UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

California Independent System Operator Corporation	)	**Docket Nos. ER01-313-004**
Pacific Gas and Electric Corporation	)	**Docket Nos. ER01-424-004**

REPLY BRIEF OF THE CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION

To: The Honorable Bobbie J. McCartney

The California Independent System Operator Corporation ("ISO") hereby submits its Reply Brief in this proceeding:

I. SUMMARY

Several parties have argued that either the Commission's decision to exclude Load served by unmodeled behind-the-meter generators from Control Area Services ("CAS") charges is incorrect because their generators are on the list of generators that were modeled and, therefore, are not eligible for the exclusion from the CAS charge, or that the ISO's interpretation of the Commission's policy is incorrect. These arguments, however, are outcome-determinative, in the parties making them are challenging the standard not because it is unjustified, is incorrectly conceived or is misguided, but simply because they do not like the result, which subjects Load served by their Generating Units to the CAS charge. The ISO has argued, since this issue arose, that the ISO's CAS provide benefits to the entire grid: the fact that application of the Commission's standard does not provide for broad exemptions from the CAS charge, does not

demonstrate that either the Commission's standard or its application by the ISO are flawed, but rather reflects the Commission's acceptance of the ISO's position in Opinions No. 463 and 463-A.

II. DISCUSSION OF ISSUES

Issue 1: What was the manner and extent to which the ISO modeled behind-the-meter generation during the time period at issue in the ISO's transmission and operations planning studies, including a listing of generators that the ISO explicitly modeled in these studies?

As several parties to this proceeding have noted, modeling is the development of a quantitative representation of the facilities that constitute the grid and their physical limitations, and the initial accumulation of data that constitutes the model may be referred to as a "base case." Tr. 163:12–14 (Shockey); Exh. S-79, 5:25 – 6:10 (Gross Testimony). As nearly every party (other than the Sacramento Municipal Utility District ("SMUD")) that filed briefs acknowledged, the ISO did not model Generation between 2001 and 2003. Initial Briefs of ISO, at 4; Southern California Edison ("SCE"), at 4; Commission Trial Staff, at 4; Silicon Valley Power ("SVP"), at 3; Modesto Irrigation District ("MID") at 11; Cogeneration Association of California/Electricity Producers Council ("CAC/EPUC") at 9. Instead, the ISO simply adopted the power flow models, including the representations of Generating Units, which were developed by the investor-owned Participating Transmission Owners ("TOs"). Exh. ISO-54, 8:8-9 (Lyon Testimony); Tr. 120:1-121:2 (Lyon).

The ISO nevertheless identified for both preparation of its November 15, 2004, compliance filing and this proceeding the list of generators that were incorporated by the Participating TOs into the models used by the ISO to conduct studies between 2001 and 2003. Tr. at 67:10-18. Although the ISO did not develop the models in question, the ISO interpreted the Commission's

decision to exclude from the CAS charge Load served by "generators which are not modeled,"[1] as an imperfect yet objective criterion to identify Load with "more limited dependence on the ISO grid."[2] The ISO's interpretation of the Commission's order was reasonable because the relevant factor that the Commission was examining was *whether* a particular Generating Unit was modeled, and not *who* modeled the Generating Unit in question.

SMUD, in contrast, in a transparent attempt to develop a framework that would exclude nearly all SMUD facilities from the CAS charge, sought to reframe the task established in Opinion No. 463-A of identifying "generators which are not modeled," as identifying generators that were not "explicitly modeled." SMUD Brief at pp. 8-20. In SMUD's framework, contrary to the definition of modeling understood by the ISO, Commission Staff, SCE, MID, and Santa Clara, "explicit modeling" requires the "active manipulation and varying of generation data," *id*. at 8, and "not mere representation in a base case." *Id*. According to the SMUD framework, development of the base case does not constitute modeling, but something short of modeling. *Id*. at 9. Only those generators for which the assumptions were adjusted by the ISO "in order to study the effect of a generator's operations on the surrounding system," were explicitly modeled under SMUD's reasoning. *Id*. While SMUD's approach might be arguably sensible if the purpose of the CAS charge was to recover the costs of modeling Generating Units, it makes no sense when the criterion of whether a Generating Unit was modeled merely is an objective criterion used as a surrogate to identify Load with a more limited dependence on the ISO's Control Area Services.

