

NON-CONFIDENTIAL VERSION

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

Southern California Edison Company and)
Pacific Gas and Electric Company) Docket No. EL01-34-000
)
)

**RESPONSE OF THE
CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION
TO THE COMMISSION'S APRIL 6, 2001 ORDER DEFERRING ACTION ON
REQUEST FOR SUSPENSION OF UNDERSCHEDULING PENALTY AND ISSUING
REQUEST FOR INFORMATION**

Pursuant to the Commission's April 6, 2001 Order (the "Order") in this proceeding (95 FERC ¶ 61,025), the California Independent System Operator Corporation ("ISO")¹ respectfully submits this response to the Commission's information request. In accordance with the Commission's instructions, the ISO has worked with Southern California Edison Company ("SoCal Edison"), Pacific Gas and Electric Company ("PG&E"), and the California Department of Water Resources ("DWR") to quantify monthly projections of the Load that these entities will serve through forward purchases and the projected amount of Load that will continue to be supplied through the ISO's Imbalance Energy market for each calendar month from April 2001 through September 2001. The ISO wishes to thank SoCal Edison, PG&E and DWR for their cooperation in this endeavor.

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

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I. Requested Information

As directed by the Order, the ISO requested, from each of the above-listed entities, as applicable, the following information:

1. Monthly load forecast for SoCal Edison and PG&E including high and low load scenarios derived from the use of mild and extreme weather projections. The ISO may include as a separate item in the net monthly load forecast any electricity conservation projections.
2. Monthly projections supplied by SoCal Edison and PG&E to the ISO of the amount of their load that will be self-supplied from their own resources (including purchase power contracts).
3. The total amount of generation from Qualifying Facilities ("QF") resources that are currently under contract with SoCal Edison and PG&E and monthly projections of the amount of SoCal Edison's and PG&E's load to be supplied from the QF's.
4. Monthly projections of the amount of SoCal Edison and PG&E load that will be served by the former PX block forward contracts that were "commandeered" pursuant to executive orders signed by the Governor of California.
5. Monthly projections of the amount of generation that will be available and under contract for each month under the ISO's Request for Bids to Provide Reliability Generation filed in Docket No. ER01-929-000.
6. Monthly supply projections based on purchase power contracts executed by the State of California identifying whether the supply is from existing resources or from new capacity additions and whether the resource is located within the ISO Control Area or whether it must be imported.
7. Monthly supply projections based on currently unexecuted forward contracts. If projections for unexecuted contracts are included, the ISO must also include the generation source and supplier of the forward power, whether the resource is existing or a new capacity addition, whether the resource is located within or outside the ISO control area and the expected start date of the contract.
8. Monthly projections of the amount of the SoCal Edison and PG&E load that will remain unscheduled and that will potentially need to be supplied through the ISO imbalance market.

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9. Monthly projections of any deficiencies between the high and low load forecasts and the total amount of available generation (classified by within control area generation or imports) on a total ISO control area system basis.
10. Monthly projections of the amount of total system load that will be potentially supplied through the ISO imbalance market.
11. To the extent the ISO projects a net shortage of resources, the report must provide a detailed explanation of all contingency plans or strategies to deal with the shortage.
12. A statement by the ISO, based upon the above projections, regarding any expected operational problems that may result from a suspension of the penalty provision.

II. Response

Given the short timeframe for developing responses, the ISO has tried its best to develop the important information sought by the Commission. The data presented is, by necessity, preliminary as the ISO has not had the opportunity to engage in a detailed review process. Moreover, the ISO cautions that the electricity crisis in California is incredibly dynamic. Events such as the State's new conservation initiatives, PG&E's bankruptcy, weather patterns, continued high generator outage rates, and legal actions by qualified facilities to be released from existing power purchase agreements could have significant effects on the data presented in this filing.

As the Commission is aware, negotiations are currently underway the State of California and suppliers of electricity. The ISO understands that the release of certain information requested by the Commission could adversely affect those negotiations. In addition, the ISO has received certain data from SoCal Edison and PG&E which the ISO understands those parties consider to be confidential. Pursuant to 18 C.F.R. § 388.112, the ISO is requesting confidential treatment for the data provided in Attachment A of this response.

