UNITED STATES OF AMERICA 111 FERC ¶ 63,008
FEDERAL ENERGY REGULATORY COMMISSION

California Independent System Operator Corporation	Docket No. ER01-313-004
Pacific Gas and Electric Company	Docket No. ER01-424-004

INITIAL DECISION

(Issued April 15, 2005)

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BOBBIE J. McCARTNEY, Presiding Administrative Law Judge

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INTRODUCTION

1. On remand from the Commission, this case is a very limited proceeding established for the purpose of obtaining information as it relates to the Control Area Gross Load (CAGL) exemption, and the manner in which it would be administrated, in calculating certain Control Area Services (CAS) charges under the California Independent System Operator Corporation's (ISO) Grid Management Charge (GMC).

JOINT PROCEDURAL HISTORY[1]

2. On November 1, 2000, as amended on December 15, 2000, the ISO submitted to the Commission its proposed GMC for 2001, including amendments to the ISO Tariff that revised the manner in which the ISO charged the GMC to Scheduling Coordinators (SCs).[2] The ISO proposed to allocate the GMC to three cost categories, or "buckets." One such bucket was CAS.[3]

3. On November 9, 2000, as amended on December 21, 2000, Pacific Gas and Electric Company (PG&E) submitted to the Commission its proposed Pass Through Tariff (PTT).[4] PG&E's PTT would allow it to pass through the GMC charged by the ISO to applicable wholesale Control Area Agreement (CAA) customers for which PG&E acts as a SC.

4. On December 29, 2000, the Commission issued an order which accepted the GMC and the PTT, as amended, suspended them for a nominal period to become effective January 1, 2001, subject to refund, consolidated the proceedings, and set them for hearing.[5]

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[1] The active parties and Commission Trial Staff (Staff) submitted this Joint Procedural History at the undersigned's request. The undersigned has made minor formatting changes to the Joint Procedural History for formatting consistency with the rest of this Initial Decision, but has not substantively changed the parties' submittal.

[2] The ISO filed its Grid Management Charge in Docket No. ER01-313-000 on November 1, 2000, and the amended version in Docket No. ER01-313-001 on December 15, 2000.

[3] These changes are described in Attachment B.

[4] Pacific Gas and Electric Company filed its Grid Management Charge Pass-Through Tariff in Docket No. ER01-424-000 on November 13, 2000, and the amended version in Docket No. ER01-424-001 on December 26, 2000.

[5] *Calif. Indep. Sys. Operator Corp., et al.*, 93 FERC ¶ 61,337 (2000).

5. The undersigned conducted a hearing from November 13, 2001, until December 20, 2001, and issued an Initial Decision on May 10, 2002.[6] The Initial Decision recommended approval of the ISO's proposal to charge CAS to CAGL.

6. In Opinion No. 463,[7] the Commission affirmed the Initial Decision in most respects, but reversed two of the undersigned's recommendations, of which one is relevant to the instant proceeding. With respect to the ISO Tariff, the Commission generally upheld the undersigned's determination that the CAS charge should be based on CAGL, but determined that an exception should be made for wholesale and retail customers with behind-the-meter generation who primarily rely on behind-the-meter generation to meet some of their energy needs because such customers have a more limited impact on the ISO's grid. The Commission concluded that customers with generators that have a capacity factor of 50 percent or greater should be allocated CAS costs on the basis of their highest monthly demand based on the ISO's grid, rather than on CAGL.[8]

7. Following the issuance of Opinion No. 463, numerous parties submitted requests for rehearing. In Opinion No. 463-A,[9] the Commission denied the requests for rehearing, except for those concerning the CAGL issue regarding CAS charges.

8. Opinion No. 463-A concluded that the exception for those customers with generators with a 50 percent or greater capacity factor was not supported by record evidence and would create implementation problems.[10] The Commission expressed its ongoing support for an exclusion from the CAS charge for "certain behind the meter generators."[11] It then ordered that behind-the-meter load served by "generators which are not modeled by the ISO in its regular performance of transmission planning and

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[6] *Calif. Indep. Sys. Operator Corp., et al*., 99 FERC ¶ 63,020 (2002).

[7] *Calif. Indep. Sys. Operator Corp., et al*., Opinion No. 463, 103 FERC ¶ 61,114 (2003).

[8] *Id*. at P 28.

[9] *Calif. Indep. Sys. Operator Corp*., Opinion No. 463-A, 106 FERC ¶ 61,032 (2004).

[10] *Id.* at P 19.

[11] *Id.* at P 20.

operation should be exempted from the CAGL charge. That is, those generators that will not cause the ISO to incur administrative or operating expenses should . . . have the load exempted from the CAS charge."[12]

9. Several parties filed requests for clarification and/or rehearing of Opinion No. 463-A on the CAGL exception issue. While the requests for clarification and/or rehearing were pending, the ISO filed a compliance refund report on November 15, 2004, in which it set forth its proposed refunds for SCs for exempted behind-the-meter load and the newly adjusted GMC charges, based on the ISO's understanding of Opinion No. 463-A and the information the ISO had collected from certain PTOs.[13]

10. On November 16, 2004, the Commission issued an order in which it "defer[ed] further action on the requests for rehearing pending the compilation of a sufficient record on this issue,"[14] and "establish[ed] limited (with respect to both time and subject matter) hearing procedures so that such a record may be compiled."[15] In its November 16 order, the Commission specified four material issues of fact on which it sought factual information at the hearing.

11. On November 17, 2004, the Chief Judge issued an order designating the undersigned to preside at the hearing ordered by the Commission.[16] On November 18, 2004, the undersigned scheduled a pre-hearing conference for December 2, 2004.[17] Following the prehearing conference, on December 3, 2004, the Transmission Agency of Northern California (TANC) filed a motion for adoption of the procedural schedule and guidelines for discovery agreed to at the prehearing conference.[18] The undersigned

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[12] *Id.*

[13] "Compliance Refund Report," Docket Nos. ER01-313-006, *et al.* (filed Nov. 15, 2004).

[14] *Calif. Indep. Sys. Operator Corp., et al.*, 109 FERC ¶ 61,162 at P 2 (2004)(brackets added).

[15] *Id.*

[16] "Order of Chief Judge Designating Presiding Administrative Law Judge," Docket Nos. ER01-313-004, *et al.* (issued Nov. 17, 2004).

[17] "Order Scheduling Prehearing Conference," Docket Nos. ER01-313-004, *et al.* (issued Nov. 18, 2004).

[18] "Motion of the Transmission Agency of Northern California Requesting the Adoption of Procedural Schedule," Docket Nos. ER01-313-004, *et al.* (filed Dec. 3,

approved the schedule and discovery procedures in a December 14, 2004 order.[19]

12. On November 22, 2004, the ISO filed a Notice of Withdrawal of its November 15, 2004, compliance refund report.[20] By December 13, 2004, several parties commented on the ISO's notice of withdrawal to which the Commission has not yet responded.[21]

13. On December 10, 2004, the Modesto Irrigation District (MID) filed a motion to clarify the scope of the proceeding. Specifically, MID sought clarification of:

> whether the exemption from the CAS charge to recognize the more limited impact of behind-the-meter load on the CAISO-Controlled Grid should be as MID has proposed, which is on the basis of the customer with behind-the-meter load's highest monthly demand placed on the CAISO-Controlled Grid, if no more than 50 percent of the behind-the-meter load is served from the CAISO-Controlled Grid.[22]

Answers were filed by Staff, the Cogeneration Association of California (CAC) and the Energy Producers and Users Coalition (EPUC)(collectively, CAC/EPUC), the Sacramento Municipal Utility District (SMUD), the California Department of Water Resources State Water Project (SWP), and the ISO. On December 22, 2004, the undersigned denied MID's motion.[23] On January 6, 2005, MID filed a motion seeking

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2004).

[19] "Order Establishing Procedural Schedule," Docket Nos. ER01-313-004, *et al.* (issued Dec. 14, 2004).

[20] "Notice of Withdrawal of California Independent System Operator Corporation of Compliance Refund Report," Docket Nos. ER01-313-006, *et al.* (filed Nov. 22, 2004).

[21] *See* "Southern California Edison Company's Comments on GMC Refund Report," Docket Nos. ER01-313-006, *et al.* (filed Dec. 6, 2004); "The Transmission Agency of Northern California's Motion to Condition the Withdrawal of the California Independent System Operator Corporation's Compliance Refund Report," Docket Nos. ER01-313-006, *et al.* (filed Dec. 7, 2004); "Comments of San Diego Gas and Electric Company on Withdrawal of Refund Report," Docket Nos. ER01-313-006, *et al.* (filed Dec. 13, 2004).

[22] "Motion to Clarify the Scope of the Proceeding and Request for Shortened Response Time of the Modesto Irrigation District," Docket Nos. ER01-313-004, *et al.* (filed Dec. 10, 2004).

[23] "Order on Motion to Clarify Scope," Docket Nos. ER01-313-004, *et al.* (issued

leave to file an interlocutory appeal of the undersigned's scope ruling.[24] On January 19, 2005, the undersigned denied MID's request for leave to take interlocutory appeal.[25]

14. On December 20, 2004, the ISO filed its prefiled direct testimony.[26] Other parties filed answering testimony on January 21, 2005,[27] and Staff filed testimony on January 31, 2005.[28] All parties sponsoring witnesses filed cross-answering testimony on February 7, 2005.[29]

Dec. 22, 2004).

[24] "Motion for Leave to File Interlocutory Appeal and Request for Shortened Response Time of the Modesto Irrigation District," Docket Nos. ER01-313-004, *et al*. (filed Jan. 6, 2005).

[25] "Order on Motion for Leave to File Interlocutory Appeal," Docket Nos. ER01-313-004, *et al.* (issued Jan. 19, 2005).

[26] "Prepared Direct Testimony and Exhibits of A. Deane Lyon on Behalf of California Independent System Operator Corporation," Docket Nos. ER01-313-004, *et al*. (filed Dec. 20, 2004).

[27] "Prepared Answering Testimony of James A. Ross on behalf of the Cogeneration Association of California and Energy Producers and Users Coalition," Docket Nos. ER01-313-004, *et al*. (filed Jan. 21, 2005); "Answering Testimony of David Olivares on Behalf of the Modesto Irrigation District," Docket Nos. ER01-313-004, *et al*. (filed Jan. 21, 2005); "Direct and Answering Testimony and Exhibits of Neil E. Shockey on Behalf of Southern California Edison Company," Docket Nos. ER01-313-004, *et al*. (filed Jan. 21, 2005); "Prepared Answering Testimony and Exhibits of Craig Cameron on Behalf of the Sacramento Municipal Utility District," Docket Nos. ER01-313-004, *et al*. (filed Jan. 21, 2005); "Prepared Answering Testimony and Exhibits of David T. Helsby on Behalf of the Sacramento Municipal Utility District," Docket Nos. ER01-313-004, *et al*. (filed Jan. 21, 2005).

[28] "Prepared Direct and Answering Testimony of Edward A. Gross Witness for the Staff of the Federal Energy Regulatory Commission," Docket Nos. ER01-313-004, *et al*. (filed Jan. 31, 2005).

