UNITED STATES OF AMERICA BEFORE THE FEDERAL ENERGY REGULATORY COMMISSION

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California Independent System Operator Corporation Docket No. ER11-2128-000

ANSWER TO MOTIONS TO INTERVENE AND COMMENTS, AND MOTION TO FILE ANSWER AND ANSWER TO PROTESTS, OF THE CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION

On November 15, 2010, the California Independent System Operator

Corporation ("ISO")¹ submitted a filing in this proceeding ("November 15

Compliance Filing") to modify the provisions of the ISO tariff regarding

convergence bidding, in compliance with directives contained in the "Order

Accepting Tariff Revisions, Directing Compliance Filing and Granting Waiver

Request" issued by the Commission on October 15, 2010.² Several parties filed

motions to intervene, comments, and protests in response to the November 15

Compliance Filing.³

¹ The ISO is also sometimes referred to as the CAISO. Capitalized terms not otherwise defined herein have the meanings set forth in the Master Definitions Supplement, Appendix A of the ISO tariff. In this answer, the terms convergence bidding and virtual bidding, and the terms convergence bid and virtual bid, are used interchangeably.

² California Independent System Operator Corp., 133 FERC ¶ 61,039 (2010) ("October 15 Order"). In the October 15 Order, the Commission conditionally accepted the tariff amendment the ISO submitted on June 25, 2010 ("June 25 Tariff Amendment"), to implement convergence bidding in the ISO market effective February 1, 2011. The June 25 Tariff Amendment was filed and the October 15 Order was issued in Docket No. ER10-1559-000. Pursuant to the Commission's eTariff requirements, the November 15 Compliance Filing was filed in Docket No. ER11-2128-000.

³ The following entities filed motions to intervene, comments, and protests: the California Department of Water Resources State Water Project ("SWP"); Modesto Irrigation District; Pacific Gas and Electric Company ("PG&E"); Powerex Corp. ("Powerex"); SESCO Enterprises, LLC, Jump Power, LLC, Silverado Energy LP, JPTC, LLC, and Solios Power, LLC (collectively, "Financial Marketers"); and Western Power Trading Forum ("WPTF").

The ISO hereby files its answer to the comments along with a motion to answer any protests submitted in this proceeding.⁴ As explained below, the Commission should accept the November 15 Compliance Filing without modification or condition except for certain clarifications the ISO commits to make in a further compliance filing as discussed herein.

I. Answer

A. The Commission Should Not Direct the ISO to Make Revisions to the ISO Tariff that Are Inconsistent With the October 15 Order or Outside the Scope of the Compliance Filing.

In the October 15 Order, the Commission directed the ISO to make specific tariff changes in its compliance filing. As explained in the November 15

Compliance Filing and this answer, the ISO has made the tariff changes required

by the October 15 Order. Financial Marketers and Powerex, however, now

request that the Commission direct the ISO to make tariff changes that are

inconsistent with the directives set forth in the October 15 Order or go beyond the

scope of the issues raised in the November 15 Compliance Filing.

Financial Marketers argue that the ISO should not be permitted to release

virtual bid data on a daily basis.⁵ However, in the October 15 Order, the

⁴ The ISO submits this answer pursuant to Rules 212 and 213 of the Commission's Rules of Practice and Procedure, 18 C.F.R. §§ 385.212, 385.213 (2010). The ISO requests waiver of Rule 213(a)(2), 18 C.F.R. § 385.213(a)(2), to permit it to make an answer to the protests. Good cause for this waiver exists here because the answer will aid the Commission in understanding the issues in the proceeding, provide additional information to assist the Commission in the decision-making process, and help to ensure a complete and accurate record in this case. *See, e.g., Entergy Services, Inc.*, 116 FERC ¶ 61,286, at P 6 (2006); *Midwest Independent Transmission System Operator, Inc.*, 116 FERC ¶ 61,124, at P 11 (2006); *High Island Offshore System, L.L.C.*, 113 FERC ¶ 61,202, at P 8 (2005).

⁵ Financial Marketers at 8-12.

Commission found that the ISO's information release policy is just and reasonable and rejected these arguments about the information release policy as unjustified.⁶ In compliance with the Commission's directives, the ISO included in the November 15 Compliance Filing new Section 6.5.8 of the ISO tariff, which states that the ISO will "post on OASIS [the Open Access Same-Time Information System] the net cleared quantities of Virtual Awards at each Eligible PNode or Eligible Aggregated PNode by the close of the Real-Time Market for each Trading Day." Financial Marketers do not contest that the Commission has authorized the daily release of virtual bid data. As they acknowledge in their comments, Financial Marketers filed a request for rehearing of those Commission directives.⁷ Indeed, as Financial Marketers themselves note, they make the same arguments on the issue, often using the same words, in both their request for rehearing and their protest.⁸

Powerex accurately notes that, in the October 15 Order, the Commission accepted Section 30.10 of the ISO tariff as proposed in the June 25 Tariff Amendment, subject only to the ISO's correction on compliance of a minor typographical error in the section.⁹ The ISO included Section 30.10 with the

⁶ October 15 Order at PP 88-89.

⁷ Request of Financial Marketers for Rehearing, Docket No. ER10-1559-001, at 4-5, 7-11 (Nov. 15, 2010) (arguing that "[t]he October 15 Order errs . . . in approving CAISO's unjust, unreasonable, and unduly discriminatory proposal to release net cleared quantities of convergence bids at each node at the close of the real-time market for each trading day.").

⁸ Financial Marketers at 2 ("Financial Marketers reiterate here the arguments it has made in its request for rehearing of the October 15 Order"). *Compare* Financial Marketers' request for rehearing at 8-11 *with* Financial Marketers' protest at 9-12.

⁹ Powerex at 9-10 (citing October 15 Order at P 252). Section 30.10 concerns the ISO's use of an alternating current ("AC") solution and nodal MW constraints. *See also* October 15

required minor correction in the November 15 Compliance Filing. Nevertheless, Powerex now requests that the Commission direct the ISO to make additional changes to Section 30.10.¹⁰ Powerex also requests that the Commission require the ISO to make additional changes to Section 11.32(iii) of the ISO tariff, which the Commission accepted in the October 15 Order subject only to commitments the ISO had made to add back an unintentionally omitted subsection (11.32(ii)) and to make revisions to Section 11.32(v) on compliance.¹¹ The November 15 Compliance Filing included these changes to Sections 11.32(ii) and -(v). The November 15 Compliance Filing made no changes to what is now Section 11.32(iii).