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1. **Monthly load forecast for SoCal Edison and PG & E including high and low load scenarios derived from the use of mild and extreme weather projections. The ISO may include as a separate item in the net monthly load forecast any electricity conservation projections.**

This information is provided in the confidential Appendix A.

2. **Monthly projections supplied by SoCal Edison and PG & E to the ISO of the amount of their load that will be self-supplied from their own resources (including purchase power contracts).**

This information is provided in the confidential Appendix A.

3. **The total amount of generation from Qualifying Facilities ("QF") resources that are currently under contract with SoCal Edison and PG & E and monthly projections of the amount of SoCal Edison's and PG & E's load to be supplied from the QF's.**

This information is provided in the confidential Appendix A.

4. **Monthly projections of the amount of SoCal Edison and PG & E load that will be served by the former PX block forward contracts that were "commandeered" pursuant to executive orders signed by the Governor of California.**

This information is provided in the confidential Appendix A.

5. **Monthly projections of the amount of generation that will be available and under contract for each month under the ISO's Request for Bids to Provide Reliability Generation filed in Docket No. ER01-929-000.**

The ISO executed 30 Summer Reliability Agreements with 10 developers that were procured through the Request for Bids to Provide Reliability Generation. The current projections provided by the developers for *capacity* available by month for 2001 by zone is as follows:

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	NP15 ² (MW)	SP15 ² (MW)	Totals (MW)	Cumulative Totals (MW)
June 2001	0	74	74	74
July 2001	88.6	0	88.6	162.6
August 2001	45	296	341	503.6
September 2001	146.6	290	436.6	940.2
October 2001	0	45	45	985.2

As of April 13, 2001, the ISO has executed termination notices for two of the projects scheduled for operation in August as the developer has negotiated an agreement with the California Department of Water Resources. For the table above, these two projects are included.

6. Monthly supply projections based on purchase power contracts executed by the State of California identifying whether the supply is from existing resources or from new capacity additions and whether the resource is located within the ISO Control Area or whether it must be imported.

Executed Purchase Power Contracts (MWh)³

	April	May	June	July	Aug	Sept
NP15	108,640	112,928	112,640	257,728	265,728	248,640
SP15	706,000	706,000	798,720	798,720	798,720	748,720

² Information represents zonal data available from the ISO, represented in capacity. For purposes of this report, the assumption is made that NP15 is a close approximation for PG&E, and SP15 is a close approximation for SoCal Edison. To convert to generation, assume 500 hours run time per MW capacity per year (run between June and September only). DWR provided information relative to current contracts is provided as an attachment to this report, Appendix A.

³ Data obtained from DWR. Data provided is an approximation based on assumption that peaker generation runs at 500 hours per year and corresponding energy output is evenly distributed across months. No information as to specific sources available or provided by DWR. Refer to Appendix B for additional information. The ISO was unable to determine from the information provided by DWR whether the supply is from existing resources or from new capacity additions and whether the resources is located within the ISO Control Area or whether it must be imported.

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7. **Monthly supply projections based on currently unexecuted forward contracts. If projections for unexecuted contracts are included, the ISO must also include the generation source and supplier of the forward power, whether the resource is existing or a new capacity addition, whether the resource is located within or outside the ISO control area and the expected start date of the contract.**

Unexecuted Forward Contract Projections (MWh)³

	April	May	June	July	Aug	Sept
NP15	80,000	169,360	179,360	260,960	260,960	260,960
SP15	30,000	60,000	160,000	445,300	486,050	486,050

8. **Monthly projections of the amount of the SoCal Edison and PG & E load that will remain unscheduled and that will potentially need to be supplied through the ISO imbalance market.**

This information is provided in the confidential Appendix A.

9. **Monthly projections of any deficiencies between the high and low load forecasts and the total amount of available generation (classified by within control area generation or imports) on a total ISO control area system basis.**

The following table summarizes forecasted supply and demand conditions under a normal load scenario. The result is a projected resource deficiency for June through September ranging from 600 MW to nearly 3,700 MW.