[29] "Cross Answering Testimony of A. Deane Lyon on Behalf of the California Independent System Operator Corporation," Docket Nos. ER01-313-004, *et al*. (filed Feb. 7, 2005); "Prepared Cross-Answering Testimony of James A. Ross on Behalf of the Cogeneration Association of California and Energy Producers and Users Coalition," Docket Nos. ER01-313-004, *et al*. (filed Feb. 7, 2005); "Cross-Answering Testimony of David Olivares on Behalf of the Modesto Irrigation District," Docket Nos. ER01-313-

15. On January 4, 2005, CAC/EPUC filed a motion to clarify the scope of the proceeding and a motion to strike ISO testimony.[30] Specifically, CAC/EPUC requested three clarifications of the scope of the proceeding. First, that an exemption from the ISO's CAS charge based on CAGL for load served behind-the-meter at a single retail location, and which takes standby service from a utility, is not an issue in this proceeding. Second, an examination of whether the exemption set forth in Opinion No. 463-A should apply to load that is not modeled by the ISO as opposed to un-modeled generators is within the scope of this proceeding is. Third, that the ISO will not be allowed to relitigate the issue of whether certain behind-the-meter loads should be exempt from the CAS charge at all. Answers were filed by SMUD, SWP, MID, and the ISO. On January 19, 2005, the undersigned denied the motion to clarify the scope of the proceeding and denied the motion to strike the ISO testimony, while reserving until later in the proceeding a determination of whether the ISO testimony directly responded to the Commission's inquiry and whether it should be stricken.[31] The same order also denied SMUD's motion to strike styled as an answer.[32]

16. On February 15 and 16, 2005, undersigned conducted the hearing ordered by the Commission. A Joint Stipulation of Issues was adopted by the undersigned, as modified, at the beginning of the hearing. At the conclusion of the hearing, the undersigned noted that the initial briefing schedule remained in place, with initial briefs due on March 14, 2005, reply briefs due on March 25, 2005, and the initial decision due on April 15, 2005.

ISSUES

I. 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

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004, *et al*. (filed Feb. 7, 2005); "Prepared Cross-Answering Testimony of David T. Helsby on Behalf of the Sacramento Municipal Utility District," Docket Nos. ER01-313-004, *et al*. (filed Feb. 7, 2005); "Cross-Answering Testimony of Neil E. Shockey on Behalf of Southern California Edison Company," Docket Nos. ER01-313-004, *et al*. (filed Feb. 7, 2005).

[30] "Motion to Clarify Scope of Proceeding, Motion to Strike and Request For Shortened Response Time of the Cogeneration Association of California and the Energy Producers and Users Coalition," Docket Nos. ER01-313-004, *et al*. (filed Jan. 6, 2005).

[31] "Order on Motions to Clarify Scope of the Proceeding and to Strike," Docket Nos. ER01-313-004, *et al*. (issued Jan. 19, 2005).

[32] *Id*. at P 8.

planning studies, including a listing of generators that the ISO explicitly modeled in these studies?

A. Positions of the Parties

17. The participants concur that the ISO adopts initial power flow models, (base cases) from the PTOs, and the ISO uses the bases cases to conduct studies relating to the transmission grid. A list of the generators that the PTOs included in their base cases between January 1, 2001 and December 31, 2003 (the locked in period), is contained in Exhibit No. ISO-55.[33] The ISO explains that it prepared this list in order to comply with the Commission's January 23, 2004 rehearing order in this proceeding.[34] In addressing this issue, the participants generally disagree as to whether this list represents the behind-the-meter generation that was modeled by the ISO, and therefore whether the behind-the-meter generators listed therein are eligible for the exemption articulated in Opinion 463-A.

18. The ISO, Staff and SCE believe that Exhibit No. ISO-55 accurately reflects all the generating units that the ISO used to conduct its transmission and operations planning studies during the locked in period.[35] The ISO asserts that this list is accurate because it was reviewed by the PTOs, and none of them indicated that any generating unit was either mistakenly included on or mistakenly excluded from the list.[36]

19. The ISO explains that when conducting studies using the base cases provided by the PTOs, it altered the data and tested different scenarios to determine different effects on the transmission system.[37] The ISO notes, however, that not every study used all of the data from the base cases; rather, the ISO explains, the selection of data used in running a particular model depended on the purpose of a given study project.[38] Staff

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[33] ISO Initial Brief at 2 (hereinafter ISO IB)(citing Ex. ISO-54 at 6:1 – 3).

[34] *Id.* at 3 (citing *Calif. Indep. Sys. Operator Corp., et. al.,* Opinion No. 463-A, 106 FERC ¶ 61,032 at P 19 – 20 (2003)).

[35] *Id.* at 3; Staff Initial Brief at 4 (hereinafter Staff IB); SCE Initial Brief at 4-5 (hereinafter SCE IB).

[36] ISO IB at 3.

[37] *Id.* at 4 (citing Tr. 166:7-11; Ex. S-79 at 5:25-6:10).

[38] *Id.* at 5.

points out that the ISO did not archive every such study it conducted.[39]

20. Other parties do not believe that Exhibit No. ISO-55 is an accurate representation of the generating units modeled by the ISO, and they disagree with the position of the ISO, Staff, and SCE that the exemption articulated in Opinion 463-A should be denied to any generating unit listed therein.

21. SMUD submits that its generating units located in the "SMUD Bubble" and Western generation serving the SMUD Bubble load qualify as behind-the-meter generation.[40] SMUD adopts a different interpretation of the term "modeled" from the ISO, Staff and SCE, contending that the ISO "explicitly models" generation when it actively manipulates and varies the data provided to it by the PTOs in the base case models in order to study and examine certain effects on the grid, and in turn, incurs administrative costs.[41] SMUD argues that because the ISO just adopts the base case models prepared by the PTOs and the WECC System Review Working Group, the ISO presented no evidence to show that it explicitly modeled any of SMUD's behind-the-meter generation or Western generation that serves SMUD Bubble load, and thus the ISO failed to present evidence that it incurred any CAS costs associated with their behind-the-meter generation which is listed on Exhibit No. ISO-55.[42] SMUD accordingly argues that its behind-the-meter generation units should be eligible for the exemption from CAS costs articulated in Opinion 463-A.[43]

22. To support its assertion that the ISO does not model SMUD behind-the-meter generation or Western generation that serves SMUD Bubble load, SMUD points to the ISO's Reliability Must Run (RMR) planning studies and infers that because in those planning studies the ISO treats SMUD's and Western generation that serve SMUD Bubble load as "always on" constants, such generation is treated in the same manner in the ISO's other planning studies.[44] SMUD also asserts that the ISO has presented no evidence in this proceeding to show that it manipulated or varied SMUD or Western

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[39] Staff IB at 4.

[40] SMUD Initial Brief at 6-7 (hereinafter SMUD IB).

[41] *Id.* at 8-11.

[42] *Id.* at 6 – 26.

[43] *Id.*

[44] *Id.* at 13-14 (citing Ex. SMD-33 at 20:11-21:11; Tr. at 123:23-124:4).

behind-the-meter generation data.[45] SMUD generally posits that an exemption which only applies to generators that are not represented in a base case (i.e., not listed on Exhibit No. ISO-55) would be meaningless because it would be overly narrow, applying only to retail load, while categorically excluding wholesale load from the exemption.[46]

23. Staff and SCE dispute SMUD's arguments, contending that requiring the ISO to prove that it manipulated the base cases of specific behind-the-meter generating units would be impractical because the ISO has not saved the data regarding every one of its vast number of transmission and operations planning studies.[47] Further, the ISO contends, 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 independence on the ISO's control area services.[48]

24. The ISO and Staff also argue that SMUD's reliance on RMR studies to infer that generation is treated similarly in other planning studies is misplaced, unsupported by the record, and contradicted by ISO and Staff witness testimony.[49] The ISO contends that its RMR studies are in no way representative of the manner in which the ISO treats SMUD's and Western's generation in studies conducted for any other purpose.[50]

25. SVP echoes many of SMUD's arguments, contending that its four behind-the-meter generators identified in Exhibit No. ISO-55 should be exempted from the CAGL charge.[51] Similar to SMUD, SVP urges that the ISO did not model its behind-the-meter generators, and furthermore, the ISO did not incur any administrative or operating expenses in the regular performance of transmission planning and operation for any of

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[45] *Id.* at 14 (citing Ex. SMD-32 at 2-3).

[46] *Id.* at 13 (citing Tr. 84:5 – 24, 86:15 – 25).

[47] Staff Reply Brief at 6 (hereinafter Staff RB)(citing Ex. S-82); SCE Reply Brief at 4 (hereinafter SCE RB)(citing Ex. SCE-61 at 4; Ex. S-82).

[48] ISO Reply Brief at 3 (hereinafter ISO RB).

[49] Staff IB at 5-6 (citing Ex. S-79 at 23 – 24 (citing Ex. S-87); ISO RB at 4 (citing Tr. at 153:16-22, 154:4 – 6, 154:11 – 17, 154:21 – 25)).

[50] ISO RB at 4.

[51] SVP Initial Brief at 3-4 (hereinafter SVP IB).

such generators listed in Exhibit No. ISO-55.[52] Rather, SVP asserts, as a Metered Subsystem (MSS) entity (i.e., its generators were metered prior to SVP's entering into a Metered Subsystem agreement with the ISO), SVP was wholly responsible for all load and generation within its retail service territory, and therefore the ISO would not have conducted any operating and planning studies for SVP's behind-the-meter generation and associated load[53] because the circumstances described by ISO witness Mr. Lyon for conducting such studies would not have existed.[54]

26. SVP further asserts that Exhibit No. ISO-55 is seriously flawed because it does not identify which generators were included in individual transmission and operations studies conducted by the ISO, and per the ISO's admission, the exhibit "may contain errors, or omissions, given the impossibility of tracing back and recreating all studies undertaken by the ISO since January 1, 2001."[55] SVP asserts that the lack of accurate records by the ISO requires the parties to establish by other means whether their generators should be included in Exhibit No. ISO-55, and concludes that reliance on this exhibit to establish which entities should qualify for exemption articulated in Opinion 463-A would be erroneous.[56]

27. In response, the ISO asserts that SVP's arguments are unsustainable and inapplicable during the entire period at issue because SVP did not become a MSS until September 1, 2002, and that prior to that date, SVP was not wholly responsible for its generation and load.[57] Rather, the ISO contends, for that period, SVP's generating units are in the same category as any other behind-the-meter generating units and load.[58] Further, the ISO argues, when SVP became a MSS pursuant to a settlement agreement, it agreed to the CAS charge based on gross load and exports out of the MSS.[59] Therefore,

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[52] *Id.* at 4-5.

[53] *Id.* at 6-8 (citing Ex. SVP-21).

[54] *Id.* at 7 (citing Ex. ISO-54 at 7:15 – 26).

[55] *Id.* at 4 (citing Ex. S-80).

[56] *Id.* at 4, 8.

[57] ISO RB at 5 (citing *Calif. Indep. Sys. Operator Corp.*, 100 FERC ¶ 61,234 at P 6, 60 (2002)).

