

Application No.: \_\_\_\_\_

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

Witness: Robert Sparks

Order Instituting Rulemaking to Integrate and Refine  
Procurement Policies and  
Consider Long-Term Procurement Plans.

Rulemaking 12-03-014

**SUPPLEMENTAL TESTIMONY OF ROBERT SPARKS  
ON BEHALF OF THE CALIFORNIA INDEPENDENT SYSTEM OPERATOR  
CORPORATION**

1

**BEFORE THE PUBLIC UTILITIES COMMISSION OF THE**

2

**STATE OF CALIFORNIA**

Order Instituting Rulemaking to Integrate and Refine  
Procurement Policies and  
Consider Long-Term Procurement Plans.

Rulemaking 12-03-014

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**Q. What is your name and by whom are you employed?**

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11

**A.** My name is Robert Sparks. I am employed by the California Independent System Operator Corporation (ISO), 250 Outcropping Way, Folsom, California as Manager, Regional Transmission.

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**Q. Have you previously submitted testimony in this proceeding?**

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**A.** Yes, I have. On May 23, 2012, I submitted initial testimony addressing the need for local area generating resources in the LA Basin and Big Creek/Ventura areas.

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**Q. What is the purpose of this supplemental testimony?**

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**A.** In addition to my May 23 testimony that describes the results of the OTC study, the ISO provided the parties to this proceeding with background information about the study. This background information included website links to the 2011/2012 Transmission Plan, as well as a workshop held on May 3 that included presentation materials. Both the 2011/2012 Transmission Plan and the workshop materials contained references to a sensitivity study performed by the ISO as part of the OTC study and at the direction of the collaborating agencies participating in the OTC study process.

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1 Subsequent to May 23, the ISO revised the sensitivity to include new information  
2 and correct some inaccuracies. The purpose of my supplemental testimony is to  
3 address this corrected sensitivity study.

4

5 **Q. Is the revised sensitivity study now publicly available?**

6

7 **A.** Yes, the ISO posted an addendum to the 2011/2012 Transmission Plan containing  
8 the revised study results which can be found at:

9

10 [http://www.caiso.com/Documents/Addendum-](http://www.caiso.com/Documents/Addendum-Section3_4_2_1_ISO2011_2012TransmissionPlan.pdf)

11

12 **Q. Please describe the updated sensitivity analysis.**

13

14 **A.** The collaborating agencies (CPUC, CARB and the CEC) asked the ISO to study the  
15 mid-net load scenario using the 2021 environmentally constrained portfolio. As part  
16 of the sensitivity analysis, incremental uncommitted energy efficiency (EE) and  
17 additional combined heat and power (CHP), provided by the state energy agencies  
18 (i.e., CPUC and CEC), were modeled. (see Table 1 below). The Transmission Plan  
19 Addendum provides updated study results for the incremental uncommitted EE  
20 scenario, and new results for additional CHP assumptions. The updated results also  
21 reflect the modeling of the Board-approved Del Amo – Ellis 230kV loop-in project  
22 that has been advanced to be in service in 2012. The Del Amo – Ellis 230kV loop-in  
23 project was not yet an approved project when the previous analyses took place, and  
24 was originally targeted to be in service in 2013.

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2 **Table 1:** State energy agencies' provided assumptions on incremental uncommitted EE & CHP

| Load Serving Entities | 2021 Incremental Uncommitted EE (MW) | 2021 Incremental Uncommitted CHP (MW) |
|-----------------------|--------------------------------------|---------------------------------------|
| SCE                   | 2,461                                | 209                                   |
| SDG&E                 | 496                                  | 14                                    |

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4

5 **Q. What were the results of the sensitivity analysis?**

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10 **A.** Table 2 provides a summary of study results with incremental uncommitted EE,  
11 uncommitted CHP and the Del Amo – Ellis 230kV line loop-in project modeled.  
12 With the loop-in project in service, it eliminates the need for local generation in the  
13 Ellis sub-area for the mid net load sensitivity analyses.

11

15 **Table 2:** Summary of sensitivity assessment of the mid net load condition for the CPUC environmentally  
16 constrained portfolio with incremental uncommitted EE, CHP and Del Amo – Ellis 230kV loop-  
17 in project

| Portfolios   | Area                 | LCR                         |           |            | New Gen. Required ? ^ | Constraint                                     | Contingency  |
|--|----------------------|-----------------------------|-----------|------------|-----------------------|--|--|
|  |                      | Non-D.G. (MW)               | D.G. (Mw) | Total (MW) |                       |  |  |
| Environmentally Constrained (Mid Net Load Condition) | Western LA           | 6,155                       | 869       | 7,024      | Yes                   | Serrano - Villa PK#1                           | Serrano - Lewis #1 / Serrano - Villa PK#2                                  |
|  | LA Basin Overall     | 7,288                       | 1,519     | 8,807      | Yes %                 | Mira Loma West 500/230 Bank#1 (24-Hr rating) * | Chino - Mira Loma East #3 230kV line + Mira Loma West 500/230kV Bank#2     |
|  | Westerr LA OTC Range | 1,042 - 1,677 MW plus SONGS |           |            |                       |  | New generation need ranges from most effective to less effective locations |
|  | Ellis                | 0                           | 0         | 0          | No                    | None   | Barre - Ellis 230kV Line + SONGS - Santiago #1 and #2 230kV Lines          |
|  | El Nido              | 274                         | 91        | 365        | No                    | La Fresa-Hinson 230 kV line                    | La Fresa-Redondo #1 and #2 230 kV lines                                    |

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1 **Q. Should the results of the sensitivity analysis be relied upon to make a**  
2 **determination as to local area needs in this proceeding?**

3  
4 **A.** No, it should not.