SMUD's framework is tortured. It requires one to suspend understanding of the English language so that while, by SMUD's own recognition, "base case models [are] prepared by the

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[1] *California Independent System Operator Corp., et al*., 106 FERC ¶ 61,032 at P 20 (2004) ("Opinion No. 463-A").

PTOs and the SRWG," *id*. at 10, and while "entities like SMUD and Western create models of their own generation and provide this information to the WECC-designated area coordinator," *id*., that the "preparation" of models by the PTOs or the "creation" of models by SMUD does not constitute modeling. Such interpretations simply cannot withstand any meaningful scrutiny.

SMUD also places great weight on the ISO's treatment of SMUD's and Western's Generation in the conduct of Reliability Must Run ("RMR") studies, stating that such treatment is representative of how their Generation is treated in all other studies. *Id*. at 13-16. Different studies, however, have different purposes. While the ISO may not adjust the assumptions concerning SMUD and Western Generation as part of RMR studies because the ISO generally does not enter into RMR agreements with municipal Generators, Tr. at 125:23-24, that in no way is representative of how the ISO treats SMUD's and Western's Generation in studies conducted for any other purpose. As Mr. Lyon stated in his testimony, for instance, the ISO would adjust the output of SMUD's hydro Generation if it were conducting a study to examine the consequences of a year with low precipitation and therefore possibly lower levels of Generation from hydroelectric generators. Tr. at 153:16-22. SMUD's suggestion that the ISO's treatment of SMUD Generators in RMR studies will be reflected in all other studies conducted by the ISO is, therefore, not only unsupported in the record, but contradicted by Mr. Lyon's testimony. RMR studies are performed to evaluate local reliability needs. Tr. at 154:4-6, 11-17. Although they are a significant part of transmission planning, Tr. at 154:11-17, they are only one component of the ISO's transmission planning and operations studies. Tr. at 154:21-25. Accordingly, SMUD's emphasis on the importance of RMR studies is misplaced.

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[2] *California Independent System Operator Corp., et al*., 103 FERC ¶ 61,114 at P 28 (2003) ("Opinion No. 463").

While SMUD attempted to develop an alternative framework pursuant to which its Generators would be exempt from the CAS charge, SVP was much more direct; it simply concluded that the list was incorrect because its Generators were inappropriately on the list of modeled generators. SVP Brief at 3-4. SVP argues that its generators clearly were "within the category of behind-the-meter Generation described by the Commission in Opinion No. 463-A as qualifying for the CAGL exemption," *id*. at 4, and that its generators caused the ISO to incur no costs in the performance of its transmission planning operation based on SVP's status as a Metered Subsystem. *Id*. at 5. SVP's arguments are unsustainable. Although SVP contends these arguments are applicable during the entire period at issue, SVP did not become a Metered Subsystem until September 1, 2002.[3] Accordingly, prior to that date, none of SVP's arguments regarding SVP being "wholly responsible" for its Generation and Load are relevant. SVP Br. at 6-7. For that period, SVP's Generating Units and Load are in the same category as any other behind-the-meter Generating Units and Load.

On September 1, 2002, SVP became a Metered Subsystem pursuant to a settlement agreement. Under the settlement agreement, SVP agreed to pay the CAS charge based on Gross Load and exports out of the MSS.[4] SVP is thus not eligible for any exemption from CAS charges.

CAC/EPUC, noting that "none of the CAC/EPUC retail behind-the-meter load associated with [CAC/EPUC's] generators would receive the exemption contained in Opinion No. 463-A," CAC Brief at 11, argued that such an outcome clearly was contrary to the Commission's intent. *Id*. CAC then argued that the Commission should adopt a modified standard that would exempt its facilities from the CAS charge. *Id*. at 12-19. MID similarly notes that its generators are not

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[3] *California Independent System Operator Corporation*, 100 FERC ¶ 61,234 PP 6, 60 (2002).

exempt from the CAS charge as defined by the Commission, MID Brief at 13-14, and then argues that the Commission should adopt a modified standard that would distinguish its facilities from other facilities, enabling the application of a reduced CAS charge to its generators. *Id*. at 19-21. Both of these arguments challenge the proposed exemption, rather than identification of modeled Generating Units. The ISO will not address the degree to which the Commission's proposed exemption meets its stated intention to impose a lesser CAS charge on behind-the-meter Loads. The ISO notes, however, that the Commission has repeatedly affirmed its approval of the allocation of the CAS charge to Control Area Gross Load. It certainly was not the Commission's intention to propose an exemption that would excuse behind-the-meter Loads entirely from responsibility for the CAS charges. The ISO believes, however, that the fact that application of the Commission's standards denies the exemption from CAS charges to many Loads that seek it reflects the Commission conclusion in Opinions No. 463 and 463-a that the ISO's CAS provides broad benefits to behind-the-meter Loads.

