operator Corporation ("ISO") hereby moves to intervene and submits comments in the above-captioned proceeding. The ISO respectfully urges the Commission to condition its acceptance of the agreements filed in this proceeding on development by San Diego Gas & Electric Company ("SDG&E"), Termoelectrica de Mexicali, S. de R.L. de C.V ("TDM-MX"), and Termoelectrica U.S., LLC ("TDM-US") (collectively referred to as "TDM") of operating procedures to address potential congestion caused by the operation of generators connected at the Imperial Valley Substation ("IV") on the facilities of the Imperial Irrigation District ("IID"). Such operating procedures should be acceptable to IID, Comisión Federal de Electricidad ("CFE"), the ISO and other affected parties. The Commission should require SDG&E to file such operating procedures with the Commission prior to energization of TDM-MX's generating plant.

I. COMMUNICATIONS

Please address communications concerning this filing to the following persons:

| | |
|--|---|
| Jeanne M. Solé* Regulatory Counsel Charles Robinson General Counsel and Vice President The California Independent System Operator Corporation 151 Blue Ravine Road Folsom, CA 95630 Tel: (916) 351-4400 Fax: (916) 608-7222 | David Rubin Swidler Berlin Shereff Friedman, LLP 3000 K Street, N.W., Suite 300 Washington, DC 20007 Tel: (202) 424-7500 Fax: (202) 424-7643 |
| Deborah A. Le Vine ¹ Director of Contracts The California Independent System Operator Corporation 151 Blue Ravine Road Folsom, CA 95630 Tel: (916) 351-4400 Fax: (916) 608-7222 | |

* Individuals designated for service pursuant to Rule 203(b)(3), 18 C.F.R. § 203(b)(3).

II. BACKGROUND

On November 25, 2002, SDG&E tendered for filing its Service Agreements numbers 17 and 18 to its FERC Electric Tariff, First Revised Volume No. 6, two interconnection agreements. According to SDG&E, both agreements relate to the interconnection to SDG&E's transmission system of a new generation plant owned by TDM-MX ("TDM-Plant"), and interconnected with SDG&E's electrical system via a tieline owned by TDM-US. SDG&E states that

the TDM-Plant, with a capacity of 650 megawatts², is being constructed on an expedited basis to meet electricity demand in the Western United States, Baja California, Mexico, and the San Diego Basin. It is located near Mexicali, Mexico, and is expected to begin commercial operation on or about April 7, 2003, although the in-service date for certain Interconnection Facilities is November 23, 2002. SDG&E indicates that those facilities are needed to provide interconnection services required to accommodate TDM's backfeed power requirements, not being provided by SDG&E, from SDG&E's transmission system, to accommodate generation construction activities. Moreover, the ISO understands that energization for testing is scheduled to take place in January 2003.

Service Agreement No. 17 is the Interconnection Facilities Agreement dated November 20, 2002 between SDG&E and TDM, under which SDG&E will construct, operate and maintain the proposed interconnection facilities. Service Agreement No. 18, the Interconnection Agreement between SDG&E and TDM, dated November 20, 2002, establishes interconnection and operating responsibilities and associated communications procedures between the parties.

The TDM-Plant is proposed to be interconnected to the ISO Controlled Grid at IV and to be part of the ISO Control Area.³ On December 4, 2002, the ISO granted final approval for connection of the TDM-Plant to the ISO Controlled

¹ In addition to Ms. Solé and Mr. Rubin, the ISO respectfully requests that Ms. Le Vine be included in the Official Service List. Ms. Solé and Ms. Le Vine work in separate buildings, and it would be of significant assistance to the ISO if both were included on the list.

² As indicated in Appendix 1, the interconnection studies modeled the TDM-Plant as a 600 MW plant, and the ISO's approval of the interconnection is thus based on an assumption that the plant's output will be no more than 600 MW.

Grid. In its approval letter (attached as Appendix 1 to this filing) the ISO noted that approval to interconnect does not guarantee full generation output from the plant. Further, the ISO stated that it "requires SDG&E to closely coordinate with the Cal-ISO, IID, CFE and [Sempra Energy Resources] any planned changes to their systems and to ensure that necessary operating procedures are finalized, before energization." The ISO included this requirement because the interconnection studies undertaken by SDG&E and reviewed by the ISO indicate that, under certain conditions, generators, including the TDM-Plant, interconnected to the ISO Controlled Grid at IV, could cause congestion not only within the ISO Control Area but also on facilities within the IID Control Area⁴.

