

April 1, 2003

Attn: Parties of CPUC Docket # R.01-10-024

RE: Docket # R.01-10-024, Order Instituting Rulemaking to Establish Policies and Cost Recovery Mechanisms for Generation Procurement and Renewable Resource Development

Dear Parties:

Enclosed please find the Opening Testimony of Kevin Graves on Behalf of the California Independent System Operator Corporation in Docket # R. 01-10-024.

Thank you.

Sincerely,

Jeanne M. Solé  
Regulatory Counsel

Cc: Attached Service List

Exhibit No.: \_\_\_\_\_

Commissioner: Peevy

Administrative Law Judge: Allen, Walwyn and Halligan

Witness: Kevin Graves

**BEFORE THE PUBLIC UTILITIES COMMISSION OF  
THE STATE OF CALIFORNIA**

Order Instituting Rulemaking to Establish  
Policies and Cost Recovery Mechanisms for  
Generation Procurement and Renewable  
Resource Development

R.01-10-024

**OPENING TESTIMONY OF KEVIN GRAVES ON  
BEHALF OF THE CALIFORNIA INDEPENDENT SYSTEM  
OPERATOR**

**Submitted by the California Independent System Operator**

April 1, 2003

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1 **BEFORE THE PUBLIC UTILITIES COMMISSION OF**  
2 **THE STATE OF CALIFORNIA**

3  
4 Order Instituting Rulemaking to Establish  
5 Policies and Cost Recovery Mechanisms for  
6 Generation Procurement and Renewable  
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R.01-10-024

7 **OPENING TESTIMONY OF KEVIN GRAVES ON**  
8 **BEHALF OF THE CALIFORNIA INDEPENDENT SYSTEM**  
9 **OPERATOR**

10  
11 **Submitted by the California Independent System Operator**

12  
13 Q. Please state your name, employer, position, and qualifications.

14 A. My name is Kevin Graves, Loads and Resources Manger in the Operations, Engineering and  
15 Maintenance Department of the California Independent System Operator Corporation (“CA ISO”). My  
16 resume is attached. It describes my professional experience and education.

17  
18 Q. On whose behalf are you submitting this testimony?

19 A. I am submitting this testimony on behalf of the CA ISO.

20 Q. What is the purpose of your testimony?

21 A. The purpose of my testimony is to highlight for the California Public Utilities Commission  
22 (“CPUC”) two issues, over-generation and transmission constraints, that it should consider in  
23 developing options for flexible compliance, rules for ranking renewables projects, and standard terms  
24 and conditions for renewables projects.

25  
26 Q. Please describe the CA ISO and its interest in this phase of this proceeding.

27 A. The CA ISO is a non-profit public benefit corporation organized under the laws of the State of  
28 California and responsible for the reliable operation of a grid comprising the transmission systems of the

1 investor owned utilities, San Diego Gas and Electric Company (“SDG&E”), Pacific Gas and Electric  
2 Company (“PG&E”), and Southern California Edison Company (“SCE”) as well as a number of other  
3 utilities. The CA ISO is also responsible for the coordination of the competitive Ancillary Services and  
4 real-time electricity markets in California.

5  
6 The CA ISO supports development of renewable resources. The CA ISO’s interest in this phase  
7 of this proceeding is to ensure that in implementing the Renewables Portfolio Standard (“RPS”) the  
8 CPUC is fully informed of issues related to system operations that could arise from the implementation  
9 of the RPS so that the CPUC can consider these issues in developing the rules for implementation of the  
10 RPS.

11 Q. Did the CA ISO participate in the workshops ordered by judge Allen in his ruling of February  
12 21, 2003.

13  
14 A. No. The CA ISO has limited resources and intended to focus these limited resources on  
15 participating in the proceedings associated with the utility long-term procurement plans and the  
16 proceedings for development by the Commission of a comprehensive transmission plan for renewable  
17 electricity generation facilities pursuant to Public Utilities Code Section 383.6. However, it recently  
18 came to the CA ISO’s attention that it may be able to provide valuable information to the CPUC  
19 regarding the system operations concerns that can arise from over-generation that may not be adequately  
20 presented by other parties. Accordingly, the CA ISO is submitting this brief testimony.

21  
22 Q. For what purpose should the CPUC consider the CA ISO’s comments on over-generation?

23 A. The CA ISO understands that in this phase of the proceeding, the CPUC is considering four  
24 matters: 1) developing flexible compliance mechanisms, 2) determining market price referents; 3)  
25 establishing standard contract terms and conditions; and 4) defining least cost and best fit and bid  
26 ranking criteria. The CA ISO considers that over-generation considerations are applicable to developing  
27  
28

1 flexible compliance mechanisms, standard contract terms and conditions, and defining least cost and  
2 best fit and bid ranking criteria.

