

THE UNITED STATES OF AMERICA  
BEFORE THE  
FEDERAL ENERGY REGULATORY COMMISSION

San Diego Gas & Electric Company,	)	
Complainant,	)	
	)	
v.	)	Docket No. EL00-95-045
	)	
Sellers of Energy and Ancillary Services	)	
Into Markets Operated by the California	)	
Independent System Operator and the	)	
California Power Exchange,	)	
Respondents.	)	
	)	
Investigation of Practices of the California	)	
Independent System Operator and the	)	Docket No. EL00-98-042
California Power Exchange	)	

DIRECT TESTIMONY OF EAN O'NEILL  
ON BEHALF OF  
THE CALIFORNIA INDEPENDENT SYSTEM  
OPERATOR CORPORATION

1 Q. PLEASE STATE YOUR NAME, TITLE, AND BUSINESS ADDRESS.

2 A. My name is Ean O'Neill, and my title is Dispatch Support for Operations  
3 Support & Training with the California Independent System Operator  
4 Corporation ("ISO"). My business address is 151 Blue Ravine Road,  
5 Folsom, CA 95630.

6

7 Q. IN WHAT CAPACITY ARE YOU EMPLOYED?

8 A. My responsibilities include, but are not limited to the following: I am the  
9 Western Systems Coordinating Council ("WSCC") Reliability Management

1 System Project Manager and am a member of the ISO Emergency  
2 Response Team. I respond to and coordinate data requests from the  
3 Federal Energy Regulatory Commission ("Commission" or "FERC"), the  
4 Department of Energy ("DOE"), the California Legislature, state agencies  
5 and other outside entities. I research, write and revise Operating  
6 Procedures, tariff provisions and protocols, and participate on or manage  
7 ISO project teams involved in negotiating agreements, including operating  
8 arrangements, with Participating Transmission Owners, Utility Distribution  
9 Companies, interconnected control areas and other entities.

10

11 **Q. PLEASE DESCRIBE YOUR EDUCATIONAL AND PROFESSIONAL**  
12 **QUALIFICATIONS.**

13 A. I hold a B.A. in Environmental Studies with minors in Economics and  
14 Biology from the California State University, Sacramento. I have twenty-  
15 two years of experience in the electric industry. I was employed at Pacific  
16 Gas and Electric Company ("PG&E") for nine years and held a number of  
17 positions there, including designing electrical distribution systems. Upon  
18 leaving PG&E, I started a consulting business that designed electrical  
19 distribution systems throughout PG&E's system for seven years. I was  
20 later employed by the California Energy Commission ("CEC") for four  
21 years as an Associate Electrical Engineer. While at the CEC, I worked in  
22 the Siting Division where my primary responsibility consisted of reviewing  
23 engineering and planning design components of a new power plant's

1 transmission facilities. I was also employed for one year at the California  
2 Electricity Oversight Board as an Associate Electrical Engineer, where I  
3 participated in meetings at the ISO, WSCC, North American Electric  
4 Reliability Council ("NERC"), California Public Utilities Commission and  
5 CEC.

6

7 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

8 A. The purpose of my testimony is to describe the manner in which the ISO  
9 implemented the Commission's July 25, 2001 Order<sup>1</sup> with respect to  
10 transactions entered into pursuant to the orders issued by DOE on  
11 December 14, 2000 and January 11, 2001 addressing electricity supply  
12 shortages in California.

13

14 **Q. PLEASE DESCRIBE THE FIRST DOE ORDER ADDRESSING**  
15 **ELECTRICITY SHORTAGES IN CALIFORNIA.**

16 A. On December 14, 2000, then Secretary of Energy Bill Richardson issued  
17 an Order pursuant to Section 202(c) of the Federal Power Act finding that  
18 an emergency existed in California by reason of a shortage of electric  
19 Energy. Based on this finding, Secretary Richardson ordered certain  
20 entities, listed in an attachment to that order, to "generate, deliver,  
21 interchange, and transmit electric energy when, as, and in such amounts  
22 as may be requested by the [ISO] . . . ." However, the identified suppliers

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<sup>1</sup> *Order Establishing Evidentiary Hearing Procedures, Granting Rehearing in Part, and Denying Rehearing in Part*, 96 FERC ¶ 61,120 (2001) ("July 25 Order").