The Commission should not require the ISO to make the additional tariff changes requested by Financial Marketers and Powerex. Those parties had the opportunity to present the arguments described above in the filings they submitted in response to the June 25 Tariff Amendment, but Powerex declined to do so and Financial Marketers had their arguments rejected in the October 15 Order. By arguing now that the Commission should require additional tariff changes, Financial Marketers and Powerex are essentially asserting that the October 15 Order itself is in error. Therefore, although not styled as such, these parties' arguments on these issues constitute requests for rehearing of the

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Order at P 202 ("[W]e find reasonable CAISO's proposed tariff revisions that enforce megawatt constraints in the integrated forward market when an AC solution is not otherwise attainable.").

¹⁰ Powerex at 10-11. Powerex requests additional clarification concerning the use of an AC solution and nodal MW constraints.

¹¹ See October 15 Order at PP 241, 248, 251-52. The ISO committed to make these changes to Sections 11.32(ii) and -(v) in the answer to comments and protests regarding the June 25 Tariff Amendment that the ISO filed on August 2, 2010 ("August 2 Answer").

October 15 Order. Court and Commission precedent clearly state that the

Commission is barred by Section 313(a) of the Federal Power Act, 16 U.S.C.

§825I(a), from considering any request for rehearing that is submitted more than

30 days after the issuance of the order that the request for rehearing concerns.¹²

Also, the Commission has stated that it will reject protests of a compliance filing

that constitute untimely requests for rehearing of, and thus collateral attacks on,

the underlying order.¹³ Therefore, the Commission should reject the arguments

of Powerex described above as collateral attacks on the October 15 Order.

Moreover, although the ISO continues to believe Financial Marketers' arguments

concerning the daily release of virtual bid data are without merit, the proper forum

for the Commission to address this issue is in response to the rehearing request

of Financial Marketers.

B. The Commission Should Not Require the ISO to Further Modify Section 30.9 of the ISO Tariff.

In the October 15 Order, the Commission directed the ISO to modify

Section 30.9 of the ISO tariff to make clear that virtual bids can be submitted at

interties.¹⁴ Accordingly, in the November 15 Compliance Filing, the ISO revised

¹² See, e.g., Cities of Campbell v. FERC, 770 F.2d 1180, 1183 (D.C. Cir. 1985); Boston Gas Co. v. FERC, 575 F.2d 975, 977-98, 979 (1st Cir. 1978); Alabama Electric Cooperative, Inc., 116 FERC ¶ 61,115 (2006).

¹³ California Independent System Operator Corp., 119 FERC ¶ 61,240, at P 13 (2007) ("Moreover, these protests should have been raised on rehearing and/or clarification of the January 22 Order, and therefore we reject their requests to alter the CAISO's compliance filing as untimely and a collateral attack on the Commission's January 22 Order."); *PJM Interconnection*, *LLC*, 104 FERC ¶ 61,020, at P 13 n.8 (2003) ("FirstEnergy's protest on this issue is a collateral attack on the November 1 Order. FirstEnergy should have sought rehearing of the November 1 Order if it believed the compliance obligation was incorrect, rather than raising it in a protest to the compliance filing.").

¹⁴ October 15 Order at P 253. Section 30.9 contains provisions that explain features of virtual bids.

Section 30.9 to state that virtual bids may be submitted at Eligible PNodes or Eligible Aggregated PNodes located at interties where virtual bidding is permitted. Powerex argues that the words "where virtual bidding is permitted" should be deleted from Section 30.9, because its understanding is that virtual bidding will be permitted at all interties.¹⁵

The Commission should accept the revisions to Section 30.9 proposed in the November 15 Compliance Filing. There are in fact a handful of locations that are treated as interties for system modeling purposes but not for scheduling purposes. The ISO will maintain on OASIS the list of locations at which virtual bidding is allowed. Thus, the words "where virtual bidding is permitted" indicate that virtual bidding is permitted only at designated locations published on OASIS, not all locations.¹⁶

Powerex suggests that other provisions in the ISO tariff do not limit the applicability of virtual bidding at the interties.¹⁷ This is incorrect. The definitions of the terms Eligible PNode and Eligible Aggregated PNode filed in the June 25 Tariff Amendment and accepted by the Commission in the October 15 Order expressly state that these locations include interties where virtual bidding is permitted. The revisions to Section 30.9 filed in the November 15 Compliance Filing are fully consistent with these accepted tariff definitions.

¹⁵ Powerex at 4-6.

¹⁶ In the market simulations the ISO is conducting in preparation for the implementation of virtual bidding, the ISO publishes and updates for market participants the list of Eligible PNodes and Aggregated Eligible PNodes located at interties where virtual bidding is permitted. The ISO will continue to publish and update this list on OASIS when virtual bidding is implemented.

¹⁷ See Powerex at 5.

C. The Commission Should Accept the Virtual Award Charge Filed by the ISO As Just and Reasonable.

Financial Marketers argue that, in the November 15 Compliance Filing, the ISO "proposes to establish a new 'virtual award charge'" which the ISO has not demonstrated to be just and reasonable.¹⁸ Financial Marketers are incorrect as to both the newness of the ISO's proposal to establish the virtual award charge and the information offered by the ISO to demonstrate that this charge is just and reasonable.

The ISO submitted proposed tariff revisions to implement the virtual award charge in the June 25 Tariff Amendment.¹⁹ In the October 15 Order, the Commission explained the virtual award charge is simply another name for the convergence bidding charge, which the Commission had already "found reasonable" subject to the ISO's provision and the Commission's acceptance of "details concerning the level" of the charge.²⁰ The Commission stated that it would defer making a determination on the level of the charge until after the ISO removed an ambiguity created by the use of the phrase "a percentage" in the relevant ISO tariff language.²¹ In the November 15 Compliance Filing, the ISO

¹⁹ See Transmittal Letter for June 25 Tariff Amendment at 34-35.

¹⁸ Financial Marketers at 5-7.