[58] *Id.*

[59] *Id.* (citing Transmittal Letter at 5 n.2 (filed in Docket No. ER02-2321); Metered Subsystem Agreement between the California Independent System Operator Corporation

the ISO concludes, SVP is not eligible for any exemption from CAS charges.[60]

28. In addition, SCE and Staff discount SVP's contention that Exhibit No. ISO-55 may contain errors. Staff notes that the ISO took extra steps to ensure that their list of generators in Exhibit No. ISO-55 was as complete as possible, and none of the parties challenged the accuracy of the list with sufficient evidence to demonstrate that such parties' generation was not modeled by the ISO.[61] SCE also asserts that no other party has come forward to dispute that any generator listed in Exhibit No. ISO-55 did not actually appear in an ISO study.[62]

29. MID concludes that the record is insufficient to support a modeling-based exemption.[63] It argues that the ISO does not model behind-the-meter generators, and the ISO's action of adopting the modeling provided to it by the PTOs is not modeling and has no relation to the specific questions posed by the Commission or the CAS exemption set forth in Opinion 463-A.[64] MID states that under its Interconnection Agreement with PG&E, all of its generation resources are contractually behind-the-meter; however if the modeling-based exemption is applied, MID will secure little or no relief from CAS charges based on CAGL.[65] MID asserts that its generation differs from that of other parties, arguing that not all wholesale behind-the-meter generation is the same, and that therefore, should the Commission eventually consider alternative CAS exemptions, it would not be constrained to a "one size fits all" exemption.[66]

30. CAC/EPUC submit that the Commission should not adopt the exemption contained in Opinion No. 463-A, because it is not supported by the record.[67] CAC/EPUC

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and Silicon Valley Power, § 13.11 (attached to ISO RB as Attachment A)).

[60] *Id.*

[61] Staff RB at 8 – 9.

[62] SCE RB at 3 n.2 (citing ISO IB at 3; Staff IB at 4).

[63] MID Reply Brief at 3 (hereinafter MID RB).

[64] MID Initial Brief at 12 (hereinafter MID IB).

[65] *Id.* at 15-16.

[66] MID RB at 4.

[67] CAC/EPUC Initial Brief at 11-12 (hereinafter CAC/EPUC IB).

assert that the ISO does not have knowledge of the impact of retail standby service load in relevant modeling and transmission studies and limited administrative involvement regarding customer generation and associated load.[68] They also point out that their customers already pay the appropriate share of modeling and planning costs through the retail standby service rate as well as a share of the utility's total GMC, including CAS charges through the retail standby service rate, or other appropriate retail service schedules for each kWh of energy that uses non-private (or non-dedicated) wires to supply the customer's retail load.[69]

31. CAC/EPUC suggest that the Commission should adopt an exemption for those retail customers with behind-the-meter generation that primarily rely on that generation to meet their energy needs on a net load basis.[70] Specifically, CAC/EPUC request that the Commission modify the definition of Gross Load that it adopted in the Transmission Access Charge (TAC) proceeding in Docket Nos. ER00-2019-006, *et al.*, confirming that for the purposes of calculating the TAC and the CAS charge, the term "Gross Load" would exclude the load of an individual retail customer of a utility distribution company, MSS, or scheduling coordinator that is served by a generating unit that (a) is located on the customer's site or provides service to the customer's site though arrangements as authorized by Section 218 of the California Public Utilities Code; and (b) secures standby service from a PTO under terms approved by a local regulatory authority or FERC, as applicable, or can be curtailed concurrently with an outage of the generating unit serving the load.[71] They argue that this proposed alternative exemption is consistent with the Commission's intention in developing the Opinion 463-A exemption and in accordance with Commission precedent.[72] Staff disagrees with CAC/EPUC's suggestion, contending that they offer no factual support for their proposal and that they rely on irrelevant cases

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[68] *Id.* at 19-21.

[69] *Id.* at 9 – 10 (citing Ex. CAC-30 at 12:17 – 23).

[70] *Id.* at 5.

[71] *Id.* at 12 – 19.

[72] *Id.* at 12 – 18 (discussing *PJM Interconnection, L.L.C.*, 107 FERC ¶ 61,113 (2004)(holding that administrative costs, such as the ISO's CAS charge are appropriately charged to this customer class on a net load basis); *Calif. Indep. Sys. Operator Corp.*, Opinion No. 464, 104 FERC ¶ 61,196 (2003)(holding that retail behind-the-meter load is not the responsibility of the ISO for reliability purposes); and *Calif. Indep. Sys. Operator Corp.*, 109 FERC ¶ 61,301 (2004)(adopting an exemption from CAGL for retail behind-the-meter load by ordering that a modified definition of gross load be reflected in the ISO's Tariff.))

and precedent.[73]

32. SWP also agrees that the record is lacking, and therefore concludes that the Commission has no basis upon which to grant the exemption articulated in Opinion 463-A, and that Exhibit No. ISO-55 cannot be relied on to show the manner and extent to which the ISO-modeled, behind-the-meter generation should be exempt from the CAGL allocation of CAS.[74] Rather, SWP asserts, there must also be a determination of whether the unmodeled generators cause the ISO to incur CAS costs and what impact of the exemption is on the CAS rate.[75]

33. SWP therefore asserts that the CAS charge should be assessed on the basis of gross load, contending that granting an exemption on any other basis would be unduly discriminatory to SWP and other customers that would be forced to pay more to cover the costs of the exemption in the absence of a showing of less cost causation by certain customers.[76] SWP argues that there is no information on the record to reflect total dollar amount of CAS charges which would be exempted under any type of exemption, including one based on whether the ISO models the generator and associated load, or of the potential change in CAS rates.[77] SWP reminds the parties that the Commission will also be approving a new CAS rate which may only be approved if found just and reasonable and not unduly discriminatory.[78] Therefore, SWP contends, evaluation of the CAS exemption necessarily entails consideration of the actual rate.[79] SWP advocates that the assessment of the CAS charge on wholesale and retail behind-the-meter load (as opposed to only on a retail basis as SCE urges) based on gross load (as opposed to net load as proposed by CAC/EPUC).[80] SWP argues that SCE's and CAC/EPUC's proposals, at worst, represent a collateral attack on Opinion No. 463 and its progeny, and,

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[73] Staff RB at 10-12.

[74] SWP Reply Brief at 3 (hereinafter SWP RB).

[75] SWP Initial Brief at 6 (hereinafter SWP IB).

[76] *Id.* at 10.

[77] *Id.* at 8.

[78] SWP RB at 3.

[79] *Id.*

[80] *Id.* at 5 – 7.

at best, concern matters outside the scope of this case.[81]

B. Discussion and Findings

34. As previously explained, the Initial Decision issued by the undersigned on May 10, 2002[82] recommended approval of the ISO's proposal to allocate costs related to its CAS charges based on CAGL. In Opinion No. 463,[83] the Commission generally upheld the undersigned's determination that the CAS charge should be based on CAGL, but determined that an exception should be made for wholesale and retail customers with behind-the-meter generation who primarily rely on behind-the-meter generation to meet their energy needs because such customers have a more limited impact on the ISO's grid. In attempting to create such an exception, the Commission *sua sponte* concluded that customers with generators that have a capacity factor of 50 percent or greater should be allocated CAS costs on the basis of their highest monthly demand based on the ISO's grid, rather than on CAGL.[84]

35. In Opinion No. 463-A, the Commission concluded that the exception it had created *sua sponte* for those customers with generators with a 50 percent or greater capacity factor was not supported by record evidence and would create implementation problems.[85] The Commission then ordered that behind-the-meter load served by "generators which are not modeled by the ISO in its regular performance of transmission planning and operation should be exempted from the CAGL charge. That is, those generators that will not cause the ISO to incur administrative or operating expenses should . . . have the load exempted from the CAS charge."[86]

36. Several parties filed requests for clarification and/or rehearing of Opinion No.

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[81] *Id.* (citing "Order on Motion to Clarify Scope of the Proceeding and to Strike," at P 6, Docket No. ER01-313-004, *et al.* (issued Jan. 19, 2005)).

[82] *Calif. Indep. Sys. Operator Corp., et al.*, 99 FERC ¶ 63,020 (2002).

[83] *Calif. Indep. Sys. Operator Corp., et al.*, Opinion No. 463, 103 FERC ¶ 61,114 (2003).

[84] *Id.* at P 28.

[85] *Calif. Indep. Sys. Operator Corp.*, Opinion No. 463-A, 106 FERC ¶ 61,032 at P 19 (2003).

[86] *Id.* at P 20.

463-A on the CAGL exception issue[87] and on November 16, 2004, the Commission issued an order which affirmed that "Opinion No. 463-A created an exemption from assessment of CAS charge based on CAGL for 'generators which are not modeled by the ISO in its regular performance of transmission planning and operation[.]"[88] The Commission explained that:

> [T]he Commission continues to subscribe to the concept of an exception from CAGL based on whether the generator and associated behind-the-meter load are modeled by the ISO. However, the requests for rehearing and clarification have made clear that questions concerning the exemption, as well as the manner in which it would be administered, present issues of material fact that cannot be resolved based on the record before us, and are more appropriately addressed in the trial-type evidentiary hearing ordered below.[89]

37. Accordingly, the Commission "defer[ed] further action on the requests for rehearing pending the compilation of a sufficient record on this issue,"[90] and "establish[ed] limited (with respect to both time and subject matter) hearing procedures so that such a record may be compiled."[91] The Commission's November 16, 2004 Order emphasized that:

> [T]he hearing is limited to the CAGL exemption issue as set forth in Opinion No. 463-A and shall *not* be treated as an opportunity for the parties to relitigate any other aspect of our decision with respect to CAGL (or any other issue)."[92]

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[87] While the requests for clarification and/or rehearing were pending, the ISO filed a compliance refund report on November 15, 2004, in which it set forth its proposed refunds for SCs for exempted behind-the-meter load and the newly adjusted GMC charges, based on the ISO's understanding of Opinion No. 463-A and the information the ISO had collected from certain PTOs. "Compliance Refund Report," Docket Nos. ER01-313-006, *et al*. (filed Nov. 15, 2004).

[88] *Calif. Indep. Sys. Operator Corp.*, 109 FERC ¶ 61,162 at P 13 (2004)(brackets in original).

[89] *Id.* at P 15.

[90] *Id.* at P 2.

[91] *Id.*

[92] *Id.* at P 16 (emphasis in original).

38. Thus, this case was neither intended to encompass alternatives to the exemption set forth in Opinion No. 463-A, nor was it intended to encompass issues that have already been litigated.[93] Nevertheless, as Staff has noted, much of the record developed in this limited hearing consists of positions that do not add factual information to the record but rather attempt to relitigate the same arguments that were raised in their requests for rehearing[94] or constitute a complaint that the exemption set forth in Opinion No. 463-A, based on unmodeled generation, does not afford sufficient relief from the CAS charge.[95] Apparently realizing that most, if not all, of the behind-the-meter generation of the parties involved in this litigation will not be eligible for an exemption from assessment of CAS charge based on CAGL for "generators which are not modeled by the ISO in its regular performance of transmission planning and operation[,]"[96] they argue that the exemption criteria is flawed, or for adoption of an entirely different exemption.

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[93] "Order on Motion to Clarify Scope," at P 9, Docket Nos. ER01-313-004, *et al*. (issued Dec. 22, 2004).

[94] Certain motions filed in this proceeding also attempt to address matters that are the subject of pending rehearing requests. For example, on December 10, 2004, MID filed a motion to clarify the scope of the proceeding seeking clarification of:

> whether the exemption from the CAS charge to recognize the more limited impact of behind-the-meter load on the CAISO-Controlled Grid should be as MID has proposed, which is on the basis of the customer with behind-the-meter load's highest monthly demand placed on the CAISO-Controlled Grid, if no more than 50 percent of the behind-the-meter load is served from the CAISO-Controlled Grid.

