January 2, 2001

The Honorable David P. Boergers
Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, D.C. 20426

Re: San Diego Gas & Electric Company v. Sellers of Energy and Ancillary Services Into Markets Operated by the California Independent System Operator and the California Power Exchange
Docket Nos. EL00-95-000, *et al*.

Dear Secretary Boergers:

The California Independent System Operator Corporation ("ISO")[1] respectfully submits an original and five copies of this filing in compliance with the Commission's December 15, 2000 "Order Directing Remedies For California Wholesale Electric Markets" in the above-captioned dockets, 93 FERC ¶ 61,294, ("December 15 Order").

I. BACKGROUND

In response to concerns regarding the functioning of the California electricity markets this past summer, and to address issues raised by Market Participants in several ongoing proceedings, the Commission instituted an investigation into the California bulk power markets. On November 1, 2000 the Commission issued an order that proposed certain "specific remedies to address dysfunctions in California's wholesale bulk power markets and to ensure just and reasonable wholesale power rates by public utility sellers in California."[2] The Commission

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[1] Capitalized terms not otherwise defined herein are used in the sense given in the Master Definitions Supplement, Appendix A to the ISO Tariff.

[2] *San Diego Gas & Electric Company v. Sellers of Energy and Ancillary Services Into Markets*

proposed significant changes to the operation of the California markets, including an interim "soft" price cap of $150 on bids in the ISO's markets. Under the Commission's proposal, the Market Clearing Price ("MCP") in the ISO's markets would be capped at $150 and suppliers would be paid "as-bid" for bids in excess of $150. In addition, the Commission proposed certain measures to increase the scheduling of Energy in the forward markets.

Numerous intervenors submitted comments in response to the November 1 Order. Subsequently, in its December 15 Order, the Commission adopted many of the features of its November 1 Order. The Commission required the ISO to file modifications to the ISO Tariff in compliance with the December 15 Order within 15 days. 93 FERC, slip op. at p. 45. The ISO hereby submits changes to the ISO Tariff in compliance with the Commission's directives. In accordance with the Commission's determination, the changes to the ISO Tariff contained herein are proposed to become effective January 1, 2001. *Id*. at 55.

II. UNDERSCHEDULING

As described by the Commission, one facet of its price mitigation proposal is the elimination of chronic underscheduling in the forward markets. The Commission concluded that underscheduling jeopardizes system operations by forcing the ISO to operate a sizeable real-time Energy market, as opposed to merely supplying the balancing services needed to provide reliable transmission service. That is, the Commission recognized that the ISO's Imbalance Energy market was intended to perform a reliability function (*i.e*., balance Generation and Load) and not be used as an Energy exchange. The Commission found that such a large real-time Energy market creates a strong sellers' market and high real-time prices. Therefore, the December 15 Order requires that all Market Participants preschedule their Load and imposes penalties when real-time Load exceeds more than five percent (5%)of an entity's scheduled Load. That is, 95 percent of a Market Participant's Load must be scheduled into the forward markets (*i.e*., the Day-Ahead or Hour-Ahead Markets) or scheduled bilaterally prior to real-time. The Commission also established a 10 MW minimum deviation to accommodate smaller entities (*i.e*., those with less than 200 MW of Load). Thus, no charge will be assessed for a scheduling shortfall up to the greater of five percent (5%) of an entity's Load or 10 MW.

The Commission set the penalty for those entities that exceed the five percent (5%) or 10 MW deadband for any trading hour at two times the cost of Imbalance Energy during that hour (including any Out-of-Market ("OOM") purchases for that hour), with the penalty not to exceed $100/MWh (*i.e*., $100 in

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Operated by the California Independent System Operator and the California Power Exchange, *et al.*, 93 FERC ¶ 61,121 ("November 1 Order") at 61,349.

addition to the actual Energy cost). The Commission also directed that the penalty revenues be disbursed to those Market Participants that scheduled accurately during the trading hour in which the penalties were incurred.

Finally, in order to remove any financial incentive for Generators to favor the real-time market, the Commission directed that suppliers receive the capacity payment for Replacement Reserves <u>or</u> the real-time Energy price, but not both. December 15 Order, slip op. at 43.