²⁰ October 15 Order at PP 213-14 (citing *California Independent System Operator Corp.*, 130 FERC ¶ 61,122, at P 111 (2010)).

²¹ October 15 Order at P 218. The relevant tariff language is contained in paragraph 9 of part A of schedule 1 of Appendix F of the ISO tariff, which sets forth how the rate for the virtual award charge is calculated.

complied with the Commission's directive to remove the ambiguity by replacing "a percentage" with the specific percentage figure of 9 percent.²²

Contrary to the assertions of Financial Marketers, the ISO has fully demonstrated the justness and reasonableness of the 9 percent level for the virtual award charge. In the November 15 Compliance Filing, the ISO explained that this is the percentage it determined should be used in the calculation of the virtual award charge rate through the 2011 budget and GMC stakeholder process. The ISO also explained that this percentage was presented for stakeholder review and input in a series of public meetings, and provided electronic links to three ISO documents that discussed the 9 percent figure.²³

Although the ISO believes that the discussion and electronic links provided in the November 15 Compliance Filing are sufficient to demonstrate that the proposed 9 percent level is just and reasonable, in order to provide a more readily accessible set of supporting materials in the record of this proceeding, the ISO is attaching to this answer the three documents cited in the November 15 Compliance Filing, as well as the meeting notes for the April 21, 2010, ISO

²³ Transmittal Letter for November 15 Compliance Filing at 7 & n.24.

²² Transmittal Letter for November 15 Compliance Filing at 7. As revised by the November 15 Compliance Filing, the relevant tariff language reads as follows:

The rate in \$/MWh for the Virtual Award Charge will be calculated by dividing the GMC [Grid Management Charge] costs, as determined in accordance with Part C of this Schedule 1, allocated to this service category in accordance with Part E of this Schedule 1, by the annual forecasted total virtual supply and virtual demand cleared in the IFM [Integrated Forward Market]. This service category will be allocated a percentagenine (9) percent of the Forward Scheduling Charge and Market Usage Charge – Forward Energy service categories based upon the total annual forecasted cleared supply and demand.

stakeholder meeting that was the subject of one of the documents cited in that compliance filing.²⁴

The attached meeting notes include questions asked by stakeholders at the April 21 meeting and the ISO's responses. In response to the stakeholder question "What have other ISO's rate designs looked like?", the ISO explained that "[a]fter benchmarking, our rates are very similar to other ISO's."²⁵ As part of this process of benchmarking against the convergence bidding practices of other Independent System Operators and Regional Transmission Organizations, the ISO determined that it was reasonable to assume that, in the year that convergence bidding is implemented (2011), the implementation of convergence bidding will cause the ISO to experience an incremental increase of approximately 10 percent in the MW volume of cleared virtual and physical bids as compared with the MW volume of cleared physical bids in the preceding year (2010), which means that the MW volume of cleared virtual and physical bids in 2011 is anticipated to be 110 percent of the MW volume of cleared physical bids in 2010. The ISO derived the 9 percent figure that Financial Marketers protest by dividing the 10 percent incremental increase for 2011 by the 110 percent volume figure for 2011. This derivation of the 9 percent figure is reflected in the attached meeting notes. In response to the stakeholder question "How did you derive the 9%?", the ISO stated: "Assume you have 100% of the costs for physical. Once

²⁴ These four documents are provided in Attachments A, B, C, and D to this answer. The meeting notes are also posted on the ISO's website at http://www.caiso.com/278f/278fc04011a90.pdf.

²⁵ Attachment D at page titled "Convergence Bidding Overview," Question #2 and ISO response.

you increment the virtuals will be 10% more. Then what we need to do to recover would be 10% / 110%."²⁶ Thus, the ISO explained in the stakeholder process exactly how it determined the 9 percent figure.

Financial Marketers' apparent lack of awareness of how this figure was determined seems to be the result of Financial Marketers' lack of participation in the stakeholder process in which the 9 percent figure was developed as well as its failure to fully explore the links included in the November 15 Compliance Filing. As indicated in the attached meeting notes, all of the other parties commenting on the compliance filing (as well as numerous other interested stakeholders) took part in that stakeholder process, but Financial Marketers were either absent or silent.²⁷ It is no coincidence that Financial Marketers are also the only parties who argue that the Commission should not accept the 9 percent figure as just and reasonable.

Financial Marketers attempt to excuse their own non-participation in the stakeholder process on the grounds that "only a small segment of convergence bidders currently participate in the stakeholder process because the market is not yet open to them."²⁸ It is unreasonable for Financial Marketers to sit on the sidelines while decisions are being made in a robust stakeholder process but then to attempt an end run around that process by protesting the decisions to the Commission without any acknowledgement of explanations provided in the

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Id. at page titled "Convergence Bidding Overview," Question #4 and ISO response.

²⁷ *Id.* at pages 1-2 (listing all of the parties in this proceeding other than Financial Marketers as participants in the April 21, 2010, stakeholder meeting).

²⁸ Financial Marketers at 5.

process. It is also unfair to the other market participants who took the time and effort to participate in the stakeholder process. For the reasons explained above, the Commission should accept as just and reasonable the 9 percent level of the virtual award charge, which the ISO has fully justified and which is not opposed by the numerous affected parties that did participate in the ISO's stakeholder process.

D. The Commission Should Not Require the ISO to Further Modify the Tariff Provisions Regarding the Daily Market Report.

WPTF argues that new proposed Section 6.5.3.2.3 of the ISO tariff should be revised to include more detail regarding the daily market report regarding submitted and cleared physical quantities and Virtual Awards that the ISO will issue on OASIS after the results of the day-ahead market are published. WPTF asserts that the October 15 Order required the ISO to include in Section 6.5.3.2.3 a similar level of detail as is provided in Section 6.5.3.2.2 of the ISO tariff.²⁹

WPTF requests that the ISO make tariff revisions that go beyond the scope of the Commission's compliance directive. In the October 15 Order, the Commission directed the ISO to "include a provision in its tariff describing the information it plans to release, consistent with the other information it plans to publish on OASIS" pursuant to Section 6.5.3.2.2.³⁰ The Commission issued this directive in response to an argument made by Financial Marketers that the ISO "cannot acknowledge on the one hand that tariff revisions are required for [Section 6.5.3.2.2], while at the same time insisting that no tariff filing is

²⁹ WPTF at 1-3.