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Table 1. Monthly Supply and Demand Projections, Normal Load Scenario⁴

		SUMMER 2001			
		JUNE	JULY	AUGUST	SEPT.
CONTROL AREA PEAK DEMAND [MW]					
1	Forecast Summer Season Peak Load	47,703	47,703	47,703	47,703
2	Operating Reserve Requirements	2,600	2,600	2,600	2,600
3	Estimated Total Control Area Capacity Requirement	50,303	50,303	50,303	50,303
CONTROL AREA GENERATION RESOURCES [MW]					
4	Maximum Net Dependable Capacity of ISO Control Area Resources (as of February 2001)	42,113	42,113	42,113	42,113
5	Dynamic Schedules into ISO	1,857	1,857	1,857	1,857
6	Expected New Generation [Cumulative Totals]	390	2,593	2,789	3,371
7	Scheduled Outages	0	0	0	0
8	Estimated Forced Outages/Capacity Limitations	-2,500	-2,500	-2,500	-2,500
9	Estimated Hydro Capacity Limitations	-1,000	-1,000	-1,000	-1,000
10	Estimated Control Area Resource Capacity (at peak)	40,860	43,063	43,259	43,841
GENERATION IMPORTS [MW]					
11	Required Net Imports [Line 3 - Line 10]	9,443	7,240	7,044	6,462
12	Forecast Net Imports at Peak	3,500	3,500	3,500	3,500
13	Estimated Resource Deficiency Before Mitigation Measures	-5,943	-3,740	-3,544	-2,962
DEFINITIVE MITIGATION MEASURES [MW]					
14	UDC Interruptible Load Curtailments	400	400	400	400
15	Demand Relief Programs	596	596	596	596
16	Conversion of Non-Spinning Reserve to Energy	1,300	1,300	1,300	1,300
17	RESOURCE DEFICIENCY AT PEAK [MW] after definitive mitigation measures	-3,647	-1,444	-1,248	-666

The next figure and accompanying table indicate the anticipated resource shortfall at the Summer 2001 peak load, under both normal and low load scenarios, and three supply scenarios (adverse, middle, and favorable). This figure and table demonstrate that the ISO will face substantial supply shortages at peak load unless demand is low or supply conditions turn out to be extremely favorable.

⁴ Data provided from ISO Summer 2001 Assessment, V1.0, 3/22/01, available on ISO web site. The ISO was not able to compile April and May data for this request item due to the short time frame for preparing and filing this response.

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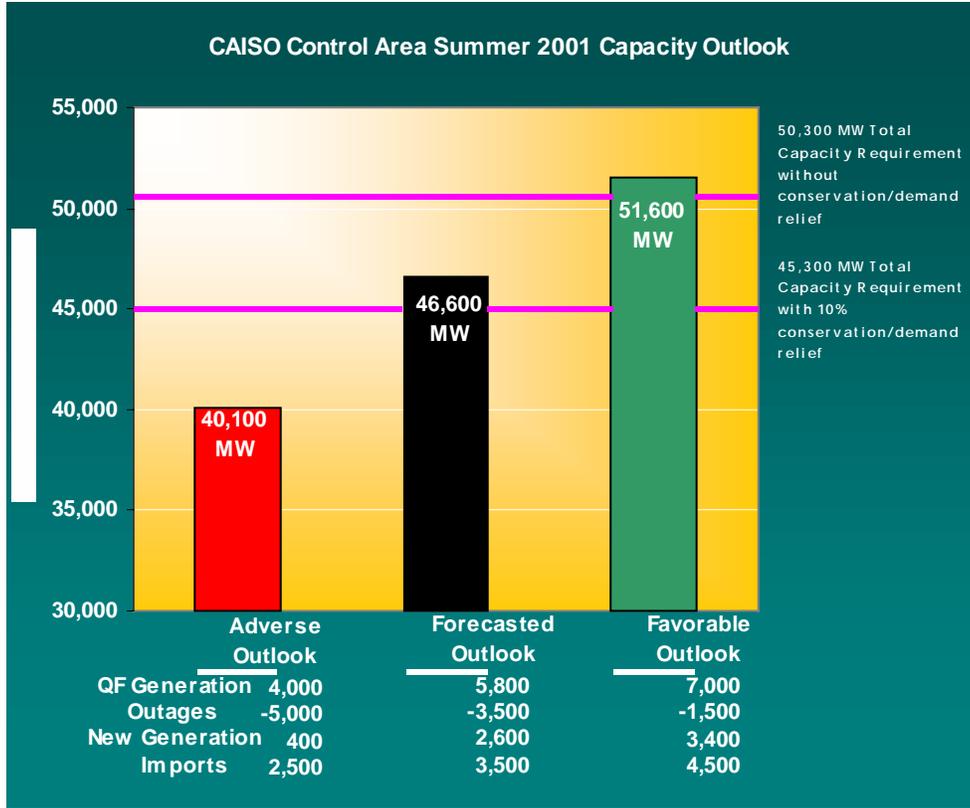