"Motion to Clarify Scope of the Proceeding and Request for Shortened Response Time of the Modesto Irrigation District," Docket Nos. ER01-313-004, *et al*. (filed Dec. 10, 2004). The undersigned subsequently denied that motion and MID's request for permission to seek interlocutory appeal of that ruling. *See* "Order on Motion to Clarify Scope," at P 9, Docket Nos. ER01-313-004, *et al*. (issued Dec. 22, 2004); "Order on Motion for Leave to File Interlocutory Appeal," Docket Nos. ER01-313-004, *et al*. (issued Jan. 19, 2005).

[95] Staff RB at 2

[96] *Calif. Indep. Sys. Operator Corp., et al*., 109 FERC ¶ 61,162 at P 13 (internal quotation marks omitted).

39. Arguments for the adoption of an entirely different exemption are rejected as outside the scope of this limited proceeding and will not be addressed further herein, except to bring them to the Commission's attention should the Commission wish to consider these arguments as part of its pending review of request for rehearing or on exceptions based on its review of the subject record. For example, 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,"[97] argued that such an outcome clearly was contrary to the Commission's intent.[98] CAC/EPUC then argue that the Commission should adopt a modified standard that would exempt its facilities from the CAS charge.[99] MID similarly notes that its generators are not exempt from the CAS charge as defined by the Commission,[100] 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.[101] All of these arguments challenge the exemption set forth by the Commission in Opinion No. 463-A, and are therefore rejected as outside the scope of this limited proceeding.

40. In evaluating "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," it is necessary to keep in mind that the ISO does not actually model generating units.[102] Instead, it adopts the power flow models, including the representations of generating units, which are developed by the investor-owned PTOs.[103] A model is a quantitative representation of the facilities that constitute the grid, and their physical limitations.[104] The initial accumulation of data that constitutes the model may be referred to as a "base case."[105]

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[97] CAC/EPUC IB at 11 (citing Tr. 147:6 – 10, 151:22 – 152:4)(brackets added).

[98] *Id*.

[99] *Id*. at 12-19.

[100] MID IB at 13-14.

[101] *Id*. at 19-21.

[102] ISO IB at 4.

[103] *Id.* (citing Ex. ISO-54 at 8:8-9; Tr. 120:1-121:2).

[104] *Id.*

[105] *Id.* (citing Tr. 163:12–14; Ex. S-79 at 5:25 – 6:10).

41. In practice, the ISO modifies models only when directed to make such changes by the PTOs in response to certain conditions, such as to add proposed or newly constructed units to the models.[106] In such circumstances, the ISO receives power flow model "change files" from the PTO to which the unit will be connecting.[107] These incremental modeling changes are then applied to the ISO's current resident planning and operating study cases, where appropriate.[108]

42. The ISO has explained that while it does not model generating units *per se*, it does use the models provided to it by the PTOs to conduct studies that examine the effects of different conditions under which the transmission system may have to operate and to determine the effects of the conditions on the transmission system.[109] Using specialized software, the ISO may alter the data and test different scenarios to determine their effect on the transmission system.[110] The ISO also noted that not every ISO study uses all of the data in the base cases but explained that the selection of the data used in running a particular model depends upon the purpose of a given study project.[111]

43. Thus, in response to the Commission's inquiry, the ISO compiled a list of the generators that the PTOs included in their base cases (*i.e.*, the list of generators modeled

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[106] *Id.*

[107] *Id.*

[108] *Id.* (citing Ex. ISO-54 at 8:11-15; Ex. S-79 at 9:8-12).

[109] *Id.* (citing Ex. ISO-54 at 6:16-18).

[110] *Id.* (citing Tr. 166:7-11; Ex. S-79 at 5:25-6:10). For instance, the ISO could adjust the data to simulate low rain years with resultant low levels of hydroelectric Generation, and examine the consequences of that change from the baseline assumption on the operation and reliability of the transmission system. *Id.* at 4 – 5 (citing Tr. 153:10-22). Similarly, the ISO could simulate the failure of either a generating unit or transmission line to understand the consequences of such a failure, and use that information to enhance the reliability of the transmission system. *Id.* at 5. The examination of different scenarios would help the ISO to better understand the most significant vulnerabilities of the transmission system. *Id.* (citing Ex. S-79 at 7:19-8:6).

[111] *Id.* (citing Tr. at 153:10-22; Ex. S-79 at 9:14-22).

by the ISO) between January 1, 2001 and December 31, 2003 (the locked in period), and this list was admitted into the record at hearing as Exhibit No. ISO-55.[112] As explained in ISO witness Mr. Lyon's prepared direct testimony and ISO witness Mr. Arikawa's direct testimony at hearing, Exhibit ISO-55 contains the list of the generating units that were included in the models that the ISO used to conduct its transmission and operations planning studies between January 1, 2001, and December 31, 2003.[113]

44. The ISO explained the manner in which the list of generating units identified as Exhibit ISO-55 was prepared in response to data request SCE-ISO-163 (included in the record as Exhibit S-81), the ISO stated:

> In response to Order No. 463-A, the ISO undertook a review of its internal databases to develop a list of generators modeled in planning studies over the period 2001 through 2003. As a starting point, the ISO extracted a list of all of the individual generators, from its data records, that have appeared in ISO studies. Next, the ISO's Operations Engineering and Grid Planning departments were asked to review the list to determine models including the listed generators were either made available to the ISO for use in an ISO Operations Engineering or Grid Planning study between January 1, 2001 and December 31, 2003. The list was then shared with each of the three investor-owned utility PTOs so that they could perform calculations necessary to comply with Order No. 463-A and provide them an opportunity to reconcile the data with their records. *None of the IOUs indicated to the ISO that the list either included generators that the IOU had not modeled or excluded generators that the IOU had modeled.* The final product was presented as ISO-55.[114]

45. The undersigned concurs with Staff's conclusion that the fact that the ISO indicated at the end of its comprehensive description of the development of Exhibit ISO-55 that, notwithstanding its effort, the list "may contain errors or omissions, given the impossibility of tracing back and recreating all studies undertaken by the ISO since January 1, 2001," [115] does not establish the need to abandon Exhibit ISO-55 as the list of generators modeled by the ISO, and arguments to the contra are hereby rejected. The ISO's data response, as well as sworn testimony and supporting exhibits, establish that

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[112] *Id.* at 2 (citing Ex. ISO-54 at 6:1 – 3).

[113] *Id.* (citing Ex. ISO-54, 6:1-3; Tr. at 82:13-83:14).

[114] Staff RB at 8 (citing Ex. S-79 (citing Ex. S-81)(emphasis added)). *See also* Ex. S-80.

[115] Staff RB at 8 – 9 (citing Ex. S-80).

the ISO took appropriate steps to ensure that the list accurately reflects the universe of generating units that were included in the models used to conduct the ISO's transmission and operations planning studies between January 1, 2001, and December 31, 2003.[116] Furthermore, Staff is correct in observing that none of the parties challenged the accuracy of the list with sufficient evidence to demonstrate that such parties' generation was not "modeled" by the ISO.[117]

46. In an apparent effort to avoid a finding of ineligibility for the subject exemption by virtue of identification in Exhibit ISO-55, several parties have argued that the ISO's definition of "modeling" is flawed. SMUD argues that the mere representation of generation in the Western Electric Coordinating Council (WECC) planning base case that the ISO receives does not mean that such generation is "explicitly modeled" by the ISO in the regular course of its transmission and operation planning.[118] SMUD argues that "explicit modeling" requires the "active manipulation and varying of generation data,"[119] and "not mere representation in a base case."[120] MID, SVP, SWP and CAC/EPUC make similar arguments.[121] The undersigned declines to adopt SMUD's definition of "explicitly modeled" and finds that, consistent with the definition of "modeling" understood by the ISO, Staff, and SCE, the ISO's use of base case models provided to it by the PTOs to conduct studies that examine the effects of different conditions under which the transmission system may have to operate and to determine the effects of the conditions on the transmission system,[122] constitutes "modeling" within the meaning of the Commission's inquiry.

47. SMUD also relies on the ISO's treatment of SMUD's behind-the-meter generation and Western Area Power Administration (Western) generation that serves SMUD Bubble load in the ISO's RMR study planning. Because the ISO treats SMUD and Western generation as "always-on" in its RMR planning studies, SMUD contends that the ISO

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[116] Tr. 112:3-113:21.

[117] Staff RB at 8 – 9.

[118] SMUD IB at 8.

[119] *Id*.

[120] *Id*.

[121] MID IB at 11; SVP IB at 4; SWP IB at 7; CAC/EPUC IB at 9.

[122] Ex. ISO-54 at 6:16-18.

does not actively study or manipulate SMUD's generation resources.[123] SMUD's reliance on RMR studies to argue otherwise is unpersuasive. First, the undersigned concurs with Trial Staff that the use of a constant, fixed output (*i.e.*, the historical output level) in a study shows that the unit *is* being modeled.[124] It does not negate the reality that the ISO in fact considers the effects of that generation on its system and, thus, incurs some costs directly related to SMUD's generation units being modeled in the base cases(s) used by the ISO.[125] Second, the undersigned concurs with the ISO's position that, in any event, its RMR studies are in no way representative of the manner in which the ISO treats SMUD's and Western's generation in studies conducted for any other purpose.[126]

48. SVP echoes many of SMUD's arguments, contending that its four behind-the-meter generators identified in Exhibit No. ISO-55 should be exempted from the CAGL charge.[127] Similar to SMUD, SVP urges that the ISO did not "model" its behind-the-meter generators, and furthermore, the ISO did not incur any administrative or operating expenses in the regular performance of transmission planning and operation for any of such generators listed in Exhibit No. ISO-55.[128] Rather, SVP asserts, as a Metered Subsystem (MSS) entity (i.e., its generators were metered prior to SVP's entering into a Metered Subsystem agreement with the ISO), SVP was wholly responsible for all load and generation within its retail service territory, and therefore the ISO would not have conducted any operating and planning studies for SVP's behind-the-meter generation and associated load[129] because the circumstances described by ISO witness Mr. Lyon for conducting such studies would not have existed.[130]

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[123] SMUD IB at 13. The arguments made here are some of the same arguments made in SMUD's request for rehearing of Opinion No. 463-A. *See also Calif. Indep. Sys. Operator Corp., et al.*, 109 FERC ¶ 61,162 at P 11 (2004).

[124] Staff IB at 6.

[125] *Id.*

[126] ISO RB at 4.

[127] SVP IB at 3 – 4.

[128] *Id.* at 4-5.

[129] *Id.* at 6-8 (citing Ex. SVP-21).

[130] *Id.* at 7 (citing Ex. ISO-54 at 7:15 – 26).

49. The undersigned finds that the ISO uses models that include the units identified in Exhibit ISO-55 in its transmission planning and operations studies. These studies facilitate the ISO's ability to plan and operate the ISO Control Area transmission system in a reliable manner. Furthermore, SVP did not become a MSS until September 1, 2002;[131] accordingly, prior to that date, SVP's generating units and load are in the same category as any other behind-the-meter generating units and load.[132] In addition, on that date, SVP became a MSS pursuant to a settlement agreement wherein SVP agreed to pay the CAS charge based on gross load and exports out of the MSS.[133] Thus, it would appear that under the terms of the settlement agreement SVP would not eligible for any exemption from CAS charges in any event.