The ISO will continue to allocate Imbalance Energy costs in the manner presented in Amendment No. 33, *i.e.*, allocation of as-bid and OOM costs above the real time Market Clearing Price to underscheduled Load and overscheduled Generation based on the Net Negative Uninstructed Deviation concept. The assessment of penalties, however, will be on Load alone, as specified in the December 15 Order. Loads in excess of five percent (5%) of a Scheduling Coordinator's schedule will pay a penalty at two times the Market Clearing Price, up to $100/MWh for each MWh in excess of this threshold.[3]

<u>Implementation</u>

As the ISO noted in its Comments on the November 1 Order, implementation of the forward scheduling requirement will require modifications to the ISO's settlements system.

Attachment A contains the revised ISO Tariff sheets (both clean and redlined versions) necessary to implement the changes outlined above. The revised Tariff sheets apply to Sections 2.2.13.2.3, and 2.5.27.4 of the ISO Tariff.

III. CHANGES TO THE SINGLE PRICE AUCTION

Another element of the Commission's price mitigation proposal is the establishment of a $150 breakpoint or "soft" cap in the ISO's markets. Under the Commission's proposal, the Market Clearing Price in the ISO's Imbalance Energy market is capped at $150. Suppliers can receive their actual bid price for bids over the $150 breakpoint, however, subject to certain reporting and monitoring requirements. Bids above the $150 breakpoint will not set the Market Clearing Price.

The Commission concluded that establishing a $150 breakpoint would limit spot market prices and provide some measure of relief to the buyers who remain

[3] The $100 cap on the penalty means that all energy costs in excess of $50/MWh are disregarded in determining the level of the penalty. The penalty will be less than $100 only when the Market Clearing Price for Imbalance Energy is less than $50. The ISO notes that it remains concerned about the lack of symmetry between generation and load with regard to the penalty required by the Commission, and will address the issue in the Request for Rehearing and Clarification to be filed on January 16.

in the market. The Commission stated that the $150 breakpoint is simply a "monitoring safety net" for what it anticipates will be a vastly reduced spot market. The Commission added that, viewed in its entirety, the price mitigation proposal outlined in the December 15 Order will move the majority of Load out of the ISO's Imbalance Energy Market and the ISO's market will become a residual Energy market (as originally intended in the design of the restructured California Energy markets) rather a primary one.

The Commission directed the ISO to modify its Tariff and procedures to implement the necessary revisions to the ISO's single-price auctions. December 15 Order, slip op. at 45. Under the new regime, the single-price auction will still be effective for bids up to $150. Bids that exceed the $150 breakpoint, however, will be accepted as-bid and will not set the Market Clearing Price.

<u>Implementation – Imbalance Energy Market</u>

In Amendment No. 33,[4] the ISO implemented a soft cap of $250, with procedures very similar to that now required by the Commission with regard to the $150 breakpoint. With respect to the ISO's Imbalance Energy Market, the ISO proposes to implement the directives in the December 15 Order as follows. First, ISO Tariff Section 2.5.23.3, as modified in Amendment No. 33, has been revised to reflect the $150 breakpoint figure. Thus, the Market Clearing Price in the Imbalance Energy market will be set at up to $150. Bids in the Imbalance Energy market above $150 will be paid as-bid and will be subject to the reporting and monitoring information outlined in the Commission's December 15 Order.[5]

The December 15 Order did not address the allocation of the costs the ISO incurs to acquire real-time Energy at prices above the breakpoint. The ISO will accordingly continue to employ the methodology accepted in the Amendment No. 33 Order. Under that methodology, the costs of procuring real-time Energy "as-bid" above the MCP are allocated to Scheduling Coordinators in proportion to their Net Negative Uninstructed Deviations, which, for each Scheduling Coordinator, is essentially equal to its unscheduled Demand that is not met by unscheduled Generation.

Attachment B contains the revised ISO Tariff sheets (both clean and redlined

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[4] Amendment No. 33 was approved by the Commission on December 8, 2000. *California Independent System Operator Corp.,* 93 FERC ¶ 61,239 (the "Amendment No. 33 Order").

[5] With regard to the reporting requirements imposed by the Commission on the ISO, the ISO notes that the Commission has ordered its staff to meet with representatives from the ISO and the PX to finalize the reporting requirements, and that the ISO's first report is expected to be filed with the Commission on February 15, 2001. December 15 Order, slip op. at 59. The ISO looks forward to working with Commission staff on this matter.

versions) necessary to implement the Commission's directives. The revised Tariff sheets apply to Section 2.5.23 of the ISO Tariff.