Table 2. Projected Peak Resource Shortfalls Under Various Load and Supply Scenarios

	Adverse Supply	Forecasted Supply	Favorable Supply
Forecasted Load	10,200 MW shortage	3,700 MW shortage	no shortage
Low Load	5,200 MW shortage	no shortage	no shortage

10. Monthly projections of the amount of total system load that will be potentially supplied through the ISO imbalance market.

The following table presents the ISO’s forecasts of the shares of system load (total monthly GWh of energy) that could potentially appear as real-time imbalance energy. These numbers were generated using the dry hydro year scenario, as that is the condition expected to occur this summer. The ISO applied the dry hydro year assumptions to three different load scenarios.

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Table 3. Expected Underscheduling Based on Low Hydro Supply Scenario (GWh)⁵

Normal Load Scenario	Apr	May	Jun	Jul	Aug	Sep
ISO System Load	18,917	20,773	22,441	22,786	24,039	21,420
Real-time Net Short	4,498	4,984	4,233	4,629	5,533	5,801
Net Short % of Load	24%	24%	19%	20%	23%	27%
Low Load Scenario	Apr	May	Jun	Jul	Aug	Sep
ISO System Load	18,255	19,839	20,287	20,966	22,621	19,814
Real-time Net Short	4,001	4,323	2,736	3,282	4,496	4,536
Net Short % of Load	22%	22%	13%	16%	20%	23%
High Load Scenario	Apr	May	Jun	Jul	Aug	Sep
ISO System Load	19,630	22,116	24,646	24,607	26,093	23,251
Real-time Net Short	5,036	5,935	5,736	5,978	7,073	7,281
Net Short % of Load	26%	27%	23%	24%	27%	31%

The salient points to emerge from this table are that:

1. The real-time market could potentially have to serve anywhere from 19 percent to 31 percent of load under either the normal or high load scenarios;
2. Even under the low load scenario, the real-time market could potentially will have to serve 20 percent or more except for the two months when hydro supplies are likely to be the most plentiful; and
3. Since these numbers represent monthly totals, actual hourly percentages of system load that have to be served in real-time may often be significantly higher than the numbers in the table indicate.
4. To the extent the generation and load data provided by PG&E and SoCal Edison may have included generation in off peak hours in excess of off peak loads, the numbers reported here may understate the real time net short in peak hours.
5. The ISO expects that DWR will continue to exercise due diligence in procuring energy on a forward basis. Thus, depending upon the success of DWR's efforts, the

⁵ The real-time net short numbers reported includes PG&E and SoCal Edison real time net short plus an assumed 5% real time net short for all other forecasted load.

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percentages reported in Table 3 may overstate the amount of energy the ISO may have to serve in the real-time market.⁶

11. To the extent the ISO projects a net shortage of resources, the report must provide a detailed explanation of all contingency plans or strategies to deal with the shortage.