50. In rejecting SVP's arguments, the undersigned concurs with the ISO's observation that the purpose of the CAS charge which is the subject of the Opinion 463-A exemption was not to recover the costs of modeling generating units, rather, the exemption criterion of whether a generating unit was modeled is merely an objective criterion used by the Commission as a surrogate to identify load with a more limited dependence on the ISO's control area services.[134] The record supports a finding that the generation included in Exhibit ISO-55 should be considered as "modeled" by the ISO for purposes of the Commission's inquiry. The undersigned finds that the ISO adopts the generator power flow models prepared by the PTOs, who identify the generating units to be included. Further, the undersigned finds that the ISO then uses the models provided to it by the PTOs to conduct studies to examine the effects of different conditions under which the grid may have to operate, and to determine the effects of those conditions on the grid and transmission system.

51. As previously explained, the Commission stated in the November 16, 2004 Order that it "continues to subscribe to the concept of an exception from CAGL based on whether the generator and associated behind-the-meter load are modeled by the ISO."[135] As observed by Staff, most, if not all, of the behind-the-meter generation of the parties

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[131] *Calif. Indep. Sys. Operator Corp.*, 100 FERC ¶ 61,234 P 6, 60 (2002).

[132] ISO RB at 5 (citing SVP IB at 6 – 7)

[133] *See id*. (citing Transmittal Letter at 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 to ISO RB as Attachment A)).

[134] *Id*. at 3.

[135] *Calif. Indep. Sys. Operator Corp., et al.*, 109 FERC ¶ 61,162 at P 15 (2004).

disputing the ISO's definition of modeling are in fact included in Exhibit ISO-55 (*i.e*., the list of generators modeled by the ISO) and, thus, would not be eligible for the Opinion No. 463-A exemption.[136] The ISO has argued, and the Commission has repeatedly affirmed, that the ISO's CAS provide benefits to the entire grid: the fact that application of the Commission's exception from CAS charges based on CAGL created by the Commission *sua sponte* in Opinion 463-A 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 affirmation of this basic fact in Opinions No. 463 and 463-A..

52. If the Opinion No. 463-A exemption does not provide sufficient relief to the intended parties to accomplish the Commission's goal of creating an appropriate exception from the CAGL allocation of CAS charges for wholesale and retail customers with behind-the-meter generation who primarily rely on behind-the-meter generation to meet their energy needs because such customers have a more limited impact on the ISO's grid, the Commission is, of course, free to revisit the exemption; however, the greater the magnitude and scope of the exemption from payment of the CAS charge allocation based on CAGL for some parties, the greater the assessment of the CAS charge will be for the remaining parties, and their ratepayers, who are required to pay this charge. Thus, eligibility criteria that limit such cost shifting may be wholly consistent with the Commission's balance of equities in this regard.

II. What are all the relevant factors the ISO has considered when modeling behind-the-meter generators in its transmission and operations planning studies, including: (1) WECC requirements for modeling; (2) the generator size and location on the transmission and/or distribution system; (3) load associated with that generation; (4) voltage, stability, and short-circuit concerns; and (5) the impact of the generation on the transmission system?

A. Positions of the Parties

53. The ISO states that in order for it to fulfill its control area responsibilities, it is necessary that the base case models it inherits from the PTOs take into consideration all generation, including both associated behind-the-meter load and all other generation, based on the impact of the control area transmission system and the ISO controlled grid, not based on differing criteria according to the type of load served.[137]

54. Staff and SCE state that the primary relevant factors that the PTOs take into

[136] Staff RB at 3.

[137] ISO IB at 6.

account when forming their base case models are the WECC criteria, which are reflected in WECC documents, such as the "WECC System Review Work Group Handbook."[138] SCE states that among the important WECC criteria is the location of the generator, i.e., whether it is on the transmission grid, but that the ISO and PTOs also examine "whether behind-the-meter generation is of such size, nature and character and connected at a critical point within the transmission system such that the generation could have a pronounced and significant effect on the transient or dynamic performance of the transmission system, including, but not limited to: transient stability, voltage collapse, local area power quality, fault current contribution [and] coordination of protective devices."[139] With regard to the other factors requested by the Commission, Staff explains that they have not been provided in the proceeding and are largely unavailable, although Staff has attempted to compile a more complete record for the Commission by requesting SCE, PG&E, and San Diego Gas and Electric Company (SDG&E) to provide a list of generators that were not modeled; this information is included in Exhibit S-88 for PG&E and SDG&E and in Exhibit SCE-63 for SCE.[140]

55. SMUD and MID argue that the ISO, under its definition of modeling, does not consider any relevant factors when modeling behind-the-meter generation, because it does not perform any modeling at all, but rather, any modeling that occurs results from the efforts of entities such as SMUD, the Western Area Power Administration, the PTOs, and the WECC's System Review Work Group.[141]

56. SMUD reiterates that the ISO fails to provide principles under which it actively models generation units, and contends that this is part of the ISO's alleged failure of proof in this case.[142] However, consistent with its argument in Issue 1, SMUD points to the ISO's RMR planning studies and infers that SMUD and Western-owned generation were treated as non-variable constants by the ISO in its planning studies, and thus were not modeled at all by the ISO.[143]

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[138] Staff IB at 10 (citing Ex. SCE-56 at 8 – 10; SCE-57; Ex. SCE-58; Ex. S-79); SCE IB at 7.

[139] SCE IB at 7-8 (citing Ex. ISO-54 at 7-8).

[140] Staff IB at 11-15 (citing Ex. S-79 at 25; Ex. S-88; Ex. SCE-63).

[141] SMUD IB at 28; MID IB at 22.

[142] SMUD IB at 29; SMUD Reply Brief 24-25 (hereinafter SMUD RB).

[143] SMUD IB at 29 (citing Ex. SMD-33 at 17-19, 23-26; Ex. SMD-34; Ex. SMD-35).

57. Similarly, MID argues that neither the ISO nor any other testifying party has presented any evidence that the ISO actually models generation, and therefore there is nothing to indicate the relevant factors the ISO considers when modeling generation.[144] MID argues accordingly that the record remains insufficient to demonstrate that the model-based CAS exemption is the product of reasoned decision making.[145]

58. Staff contends that SMUD and MID's arguments are misleading because the ISO uses the models it inherits from the PTOs as a starting point to conduct studies to examine the effects of different conditions under which the grid may have to operate, and thereby determine the effects of the conditions on the grid, including conditions which affect or are impacted by SMUD and MID facilities.[146] Thus, Staff argues, the ISO incurs some costs directly related to the SMUD and MID generation units being modeled in the base cases used by the ISO.[147] Staff also argues, as in Issue 1, that SMUD's reliance on the models that the ISO produced in its RMR planning process to infer that the ISO did not consider SMUD's and Western's behind-the-meter generation in other models is inappropriate.[148]

59. SVP submits, similar to its position as described under Issue 1, that Exhibit No. ISO-55 does not reflect the universe of generators that the ISO studied, but rather that the ISO would have only conducted studies on generators for which it was responsible.[149] Therefore, SVP opines, considering that SVP was wholly responsible for the four behind-the-meter generators within SVP's retail service territory, the ISO would not have conducted any studies on the behind-the-meter generators within SVP's retail service territory.[150]

B. Discussion and Findings

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[144] MID IB at 23.

[145] MID RB at 17.

[146] Staff IB at 13; Staff RB at 13.

[147] Staff IB at 13; Staff RB at 13.

[148] Staff IB at 14-15; Staff RB at 13.

[149] SVP Reply Brief at 13 (citing Ex. ISO-54 at 7:14-26)(hereinafter SVP RB).

[150] *Id.*

60. As noted above in the discussion of the first issue, the ISO does not model generating units.[151] Rather, it relies upon power flow models developed by the PTOs to perform studies to fulfill its grid planning, operations engineering and other operations reliability responsibilities.[152] Staff explains this process in greater detail. Specifically, creation of the base case(s) starts with data supplied by transmission owners to the WECC appointed area coordinator for planning.[153] The WECC compiles the data from all area coordinators to form a base case(s), and makes the base case(s) available to all WECC members, including the ISO.[154] The ISO then uses these base case(s) to conduct studies to examine the effects of different conditions under which the grid may have to operate, and determine the effects of these conditions on the grid.[155]

61. As discussed above, the ISO has stated that in order for it to fulfill its control area responsibilities, it is necessary that those studies take into account all generation based on the impact on the control area transmission system and the ISO controlled grid, not based on differing criteria according to the type of load served. Accordingly, the ISO states, it would expect the PTOs to model: (1) behind-the-meter generation that may deliver excess energy to the transmission system in the wholesale market arena; (2) behind-the-meter load serviced by the behind-the-meter generation that would remain connected and continue to draw power from the transmission system in the event the behind-the-meter generation tripped or was curtailed; and (3) behind-the-meter generation that is of such size, nature, and character or connected at a critical point within the transmission system such that the performance of the transmission system with respect to transient stability, voltage collapse, local area power quality, fault current contribution or coordination of protective devices.[156]

62. Staff adds that the ISO studies generally will not add to the base case any equipment not modeled by the PTOs, unless directed by a PTO to do so in order to recognize new facilities, nor will the ISO recognize facilities that are planned but not

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[151] ISO IB at 5.

[152] *Id.* (citing Ex. ISO-54 at 8:8 – 9; Tr. 120:1 – 121:2).

[153] Staff IB at 8. For example, PG&E is the appointed area coordinator for planning in northern California and SMUD provides its model data to PG&E who submits the data to the WECC. *Id.* at 8 n.19.

[154] *Id.* at 8.

[155] *Id.* at 9 (citing Ex. S-79 at 8 (citing Ex. S-80)).

[156] *Id.* at 6 (citing Ex. ISO-54 at 7:10 – 8:4).

actually in operation at the time that the study is performed.[157] In addition, the ISO studies may not use all of the potential data in the base case.[158] The amount and nature of data used in running a particular study depends on the purpose of a given study project.[159] Thus, although the ISO will have used all the data that the PRO base case models provide to it at some time or another, not every study of the ISO will use all the data, including all the modeled generation units.[160]

63. SCE – the only PTO that presented witness testimony in this case – and Staff agree that the primary relevant factors that the PTOs take into account when forming their base case models are the WECC criteria, which are reflected in WECC documents, such as the "WECC System Review Work Group Handbook."[161] SCE's statement – that among the important WECC criteria is the location of the generator, i.e., whether it is on the transmission grid, but that the ISO and PTOs also examine "whether behind-the-meter generation is of such size, nature and character and connected at a critical point within the transmission system such that the generation could have a pronounced and significant effect on the transient or dynamic performance of the transmission system, including, but not limited to: transient stability, voltage collapse, local area power quality, fault current contribution [and] coordination of protective devices"[162] – reveals the particular WECC criteria that a PTO considers most important when it develops the power flow models on which the ISO relies when it performs its studies.[163] The ISO's

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[157] *Id.* at 9 (citing Ex. S-79 at 9; Ex. SMD-32 at 1).

[158] *Id.*

[159] *Id.*

[160] *Id.* (citing Ex. S-79 at 9; Ex. SMD-32 at 1).

[161] Staff IB at 10 (citing Ex. SCE-56 at 8 – 10; SCE-57; Ex. SCE-58; Ex. S-79); SCE IB at 7.

[162] SCE IB at 7-8 (citing Ex. ISO-54 at 7-8).