Implementation – Ancillary Services Markets

In order to comply with the Commission's directives in the December 15 Order, the ISO also will modify the single-price auction methodology in its Ancillary Service Markets. Therefore, the ISO will modify its software such that the Market Clearing Price in each of the Ancillary Service Markets will be "soft" capped at $150. In addition, bids above the $150 breakpoint will be paid as-bid, as outlined in the December 15 Order, subject to certain reporting and monitoring requirements. Ancillary Service costs will continue to be allocated to Scheduling Coordinators based on their Metered Demand, as is done today. However, the price for each Ancillary Service will be calculated using the weighted average of the MCP for that service and the as-bid prices (*i.e.*, the prices above $150) in that hour.

Attachment C contains the revised ISO Tariff sheets (both clean and redlined versions) necessary to implement the Commission's directives. The revised Tariff sheets apply to Sections 2.5.7.3, 2.5.27.1, 2.5.27.2, 2.5.27.3, 2.5.27.4, and 2.5.27.7 of the ISO Tariff.

Implementation – Manual Calculation and Systems Modifications

In its comments on the Commission's November 1 Order, the ISO stated that it would take up to four months to make all of the necessary modifications to its systems in order to implement all features the Commission's proposed price mitigation proposal (*i.e.*, the $150 breakpoint in the ISO's Imbalance Energy market, as well as the underscheduling penalty). The ISO also explained that it could implement a blended automated/manual approach by January 1, 2001. The Commission directed the ISO to adopt this blended approach in the December 15 Order. 93 FERC slip op. at 44.

As well, since Amendment No. 33 was approved on December 8, 2000, the ISO has identified an additional software limitation that creates the need for manual calculations. If the ISO accepts a bid above the breakpoint, for payment "as bid," the software would set the MCP at the $150 breakpoint, even if the highest bid below the breakpoint level that was accepted were less than $150. For example, if the ISO had accepted a bid of $200, and the next highest bid in the stack that is accepted by the ISO and acknowledged by the relevant Scheduling Coordinator was $100, the software would have established a MCP of $150. The ISO will have to evaluate manually, for each settlement interval, whether this circumstance requires the ISO manually to set the MCP at the level of the highest accepted bid below the breakpoint[6]

[6] The ISO is evaluating whether, due to this aspect of the software, the ISO will have to make

In addition, the Commission authorized the ISO to institute a temporary estimated billing procedures, in order to simplify the settlement process. Slip op. at 4-45. While an estimated billing process might expedite the settlement of market changes, the ISO does not intend to implement such a process, but may be required to implement a manual process to be followed by a transition to an automated process that will be transparent to Scheduling Coordinators' statements. An estimated settlement process does not reduce the workload associated with any market re-runs. The ISO is prepared to implement the Commission's directives as outlined in the December 15 Order.

The December 15 Order provided that the $150 breakpoint in each of the ISO's markets is to be in effect for 24 months, although the Commission stated that "we fully expect the breakpoint to be superseded as a result of our aforementioned adoption of a permanent monitoring plan by May 1, 2001." December 15 Order, slip op. at 52. In light of this, the ISO is not adopting a sunset provision for the breakpoint at this time, but will file conforming tariff changes as needed to reinstitute the original pricing provisions of the ISO Tariff when appropriate.

IV. THE ISO'S CONGESTION MANAGEMENT PROCESS

The December 15 Order directs the "ISO, PX and other affected scheduling coordinators to workout the most expeditious way to calculate usage charges for congestion management." Slip op. at 55. As explained in its comments on the PX's Motion for Emergency Expedited Modification of Amendment No. 33,[7] the ISO has already identified an approach for processing Adjustment Bids submitted to the ISO as part of its Congestion Management process. As outlined in the ISO's comments, the ISO believes that it is appropriate to retain a "hard" cap on Adjustment Bids submitted as part of its Congestion Management process. First, as a practical matter, the ISO cannot implement a "soft" cap on Adjustment Bids by January 1, 2001. More importantly, when considering this issue, it is important to remember that the sole purpose of Adjustment Bids in the ISO's Congestion Management process is to permit Market Participants to indicate the value they place on use of constrained transmission paths. The ISO uses the Adjustment Bids submitted by Market Participants to determine the marginal value for use of a particular transmission path (*i.e.*, the Usage Charge applicable to that constrained path). Therefore, application of the "soft" cap or breakpoint methodology as outlined in the

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adjustments to the Market Clearing Prices established since December 8, 2000, when Amendment No. 33 was implemented. The ISO notes that its Department of Market Analysis is evaluating the effect of this approach to the soft cap and may have further comments on this issue in a future ISO request for clarification or rehearing of the December 15 Order.