5  
6 **Q. Please explain why it would be inappropriate to use the sensitivity study to**  
7 **make decisions about procurement in the LA Basin and Big Creek/Ventura**  
8 **areas.**

9  
10 **A.** The ISO used the 2009 CEC 1-in-10 load forecast, which includes certain levels of  
11 EE and CHP. Uncommitted EE was not included in the CEC load forecast, and  
12 CHP generation was counted on for meeting local reliability needs only to the extent  
13 it was included in the CEC's officially adopted demand forecast.

14  
15 The ISO shares the CEC's concerns about uncommitted energy savings from  
16 uncommitted resources. To the extent such uncommitted resources ultimately  
17 develop, they can be helpful in reducing overall net-demand, but the ISO does not  
18 believe it is prudent to rely on uncommitted resources for assessing future local  
19 system needs and ensuring the reliability of the bulk power system.

20  
21 **Q. Please elaborate on why it is inappropriate to rely upon the EE assumptions in**  
22 **the sensitivity study.**

23  
24 **A.** In considering the assumptions in the sensitivity study, we must first consider the  
25 different applications in which the load forecast information is used, and the  
26 consequences of the different assumptions. Deliberately conservative forecasts  
27 must be employed in the assessment of reliability requirements for capacity in  
28 constrained areas since the consequences of being marginally short versus  
29 marginally long are asymmetric. A marginal shortage means the loss of firm load,

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1           which puts public safety and the economy in jeopardy, whereas a marginal surplus  
2           has only a marginal cost implication. Thus, the ISO has a responsibility to carefully  
3           consider demand forecast assumptions and how they are developed, especially if  
4           such forecasts include assumptions about uncommitted resources that can only  
5           provide uncommitted energy savings, for planning purposes.

6

7           As the CEC observed in a report issued in May 2010 entitled “Incremental Impacts  
8           of Energy Efficiency Policy Initiatives relative to the 2009 Integrated Energy Policy  
9           Report Adopted Demand Forecast” (CEC EE Report), there is substantial  
10          uncertainty regarding whether the amount of additional energy savings that will be  
11          achieved through uncommitted energy efficiency.<sup>1</sup> This conclusion is further  
12          supported by the CEC’s more recent comment provided in the 2011 Integrated  
13          Energy Policy Report dated January 2012 (CEC 2011 IEP Report), which stated in  
14          its discussion of EE that “[u]ncommitted savings” for EE “while plausible, have a  
15          great deal of uncertainty surrounding the method, timing, and relative impact of  
16          their implementation.”<sup>2</sup>

17

18          Even programs that are more successful than anticipated may fail to produce the  
19          required energy savings in the particular area specifically where they are needed and  
20          when they are needed. Effectiveness on a broad system-wide basis can be  
21          invaluable from a total resource adequacy perspective, but can easily fail to provide  
22          the expected load relief if the programs are not successfully deployed when and  
23          where needed in the constrained local capacity area.

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<sup>1</sup>        See CEC EE Report at 5, 53-54.

<sup>2</sup>        CEC 2011 IEP Report at 110.

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1 **Q. Similarly, why is it inappropriate to rely upon the CHP assumptions in the**  
2 **sensitivity study?**

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4 **A.** The ISO does not consider it reasonable or prudent to rely on incremental CHP  
5 programs beyond what has been considered in CEC forecasts due to the level of  
6 uncertainty that exists with regard to future increases in CHP development that was  
7 noted in both the CEC's 2009 IEP Report<sup>3</sup> and the 2011 IEP Report. The 2011 IEP  
8 Report further supports the conclusion that it is not prudent to count on any  
9 incremental CHP at this time; the forecast CHP additions to the system may simply  
10 offset retirements to existing CHP resources.<sup>4</sup>

11

12 **Q. Finally, please describe why it is inappropriate to rely upon the distributed**  
13 **generation (DG) assumptions in the environmentally-constrained portfolio that**  
14 **the ISO was asked to use for the sensitivity study.**

15

16 **A.** The ISO studied the need for replacement OTC generation under four 33% RPS  
17 scenarios during the 2011-2012 transmission planning cycle. The amount of DG in  
18 the LA Basin ranged from 271 MW to 687 MW for three of the scenarios. The  
19 environmentally constrained portfolio, which has the highest amounts of DG in any  
20 of the CPUC scenarios, had 1519 MW. The ISO believes that the 271 MW to 687  
21 MW range is a reasonable assumption for planning to ensure that the system will be  
22 reliable. Although the 1519 MW level of DG in the environmentally constrained

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<sup>3</sup> See CEC 2009 IEP Report at 97 ("The continued existence and viability of this power is a major issue ..."), 236 ("The barriers to increased penetration of CHP technologies have been identified repeatedly in past *IEPRs*, but little progress has been made.").

<sup>4</sup> See CEC 2011 IEP Report at 108-110 ("For traditional combined heat and power (CHP) technologies, self-generation is assumed constant, so that retired CHP plants are replaced with new ones with no net change in generation in the current forecast.").

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1            scenario may be an admirable goal, it is not a capacity amount that can be depended  
2            on for ensuring the reliability of the bulk power system.

3

4    **Q.    Does this conclude your supplemental testimony?**

5

6    **A.    Yes, it does.**