As shown by the data in Sections 9 and 10, the ISO's current projections of supply and demand, including an assessment of the extent of forward contracting by California's load-serving entities and the State, indicate that there will be resource shortages and potentially high real-time Energy requirements at the summer peaks under all but the most favorable conditions. Line 13 of Table 1 shows monthly estimates of resource shortages ranging from 3,000 to nearly 6,000 MW, prior to adjustment for the effects of mitigation measures that will be in place for this summer. These contingency measures – the utility interruptible load programs, the ISO's demand relief programs, and the dispatch of energy from non-spinning reserves – represent the ISO's primary strategy for responding to resource shortages, and will, hopefully, reduce

⁶ DWR provided the following data which is based upon the assumption that DWR would be successful in its efforts to procure additional energy on a forward basis. DWR estimates it will be able to schedule additional energy to meet 70% to 90% of the SoCal Edison and PG&E projected net short energy requirements in the ISO Day Ahead Market. DWR also estimates that it will schedule an additional 5% to 10% of the SoCal Edison and PG&E projected net short energy requirements in the ISO Hour Ahead Market. Thus, DWR projects the potential for 5% to 25% of the SoCal Edison and PG&E net short energy requirements to be supplied in the ISO imbalance market. The estimated monthly MWH that potentially will be dispatched through the ISO imbalance market are as follows:

April 150,000 MWH to 300,000 MWH
May 160,000 MWH to 320,000 MWH
June 165,000 MWH to 330,000 MWH
July 180,000 MWH to 360,000 MWH
Aug 180,000 MWH to 360,000 MWH
Sep 170,000 MWH to 340,000 MWH

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the total shortages by approximately 2,300 MW (lines 14-16). This still leaves potential real-time shortages ranging from 600 to 3,700 MW (line 17).

Additional mitigation may result from legislation passed recently by the California legislature which provides over \$850 million for a variety of programs to promote energy efficiency, conservation, and peak load reduction (see SB 5X and AB 29X). Included in these programs are: residential air conditioning incentives and appliance rebates, low-income weatherization, commercial lighting incentives, demand responsive building systems, agricultural peak load reduction, retrofit of existing distributed generation at municipal water districts, installation of real-time meters, and public awareness initiatives.

At this time the ISO can provide only very preliminary estimates of the effectiveness of these State programs, which may achieve approximately 5,000 MW (10 percent) of load reduction at the peak, assuming all programs meet their intended targets by the time the summer peak arrives. This estimate is the basis of the low load scenario shown in Figure 1 and Table 2 above.

Under today's market power mitigation regime the projected shortfalls are expected to place extreme pressure on ISO operations staff and therefore present serious concerns about the ISO's ability to maintain adequate supply to serve firm Load consistently and at reasonable cost. Indeed, as the ISO previously noted, the Commission's breakpoint methodology, in combination with an underscheduling penalty that applies only to load, creates an incentive for suppliers to continue to rely on spot-

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market sales and therefore exacerbates the ISO's real-time operating difficulties.⁷ In addition, as discussed extensively in the ISO's March 22, 2001 Comments in response to the March 9 FERC Staff Market Mitigation Proposal, the Staff Proposal would not significantly improve this situation since its mitigation measures would apply only to the real-time market, and would only take effect once all other load reduction and contingency measures were exhausted. Indeed, the Staff Proposal was explicitly based on the assumption that the ISO's real-time imbalance market would have to manage only five percent of system load, an assumption that the ISO does not believe is achievable this summer.

One of the measures the ISO's has undertaken to help manage this situation is to proposed to the Commission in its April 6, 2001 Comments, a Market Stabilization Plan (the "Plan") which it hopes to be authorized to implement prior to the beginning of Summer 2001. Admittedly this Plan will not be able to increase overall supplies to California; its purpose is rather to allow the ISO to better manage existing supplies as described below. The proposed Plan has two major components:

1. Mitigation of the market power of all supply resources that are covered by Participating Generator Agreements ("PGAs"), through a payment package that will ensure the ability of such resources to fully recover all costs, including going-forward fixed costs as well as variable costs. In return for this payment package these resources will be required to make all their capacity and energy available at cost-based rates to serve load within the ISO control area. Non-PGA

⁷ Moreover, the Commission's breakpoint methodology created an incentive for suppliers to rely on spot market purchases of gas and other necessary inputs in order to cost-justify bids above the \$150 breakpoint.

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resources, such as import suppliers, will be eligible to sign up for the same payment package in return for the same commitment of capacity and energy.