[163] SCE states that the PTOs, not the ISO, determine which generators are included in base case models used by the ISO to perform its transmission and operations planning studies, but that in contrast, the ISO determines how to alter the representations o the generators in the model and to reflect different operating conditions based on the purpose of the study. *Id.* at 7 (citing Ex. SCE-62 at 2 – 3, 5 – 6). SCE submits that because the ISO is the entity performing the studies and making the adjustments, only the ISO has actual knowledge of the factors it takes into account in performing studies. Although the Commission may or may not be interested in how the PTOs decide what generators to include in their base case models that are used by the ISO for their studies, SCE submits

expectations concerning what the PTOs model are reasonable because they generally coincide with the WECC criteria on which the PTOs place their emphasis. SCE points out that the focus on the transmission system leaves numerous unmodeled generators which, by implication, are all or almost all located on the distribution system of the various utility distribution companies.[164]

64. Staff believes that the generators which are included in WECC models used by the ISO to perform its studies should be determined by WECC criteria because the criteria provides the Commission with many relevant factors which show how generators are included in the models.[165] However, Staff observes, not all the relevant factors which the Commission requested have been provided in this case.[166] Staff also submits that to the extent that the commission requested factual information on categories of relevant factors aside from the WECC requirements for modeling, information on those factors is generally unavailable.[167] Considering the record in this limited proceeding, the undersigned finds that these observations are credible and accurate. To the extent that Staff and other parties have made available such information, that information will be discussed here.

65. Staff expands on the WECC requirements for modeling as follows. Relevant WECC requirements for modeling are included in the record in Exhibits SCE-56, SCE-57, and S-79. For example, the WECC System Review Work Group Handbook specifies the manner in which WECC member systems are to submit data on their systems so that a model and base cases can be developed by the System Review Work Group.[168] A section

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that the record is largely uncontested that the WECC's modeling criteria is the primary determinative factor. *Id.* at 7 (citing Ex. SCE-56 at 7 – 9; Ex. S-79 at 9 – 14). According to SCE, under such WECC criteria, as became evident at hearing, the location of the generator – whether or not it is on the transmission grid – is an important factor. *Id.* at 7 (citing Ex. S-79 at 16).

[164] *Id.* at 8.

[165] Staff IB at 10 – 11 (citing Ex. S-79 at 8 – 14).

[166] *Id.* at 11.

[167] *Id.*

[168] *Id.* at 10. Staff explains that one of the purposes of the System Review Work Group is to provide timely and accurately updated information for the WECC ten-year power flow and stability data bank for member systems and WECC Committee use. *Id.* at 10 n.26.

of the handbook titled "WECC Data Preparation Procedural Manual for Power Flow and Stability Studies" provides the guidelines for data collection for certain models (base cases) and is included in Exhibit SCE-57.[169] This manual contains important information with respect to guidelines for generation for power flow and dynamic stability data requirements.

66. Information on the generator size and location on the transmission and/or distribution system and the load associated with that generation (the second and third relevant factors, respectively) is not complete in the WECC models, according to Staff.[170] Staff witness Mr. Gross explains that, while some generator size information was included in Exhibit No. ISO-55 in the column labeled "pgen," no locational or load information was provided.[171] Further, no data on the generator size or location are provided concerning the distribution system(s) of California.[172] However, Staff witness Mr. Gross believes that the ISO typically has no information on generator size or location on the distribution system because the PTOs operate their own distribution systems.[173] Moreover, Staff points out, the "WECC Data Preparation Procedural Manual for Power Flow and Stability Studies" document does not explicitly state what size a generator should be for modeling.[174]

67. Staff witness Mr. Gross further explains that in his experience, most models of transmission level service make simplifying assumptions by representing distribution systems as loads on a transmission system bus.[175] Staff witness Mr. Gross explains that such simplifications are necessary due to the complexity that a complete transmission/distribution model would entail.[176] Also, it would take an extraordinarily large amount of computing power and/or time to solve a combined

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[169] *Id.* at 10.

[170] *Id.* at 11.

[171] *Id.*

[172] *Id.*

[173] *Id.*

[174] *Id.* (citing Ex. SCE-56 at 8).

[175] *Id.*

[176] *Id.* at 11 – 12.

transmission/distribution model.[177]

68. With respect to voltage, stability and short-circuit concerns (the fourth relevant factor), Staff explains that these concerns pertain more to individual studies than they do to the actual model used to perform the study.[178] Staff witness Mr. Gross explains that gathering such information would require the ISO to provide a large number of studies some of which may no longer be available.[179] Also, the "WECC Data Preparation Procedural Manual for Power Flow and Stability Studies" document does not explicitly address how these items impact the need for modeling.[180]

69. Concerning the information on the impact of the generator on the transmission system (fifth relevant factor), Staff witness Mr. Gross observes that all generators connected at transmission levels have some impact on the transmission system.[181] The degree to which a generator impacts the transmission system depends on the size and location of that generator; however, as previously discussed, information on generator size and location was not provided.[182]

70. In order to address some of the concerns raised by SMUD and MID, Staff offers additional information that it obtained upon request from SCE, PG&E and SDG&E.[183] In order to provide the Commission with as much information as is available pursuant to its request, this information will be discussed here. Staff explains that it requested the PTOs to provide a list of generators that were not modeled.[184] Responses were provided which indicate that the generators not modeled were primarily small sizes (typically less than 10 MW) and connected at a voltage of 12 kV.[185] Staff submits that this information is

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[177] *Id.* at 12 (citing Ex. S-79 at 16).

[178] *Id.*

[179] *Id.*

[180] *Id.* (citing Ex. SCE-56 at 9).

[181] *Id.*

[182] *Id.* (citing Ex. S-79 at 16 – 17).

[183] *Id.* at 13.

[184] *Id.*

[185] *Id.*

indicative of generators which are not required to be modeled under WECC guidelines.[186] The data requests and responses are included as Exhibit S-88 for PG&E and SDG&E and as Exhibit SCE-63 for SCE.[187]

71. The undersigned adopts as persuasive the information offered by the ISO, Staff, and SCE. To the extent that the information requested by the Commission was available in this case, these parties and Staff have offered the most insight into the factors that influence the base case models upon which the ISO relies and therefore the studies that the ISO conducts that are based on the base case models.

72. The undersigned rejects SMUD's arguments that under the ISO's definition of "modeling," there are no relevant factors applicable to SMUD and Western generation because the ISO accepts the WECC base cases without modification, as well as MID's argument that the ISO does not actually model behind-the-meter generation, instead relying exclusively, without verification, on models that are provided to the ISO by the PTOs. The undersigned adopts Staff's view that the ISO simply uses the models as a starting point to conduct studies to examine the effects of the conditions on the grid, including conditions which affect or are impacted by SMUD and MID facilities.[188] The undersigned agrees with Staff that the ISO thus incurs some costs directly related to the SMUD and MID generation units being modeled in the base case(s) used by the ISO.[189]

73. Consistent with the rulings discussed under Issue 1, the undersigned also agrees with Staff that SMUD's reliance on the models that the ISO produced in its RMR planning process to infer that the ISO did not consider SMUD and Western behind-the-meter generation in other models is inappropriate.[190] As Staff points out, SMUD improperly relies on the ISO RMR Study Screening Analysis (Exhibit SMD-34) as support for the practice of excluding municipal units from the ISO's planning and operation process. The screening analysis relied upon is applicable to the ISO's 2002 – 2004 Reliability Must Run Study which is outside of the locked in period for this proceeding. SMUD also relies on an excerpt from the ISO's Five-Year RMR technical Study of the ISO-Controlled Grid of September 1998 (Exhibit SMD-36), which was prepared in September 1998, prior to the commencement of the locked-in period of this

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[186] *Id.*

[187] *Id.*

[188] *Id.*

[189] *Id.*

[190] *Id.* at 14-15; Staff RB at 13.

proceeding. Moreover, even if the RMR study was applicable to the locked in period, Staff correctly points out that SMUD has not established the applicability of RMR eligibility as it relates to the exemption at issue in this case.

74. Additionally, consistent with the undersigned's rulings concerning Issue 1, SVP's arguments on this issue – i.e., that considering that SVP was wholly responsible for the four behind-the-meter generators within SVP's retail service territory, the ISO would not have conducted any studies on the behind-the-meter generators within SVP's retail service territory – are hereby rejected. For the reasons set forth under Issue 1, these arguments by SVP are unpersuasive.

III. 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?

A. Positions of the Parties

75. The ISO and Staff agree that the ISO incurs costs to provide control area services from which behind-the-meter load benefits.[191] The ISO and Staff first argue that the ISO incurs the same CAS costs for behind-the-meter load that it incurs for load served using the ISO controlled grid.[192] Further, to the extent that the behind-the-meter load has not self-provided or made appropriate arrangements (for example, through an adequate standby service agreement) for the required amount of operating reserve, and to the extent that such standby service arrangements are not directly associated with a proportional share of operating reserve, in all cases the ISO must be prepared to maintains continuity of service to such load and therefore must procure the requested amount of operating reserve, the ISO submits.[193] However, the ISO recognizes that the Commission has concluded that behind-the-meter load imposes a lesser amount of CAS costs on the ISO.[194] Therefore, although the ISO concedes that no witness presented quantifiable evidence of cost imposed by load that is not considered in the ISO's transmission and operations planning, the ISO generally asserts that behind-the-meter

[191] Staff IB at 16; ISO IB at 7 (citing *Calif. Indep. Sys. Operator Corp.*, 99 FERC ¶ 63,020 at 65,109-10 (2002), *aff'd in pertinent part*, Opinion No. 463, 103 FERC ¶ 61,114 at P 25-26 (2003)).

[192] ISO IB at 8 (citing Ex. ISO-54 at 13:13-16, 13:20-14:2; Staff RB at 15).

[193] *Id.* (citing Ex. ISO-54 at 13:20 – 14:2).

[194] *Id.* (citing *Calif. Indep. Sys. Operator Corp., et. al.*, Opinion No. 463, 103 FERC ¶ 61,114 at P 28 (2003)).

load benefits less or more directly from different types of control area services.[195] For instance, the ISO submits, behind-the-meter load benefits directly from the ISO's assurance of adequate reserves, the monitoring and operating efforts by the ISO to ensure the safe and reliable operation of the ISO control area, and the administrative costs of dispatching energy to balance generation and load.[196] In contrast, the ISO posits, behind-the-meter load benefits less directly from transmission planning, maintenance and outage coordination, and numerous other administrative functions.[197]

76. Staff concurs with the ISO's general description of its costs and recognizes the complexity of the task of attempting to identify the extent to which behind-the-meter load netted against unmodeled generation imposes CAS costs.[198] Staff also believes that because the ISO expends time and resources to ensure that the system is operating to benefit behind-the-meter load, some share of the CAS charges should be passed on to such customers based on the loads the behind-the-meter generation serves.[199]

77. SMUD, MID, and SWP concur, and Staff acknowledges, that the ISO failed to provide any evidence quantifying the CAS costs it incurs from behind-the-meter load netted against unmodeled generation.[200] Therefore SMUD, MID, and SWP reject the ISO's and Staff's arguments, and they assert that the record is insufficient to demonstrate the extent to which behind-the-meter load netted against unmodeled generation imposes CAS costs on the ISO.[201] SMUD argues that since the ISO is the sole repository of such information, the ISO's alleged failure of proof in this regard should be held against it.[202]

78. SWP asserts that the general terms that the ISO presents fall short of the information the Commission stated it needed in order to ascertain whether the eligibility test of Opinion 463-A is capable of satisfying its intent, and that the generalized

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[195] *Id.* at 9.

[196] *Id.* (citing Ex. ISO-54 at 10:16-20, 12:15-19).