Finally, both MID and SMUD assert that some Generation that they import into their service territories is nevertheless behind-the-meter Generation. MID asserts that Generation physically located outside of MID's service territory but within the ISO Control Area, and Generation outside the ISO Control Area and delivered to MID through owned transmission and existing transmission contracts, which are not subject to the ISO's operational control, are behind-the-meter Generation, MID Brief at 8, and SMUD asserts that imports from Western, which is directly connected to the SMUD Bubble, are generated behind-the-meter. SMUD Brief at 6. Each party is incorrect. The Initial Decision in this proceeding stated that:

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[4] *See* Transmittal Letter at p.5 n.2, filed in Docket No. ER02-2321-000; Metered Subsystem Agreement between the California Independent System Operator Corporation and Silicon Valley Power, § 13.11. (Attached hereto as Attachment A).

> "Behind-the-meter" in this context may refer to circumstances in which retail Loads of an entity and the Generation from which that entity serves the Loads are located on the same side of the meter at the interconnection between the ISO Controlled Grid and the transmission or distribution facilities of the entity.[5]

Mr. Lyon defined behind-the-meter Generation as "situations in which a Load's electrical consumption cannot be distinguished from a Generating Unit's simultaneous production of electricity, because both are measured with only one meter." Ex. ISO-54 at 5:4-7. Neither MID's nor SMUD's Generation outside of their service territories meets these standards, because their Generation and Load are not behind a common meter that cannot distinguish Generation from Load, and some Generation is on the ISO side of the interconnection between the ISO and the load-serving entity. Such Generation, therefore, should not be treated as behind-the-meter Generation.

Issue 3: How and to what extent does behind-the-meter load netted against unmodeled generation impose CAS costs, as delineated by ISO witness Lyon, on the ISO?

SWP, CDWR and MID argue that the ISO was non-responsive to the Commission's inquiry regarding the extent to which behind-the-meter Load netted against unmodeled Generation imposes CAS costs on the ISO. Because all Load benefits from the ISO's Control Area Services, those costs are incurred on behalf of all Load.[6] The ISO has acknowledged that behind-the-meter Load imposes lesser costs with regard to Control Area Services directed toward transmission planning and maintenance and outage coordination than it does with respect to the those related to the ISO's assurance of adequate Operating Reserve and the ISO's monitoring and operating efforts to ensure safe and reliable operation of the Control Area transmission system. Nevertheless, the

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[5] *California Independent System Operator Corp., et al.*, 99 FERC ¶ 63,020 at 65,109 n.66 (2002) (*Initial Decision*).

[6] *California Independent Sys. Operator Corp.*, 99 FERC ¶ 63,020 at 65,109-10, *aff'd* 103 FERC¶ 61,114 at P 25-26.

fact that some Load may impose a greater burden on Control Area Services than other Load does not mean that the ISO can separate out such costs in the manner requested by the Commission.

III. CONCLUSION

WHEREFORE, the Presiding Judge should make findings as discussed above.

Respectfully Submitted,

/s/Julia Moore

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Date: March 25, 2005

Attachment A

Excerpts From

Transmittal Letter for
California Independent System Operator Corporation
Tariff Amendment No. 46

and

Metered Subsystem Agreement between the
California Independent System Operator Corporation and
Silicon Valley Power

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[PUBLIC VERSION]

July 15, 2002

The Honorable Magalie R. Salas
Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, D.C. 20426

Re: California Independent System Operator Corporation
Docket No. ER02-___-___
Amendment No. 46 to the ISO Tariff

Dear Secretary Salas:

Pursuant to Section 205 of the Federal Power Act ("FPA"), 16 U.S.C. § 824d, and Section 35.13 of the Commission's regulations, 18 C.F.R. § 35.13, the California Independent System Operator Corporation ("ISO")[1] respectfully submits for filing an original and six copies of an amendment ("Amendment No. 46") to the ISO Tariff. Amendment No. 46 would modify the ISO's Tariff by amending its provisions concerning Metered Subsystems ("MSS").