3 Q. Please define over-generation conditions.

4 A. Over-generation occurs when supply (i.e. generation and imports) exceeds demand (loads and  
5 exports), and the ability of system operators to back down generation to balance the system is  
6 constrained. These conditions generally occur during off-peak hours during the spring and early  
7 summer seasons. Some examples of generators that system operators may have difficulties backing  
8 down in over-generation conditions include: 1) must-take generators (e.g. nuclear plants and qualifying  
9 facilities that have take or pay contracts with the utilities) that the CA ISO does not have authority to re-  
10 dispatch to reduce output; 2) generators that are already operating at minimum load and that are likely to  
11 be needed within a time frame (i.e. to meet the next day's peak load) that does not permit a generating  
12 unit to shut down and restart; and 3) hydroelectric generators that are operating at minimum levels based  
13 on current hydro conditions (i.e. high runoff) and the only way to reduce output is to spill water.

16 Q. When do over-generation conditions typically occur?

17 A. These conditions generally occur during light load periods (off-peak hours) during the spring and  
18 early summer seasons.

19 Q. Doesn't the CA ISO tariff address over-generation situations?

20 A. Yes. Section 2.3.4 of the CA ISO tariff addresses overgeneration and sets out a number of  
21 sequential steps that can be taken by the CA ISO to address over-generation circumstances. Ultimately,  
22 the CA ISO can instruct scheduling coordinators to reduce their generation or import schedules on a pro  
23 rata basis, or in more extreme circumstances, the CA ISO can issue mandatory dispatch instructions  
24 directing reductions from particular generating units and/or external imports.

26 Q. If over-generation is already addressed in the CA ISO tariff why should the CPUC consider it in  
27 this phase of these proceedings?  
28

1 A. First, over-generation circumstances can create operational difficulties. If over-generation  
2 circumstances exist due to the characteristics of the generating units that remain online there may be  
3 physical limitations on the ability of the CA ISO to manage an over-generation situation. For example,  
4 there are physical limitations on the ability of nuclear units to be turned on and off. Second, there are  
5 financial consequences to over-generation. For example, if the CA ISO orders units subject to take-or-  
6 pay contracts to reduce their output to address over-generation circumstances, utilities may nonetheless  
7 be required to pay for the output.  
8

9 Q. How should the CPUC consider over-generation in addressing flexible compliance mechanisms?

10 A. The CPUC could design compliance mechanisms that reduce the likelihood that utilities will be  
11 forced to accept additional output at a times when over-generation conditions already can be expected to  
12 occur.  
13

14 Q. How should the CPUC consider over-generation in developing standard terms and conditions?

15 A. The CPUC could include in the standard terms and conditions tools that would allow the utilities  
16 (or the CA ISO) to curtail resources to address over-generation conditions. The CPUC could include a  
17 requirement that generators that qualify as Participating Generators under the CA ISO tariff sign a  
18 Participating Generator Agreement with the CA ISO, and hence agree to abide by the CA ISO tariff.  
19 This would ensure that the CA ISO would be able to order reductions in the output from these generators  
20 if necessary to address over-generation circumstances. Further, the CPUC could limit the number of  
21 resources subject to “as available” or “take-or-pay” standard terms and conditions, particularly with  
22 regards to resources that are expected to operate during off-peak time periods.  
23

24 Q. How should the CPUC consider over-generation conditions in defining least cost and best fit and  
25 bid ranking criteria?  
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1 A. The CPUC should include as a criteria whether a resource is likely to create or exacerbate over-  
2 generation conditions. The CPUC should reduce the rank of resources that will create or exacerbate  
3 over-generation conditions and/or provide higher rankings for units that have greater dispatch flexibility.

4 Q. Are there other factors that the CPUC should consider in developing flexible compliance  
5 mechanisms, standard contract terms and conditions, and defining least cost and best fit and bid ranking  
6 criteria?  
7

8 A. Yes. The CPUC should consider the deliverability of resources (i.e. whether transmission  
9 upgrades are required to interconnect and deliver the output of the resources) and whether they will  
10 create or exacerbate congestion. The CA ISO understands that these issues have been discussed at  
11 length and mentions it merely to state for the record that it considers these issues to be legitimate  
12 concerns.  
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14 Q. Thank you. I have no further questions.  
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PROOF OF SERVICE

I hereby certify that on April 1, 2003, I served by electronic and U.S. mail, the Opening Testimony of Kevin Graves on Behalf of the California Independent System Operator Corporation in Docket # R. 01-10-024.

DATED at Folsom, California on April 1, 2003.

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