[197] *Id.* (citing Ex. ISO-54 at 14:2-6).

[198] Staff IB at 16; Staff RB at 14.

[199] Staff IB at 16.

[200] SMUD IB at 30; MID RB at 21; SWP IB at 12; SWP RB at 5; Staff RB at 14.

[201] SMUD IB at 30; MID RB at 21; SWP IB at 12; SWP RB at 5.

[202] SMUD IB at 30.

conclusions cannot support an exemption of any load from CAGL allocation of CAS charges.[203]

79. SCE argues that unlike behind-the-wholesale-meter load, it is relatively simple to calculate the amount of behind-the-retail-meter load served by unmodeled generators, particularly given that the ISO actually estimated the behind-the-retail-meter load in the first phase of the case.[204] SCE adds that, with SCE's proposed method, the ISO can calculate behind-the-retail meter load served by modeled generation and this amount can be subtracted from the originally estimated (and billed) amount with the remaining amount refunded to the investor-owned PTOs.[205] SCE submits that its methodology is applied only to investor-owned PTOs because the "retailed BTM load of the government-owned utilities was never assessed the CAS charge."[206] Furthermore it asserts that the factual record supports applying the CAS charge exemption to behind-the-retail-meter load, but not to behind-the-wholesale-meter load.[207] SCE disputes the ISO's arguments that control area services are performed for all load (including behind-the-retail-meter load), and asserts that the ISO generally does not perform the control area services that were described in the ISO's testimony for retail behind-the-meter load that is served by behind-the-meter generation.[208]

80. SCE contends that behind-the-retail-meter load is not scheduled, it is not the ISO's load responsibility, activities that cause the ISO to incur CAS costs are largely not performed to serve behind-the-retail-meter load, and the WECC does differentiate between behind-the-retail-meter load and other load.[209] SCE therefore concludes that

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[203] SWP IB at 13; SWP RB at 5.

[204] SCE IB at 12-13. SCE uses the terms "behind-the-retail meter load" and "behind-the-wholesale-meter load" rather than "retail behind-the-meter load" and "wholesale behind-the-meter load" because it believes that the former terms more accurately reflect the type of meter being discussed. *Id.* at 2 n.4. These terms will only be used in this Initial Decision when discussing SCE's arguments.

[205] *Id.* at 13 (citing Ex. SCE-56 at 17 – 18).

[206] *Id.* (citing Ex. SCE-56 at 5; Ex. ISO-12; Ex. SCE-32; Phase 1 Tr. at 827, 839 – 41).

[207] *Id.* at 16.

[208] *Id.*

[209] *Id.* at 16 - 17 (citing Ex. SCE-56 at 12 (citing Ex. SCE-30; Phase 1 Tr. 1183-1185), 14 - 16).

load located behind-the-retail-meter of an unmodeled generator, when served by such generation, imposes insufficient CAS cost to merit a CAS charge.[210]

81. CAC/EPUC urge modification of the Opinion 463-A exemption in favor of an exemption for those retail customers with behind-the-meter generation which primarily rely upon that generation to meet their energy needs on a net load basis.[211] They contend that such an exemption is consistent with Commission precedent.[212]

82. Staff and several parties disagree with SCE's contentions. Staff and SCE disagree over whether load located behind-the-retail meter of an unmodeled generator, when served by such generation, imposes insufficient CAS costs to merit a CAS charge. Staff maintains that if the combination of behind-the-meter load netted against unmodeled generation does not have a standby service contract with a utility distribution company and no CAS charge is imposed, then that combination gets CAS services without paying for them.[213] Staff also argues that the support provided by SCE for its argument are statements from the pre-remand phase of this proceeding, and that SCE has not supported its contention with factual information that the Commission has requested in this case.[214] SCE counters that Staff is factually wrong and asserts that whenever a load is served from the SCE system, rather than from the behind-the-meter generator, it is not behind-the-retail-meter load, as defined by the undersigned and the ISO, but rather, it is simply SCE retail load and is assessed the CAS charge under the relevant retail tariff.[215] SCE also asserts that this case does not involve behind-the-retail-meter loads which are not subject to standby contracts, but rather, the only behind-the-retail-meter loads at issue in this case are IOU standby customers and all other behind-the-retail-meter loads were effectively exempted from the CAS charges.[216]

83. SWP and MID dispute SCE's and CAC/EPUC's arguments, which SWP and MID

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[210] *Id.*

[211] CAC/EPUC IB at 4.

[212] *Id.* at 4 – 6.

[213] Staff IB at 15.

[214] Staff RB at 14-15.

[215] SCE RB at 23.

[216] *Id.*

characterize as advocating that the exemption ordered by the Commission be confined to retail load, as contrary to the Commission's clear and consistent directives in Opinion Nos. 463 and 463-A and the November 16, 2004 Order in this case that such exemption should apply to both wholesale and retail load.[217] SWP and MID also contend that an exemption only applying to behind-the-meter retail load is also contrary to the undersigned's ruling that exemptions other than those specified in Opinion No. 463-A are not issues in this case.[218]

84. SWP also argues that there is no evidence to demonstrate that there is any difference in costs imposed by retail behind-the-meter load and wholesale behind-the-meter load.[219] Further, SWP maintains, even if this issue were properly within the scope of this hearing, the asserted justification would fail to overcome the discrimination inherent in limiting the exemption to solely retail-behind-the-meter load.[220] SCE disputes SWP's position, stating that there is extensive qualitative evidence in the record demonstrating that there are significant differences in the services that are performed for the two types of load, including the fact that behind-the-retail-meter loads, unlike behind-the-wholesale-meter loads, were not scheduled, studied, and subject to reserve procurement.[221]

B. Discussion and Findings

85. Because of the complexity of the task of attempting to identify the extent to which behind-the-meter load netted against unmodeled generation imposes CAS costs,[222] neither the ISO or any other party has been able to present quantifiable evidence on this issue.[223] SWP and MID argue that the ISO was non-responsive to the Commission's inquiry regarding this issue. The ISO responds that because all load benefits from the

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[217] SWP IB at 13-14; SWP RB at 6-7; MID RB at 17-18.

[218] SWP IB at 13-14; SWP RB at 6-7; MID RB at 17-18.

[219] SWP IB at 14; SWP RB at 7.

[220] SWP RB at 7.

[221] SCE RB at 25; SCE IB at 16 (citing Ex. SCE-56 at 12 (citing Ex. SCE 30; Phase 1 Tr. 1183-1185), 14 – 16).

[222] Staff IB at 16; Staff RB at 14.

[223] ISO IB at 9; SMUD IB at 30; MID IB at 23; SCE IB at 15.

ISO's control area services, those costs are incurred on behalf of all load.[224] However, the ISO acknowledges that behind-the-meter load benefits less directly from transmission planning, maintenance and outage coordination, and numerous other administrative functions than[225] from other ISO Control Area Services, such as the ISO's assurance of adequate reserves, the monitoring and operating efforts by the ISO to ensure the safe and reliable operation of the ISO control area, and the administrative costs of dispatching energy to balance generation and load.[226]

86. While SMUD, MID, and SWP all assert that the record is insufficient to demonstrate the extent to which behind-the-meter load netted against unmodeled generation imposes CAS costs,[227] the parties reach very different conclusions regarding the impact of this record deficiency. SMUD argues that since the ISO is the sole repository of such information, the ISO's alleged failure of proof in this regard should be held against it, apparently by means of findings supporting an expansive exemption from the CAS charges.[228] SWP asserts, however, that because the ISO is unable to provide the information the Commission stated it needed in order to ascertain whether the eligibility test of Opinion 463-A is capable of satisfying its intent, the record cannot support an exemption of any load from the CAGL allocation of CAS charges.[229] SWP renews its point that exemptions from the CAS charge for some only results in higher payments for others. For the reasons discussed more fully herein below, the undersigned declines to adopt either of these extremes.

87. While the factual information that the Commission was apparently looking for here has not been forthcoming, mostly due to the inability of the ISO or the other parties to quantify the costs in question, attempts to address the extent to which behind-the-meter load netted against unmodeled generation imposes CAS costs have led to renewed arguments regarding distinctions to be drawn between behind-the-meter *retail* and behind-the-meter *wholesale* load. SCE argues that the factual record supports applying

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[224] ISO RB at 7 (citing *Calif. Indep. Sys. Operator Corp.*, 99 FERC ¶ 63,020 at 65,109-10 (2002), *aff'd in pertinent part*, 103 FERC¶ 61,114 at P 25-26 (2003)).

[225] ISO IB at 9 (citing Ex. ISO-54 at 14:2-6).

[226] *Id.* (citing Ex. ISO-54 at 10:16-20, 12:15-19).

[227] SMUD IB at 30; MID RB at 21; SWP IB at 12; SWP RB at 5.

[228] SMUD IB at 30.

[229] SWP IB at 13; SWP RB at 5.

the CAS charge exemption to behind-the-retail-meter load, but not to behind-the-wholesale-meter load,[230] and the CAC/EPUC make arguments raising such a distinction.

88. SCE strongly disputes the ISO's position that control area services are performed for all load (including behind-the-retail-meter load), and asserts that the ISO generally does not perform the control area services that were described in the ISO's testimony for behind-the-retail-meter load that is served by behind-the-meter generation.[231] SCE therefore concludes that load located behind-the-retail-meter of an unmodeled generator, when served by such generation, imposes insufficient CAS cost to merit a CAS charge.[232]

89. CAC/EPUC observe that accepting the ISO's definition of "modeling" (discussed more fully in Section I *supra*) results in all generating units identified on ISO Exhibit No. 55 being summarily disqualified from application of the Opinion No. 463-A exemption. Therefore, "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,"[233] a result that the CAC/EPUC argue is clearly contrary to the Commission's intent.[234] First, CAC/EPUC argue that retail behind-the-meter load should receive an exemption under the Opinion No. 463-A and be billed CAS charges on a net metered basis because the ISO does not "model" retail behind-the-meter generation or load in its transmission or planning studies.[235] In the alternative, CAC/EPUC argue that if the Commission were to adopt the ISO's definition of "modeling" and utilize ISO Exhibit No. 55 as the basis for applying the Opinion 463-A exemption, "the ISO's argument should not be accepted with regard to retail customers with behind-the-meter generation . . . ."[236] Rather, CAC/EPUC argue, the Opinion 463-A exemption should be modified to permit an allocation of CAS charges to such load on a net metered basis.

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[230] SCE IB at 16.

[231] *Id.*

[232] *Id.*

[233] CAC/EPUC IB at 11

[234] *Id*.

[235] *Id*. at 12-19.

[236] CAC/EPUC Reply Brief at 3.