2. Forward markets for energy and unit commitment to be operated by the ISO.

The ISO proposes to implement day-ahead and hour-ahead markets that would simultaneously commit and dispatch available resources to meet the shortfall between forecasted system load and Scheduling Coordinator's supply schedules, as well as procure ancillary services and manages inter-zonal congestion. Since PGA resources and other resources that have accepted the payment package would be required to participate in these markets as noted above, these forward markets would enable the ISO to achieve greater forward timeframe certainty about real-time supplies and thus minimize, as far as possible, the volume of energy transacted in the real-time market.

The creation of new forward markets for energy will require the ISO to procure and implement new software to perform transmission-constrained unit commitment and economic dispatch ("UCED"). By obtaining a proven UCED software package and minimizing the changes needed to ISO systems, the ISO believes it can implement this software by June 1, 2001. At the same time, the ISO recognizes that the time frame is aggressive, and therefore is developing manual procedures to enable the ISO to implement the cost-based payment structure and day-ahead commitment of resources on a temporary basis in the event of a delay in the operational date of the software.

In summary, the proposed Market Stabilization Plan, including temporary contingency procedures in the event of a software delay, represents the best strategy for mitigating the impact of resource shortages on real-time operations. In developing

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this Plan, the ISO assessed the likely effect of the existing under-scheduling penalty, particularly with regard to its primary intended purpose of encouraging load-serving entities to enter forward contracts for energy and to schedule that energy in the ISO's forward markets. Based on that assessment, the ISO believes that the penalty would not have the desired incentive effect at this point in time due to the deficiency of resources under current market conditions. (The reasons for this conclusion are discussed further under item 12 below.) Thus, the ISO would propose that the Commission suspend the under-scheduling penalty through the end of 2001. This would give the ISO time to evaluate the results of Summer 2001 operations and the effectiveness of the Market Stabilization Plan, and to assess the need and develop proposals for further reforms to the California markets.⁸

12. A statement by the ISO, based upon the above projections, regarding any expected operational problems that may result from a suspension of the penalty provision.

As stated above, the ISO does not believe -- at the present point in time and given current conditions in the California markets -- that the existing under-scheduling penalty would achieve its intended purpose of encouraging greater forward contracting and forward scheduling of energy. Moreover, since the penalty cannot achieve this purpose and reduce under-scheduling, its suspension will *not* further exacerbate the

⁸ The ISO has been informed that DWR currently intends to procure the full net short energy requirements of the investor owned utilities, subject to such considerations as exorbitantly high energy prices or unavailability of energy. DWR will support programs such as the base interruptible program, voluntary demand response program, optional binding mandatory curtailment program, air conditioning cycling and agricultural pumping program. DWR will also support the ISO's load management programs and will, in coordination with the ISO, optimize State Water Project generation and pumping operations as conditions permit.

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real-time operating problems resulting from under-scheduling. The reasons behind this conclusion are as follows:

First, as the Commission is aware, the West faces an unparalleled capacity shortage this summer. The anticipated resource deficiency means that buyers will have difficulty obtaining adequate suppliers to cover their load in all timeframes, whether that be in real-time or in the forward markets. Moreover, the severe capacity shortage facing California provides little or no incentive for suppliers to enter forward contracts with load-serving entities at just and reasonable prices. Absent effective market power mitigation measures, suppliers know that they can wait until real-time and force purchasers to pay a high price for power. Placing an underscheduling penalty on load serving entities will not enable them to enter forward contracts if there are no willing suppliers.⁹

Second, given the current financial condition of California's two largest utilities, the State of California has become the only creditworthy buyer on behalf of End-Use customers, who may constitute up to 70 percent of ISO Control Area load in any given hour. The State agency that is performing these purchases, DWR, is acting under a State legislative mandate. DWR is acting diligently to procure electricity supplies on a forward basis at least cost and to schedule such suppliers in the forward markets. To assess a further penalty on the utilities for under-scheduling will only increase the ultimate cost of energy to California consumers while doing virtually nothing to improve

⁹ The ISO notes that in its December 15, 2000 Order, the Commission required suppliers with market based rate authority to report on a confidential basis price, terms and amounts of "round-the-clock" long-term products in annual increments of between two and five years that there were willing to offer in California. While the Commission has never released these data, the ISO believes that, given the efforts of DWR, its results are consistent with the information provided to the Commission.