[7] Filed on December 11, 2000 in Docket No. ER01-607-000 ("December 11 Comments").

December 15 order makes little sense when the purpose of Adjustment Bids is to establish a marginal value for use of a constrained path. In addition, if the overriding objective of the Commission's price mitigation proposal is to limit the volatility and magnitude of prices, it may be more appropriate to focus on the manner in which prices are set in the Energy markets, as opposed to the Congestion Management market.[8] Subsequent to the Commission's Order accepting Amendment No. 33, and consistent with the ISO's December 11 Comments, the ISO and the PX together implemented certain changes to the way they respectively formulate and process Adjustment Bids. These changes were implemented on December 20, 2000 and are described briefly below:

Treatment of PX Adjustment Bids

As explained in the ISO's December 11 Comments, the manner in which the PX uses Adjustment Bids submitted by its participants is, among all Scheduling Coordinators, unique to the PX. Whereas most Scheduling Coordinators submit incremental and decremental bids (which together constitute an Adjustment Bid) with the relative price difference reflecting the price they are willing to pay to use a constrained transmission grid, the PX requires its participants to submit incremental and decremental bids that reflect the marginal cost of their resources and then uses those bids to establish the constrained PX Market Clearing Price in a Zone. Specifically, the PX accepts Adjustment Bids submitted by its participants only if they satisfy a strict relationship to the PX Unconstrained Market-clearing Price ("UMCP"), namely:

- Any incremental ("INC") Adjustment Bid must be greater than or equal to the UMCP
- Any decremental ("DEC") Adjustment Bids must be less than or equal to the UMCP.

On the other hand, the ISO accepts Adjustment Bids for Day-Ahead and Hour-Ahead Congestion Management only if they fall within a certain "economic" range (currently set between $0/MWh to $250/MWh).

Prior to December 20, 2000, the combination of these PX and ISO rules prevented the PX participants from submitting INC bids when the PX UMCP was above $250/MWh, as was the case on many occasions after the implementation of the soft cap on the ISO's Real Time Energy market pursuant to the Amendment No. 33 Order. Since the PX uses both the congestion Usage Charge determined by the ISO (capped at $250) and the marginal PX Adjustment Bid (which must be greater than the UMCP, which was greater than $250) to compute its Constrained Zonal

8 As described further below, the manner by which the PX incorporates and uses the Usage Charges generated by the ISO is unique to the PX and is not relevant to the ISO's Congestion Management process.

Market-Clearing Price ("CZMCP"), a disconnect between the UMCP and CZMCP resulted, in which the constrained price could be less than the unconstrained price.[9]

To resolve this problem, the following accommodation was agreed upon and implemented by the ISO and the PX:

The PX would keep its current rules, but would restrict the range of INC and DEC bids as follows:

- Any INC Adjustment Bid must be greater than or equal to the UMCP, but no greater than UMCP + 0.5*CAP (where CAP is the Adjustment Bid cap, currently set at $250);
- Any DEC Adjustment Bid must be less than or equal to the UMCP, but no less than the UMCP – 0.5*CAP (where CAP is the Adjustment Bid cap. currently set at $250).

The PX then processes the Adjustment Bids submitted by its participants before sending them to the ISO such that the ISO receives Adjustment Bids in the ISO's acceptable "economic" range ($0 to $250).[10]

Subsequent to the completion of the ISO's Congestion Management process, the PX would compute its constrained zonal market clearing prices by adding back in the number that was subtracted from the Adjustment Bids ($875 in the example in n. 9, *infra*).

In addition, as is done today, after the ISO's Congestion Management process is complete, the ISO would utilize unused Adjustment Bids (as well as Supplemental Energy bids) for real time Intra-Zonal Congestion Management. Similar to the approach outlined above, the ISO also would utilize the original Adjustment Bids submitted by the PX participants for purposes of real time

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[9] For example, assume congestion from SP15 to NP15, a PX UMCP of $1,000 and the marginal decremental bid selected in SP15 of $250 (which satisfies both the PX's and the ISO's market rules. Since no PX INC bids could be submitted in NP15 without violating the rules of either the PX or the ISO (*i.e.*, no one could submit an INC greater than $250), CONG would use a Default Usage Charge equal to $30 (calculated as the higher of $30 or the Adjustment Bid minus the marginal DEC bid, or $250 - $250 = $0). The PX zonal price calculator would then set the CZMCP at $250 in SP15 (marginal DEC bid selected in CONG) and $30 in NP15 ($250 + $30 = $280). As explained by both the PX and the ISO, this outcome created a disconnect between the PX's UMCP and CZMCP, since one would expect that constrained zonal prices would be at or above the unconstrained price.