90. While the record in this proceeding does support SCE's contentions that behind-the-retail-meter load is not scheduled by the ISO, it is not the ISO's load responsibility, and the activities that cause the ISO to incur CAS costs are largely not performed to serve behind-the-retail-meter load,[237] it does not support SCE's conclusion that load located behind-the-retail-meter of an unmodeled generator, when served by such generation, imposes insufficient CAS cost to merit a CAS charge.[238] Rather, the undersigned concurs with the ISO and Staff that because the ISO expends time and resources to ensure that the system is operating, which benefits all load – including retail behind-the-meter load – some share of the CAS charges should be passed on to such customers based on the loads the behind-the-meter generation serves.[239]

91. With regard to arguments raised by CAC/EPUC, the November 16, 2004 Order affirms that "Opinion No. 463-A created an exemption from assessment of CAS charge based on CAGL for 'generators which are not modeled by the ISO in its regular performance of transmission planning and operation[.]"[240]

92. For the reasons set forth in the discussion of Issue I, *supra*, the ISO's definition of modeling has been adopted by the undersigned as the appropriate definition for purposes of the Commission's inquiry in this proceeding. Therefore, as observed by Staff, most, if not all, of the behind-the-meter generation of the parties disputing the ISO's definition of modeling are in fact included in Exhibit ISO-55 (*i.e.*, the list of generators modeled by the ISO) and, thus, not eligible for the Opinion No. 463-A exemption.[241] However, were the Commission to find that certain behind-the-meter load of generators modeled by the ISO (as identified in ISO Exhibit ISO-55) should, nevertheless, be entitled to an exemption from CAS charges based on CAGL, the record supports a finding that the extent to which behind-the-meter load netted against unmodeled generation impose CAS costs is less for behind-the-meter *retail* load than for behind-the-meter *wholesale* load. While Commission Opinion Nos. 463 and 463-A, and the November 16, 2004 Order in this case, clearly indicate that the subject exemption is intended to apply to both

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[237] SCE IB at 16 - 17 (citing Ex. SCE-56 at 12 (citing Ex. SCE-30; Phase 1 Tr. 1183-1185), 14 - 16)

[238] *Id.*

[239] Staff IB at 16; ISO RB at 7.

[240] *Calif. Indep. Sys. Operator Corp., et al.*, 109 FERC ¶ 61,162 at P 13 (2004)(brackets in original).

[241] Staff RB at 3.

wholesale and retail load as argued by SWP and MID,[242] the Commission may choose to reflect this distinction in its final determination of the methodology to be applied in calculating the actual CAS charges for behind-the-meter load.

IV. How and to what extent does behind-the-meter generation that is not explicitly modeled by the ISO in its transmission and operations planning studies impose CAS costs on the ISO?

A. Positions of the Parties

93. The ISO, Staff, and SCE argue that this issue is not relevant to the instant case.[243] The ISO states that CAS costs are incurred to serve load reliability, and to the extent a particular generating unit or type of generating unit imposes costs on the ISO, that generator or entity that specifically purchases from the generator should bear those costs, as through the market operations charge.[244] The ISO argues that the Commission did not set this issue for hearing; rather, the ISO submits, the purpose of the Commission's exemption is to quantify the lesser amount of costs that behind-the-meter loads impose on the ISO's CAS, an inquiry to which this issue is not relevant.[245]

94. SCE also states that whether or not this issue is relevant, the Commission would be hard-pressed to make any conclusive factual finding because the parties have not established the extent to which modeled generation, let alone unmodeled generation, imposes CAS costs on the ISO.[246] SCE explains that the ISO bills the CAS charge based on load and not generation, the ISO has not broken out the CAS costs, and there is no way to determine the extent to which CAS costs can be associated with generation.[247]

95. SMUD, MID and SWP agree with SCE's assertion of a lack of evidence quantifying the costs incurred by it in the regular course of transmission planning and operations for behind-the-meter generation that is not explicitly modeled by the ISO.[248]

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[242] SWP IB at 13-14; SWP RB at 6-7; MID RB at 17-18.

[243] ISO IB at 10; Staff IB at 17; SCE IB at 18.

[244] ISO IB at 10.

[245] *Id.*; SCE IB at 18.

[246] SCE IB at 18.

[247] *Id.* at 18-19.

[248] *Id.*; SMUD IB at 30-31; SWP IB at 14; MID RB at 24.

SMUD alleges that this lack of information constitutes a failure of proof by the ISO, and should be held against the ISO.[249]

B. Discussion and Findings

96. The undersigned concurs with the position of the ISO, Staff, and SCE that this issue has not been set for hearing by the Commission and is not relevant to the instant case.[250] The undersigned further agrees with SCE's observation that, whether or not this issue is considered to be relevant, the Commission would be hard-pressed to make any conclusive factual finding on this issue because the parties have not established the extent to which modeled generation, let alone unmodeled generation, imposes CAS costs on the ISO.[251] As SCE explains, the ISO bills the CAS charge based on load and not generation and there is simply no way to determine the extent to which CAS costs can be associated with generation.[252]

V. What regulatory controls (if any) are necessary for the ISO to report which generation and associated load it does not model as part of its transmission and operations planning studies?

A. Positions of the Parties

97. The parties and Staff discussed this issue in their Joint Stipulation of Issues, which was discussed at hearing.[253] Based upon the summary of positions concerning this issue, the parties and Staff appear to be in consensus that, given that this case concerns a locked-in period, and that therefore it concerns a retroactive look at this issue, there are not any regulatory controls at this point that would be particularly helpful. As discussed at hearing,[254] the positions of parties and Staff as set forth in the Joint Stipulation of Issues are set forth below to support the finding that this issue has been rendered moot due to the agreement of the parties.

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[249] SMUD IB at 31.

[250] ISO IB at 10; Staff IB at 17; SCE IB at 18.

[251] SCE IB at 18.

[252] *Id.* at 18-19.

[253] *See* Tr. 41:4 – 47:18.

[254] *Id.*

98. The ISO states that because it no longer estimates behind-the-meter load for the purposes of assessing control area services (or its current equivalent) and the relevant entities remaining within the control area now comply with the ISO's requirements, regulatory controls through which the Commission directs parties to provide information to the ISO to accurately charge behind-the-meter load are not required.[255]

99. SCE believes that this proceeding has provided sufficient information to make the determination as to what generation is modeled.[256] Unless "associated load" is limited to load behind retail meters of unmodeled generators, it is not possible in SCE's opinion to make a determination as to what generation served what load on a retroactive basis for the time period in question.[257]

100. MID submits that, given that this proceeding focuses on a locked-in period, it is difficult to impose regulatory controls retroactively.[258] However, MID voices concerns with SCE witness Mr. Shockey's proposal in response to this issue which, MID submits, could make having standby service a condition precedent for any wholesale or retail CAS exemption.[259] MID does not discuss this issue further in its briefs.

101. Several parties and Staff take no position on this issue. SWP states in the Joint Stipulation of Issues that it does not take a position on this issue but that it reserves the right to address the issue in briefs,[260] and Staff also similarly indicates that it does not have a position on this issue.[261] In its briefs, SWP confirms that it is not briefing this issue because the undersigned found this issue moot with respect to the locked-in period which is the subject of this case.[262] SVP also confirms that it takes no position on this

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[255] Joint Stipulation of Issues at 7 (citing Ex. ISO 54 at 15:4-12).

[256] *Id.* (citing Ex. SCE-61 at 2-3).

[257] *Id.*

[258] *Id.*

[259] *Id.* (citing Ex. MID-23 at 4:21 to 7:3).

[260] *Id.*

[261] *Id.* (citing Ex. S-79 at 25:22).

[262] SWP IB at 15 (citing Tr. 43:9 – 13; SWP RB at 8).

issue.[263] CAC/EPUC and SMUD also appear not to have a position on this issue.

B. Discussion and Findings

102. Based on the stipulation of the parties, it is the determination of the undersigned that this issue should be considered moot.

SUMMARY AND CONCLUSION

103. The Commission's November 16, 2004 Order affirms that "Opinion No. 463-A created an exemption from assessment of CAS charge based on CAGL for 'generators which are not modeled by the ISO in its regular performance of transmission planning and operation[.]"[264] The Commission's November 16, 2004 Order emphasized that: "the hearing is limited to the CAGL exemption issue as set forth in Opinion No. 463-A and shall *not* be treated as an opportunity for the parties to relitigate any other aspect of our decision with respect to CAGL (or any other issue)."[265]

104. Thus, the hearing is neither intended to encompass alternatives to the exemption set forth in Opinion No. 463-A, nor is it intended to encompass issues that have already been litigated.[266] Yet, as Staff has noted, much of the record developed in this limited hearing consists of positions advanced by certain parties that do not add factual information to the record, but rather present some of the same positions argued in their requests for rehearing of Opinion No. 463-A, or constitute a complaint that the exemption set forth in Opinion No. 463-A, based on unmodeled generation, does not afford sufficient relief from the CAS charge.[267] Therefore, they either argue that the exemption criteria is flawed, or for the adoption of a different exemption entirely.

105. For the reasons set forth in the discussion of Issue I, *supra*, the ISO's definition of "modeling" has been adopted by the undersigned as the appropriate definition for purposes of the Commission's inquiry in this proceeding. The ISO uses models that include the units identified in Exhibit ISO-55 (*i.e*., the list of generators modeled by the

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[263] SVP IB at 11; SVP RB at 13.

[264] *Calif. Indep. Sys. Operator Corp., et al*., 109 FERC ¶ 61,162 at P 13 (2004)(brackets in original).

[265] *Id.* at P 16 (emphasis in original).

[266] *Id.*

[267] Staff RB at 2.

ISO between January 1, 2001 and December 31, 2003)[268] in its transmission planning and operations studies. These studies facilitate the ISO's ability to plan and operate the ISO control area transmission system in a reliable manner.

106. The Commission made it clear in its November 16, 2004 Order that the goal of this proceeding was to address factual issues "concerning the exemption, as well as the manner in which it would be administered."[269] As SCE points out, the parties had an opportunity to support claims that they had behind-the-meter load served by unmodeled generation and/or present methodologies for calculating behind-the-meter load served by unmodeled generation.[270] However, the parties failed to act on this opportunity to present such facts. Rather, as observed by Staff, most, if not all, of the behind-the-meter generation of the parties disputing the ISO's definition of "modeling" are in fact included in Exhibit ISO-55 and have not persuasively demonstrated eligibility for the Opinion No. 463-A exemption.[271]

107. However, were the Commission to find that certain behind-the-meter load of generators modeled by the ISO (as identified on Exhibit ISO-55) should, nevertheless, be entitled to an exemption from CAS charges based on CAGL, the record supports a finding that the extent to which behind-the-meter load netted against unmodeled generation impose CAS costs is less for behind-the-meter *retail* load than for behind-the-meter *wholesale* load. While Commission Opinion Nos. 463 and 463-A, and the November 16, 2004 Order in this case, clearly indicate that the subject exemption is intended to apply to both wholesale and retail load as argued by SWP and MID,[272] the Commission may choose to reflect this distinction in its final determination of the methodology to be applied in calculating the actual CAS charges for behind-the-meter load.

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[268] Because the ISO no longer estimates behind-the-meter load for the purposes of assessing control area services (or its current equivalent) and the relevant entities remaining within the control area now comply with the ISO's requirements,[268] this case concerns a locked-in period, the period between January 1, 2001 and December 31, 2003, and therefore these issues are being addressed, by necessity, retroactively. Joint Stipulation of Issues at 7 (citing Ex. ISO 54 at 15:4-12).

[269] *Calif. Indep. Sys. Operator Corp., et al.*, 109 FERC ¶ 61,162 at P 15.

[270] SCE IB at 2.

[271] Staff RB at 3

[272] SWP IB at 13-14; SWP RB at 6-7; MID RB at 17-18.

ORDER

IT IS ORDERED, subject to review by the Commission on exceptions or on its own motion, as provided by the Commission's Rules of Practice and Procedure, that within thirty days of the issuance of the Final Order in this proceeding, all parties shall take appropriate action to implement all the rulings in this decision. All arguments made by the participants, which have not been discussed and/or adopted by this decision have been considered and are rejected.

Bobbie J. McCartney
Presiding Administrative Law Judge