³⁰ October 15 Order at P 90 & n.56.

necessary to implement daily releases of virtual bid data."³¹ Thus, the Commission found that it would be inconsistent for the ISO to believe that revisions are required to Section 6.5.3.2.2 but to dispute that new tariff provisions are also required to implement daily releases of virtual bid data. The Commission only found that the types of detail in the tariff on these daily releases must be consistent with other tariff provisions on information release, and did not make any finding that the new tariff provisions contained in Section 6.5.3.2.3 must be in the same format as Section 6.5.3.2.2.

Pursuant to the Commission's directive to include a provision in the ISO tariff describing the information the ISO plans to release, Section 6.5.3.2.3 states that the ISO will "publish on OASIS a daily market report that includes a summary of information regarding submitted and cleared physical quantities and Virtual Awards." This description of the daily market report fully satisfies the Commission's compliance directive and matches the level of detail regarding the daily market report that the ISO explained it would provide in the June 25 Tariff Amendment.³²

The ISO provides additional details regarding a number of informationrelated provisions of ISO tariff Section 6.5 in the Business Practice Manual

³¹ *Id.* at P 15. Financial Marketers were the only parties who mentioned Section 6.5.3.2.2 in their comments on the June 25 Tariff Amendment, which makes it clear that their comments that were the impetus for the Commission directive quoted above.

³² Transmittal Letter for June 25 Tariff Amendment at 45 ("[T]he ISO will issue a daily market report that includes a summary of information regarding submitted and cleared physical and virtual bids.").

("BPM") for Market Instruments.³³ Consistent with that that approach, the ISO plans to add to the BPM for Market Instruments further detail regarding the daily market report set forth in Section 6.5.3.2.3. The ISO intends to implement those additions to the BPM before the start of virtual bidding on February 1, 2011.³⁴

E. The Commission Should Accept the ISO's Proposal to Clarify Its Tariff Provisions Regarding the Allocation of Net RTM Bid Cost Uplift.

In the November 15 Compliance Filing, the ISO included revisions to Section 11.8.6.6 of the ISO tariff, regarding the allocation of Net Real-Time Market ("RTM") Bid Cost Uplift, which the ISO had committed to make in the August 2 Answer and the Commission accepted in the October 15 Order.³⁵ SWP requests that the ISO clarify in Section 11.8.6.6 that entities that reduce loads or generation resources at the request or direction of the ISO will not be allocated additional costs due to their reduction of those loads or generation resources.³⁶

The ISO agrees that it should address this subject and provides the following clarifications in response to SWP's comments. Additional costs will not be allocated to a load or generation resource pursuant to Section 11.8.6.6 if the day-ahead schedule is tagged and subsequently reduced at the request or

³³ See BPM for Market Instruments at Section 12. The BPM for Market Instruments is available on the ISO's website at <u>https://bpm.caiso.com/bpm/bpm/version/0000000000110</u>.

³⁴ The ISO has posted on its website proposed revisions to Section 12.4 of the BPM for Market Instruments that contain further detail regarding the daily market report. See "Document: PRR CB_ init_post_v3.doc," available at

https://bpm.caiso.com/bpm/prr/show/PRR00000000341. The proposed BPM revisions are currently open to review and comment by all stakeholders, including WPTF.

³⁵ See October 15 Order at PP 251-52.

³⁶ CDWR at 1-3.

direction of the ISO.³⁷ However, if the day-ahead schedule is not tagged and is subsequently reduced at the request or direction of the ISO, additional costs will be allocated to the load or generation resource pursuant to Section 11.8.6.6.³⁸ Although these clarifications are consistent with the provisions in the BPM Configuration Guides cited above, the ISO believes it is appropriate also to include them in the tariff. Therefore, the ISO proposes to add the clarifications described above to the tariff in a further compliance filing.

F. The Commission Should Accept the CRR Settlement Rule Subject to One Clarification.

In the October 15 Order, the Commission conditionally accepted the Congestion Revenue Right ("CRR") settlement rule set forth in Section 11.2.4.6 of the ISO tariff, subject to the requirement that the ISO file tariff language on compliance that clearly defines the threshold percentage value that will be used in assessing the impact that virtual bidding has on CRR revenue.³⁹ To comply with this Commission directive, the ISO proposes to modify Section 11.2.4.6(b) to specify that the threshold percentage is 10 percent of the flow limit for each constraint and to delete tariff language in Section 11.2.4.6(b) providing the ISO

³⁷ See BPM Configuration Guide 6051 at Section 3.6.8, and Section 3.7, Row 5.0. This BPM Configuration Guide is available on the ISO's website at https://bpm.caiso.com/bpm/prr/show/PRR00000000335.

³⁸ See BPM Configuration Guide 6678 at Section 3.5, Row 1, and Section 3.6.8. This BPM Configuration Guide is available on the ISO's website at https://bpm.caiso.com/bpm/prr/show/PRR00000000322.

³⁹ October 15 Order at PP 153, 157.

with the ability to adjust the threshold percentage without making changes to the ISO tariff.⁴⁰

PG&E states that it does not object to the ISO's proposed use of a 10 percent threshold for the flow limit, but asserts that the Commission should require the ISO to report on the effectiveness of the 10 percent threshold and propose any modifications to the threshold level within one year after virtual bidding is implemented.⁴¹ The Commission should not require the ISO to take the steps requested by PG&E. In the October 15 Order, the Commission did not impose any reporting requirement with regard to the CRR settlement rule or direct the ISO to modify the threshold percentage value within any particular timeframe. Moreover, the ISO explained in the November 15 Compliance Filing that it will file a tariff amendment if it determines that a change to the 10 percent threshold percentage is justified in the future.⁴² The ISO's Department of Market Monitoring ("DMM") will monitor the operation of the 10 percent threshold percentage to determine if it should be modified. If the ISO, informed by these DMM activities, decided to pursue a change to the flow limit threshold the ISO will convene a stakeholder process and will file a tariff amendment to modify the threshold percentage as appropriate. Therefore, it is unnecessary for the ISO to provide a report or tariff modifications within a particular timeframe.