[10] In order to do this, the PX merely has to apply the formula: AB' = AB - UCMCP + 0.5*CAP to all Adjustment Bids submitted by its participants. In the example described in note 9 above, the PX would accept INC bids above $1125 or below $875 and DEC bids between $875 and $1000. If the PX received an INC bid of $1100, it would change the bid to $1,100 - $1,000 +$125 = $225 before forwarding it to the ISO. Similarly, if the PX received a DEC bid of $900, it would modify that bid to $25 ($900 – ($1,000 - $125)) before submitting it to the ISO.

Congestion Management.[11]

The ISO believes that the above approach will work with either a hard cap or a soft cap in the PX market. The ISO understands, however, that due to software implementation time requirements, the PX will not be able to implement the soft cap in its markets by January 1, 2000. Thus, unless otherwise directed by the Commission, the ISO will maintain its existing $250 hard cap for Adjustment Bids until the issues raised by the PX in their December 26 request for rehearing and stay of the December 15 Order are resolved.

V. RMR PREDISPATCH

In Amendment No. 26 to the ISO Tariff,[12] the Commission accepted a requirement that any Scheduling Coordinator that schedules Reliability Must-Run ("RMR" Generation) and that elects to be paid under the RMR Contract must bid its RMR Energy in a PX market (at $0/MWh) when issued a dispatch instruction by the ISO. If the RMR Owner elects the market payment as opposed to the contract payment option, the applicable SC is required to schedule in the PX markets or via bilateral contracts. Six RMR facilities are owned by Pacific Gas and Electric Company ("PG&E"), which up until the December 15 Order had been required to trade exclusively through the PX. The December 15 Order, however, prohibits Investor Owned Utilities ("IOUs") from bidding their generation into the PX.

The ISO does not view this set of circumstances as necessitating a tariff change. The ISO understands that it would be free, as would any other purchaser of power from PG&E, to enter an agreement specifying the terms under which that power would be sold and dispatched. Since RMR Predispatch only occurs by direction of the ISO as a power purchaser, PG&E would not be bidding into the PX at its own discretion or under a regulatory mandate, but due to a contractual (and ISO Tariff) mandate. As such, it will not be in violation of the December 15 Order.

VI. REQUEST FOR CLARIFICATION, REHEARING

This filing represents the ISO's best efforts at complying with the

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11 In the above situation, the original Adjustment Bids submitted by the PX participants could be negative if the UCMCP is less than $125. For example, if the UCMCP is $75, the PX would accept Adjustment Bids in the range -$50 to $200. Thus, although the ISO would not be using negative Adjustment Bids for purposes of Congestion Management, the Adjustment Bids used for real-time Intra-Zonal Congestion Management may be negative. Since the ISO does allow negative Supplemental Bids for real-time Intra-Zonal Congestion Management, we believe this is consistent with current practice.

12 Approved, as modified, by the Commission on March 31, 2000 (90 FERC ¶ 61,345).

Commission's December 15 Order in the short time permitted. The ISO is continuing its evaluation of the Commission's decision. As mentioned above, the ISO plans to file a Request for Clarification and/or Rehearing of some of the elements of the Order on January 16, 2001.

VII. SUPPORTING DOCUMENTS

The following documents, in addition to this letter, support this filing:

Attachment A	Revised Underscheduling Tariff Sheets, both clean and redline;
Attachment B	Revised Imbalance Energy Breakpoint Tariff Sheet, both clean and redline;
Attachment C	Revised Ancillary Services Breakpoint Tariff Sheets, both clean and redline;
Attachment D	A Notice of filing, suitable for publication in the Federal Register (also provided in electronic format); and
Attachment E	A Certificate of Service.

Two additional copies of this filing are enclosed to be date-stamped and returned to our messenger. If there are any questions concerning this filing, please contact the undersigned.

Respectfully submitted,

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