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the position of the investor owned utilities or the State's ability to make forward purchases or to schedule supply in the forward markets.

While the ISO agrees that a properly structured under-scheduling penalty could be an effective measure in increasing forward scheduling and reducing the volumes in the real-time market (and thus lessening the ISO's real-time operational difficulties), the ISO does not believe an underscheduling penalty can possibly be effective under the existing circumstances. Therefore, the ISO does not believe there would be any additional operational impact, either negative or positive, of suspending the underscheduling penalty at this time.

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In summary, the ISO believes that its proposed Market Stabilization Plan, which does not include the under-scheduling penalty, represents the best available approach to reduce the volume of the real-time market and thus improve operational stability under current supply and demand conditions. In looking beyond Summer 2001 and considering what further changes should need to be made to the California markets, the issue of the merits of the under-scheduling penalty and other mechanisms that create appropriate incentives for forward contracting and scheduling the bulk of California's energy demand should be reviewed.¹⁰

Respectfully submitted,

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¹⁰ The ISO understands that DWR also supports suspension of the underscheduling penalty. At this time, DWR believes that the underscheduling penalty provides an incentive for generators to withhold generation from the market and impose additional costs on DWR and thereby on the End Use customers of California. DWR has stated it is using its best efforts to fill the entire net short position of the investor owned utilities and that the underscheduling penalty does not provide it with any further incentive to schedule all load into the system.

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APPENDIX A

CONFIDENTIAL INFORMATION REDACTED

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APPENDIX B
Agreements Executed and In Contract Development
Source: DWR

CDWR POWER BIDS STATUS

AS OF April 9

Contact No.	GENERAL TERMS										STATUS		
	Start	Term	Product	Zone	MW 2001	MW 2002	MW 2003	MW 2004	MW 2005	MW 2006-10	Submitted	Agreement in Principle	Signed Contract

(MW shown reflect July capacity, before transmission losses)

LONG TERM

1	2/9/01	5 yr	Peak	SP15	50	50	50	50	50		2/6/01	2/7/01	2/13/01	3
2	2/9/01	5 yr	Peak	NP15	50	50	50	50	50		2/6/01	2/7/01	2/13/01	3
3	2/13/01	14 mos	Base	NP15	12	*							2/01	3
4	2/15/01	5 yr	Base	SP15	50	50	50	50	50		2/6/01	2/7/01	2/20/01	3
5	2/?/01	Bal.	Op. Res.	NP15	Unspec.						2/9/01	2/14/01	2/20/01	3
6	2/23/01	3/30/06	Peak	NP15	200	200	200	200	200		2/6/01	2/7/01	2/22/01	3
7	3/1/01	Bal.	Peak	SP15	1000						2/22/01	2/23/01	3/2/01	3
8	3/1/01	Bal.	Off Peak	SP15	**						2/22/01	2/23/01	3/2/01	3
9	4/1/01	10 yr	Peak	SP15	175	200	250	250	300	300	2/5/01	2/6/01	2/16/01	3
10	6/1/01	4.5 yr	Peak	SP15	140	160	240	320	400		2/9/01	2/9/01	2/21/01	3
11	6/1/01	9.5 yr	Base	SP15	35	40	60	80	100	600	2/9/01	2/9/01	2/21/01	3
12	7/1/01	9.5 yr	Base	NP15	200	1,000	1,000	1,000	1,000	1,000		2/21/01	2/27/01	3
13	8/1/01	20 yr	Peak	NP15	*	450	495	495	495	495		2/21/01	2/27/01	3
14	10/1/01	10 yr	Base	NP15	*	350	600	1,000	1,000	1,000	1/24/01	2/6/01	2/6/01	3
15	1/1/02	3 yr	Base	SP15		200	200	200			2/22/01	2/23/01	3/2/01	3
16	1/1/02	3 yr	Peak	SP15		600	600	600			2/22/01	2/23/01	3/2/01	3
17	1/1/02	3 yr	Peak	SP15		500	500	500			2/22/01	2/23/01	3/2/01	3
18	1/1/02	3 yr	Off Peak	SP15		**	**	**			2/22/01	2/23/01	3/2/01	3
19	1/1/03	8 yr	Peak	SP15			500	500	500	500			2/21/01	3
20	7/1/03	8.25 yr	Base	SP15			730	730	730	730	2/27/01	2/28/01	3/15/01	2
21	4/1/01	2.25 yr	Peak	SP15	200	200	*				2/27/01	2/28/01	3/15/01	2
22	3/15/01	6 mos	Peak	SP15	250						2/12/01	2/26/01	3/26/01	2
23	10/1/01	10.25 yr	Base	SP15	*	250	250	500	1,000	1,000	2/12/01	2/26/01	3/26/01	2
24	6/1/01	2.5 yr	Base	SP15	16	16	16				2/6/01	2/7/01	3/13/01	2
25	3/1/01	4 mos	Base	SP15	*						2/12/01	2/15/01		1
26	3/1/01	Bal.	Peak	NP15	500							Jan		1
27	4/1/01	1.5 yr	Peak	NP15	400	400					2/23/01	2/26/01		1
28	4/1/01	Bal.	Peak	SP15	925							Jan		1