⁴⁰ Transmittal Letter for November 15 Compliance Filing at 3-4.

⁴¹ PG&E at 3-4.

⁴² Transmittal Letter for November 15 Compliance Filing at 4.

Powerex argues that the ISO should modify the definition of the term Flow Impact in Appendix A to the ISO tariff, which is used in Section 11.2.4.6, to state that the shift factors used by the ISO in calculating a Flow Impact will be subject to the effectiveness threshold set forth in Section 27.4.3.6 of the ISO tariff.⁴³ The ISO agrees that Powerex's suggested change to the definition of Flow Impact will provide helpful clarity on this matter. Therefore, the ISO proposes to make that tariff change in a further compliance filing.

Powerex requests that the ISO provide further information as to how the CRR settlement rule will interact with the ISO's process for compensating injections in the real-time market. Powerex expresses concern that the process for compensating injections may cause the CRR settlement rule to trigger inappropriately and thereby to subject market participants to increased adjustments of CRR revenue.⁴⁴ This Powerex request for this further information goes beyond the directives in the October 15 Order and therefore goes beyond the scope of the ISO's compliance obligation. Nevertheless, in order to provide greater clarity, the ISO will address this question in this answer. The ISO has determined that, far from inappropriately triggering the CRR settlement rule, the process for compensating injections will actually help prevent the inappropriate triggering of the CRR settlement rule, because the process for compensating injections for compensating injections. Thus, the ISO's process for

⁴³ Powerex at 6-8. Pursuant to Section 27.4.3.6, the effectiveness threshold is currently set at 2 percent.

⁴⁴ Powerex at 8-9. Powerex only requests that the ISO provide further information. Powerex does not assert that the information needs to be reflected in tariff changes, and the ISO does not believe that any tariff changes are required.

compensating injections in the real-time market makes the modeling of flows more accurate. As a result, the ISO expects that the process for compensating injections will make the CRR settlement rule more effective.

II. Conclusion

For the reasons explained in the November 15 Compliance Filing and in this answer, the Commission should accept the November 15 Compliance Filing without modification or condition except for the clarifications discussed herein.

Respectfully submitted,

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<u>/s/ Bradley R. Miliauskas</u>

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Attorneys for the California Independent System Operator Corporation

Dated: December 21, 2010

ATTACHMENT A

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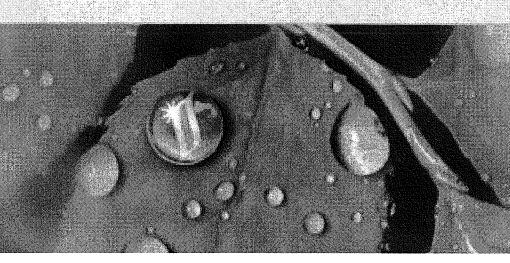
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GMC Stakeholder Process 2011-2012



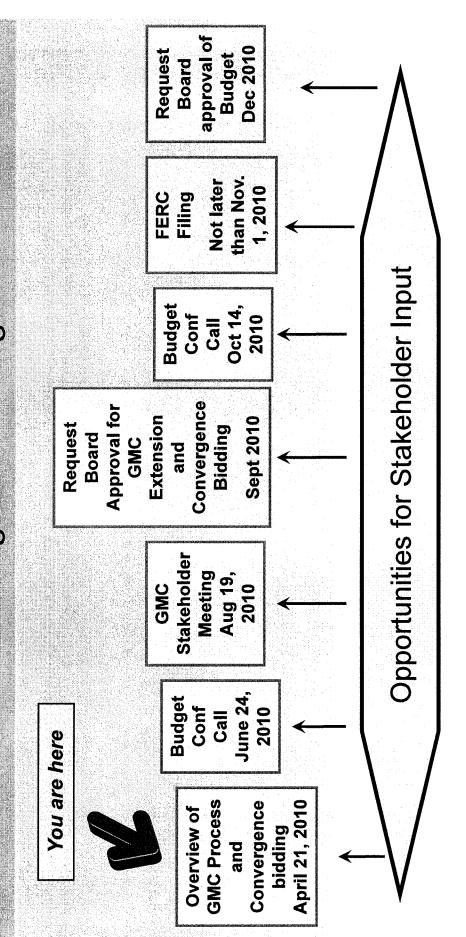
April 21, 2010 10 am - 2 pm Lake Tahoe Conf Rooms

Agenda

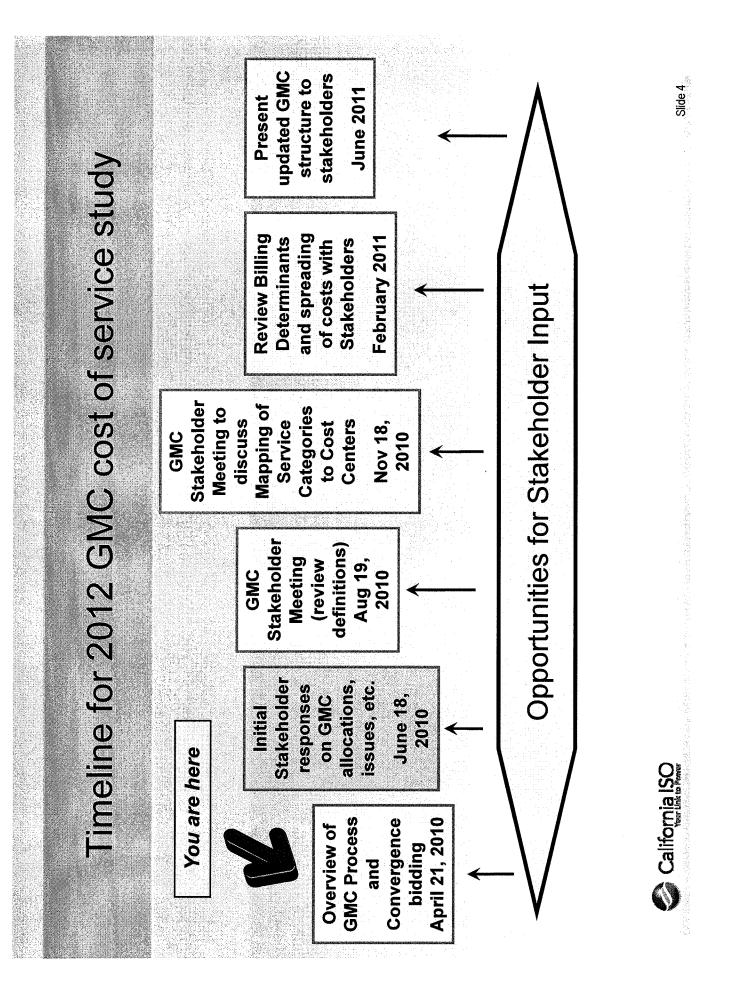
- Opening remarks
 - **Timeline Review**
- Status of GMC 2001-2003 Refund
- Review of GMC rate adjustments in 2010
- Status of settlement of 2010 GMC Market Usage Forward Energy (MUFE) structure
- Proposal on structure and rates for convergence bidding for 2011
- Plan for 2011 GMC revenue requirement
- Filing of 2011 rate extension
- Plan for cost of service study for 2012 GMC rates