In addition, the ISO is filing the Northern California Power Agency MSS Aggregator Agreement; the City of Roseville Metered Subsystem Agreement; and the Silicon Valley Power Metered Subsystem Agreement.

As noted below, this filing is pursuant to a settlement agreement filed on July 15, 2002 in Docket Nos. ER01-2998-000, ER02-358-000, and EL02-64-000.

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[1] Capitalized terms not otherwise defined herein are defined in the Master Definitions Supplement, Appendix A to the ISO Tariff, as filed August 15, 1997, and subsequently revised.

market, then the SC will be charged GMC associated with uninstructed deviations for this quantity. (Section 23.12.3.2)[2]

D. Information Sharing

The ISO, MSS Operator and Participating TOs shall share information such as projected Load growth and system expansions to the extent that they may affect the operation of the ISO Control Area. Each MSS Operator must provide the ISO annually its ten-year forecasts of Demand growth, internal Generation, and expansion or replacement of transmission facilities. Each MSS Operator must also submit weekly and monthly peak Demand forecasts in accordance with the ISO's protocols. (Section 23.13.1)

Each MSS Operator must provide such information as the ISO may reasonably request to enable the ISO to conduct reviews and prepare reports following major Outages. The MSS Operator, however, will be solely responsible for the preparation of any reports required by any governmental entity or the Western Electricity Coordinating Council ("WECC") with respect to any Outage that affects only customers in the MSS Service Area. (Section 23.13.3.3.3)

Each MSS Operator must promptly inform the ISO, and the ISO must promptly inform the MSS Operator, of any circumstances or incidents that are reasonably likely to threaten the reliability of the ISO Controlled Grid or the integrity of the MSS respectively.[3] Such information must be provided in a form that is sufficient to give timely warning of the threat, and the ISO may not unduly discriminate with respect to its provision of similar information to other entities. (Section 23.13.3.4)

E. MSS Settlements

The ISO will assess the MSS SC the neutrality adjustments and Existing Contracts cash neutrality charges pursuant to Section 11.2.9 (or collect refunds therefor) based on the net metered Demand and exports of the MSS. (Section 23.15.1) If the ISO is charging SCs for summer reliability or demand programs, the MSS Operator may petition the ISO for an exemption from these charges. The ISO will grant an exemption from these charges if the MSS Operator demonstrates by November 1

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[2] Only GMC associated with uninstructed deviations (the Ancillary Services and Real-Time Energy Operations Charge (ASREO)) will be treated on a net basis. GMC for Control Area Services will be charged based on Gross Load and exports out of the MSS. The GMC Congestion Management Charge will be assessed in accordance with Section 8.3 of the Tariff. Ancillary Service bids accepted by the ISO and Instructed Energy will be assessed the GMC ASREO. (Section 23.12.3.3)

[3] Such circumstances may include such things as abnormal temperatures, storms, floods, earthquakes, and equipment depletions and malfunctions. Incidents may include such things as equipment outages, over-loads or alarms.

Docket No.: ER02-2321-003
Company: Cal. ISO
Service Agreement No.: 459
Under FERC El. Tariff No.: 1
Filing Date: 9-27-02
Effective Date: 9-1-02

METERED SUBSYSTEM AGREEMENT WITH SILICON VALLEY POWER

Effective: September 1, 2002

CALIFORNIA INDEPENDENT SYSTEM OPERATOR

AND

SILICON VALLEY POWER

METERED SUBSYSTEM AGREEMENT

METERED SUBSYSTEM AGREEMENT

THIS AGREEMENT is dated this _____ day of _____, 20___ and is entered into, by and between:

(1) **The City of Santa Clara**, a duly chartered city under the laws of the State of California, which does business as Silicon Valley Power ("SVP"), and owns and operates a municipal electric utility system engaged in the generation, transmission, distribution, purchase and sale of electric power and energy at wholesale and retail, having its registered and principal place of business located at 1500 Warburton Avenue, Santa Clara, California 95050-3713;

and

(2) **California Independent System Operator Corporation**, a California non-profit public benefit corporation having its principal place of business located in such place in the State of California as the ISO Governing Board may from time to time designate, initially 151 Blue Ravine Road, Folsom California 95630 (the "ISO").

SVP and the ISO are hereinafter referred to individually as "Party" or collectively as the "Parties."