NON-CONFIDENTIAL VERSION

29	5/1/01	4.5 yr	Base	NP15	13	13	13				2/6/01	2/15/01	1
30	6/1/01	10.3 yr	Peak	SP15	250	300	350	700	700	700		2/28/01	1
31	7/1/01	5 yr	Peak	SP15	450	450	450	450	450		2/16/01	3/2/01	1
32	7/1/01	5 yr	Base	SP15	90	90	90	90	90		2/16/01	3/2/01	1
33	7/1/01	10 yr	Base	NP15	100	200	200	400	400	400	2/9/01	2/12/01	1
34	7/15/01	17 mos	Peak	SS	SP15	325	325				2/15/01	3/2/01	1
35	6/1/03	8 yr	Base	SP15			542	542	542	542	2/15/01	3/2/01	1
36	1/1/02	9 yr	Base	SP15		300	300	300	300	300	1/24/01	2/28/01	1
37	1/1/02	9 yr	Base	NP15		250	500	500	500	500	1/24/01	2/28/01	1
38	4/1/02	9.5 yr	Base	SP15		150	1,000	1,200	1,200	1,200		2/28/01	1
39	4/1/01	11.25 yr	Peak	NP15		150	375	550	550	550		3/16/01	1
40	4/1/01	11.25 yr	Peak	SP15	150	150	200	200	200	200		3/16/01	1
41	7/1/02	10 yr	Base	NP15		50	50	50	50	50		3/16/01	1
42	7/1/02	10 yr	Base	SP15		50	50	50	50	50		3/16/01	1
43	8/1/01	10 yr	Sum.	SP15	*	80	80	80	80	80		2/26/01	1
44	9/1/01	10 yr	Peak	SS	NP15	*	96	96	96	96		2/28/01	1
45	9/1/01	10 yr	Peak	SS	SP15	*	144	144	144	144		2/28/01	1
46	11/1/01	10 yr	Peak	NP15	*	*	*	*	*	*		2/28/01	1
47	11/1/01	10 yr	Peak	SP15	*	*	*	*	*	*		2/28/01	1
48	8/1/01	6.25 yr	Peak	SP15	*	95	95	95	95	95	3/1/01	3/27/01	1
49	6/15/01	10yr	Peak	NP15	49	94	94	94	94	94		4/9/01	1
				NP15		1,524	3,303	3,673	4,435	4,435	4,185		
				SP15		4,106	4,400	6,747	7,631	6,981	6,441		
				Total		5,630	7,703	10,420	12,066	11,416	10,626		

MW	MW	MW	MW	MW	MW
2001	2002	2003	2004	2005	2006-10

3,252	3,387	4,629	5,541	5,541	5,001
466	466	996	1,230	1,730	1,730
Executed	1,912	3,850	4,795	5,295	4,145
Agreements					3,895
	5,630	7,703	10,420	12,066	11,416
			0	6	6

Notes: Lines 26 and 28 represent the Block Forward contracts assumed by CDWR.
 * Capacity provided during year, but not in July (month of maximum statewide net short)
 ** Off-Peak capacity is not part of peak MW tabulation