Timeline for 2011 budget, GMC rates and convergence bidding



California ISO



Status of 2001 – 2003 GMC refund

GMC refund paid out in March 2010

- Refund for 2001 of \$1.8M plus interest of \$1.2M for all 3 GMC categories
- Reallocation of \$4.1M of credits for removal of specified behind the meter and standby capacity generation for 2001 to 2003 and elimination of dynamic scheduling for 2001 reliability bucket



April 2010 GMC Rate Adjustments

volumes in export MWhs and number of forward schedules GMC rate adjustments effective April 1, 2010 due to Lower

- Core Reliability Services -Exports rate increased from \$1.1652 to \$1.8291 per MWh
- Core Reliability Services revised quantity forecast of 4,739,625 MWh is 36.2% lower than budgeted quantity of 7,439,739 MWh
 - Forward Scheduling rate increased from \$1.7078 to \$2.5319 per schedule
- Forward Scheduling revised quantity forecast of 8,768,556 schedules is 32.5% lower than budgeted quantity of 12,999,740 schedules



Status of 2010 GMC MUFE Structure

Proposed 2010 GMC MUFE Offer of Settlement

- Incorporates methodology submitted by the ISO in October 2009
- Rate will be adjusted based on new forecasted volumes
- Eliminates Inter SC Trades (ISTs) from the calculation
- Uses the "greater of" the absolute value of supply or demand scheduled in the forward market as the volume determinant
- Settlement filed with FERC on March 23, 2010
- Rate will go into effect on June 1, 2010 subject to refund unless FERC rules on the Offer of Settlement prior to that date



Convergence Bidding Overview

Convergence bidding will be a new GMC service category consisting of 2 charge codes

- One charge code for a per bid segment rate
- One charge code for a cleared bid rate (per MWh)
- Scheduling and Market Usage Forward Energy service Designed to recover costs that are in the Forward categories
- These rates will be filed as part of the 2011 GMC rate extension

Anticipate convergence bidding to go live 2/1/2011



Convergence Bidding Bid Segment Rate

An \$0.005 per-segment fee will be imposed on submitted convergence bids

- Designed to alleviate bid volume limitations economically
- Revenues from the fee will be credited against the next year's GMC imposed on cleared convergence bids (gross MWh)
- Design limits incentives to submit out of the money bid segments without imposing additional "net cost" on convergence bids
- CAISO will evaluate magnitude on an on-going basis



Convergence Bidding Rate (Based on 2010 Budget and Volumes)

- Assumed 10% incremental cleared MW above physical estimate of 246,000,000 MW
- 9% of Forward Scheduling and MUFE costs allocated to convergence bidding - \$3.9M

Gross cleared MW rate is \$0.078



Convergence Bidding Rate Table

	Dollars	Volume (MWh)	Rate
2010 Forward Scheduling	\$22,201,462		
2010 MUFE	\$20,438,138		
Total:	\$42,639,590		
9% of Total:	\$3,837,563		
2010 estimated cleared MWh		246,000,000	
10% of estimated cleared Volume		24,600,000	
Gross counting both sides (*2)		49,200,000	
Rate:			\$.078



Plan for 2011 GMC Revenue Requirement and Rate Extension

- Conference calls tentatively scheduled for June 24 and October 14 to discuss revenue requirement
- Targeting revenue requirement of \$197 Million

- Continuing to stay at or under budget
- Cash funding Capital Projects costs
- Stakeholder meeting August 19 to discuss rate extension
- Present rate extension at September Board meeting (no October Board meeting this year)
- Present budget at December Board meeting



Cost of Service Study for 2012 GMC Rates: Assumptions and Phases

- Start with existing structure (plus convergence bidding)
 - Seek stakeholder input on allocations and other issues
 - Settlements, Metering and Client Relations allocated based on settlement charges
- 35% of Core Reliability Services going to Energy Transmission Services, both Net Energy and Uninstructed Energy
- 80%/20% split of Energy Transmission Services between metered load and uninstructed imbalance energy



Cost of Service Study for 2012 GMC Rates

Milestones

- Review definitions of categories and map software to categories
- Map cost centers and debt service to categories
- Review billing determinants and modify if appropriate
- Review impacts using 2010 data
- Propose long term revenue requirement ceiling
- Seek stakeholder input at completion of milestones



Cost of Service Study for 2012 GMC Rates: Next Steps in 2010	 ISO reviewing GMC definitions, allocations and cost center mapping with stakeholders: June 18 June 18 Initial stakeholder responses on allocations of Settlements, Metering and Client Relations, Core Reliability Service & Energy Transmission Services, other issues August 19 Review of definitions with stakeholders Review of definitions with stakeholders Review of mapping of cost centers and debt service with stakeholders 	
		0

Cost of Service Study for 2012 GMC Rates: **Tentative Calendar 2011**

- February 2011
- Discuss with stakeholders:
- GMC categories
- Billing determinants
- Review impacts using 2010 data
- Propose long term revenue requirement ceiling
- June 2011
- File revised GMC rate structure
- June and October 2011
- Stakeholder meeting to review 2012 revenue requirement
- Other meetings as necessary