Whereas:

A. The City of Santa Clara, doing business as Silicon Valley Power (SVP), is a MSS Operator of a Metered Subsystem engaged in, among other things, generating, transmitting and distributing electric power in the SVP Service Area and is a member of the Northern California Power Agency ("NCPA");

B. As a member of NCPA, SVP receives power from various NCPA resources and will be using NCPA as its initial Scheduling Coordinator;

C. The ISO, a NERC or its successor-certified Control Area, is engaged in, among other things, exercising Operational Control over certain electric transmission facilities forming the ISO Controlled Grid, scheduling transactions that utilize those transmission facilities, and operating certain markets, including markets for Imbalance Energy and Ancillary Services, pursuant to the terms of the ISO Tariff and has certain statutory obligations under California law to maintain the reliability of the ISO Controlled Grid, as well as certain NERC and Western Electricity Coordinating Council or its successor ("WECC")-mandated responsibilities to ensure the reliable operation of the entire electric grid within the ISO Control Area;

D. SVP's System is within the ISO Control Area and is interconnected to the ISO Controlled Grid;

13.11 **Grid Management Charge Adjustment for MSS Load Following.** If the ISO is charging Grid Management Charges for uninstructed deviations, and if SVP's Scheduling Coordinator has uninstructed deviations associated with Load following from resources listed in Schedule 14, then the ISO will net the Generation and imports into the MSS to match the Load and exports out of the MSS, and will not assess Grid Management Charges associated with uninstructed deviations for such portion of Energy that is used to match MSS Load and net exports out of the MSS. If Generation, above the amount to cover Load and exports out of the MSS, was sold into the ISO's Imbalance Energy market, then SVP's Scheduling Coordinator will only be charged Grid Management Charges associated with uninstructed deviations for this quantity. SVP's Scheduling Coordinator will only be charged Grid Management Charges associated with uninstructed deviations if insufficient Generation and imports into the MSS were available to cover Load and exports out of the MSS, and SVP's Scheduling Coordinator purchased Imbalance Energy from the ISO's market. Only Grid Management Charges associated with uninstructed deviations (the Ancillary Services and Real-Time Energy Operations Charge (ASREO)) will be treated on a net basis. Control Area Services Charges will be based on Gross Load and exports out of the MSS. SVP's Scheduling Coordinator will be assessed the Congestion Management Charge in accordance with the ISO Tariff. Instructed Imbalance Energy will be assessed the ASREO.

13.12 **Deviation Band and Penalties Calculation.** Subject to an election by SVP made in accordance with Section 23.12 of the ISO Tariff to have its Scheduling Coordinator follow Load, the ISO will settle with SVP's Scheduling Coordinator with regard to Imbalance Energy, based on the applicable zonal or locational ex post prices, in accordance with the ISO Tariff. For purposes of assessing penalties to SVP's Scheduling Coordinator associated with operating outside the portfolio deviation band described in Section 8.6, the portfolio deviation band shall be three percent (3%) of the lesser of SVP's metered or Hour-Ahead scheduled Demand and exports from the MSS, adjusted for Forced Outages and any ISO directed firm Load Shedding, for SVP's portfolio as a whole. Penalties for operating outside of the deviation band will be based on a price that is the effective weighted average ex post price applicable to SVP for the billing interval. If the metered Generation resources and imports into the MSS exceed the Demand, exports out of the MSS, and Energy expected to be delivered by SVP in response to the ISO's Dispatch instructions and/or Regulation set-point signals issued by the ISO's AGC by more than the deviation band, then the ISO will take back its payment for Imbalance Energy by assessing SVP's Scheduling Coordinator a penalty of one hundred percent (100%) of the amount of Imbalance Energy that is outside the deviation band. If metered Generation resources and imports into the MSS are deficient in meeting Demand, exports out of the MSS, and Energy expected to be delivered by SVP in response to the ISO's Dispatch instructions and/or Regulation set-point signals issued by the ISO's AGC by more than the deviation band, then SVP's Scheduling Coordinator shall be assessed a two hundred percent (200%) penalty for the amount of Imbalance Energy that is outside of the deviation band, in addition to the

Certificate of Service

I hereby certify that I have this day served a copy of this document upon all parties listed on the official service list compiled by the Secretary in the above-captioned proceedings, in accordance with the requirements of Rule 2010 of the Commission's Rules of Practice and Procedure (18 C.F.R. § 385.2010). Dated this 25th day of March in the year 2005 at Folsom in the State of California.

/s/ *Sidney M. Davies*
Sidney M. Davies