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

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

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

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

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.

Q. Have you previously submitted testimony in this proceeding?

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.

Q. What is the purpose of this supplemental testimony?

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.

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

Q. Is the revised sensitivity study now publicly available?

A. Yes, the ISO posted an addendum to the 2011/2012 Transmission Plan containing the revised study results which can be found at: http://www.caiso.com/Documents/Addendum-Section3_4_2_1_ISO2011_2012TransmissionPlan.pdf

Q. Please describe the updated sensitivity analysis.

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

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

Q. What were the results of the sensitivity analysis?

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

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

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

A. No, it should not.

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

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

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

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

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

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

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

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

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1 *See* CEC EE Report at 5, 53-54.

2 CEC 2011 IEP Report at 110.

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

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

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

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

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[3] *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.").

[4] *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.").

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

Q. Does this conclude your supplemental testimony?

A. Yes, it does.