1           were required to sell to the ISO only that Energy “available in excess of  
2           electricity needed by each entity to render service to its firm customers.”  
3           The order also stated that the suppliers would not be required to “deliver  
4           Energy or services under the terms of this order” until 12 hours after the  
5           ISO had filed with DOE a signed certification stating that it had been  
6           unable to acquire adequate supplies of electricity in the market.”  
7           Moreover, in order to continue to acquire supplies under the terms of this  
8           order for any 24-hour period, the ISO was required to provide DOE with  
9           such a certification covering that 24-hour period. Finally, the ISO was  
10          required to inform each entity subject to this order of the amount and type  
11          of energy or services requested by 9:00 p.m., EST, of the day prior to the  
12          requested service. The order was set to expire at 3:00 a.m., EST,  
13          December 21, 2000. The December 14 Order, including the attachment,  
14          is attached as Exhibit No. ISO-11.

15

16   **Q.   WERE THE TERMS OF THE DECEMBER 14 ORDER EXTENDED PAST**  
17   **THE DECEMBER 21, 2000 EXPIRATION DATE?**

18   A.   Yes. Subsequent to the release of the December 14 Order, Secretary  
19   Richardson issued three amendments extending the terms of that order  
20   until 3:00 a.m., EST, January 11, 2001.

21

1    **Q.    DID ANY OF THE AMENDMENTS TO THE DECEMBER 14 ORDER**  
2           **MODIFY ANY OF THE SUBSTANTIVE PROVISIONS OF THAT**  
3           **ORDER?**

4    A.    Yes. In the third amendment to the December 14 Order, released on  
5           January 5, 2001, Secretary Richardson revised the ISO's certification  
6           process to require the ISO to provide to DOE by 12:00 noon, EST,  
7           January 9, 2001, a certification "by a responsible official of the State of  
8           California that the state will initiate a program to reduce peak load  
9           electricity consumption by at least 5% by 3:00 a.m., EST, January 16,  
10          2001." The amendment also stated that the ISO could not "agree to a rate  
11          above \$64 per megawatt hour" for Energy delivered pursuant to the  
12          December 14 Order, and specified that "[i]f a rate at or below \$64 cannot  
13          be agreed to by the parties, then the requested service energy or service  
14          will nevertheless be provided, and the rate issue will be referred to the  
15          Federal Energy Regulatory Commission . . . ."

16  
17   **Q.    PLEASE DESCRIBE THE SECOND DOE ORDER ADDRESSING**  
18           **ELECTRICITY SHORTAGES IN CALIFORNIA.**

19   A.    On January 11, 2001, Secretary Richardson issued another Order  
20          pursuant to Section 202(c) of the Federal Power Act, finding, as he did in  
21          the December 14 Order, that an emergency existed in California by  
22          reason of a shortage of electric Energy, and ordering certain entities, listed  
23          in an attachment to the new order, to "generate, deliver, interchange, and

1 transmit electric energy when, as, and in such amounts as may be  
2 requested by the [ISO] . . .” The January 11 Order contained terms and  
3 conditions substantially similar to those in the December 14 Order, with  
4 the additional requirement that the ISO notify DOE that it had implemented  
5 for each 24-hour certification period the conservation measures specified  
6 for Stage One and Stage Two emergencies set forth in the ISO Tariff. The  
7 ISO was also ordered to submit a status report from a “responsible state  
8 official” on the state program to reduce peak electricity load use by 5:00  
9 p.m., EST, January 16, 2001. Finally, the ISO was required to seek  
10 information on the availability of Energy or services from suppliers subject  
11 to this Order at the time of certification, and those suppliers were obligated  
12 to respond within 6 hours of the ISO’s query. The January 11, 2001 Order  
13 was to expire by its terms at 3:00 a.m., EST, January 18, 2001. The  
14 January 11 Order, including the attachment, is attached as Exhibit No.  
15 ISO-12.

16  
17 **Q. WERE THE TERMS OF THE JANUARY 11 ORDER EXTENDED PAST**  
18 **THE JANUARY 18, 2001 EXPIRATION DATE?**

19 A. Yes. On January 17, 2001, Secretary Richardson issued an amendment  
20 extending the terms of the January 11 Order until 3:00 a.m., EST, January  
21 24, 2001, and on January 23, 2001, current Secretary of Energy Spencer  
22 Abraham further extended the terms of that order until 3:00 a.m., EST,  
23 February 7, 2001. These amendments also required the ISO to provide