At this time, the ISO does not have an Interconnected Control Area Operating Agreement with IID because IID has indicated to date that it is not able to commence substantive negotiations regarding such an agreement with the ISO. Consequently, the ISO and IID have no procedures to deal with congestion in the IID system caused by generating facilities in the ISO's Control Area.

III. BASIS FOR MOTION TO INTERVENE

The ISO is a non-profit public benefit corporation organized under the laws of the State of California and responsible for the reliable operation of a grid comprising the transmission systems of SDG&E, and other utilities, as well as for the coordination of the competitive Ancillary Services and real-time electricity markets in California. SDG&E's transmission is part of the ISO Control Area, and

³ The ISO is in the process of negotiating a Participating Generator Agreement with TDM for the TDM-Plant.

the TDM-Plant is proposed to be a part of the ISO Control Area. As the Control Area operator that will have to coordinate the operation of the TDM-Plant, to manage any congestion caused by the TDM-Plant on the ISO Controlled Grid, and to interact with IID as to concerns about congestion caused on the IID system by generators connected at IV, the ISO has a unique interest in this proceeding.

IV. COMMENTS

The ISO has issued final approval for interconnection of the TDM-Plant and does not oppose acceptance by the Commission of the agreements filed in this matter, provided that such acceptance is conditioned upon SDG&E filing with the Commission prior to energization in January of the TDM-Plant the procedures to be used by the ISO to address congestion on the IID system caused by generators connected at IV. Such procedures should have the support of IID, CFE, the ISO and other affected parties.

The ISO expects to work with SDG&E, TDM and others to develop operating procedures to ensure the reliable operation of the ISO Controlled Grid with the additional generators connected at IV, including the TDM-Plant.⁵

⁴ The ISO's review of the interconnection studies as to the effects on IID's system was limited by the fact that it was not permitted access to the underlying data about the IID system. Accordingly, as to these effects, the ISO was forced to rely on SDG&E's work.

⁵ The ISO notes that the potential congestion on the IID system and ISO Controlled Grid would be caused by all generators connected at IV, including the Central La Rosita II Power Plant Expansion Project ("LREP") which is expected to begin testing shortly. The ISO filed with the Commission on June 3, 2002 an executed PGA with Energia de Baja California, S. de R.L. de C.V. for LREP in Docket ER02-2009-000. The PGA was accepted by the Commission effective as of May 29, 2002. The potential congestion on the IID system was not presented to the Commission in Docket ER02-2009-000 because at that time IID had not yet provided to SDG&E the information required to study and identify the potential problems. Nonetheless, the same IID congestion issues arise as to LREP, which was behind the TDM-Plant in SDG&E's interconnection queue. Thus, the Commission should encourage SDG&E to work with all generators seeking to interconnect at IV to address the problem in a comprehensive manner.

Moreover, the ISO Tariff dictates how congestion within the ISO Controlled Grid that is not otherwise addressed through facility improvements and operating procedures is to be managed by the ISO.

Nonetheless, as described above, generators connected at IV can also cause congestion on the IID system, depending on the level of imports from CFE and the schedules of other Market Participants over Path 45. The ISO has directed SDG&E in its approval of the TDM-Plant interconnection to work with IID, CFE and the ISO to address the problem. However, the ISO is concerned that there is no clear understanding as to how congestion on the IID facilities caused by generation within the ISO Control Area is to be addressed. The ISO Tariff does not address management of congestion in a contiguous Control Area which is caused by generators interconnected to the ISO Controlled Grid: whether it is the responsibility of the ISO or IID to manage such congestion, or who should absorb the cost of such management (e.g. IID, ISO Market Participants or generators connected at IV). Moreover, absent the ability by IID to commence negotiating an Interconnected Control Area Operating Agreement with the ISO, the ISO has no agreement with IID that addresses this matter.

The ISO recognizes that this is a classic seams issue that the Commission is encouraging entities to resolve through seams agreements, and greater regional integration. Nonetheless, much progress remains to be achieved as to these objectives, whereas the problem of addressing congestion on IID facilities caused by generation within the ISO Control Area must be resolved in the near-term. Direction from the Commission as to the respective responsibilities among

the parties, and the allocation of costs, pending better regional integration, would likely facilitate resolution of these issues by the parties, and would certainly assist the ISO in evaluating the propriety of potential solutions developed among the parties.