Cost of Service Study for 2012 GMC Rates: Stakeholder Input Requested Brakeholder Input Requested Please send written comments, suggestions, and questions to GMC@caiso.com by close of business June 18, 2010 = Process suggestions and improvements = Process suggestions and improvements = Proposed calendar of events = SMCR allocation based on settlement charges = SMCR allocation based on sett	
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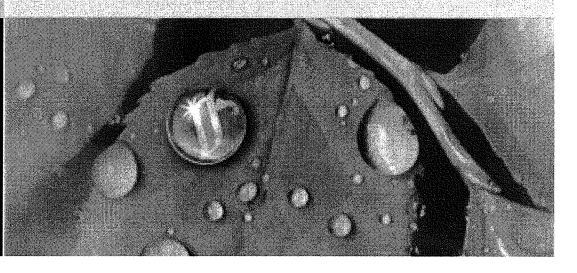
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ATTACHMENT B



2011 Budget - Stakeholder Call



Michael Epstein Director of Financial Planning

August 19, 2010

Slide 2 PRESENTER **Judi Sanders Charles Snay Mike Epstein Mike Epstein Mike Epstein Mike Epstein** Group **Stakeholder Feedback and Discussion 2011 Revenue Requirement** 2012 Cost of Service Study **2011 Convergence bidding Calendar and Next Steps** TOPIC 2011 Rate extension Introduction California ISO Your Link to Power Agenda

The revenue requirement is unchanged from 2010.

Component (\$ in millions)	2011	2010	change
O&M	\$162.5	\$162.7	\$(0.2)
Expense recovery	(7.6)	(8.1)	0.5
Debt service	43.7	61.0	(17.3)
Out of pocket capital	27.0	15.0	12.0
Revenue credit	(30.5)	(35.5)	2.0
Total	\$195.1	\$195.1	\$0.0
Fransmission volume in GWh	240.0	246.0	(6.0)
Pro forma rate in \$ per MWh	\$0.813	\$0.793	\$0.020



2011 GMC Rate Extension

- No change from prior year
- Extend structure to 2011
- Present rate extension at September Board meeting
- no October Board meeting this year



Convergence Bidding Overview

- Convergence bidding will consist of 2 charge codes
- One charge code for a per bid segment rate \$0.005
- One charge code for a cleared bid rate (per MWh)
- Scheduling and Market Usage Forward Energy service Designed to recover costs that are in the Forward categories
- Assumed 10% incremental increase or 44,975,000 MW
- 9% of Forward Scheduling and MUFE costs allocated to convergence bidding - \$2.9M
- Gross cleared MW rate is \$0.064
- Anticipate convergence bidding to go live 2/1/2011

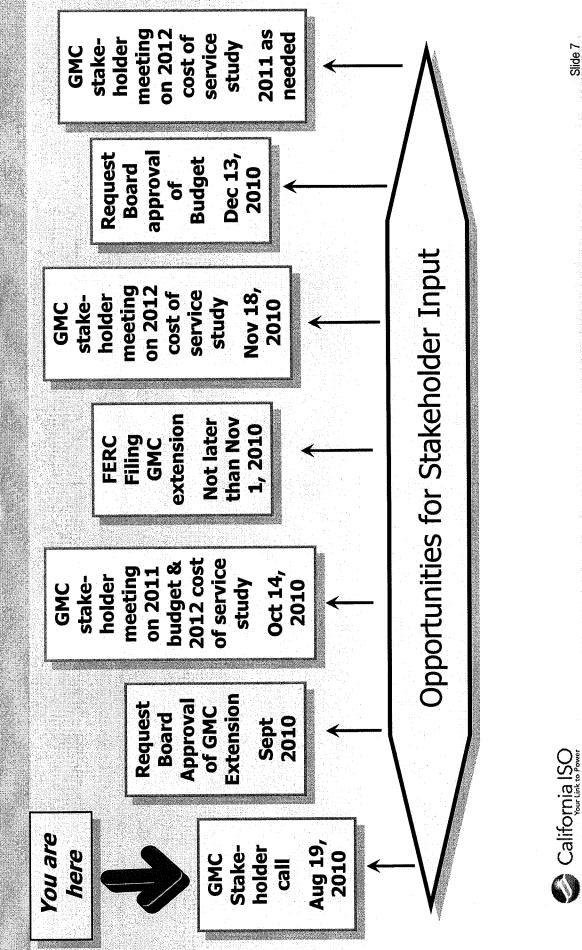


2012 Cost of Service Study

- Goal is to be simple, predictable and transparent
- Working on proposal and developing impacts to participants
- May be ready to present by October 14, 2010 meeting

Slide 6

California ISO Your Link to Power Timeline for 2011 budget and GMC rates



Key Calendar Dates and next steps	
Board of Governors meeting -	Sept 9-10
Approval of rate extension and present draft 2011 budget	
Post 2011 budget information for stakeholders	Sept 17
Stakeholder meeting to review 2011 preliminary budget	
and review 2012 cost of service study	Oct 14
Written Stakeholder comments due to ISO	Oct 21
Board of Governors Meeting -	Nov 1-2
Public comments to board on 2011 budget	
Board of Governors Meeting - Approval of 2011 budget	Dec 13-14
Post rates and budget documentation to ISO website	Dec 18
Stakeholder meeting to review 2012 cost of service study	as needed
 California ISO	ins during the second secon