1 DOE with additional progress reports on the State of California's program  
2 to reduce peak load electricity use.

3

4 **Q. WAS IT NECESSARY FOR THE ISO TO AVAIL ITSELF OF THE**  
5 **TERMS OF THE DOE ORDERS?**

6 A. Yes. During the period that the two DOE Orders were in effect, the ISO  
7 provided DOE with 34 certifications explaining that it had been unable to  
8 acquire in the forward markets adequate supplies of electricity to meet  
9 forecasted demand for the upcoming 24-hour period. Accompanying each  
10 certification was a report describing the ISO's assessment of the  
11 conditions requiring the use of the authority granted under the DOE  
12 Orders, including the forecast components and values expected for each  
13 component, the magnitude and duration of the resource deficiency, and  
14 the conditions that gave rise to the deficiency. Attached to this report was  
15 a spreadsheet that documented the ISO's load forecast, scheduled loads,  
16 forecasted real-time Energy and other arrangements made in California  
17 and out of California for the subsequent 24-hour period. An example of a  
18 certification filed by the ISO, along with the accompanying report and  
19 attachment, is attached as Exhibit No. ISO-13. Additionally, attached as  
20 Exhibit No. ISO-14 is a document showing all of the dates on which the  
21 ISO provided a certification to DOE, as well as the time that those  
22 certifications were faxed and emailed to DOE.

23

1    **Q.    WHAT ACTION DID THE ISO TAKE TO ADDRESS RESOURCE**  
2           **DEFICIENCIES DURING THE PERIOD IN WHICH THE DOE ORDERS**  
3           **WERE IN EFFECT?**

4    A.    As noted in its numerous certifications to DOE during this time period, the  
5           ISO often anticipated that scheduled resources (i.e., those resources  
6           scheduled in the ISO’s Day-Ahead and Hour-Ahead Markets) and real-  
7           time resources (i.e., capacity expected to be bid into the ISO’s Real Time  
8           Market) during the subsequent 24-hour period would be insufficient to  
9           satisfy forecasted loads in the ISO’s Control Area. Therefore, in an effort  
10          to obtain sufficient Energy to meet forecasted and actual loads, the ISO,  
11          during the period in which the DOE orders were in effect, engaged in  
12          numerous transactions with a variety of suppliers outside of its formal  
13          markets for Energy and capacity. These types of transactions are  
14          characterized as Out-of-Market (“OOM”) transactions. In arranging OOM  
15          transactions, ISO Operations personnel either would contact, or were  
16          contacted by, suppliers, usually via telephone, and would negotiate  
17          quantities and prices for Energy to be delivered.

18  
19   **Q.    DID THE COMMISSION ADDRESS TRANSACTIONS ENTERED INTO**  
20           **BY THE ISO PURSUANT TO THE DOE ORDERS IN ITS JULY 25**  
21           **ORDER?**

22    A.    Yes. In the July 25 Order, the Commission explicitly excluded  
23          transactions entered into pursuant to the DOE Orders from refund liability.



1 Specifically, the Commission stated that “rates for transactions entered  
2 into under Section 202(c) in compliance with the Secretary’s orders are  
3 outside the scope of this proceeding.” 96 FERC at 61,516.

4

5 **Q. HOW HAS THE ISO DETERMINED WHICH OF THE TRANSACTIONS**  
6 **THAT OCCURRED DURING THE PERIOD THAT THE DOE ORDERS**  
7 **WERE IN PLACE CONSTITUTED TRANSACTIONS “ENTERED INTO**  
8 **UNDER SECTION 202(c)?”**

9 A. The only information that the ISO has available as to which sellers were  
10 motivated to provide Energy to the ISO solely because of the existence of  
11 the DOE orders relates to OOM transactions that the ISO entered into  
12 during real time of the specific operating days with respect to which the  
13 ISO had made certification to DOE under the orders. During the period  
14 covered by the DOE Orders, ISO real-time operations personnel were  
15 usually contacted by suppliers asking if the ISO needed a certain amount  
16 of Energy for a specific hour at a specified price. Also, the ISO itself  
17 contacted suppliers on several occasions seeking to procure Energy that  
18 those suppliers had indicated as “available” pursuant to the DOE Orders.  
19 In both of these situations, ISO real-time operations personnel made a  
20 notation, "DOE Order", on the OOM sheet, which is a document prepared  
21 by ISO real-time operations personnel during the course of each operating  
22 day. It is these notations that the ISO has used to identify those  
23 transactions “entered into under Section 202(c) in compliance with” the

1 DOE Orders, and therefore intends to exclude from refund calculations.

2 The OOM sheets that contain references to OOM purchases made

3 pursuant to the DOE Orders are attached as Exhibit No. ISO-15.