If these issues are not clearly and satisfactorily resolved before TDM commences operation (including both testing and commercial operation), the ISO operators may face disputes in real time among IID, CFE, generators connected at IV, and other Market Participants whose schedules may be affected by the need to prevent overloads of IID facilities. This result is inappropriate and unacceptable to the ISO. Accordingly, the ISO urges the Commission to condition acceptance of the interconnection agreements upon development of acceptable procedures to address congestion on IID facilities among the affected parties prior to energization either for testing or for commercial operations.

V. CONCLUSION

For the foregoing reasons, the ISO respectfully requests that the Commission permit it to intervene, and that it be accorded full party status in this proceeding. Further, the ISO urges the Commission to condition any acceptance of the agreements filed in this matter upon SDG&E filing with the Commission prior to energization (either for testing or for commercial operations) of the TDM-Plant the procedures to be used by the ISO to address congestion on the IID system caused by generation connected at IV that have the support of IID, CFE, the ISO and other affected parties. Finally, the ISO requests the Commission to

provide guidance in its order on the respective responsibilities of the various parties in resolving such congestion.

Respectfully submitted,

Jeanne M. Solé
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California Independent System Operator
Corporation
151 Blue Ravine Road
Folsom, CA 95630
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Counsel for the California Independent
System Operator Corporation

Date: December 16, 2002



December 16, 2002

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

Re: **San Diego Gas & Electric Company,
Docket No. ER03-217-000**

Dear Secretary Salas:

Enclosed please find an electronic filing in the above-captioned proceeding of the Motion to Intervene and Comments of the California Independent System Operator Corporation. Thank you for your attention to this filing.

Respectfully submitted,

Jeanne M. Solé
Counsel for the California Independent
System Operator Corporation

CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing document upon each person designated on the official service list compiled by the Secretary in this proceeding.

Dated at Folsom, CA, on this 16th day of December, 2002.

Jeanne M. Solé



December 4, 2002

Mr. David Korinek
Manager, Transmission Planning
San Diego Gas and Electric Company
8316 Century Park Court, CP-52A
San Diego, CA 92123

Dear Mr. Korinek,

The California ISO (Cal-ISO) has reviewed the supplemental study results for SER's Imperial Valley Generation Project No. 1, which is also known as the Termoelectrica de Mexicali (TDM) Project, dated November 8, 2002, November 21, 2002 and November 27, 2002. San Diego Gas and Electric (SDG&E) Company conducted these studies to address the Cal-ISO comments and recommendations, which were listed in the Cal-ISO Facilities Study review letter, dated November 28, 2001.

A summary of the study assumptions and conclusions is included below along with the Cal-ISO recommendations.

Study Assumptions

- SDG&E modeled TDM's 600 MW plant connected to the existing Imperial Valley 230 kV (IV) Substation by a double circuit 230 kV line. SDG&E also modeled an additional 488 MW of new generation projects that are proposed to connect to the IV 230 kV Substation, for a total IV generation of 1088 MW.
- The SDG&E transmission system was analyzed for the following two scenarios:

| Scenario | SDG&E load level | SDG&E import level | EOR level | Path 45 |
|--------------------------|-----------------------------|-------------------------------|------------------|-----------------------|
| 2003 Heavy Summer | 4068 MW | 2300 MW | 6000 MW | Up to 579 MW to SDG&E |
| 2002/2003 Winter | 2253 MW | 1350 MW | 6000 MW | 800 MW to SDG&E |

Study Summary

1. SDG&E is proposing to use a Special Protection System (SPS) to trip either the IV generators or their generation ties, to mitigate the adverse impact created by any of the following outages,
 - N-1 of Miguel – Imperial Valley 500 kV Line. The expected SPS in-service date is February 1, 2003,
 - N-1 of Miguel – Sycamore 230 kV Line with a stuck breaker leading to the outage of Miguel Bank 71. The expected SPS in-service date is April 1, 2003, and
 - N-2 of Miguel – Mission and Miguel – Sycamore 230 kV Lines. The expected SPS in-service date is April 1, 2003.

This SPS will be referred to hereafter as the IV SPS.

2. Under winter operating conditions, after implementing the IV SPS, the double line outage of the La Rumorosa – La Rosita and the La Rosita – Metropoli 230 kV Lines is the most limiting outage. This double line outage could overload the Imperial Valley 500/230 kV Bank. The supplemental studies show that the IV generation should be limited to a maximum of 700 MW, at zero import from CFE, to prevent a bank overload. The proposed upgrade of the Imperial Valley 500/230 kV Bank could potentially remove this limitation. The proposed in-service date for the first phase of the bank upgrade is June 2003. SDG&E is proposing the use of a dispatch nomogram as a temporary mitigation for this problem.
3. Under summer operating conditions, the N-1 outage of the Niland – Coachella Valley 161 kV Line and the T-1 outage of the El Centro 161/92 kV Bank are the most two limiting outages. To protect against possible overloads due to these two outages, the IV generation should be limited to 280 MW and 530 MW respectively, at zero import from CFE. SDG&E is proposing the use of either a dispatch nomogram or a SPS as possible alternatives to mitigate the impact of these two outages.
4. Under summer operating conditions, the loss or contingency overload of the Imperial Valley 500/230 kV Bank seems to be the most limiting element for both SDG&E and CFE systems. SDG&E is proposing the use of a dispatch nomogram as a temporary mitigation for this problem until the second 1120 MVA Imperial Valley 500/230 kV Bank is installed at the end of 2003.
5. SDG&E is also proposing the use of dispatch nomograms to mitigate other contingency overloads, which are aggravated by the addition of the TDM project.

6. The original Facilities Study showed that the TDM Project worsens the pre-project existing frequency deviation when a three-phase fault occurs at Tijuana followed by the loss of the Miguel – Tijuana 230 kV Line, when the fault is cleared in six cycles. In these recent supplemental studies, SDG&E showed that clearing this fault in five cycles would eliminate the frequency deviation problem. SDG&E and CFE confirmed that the clearing time at both Tijuana and Miguel is 5 cycles.

Cal-ISO Recommendations

- Based on the results of these supplemental studies, the Cal-ISO grants final approval to connect the TDM Project to the ISO Grid. This final interconnection approval would allow connection of the proposed TDM Project to the grid, but does not guarantee full generation output from the plant.
- Final interconnection approval means that the ISO is satisfied that facilities and/or necessary operating procedures will be in place, prior to energization, to mitigate the reliability criteria violations aggravated by the addition of the TDM Project to the ISO controlled grid.
- The Cal-ISO concurs with SDG&E's alternative to use SPS to mitigate the impacts of the outage of the Miguel – Imperial Valley 500 kV Line and the double line outage of Miguel – Mission and Miguel – Sycamore 230 kV Lines. The SPS should be designed to be consistent with the SPS guides contained in the ISO Grid Planning Standards.
- The Cal-ISO concurs with the possibility of using dispatch nomograms to mitigate the congestion problems reported in the supplemental studies. However, SDG&E needs to install the necessary SCADA to achieve real time visibility of the transmission lines where flows are to be mitigated by congestion management. Lack of real-time visibility for the lines where flows are controlled by congestion management can adversely impact the reliability of the grid, and can potentially lead to generation curtailment.
- The Cal-ISO requires SDG&E to investigate the possibility of upgrading the terminal equipment of the Miguel – Tijuana 230 kV Line, which can potentially increase the normal and emergency rating of this line from 2000 A and 2133 A to 2422 A and 2600 A respectively.
- To ensure reliable grid operation, the Cal-ISO requires that SDG&E to closely coordinate with the Cal-ISO, IID, CFE and SER any planned changes to their systems and to ensure that necessary operating procedures are finalized, before energization.

If you have any questions about the Cal-ISO review of this study, please call me at (916) 351- 4464 (jmiller@caiso.com) or Mohamed Awad at (916) 351-2153 (mawad@caiso.com).

Sincerely,

Original signed by M. Awad for

Jeffrey Miller
Regional Transmission Manager

CC: Michael R. Niggli (SER)
Leslie Padilla (SER)

Geoff Gaebe (SDG&E)
Abbas Abed (SDG&E)
Steve Taylor (SDG&E)

Armando Perez (ISO)
Rich Cashdollar (ISO)
Jeanne Sole (ISO)
Chuck Wu (ISO)
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Grid Planning (ISO via e-mail)