4

5 **Q. PLEASE DESCRIBE IN GREATER DETAIL THE TRANSACTIONS**  
6 **INVOLVING THOSE SUPPLIERS WHO CONTACTED THE ISO DURING**  
7 **THE PERIOD THAT THE DOE ORDERS WERE IN EFFECT SEEKING**  
8 **TO SELL ENERGY TO THE ISO.**

9 A. One supplier, upon contacting the ISO to arrange OOM sales, read a  
10 prepared statement to the ISO real-time operations personnel explaining  
11 that the Energy was being supplied pursuant to the DOE Order under  
12 Section 202(c). After reading this statement, the supplier would provide  
13 the number of megawatts that it agreed to deliver at the negotiated price.  
14 Additionally, other suppliers sometimes contacted the ISO during this  
15 period seeking to make sales of Energy to the ISO. However, unless the  
16 supplier explicitly indicated that the Energy was being provided pursuant  
17 to the DOE Orders, ISO real-time operations personnel did not indicate  
18 these transactions as being entered into "pursuant to" the DOE Orders.

19

20 The ISO real-time operations personnel were asked on many occasions  
21 by suppliers what the bid price was. The ISO real-time operators  
22 responded that the supplier needed to make an offer. On a few  
23 occasions, the supplier was adamant that the ISO real-time operators

1 state a bid price. In those situations the ISO real-time operator informed  
2 the supplier of that supplier's last bid price, the typical price being paid by  
3 the ISO for OOM Energy on that day, or stated the \$250/MWh price cap in  
4 effect during that period.

5

6 **Q. PLEASE DESCRIBE IN GREATER DETAIL THOSE INSTANCES IN**  
7 **WHICH THE ISO CONTACTED SUPPLIERS TO OBTAIN ENERGY**  
8 **IDENTIFIED BY THOSE SUPPLIERS AS EXCESS ENERGY**  
9 **PURSUANT TO THE DOE ORDERS.**

10 A. As noted above, there were occasions when ISO real-time operators  
11 contacted suppliers requesting they deliver the Energy they stated was  
12 available as "excess" Energy pursuant to the DOE Order in a facsimile  
13 delivered to the ISO the night prior to the operating day. The supplier  
14 would then respond that the Energy was available and state the price at  
15 which it was willing to sell the Energy to the ISO. These transactions were  
16 noted as being provided pursuant to the DOE Order on the OOM sheet by  
17 the ISO real-time operator.

18

19 Additionally, on January 9, 2001, the ISO invoked the December 14 DOE  
20 Order, specifically Amendment No. 3, that specified that the California ISO  
21 could not agree to a rate above \$64/MWh for Energy delivered pursuant to  
22 the DOE Orders. On this particular day, ISO operations personnel  
23 contacted a number of the suppliers listed and stated that the ISO was in

1 an emergency situation, that the ISO was invoking the DOE Order, and  
2 that the ISO could not negotiate a price higher than \$64/MWh. The  
3 suppliers that were contacted and required to supply any excess Energy  
4 under the DOE Order did so, and these transactions were noted as being  
5 provided pursuant to the DOE Order on the OOM sheet.

6

7 **Q. WHY HAS THE ISO RELIED ON THE NOTATIONS MADE BY ISO**  
8 **REAL-TIME OPERATORS ON THE OOM SHEETS, AS YOU TESTIFIED**  
9 **PREVIOUSLY, TO IDENTIFY THOSE TRANSACTIONS ENTERED INTO**  
10 **PURSUANT TO THE DOE ORDER?**

11 A. The ISO identified DOE transactions based on this criterion because it  
12 would be illogical as well as impractical for the ISO to attempt to label  
13 other transactions as “DOE transactions,” as the ISO simply has no  
14 additional direct information concerning the motivations of particular  
15 sellers in supplying Energy to the ISO during this time period, and thus no  
16 other mechanism by which to categorize transactions that occurred during  
17 this period.

1    **Q.    ARE THERE OTHER REASONS THAT SELLERS MAY HAVE SOLD**  
2           **INTO THE ISO’S MARKETS OR AGREED TO PROVIDE OUT-OF-**  
3           **MARKET ENERGY TO THE ISO DURING THE PERIOD IN WHICH THE**  
4           **DOE ORDERS WERE IN PLACE?**

5    A.    Yes. The circumstances that existed in California forced the ISO to accept  
6           prices from suppliers in excess of the \$250/MWh price cap that existed in  
7           the ISO’s markets for Energy and Ancillary Services at the time that the  
8           DOE Orders were in effect. Therefore, the price that suppliers could  
9           command for their Energy likely constituted a strong incentive for them to  
10          supply Energy to the ISO.

11

12   **Q.    DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

13   A.    Yes, it does.