ATTACHMENT C

	California Independent System Operator
	2011 Cost Allocation Model
	Revenue Requirement and Rate Calculations
	I requirement requirement and functionalizes the debt service requirement, capital
	ry budget and the Operating and Capital Reserve credit. It sums these, applies the
	ents, Metering and Client Relations costs and calculates rates applicable for 2011.
The 2011 Rate Structure include	
80/20 revenue spiit between Ers	S-withdrawals (CC4505) and ETS-UE (CC4506) nue based on Functional Association of Charge Types
	nue based on Functional Association of Charge Types lling (CC4511) or Inter SC trades (CC4512), but retains discount for Path 15
Facilitator Inter SC trades (CC45	
MU-Forward Energy (CC4537) b	
	6) to be simple sum of ETS-withdrawals (CC4505) and MU-deviations (CC4536)
rates	0) IO DE SIMPLE SUM OF L'IS-WILLOWING (SS-1000) and the solution (SS-100)
	charge is made up of 9% of MUFE and 9% of FS
SMCR rate (CC4575) remains a	
	set to 20% of net of withdrawals and injections
CRS/ETS TOR rate (CC 4508) b	used on cost of service
Sheet Index:	Description
	Shows the detailed calculation of revenue requirement as the sum of O&M,
l	Financing Budget, Capital Project Funding, Expense Recovery Budget and the
Rev Reg Detail	Financial and Capital Operating Reserve
	Shows the summary calculation of revenue requirement as the sum of O&M,
	Financing Budget, Capital Project Funding, Expense Recovery Budget and the
Rev Reg Summary	Financial and Capital Operating Reserve
	Summarizes revenue requirement calculation, applies functional association of
	charge types and billing determinants to calculate rates using as filed 2004 GMC
As filed Rates	method
	Summarizes revenue requirement calculation, applies functional association of
	charge types and billing determinants to calculate rates using as settled 2004 GMC
GMC rate	method
Worksheet divider	
Billing determinants	Historical and estimated billing units for 2011
BD Charts	Charts of Historical and forecast billing units
Revenue Forecast	Forecast of GMC revenues
Financing Budget	Functionalization of the debt service costs for bonds
Debt Mapping	Debt Mapping
Expense Recovery Budget	Functionalization of miscellaneous credits and interest
F&C Op Reserve	Functionalization of Operating and Capital Reserve credit
Rates by Charge Code	GMC rates by charge code
	Shows the summary calculation of revenue requirement as the sum of O&M,
	Financing Budget, Capital Project Funding, Expense Recovery Budget and the
Revenue Requirement	Financial and Capital Operating Reserve
Comparison-Year to Year	Assesses change in Revenue Requirement from year to year
Last updated:	9/9/2010 10:47

Rev Req detail

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		De	tailed Revenue R	equirement				
		Energy					Settlements,	
	Com Baliability	Transmission	OBS/ETS TOP	Forward Scheduling	Market Hanne	Market Usage	Metering and	
ons and Maintenance	Core Reliability	Services	CRS/ETS TOR	Scheduling	Market Usage	Forward Energy	Client Relations	Total
2111 CEO-General	\$ 768,729	\$ 293,971	\$ 8,582	\$ 113,645	\$ 388,819	\$ 116,329	\$ 487,017	\$ 2,1
2121 Market Monitoring	\$ 613,153		\$ -	\$ 169,695	\$ 1,278,380	\$ 468,455		\$ 2,73
2122 Market Surveillance Committee (Non-labor cost			\$ -	\$ -	\$ 232,500	\$ -	· · · · · · · · · · · · · · · · · · ·	\$ 3
2211 Planning and Infrastructure Development	\$ 738,797	\$ 648,745	s -	\$-	\$ -	\$ -		\$ 1,3
2221 Regional Transmission-North	\$ 1,484,512	\$ 1,089,682	\$.	\$	\$ -	\$ -	\$-	\$ 2,5
2231 Regional Transmission-South	\$ 1,153,403	\$ 959,173	\$ -	ş -	\$ -	\$ -	\$ -	\$ 2,1
2241 Grid Assets	\$ 1,350,134		\$ -	\$	\$ -	\$	ş -	\$ 1,9
2242 Generator Interconnections	\$ -	\$ -	<u>\$</u> -	\$	\$ -	\$	the second se	\$
2251 Network Applications	\$	\$ 1,132,521	\$ -	\$	\$	\$ -		\$ 1,1
2311 CFO General	\$ 1,275,556		\$ 14,487	\$ 135,472	\$ 365,689	\$ 174,901		\$ 3,4
2321 Accounting	\$ 584,331		\$ 6,625	\$ 64,391 \$ 52,672	\$ 200,115	\$ 53,124		\$ 1,5
2331 Financial Planning and Treasury 2341 Human Resources	\$ 478,096 \$ 2,377,139		\$ 5,418 \$ 27,523	\$ 52,672 \$ 175,319	\$ 163,738 \$ 585,251	\$ 43,465 \$ 349,184		\$ 1,5 \$ 5.8
2351 Facilities	\$ 3,393,218		\$ 39,287	\$ 250,257	\$ 835,410			
2361 Procurement and Vendor Management	\$ 3,393,218		\$ 5,540		\$ 167,328	\$ 498,438	the second se	\$ 8,3 \$ 1,2
2371 Enterprise Risk Management	\$ 400,555	\$ -	\$ -	\$ 03,042	\$	\$ -		<u>\$ 1,2</u> \$
2372 Internal Audit	\$ 285,464		\$ 3,237	\$ 31,457	\$ 97,763	\$ 25,953	**************************************	, \$7
2373 Information Security	\$	\$ -	\$ -	\$ -	\$ -	\$ -		<u>s</u>
2374 Physical Security	\$ 1,058,308		\$ 12,253	\$ 78,053	\$ 260,555	\$ 155,457		\$ 2,5
2411 Information Technology-General	\$ 400,400		\$ 3,989	\$ 92,121	\$ 126,134	\$ 53,025		\$ 1,1
2412 Asset Management (Non-Labor costs only)	\$ 3,893,517		\$ 40,263	\$ 903,099	\$ 1,535,653	\$ 645,053	\$ 3,825,130	\$ 12,0
2441 Software Quality Assurance	\$ 305,974		\$ 2,847	\$ 128,831	\$ 83,495			\$ 1,3
2451 IT Support & Operations	\$ 4,519,593		\$ 47,063	\$ 1,178,022	\$ 1,515,466	\$ 284,074		\$ 12,1
2452 System & Database Administration	\$ 822,900		\$ 7,658	\$ 346,482	\$ 224,554			\$ 3,4
2453 Data Center & Operations	\$ 1,002,311		\$ 12,082	\$ 60,807	\$ 352,413	\$ 40,978		\$ 2,4
2454 Architecture & Systems Engineering	\$	\$ -	\$ -	5	\$ -	<u>s</u> -		\$
2462 EMS Information Technology 2463 Operations Information Technology	\$ 2,092,646 \$ 1,303,853		\$ 17,793 \$ 13,605	\$	\$ 29,648 \$ 1,099,984	s	\$ 29,648 \$ 773,502	\$ 2,2 \$ 4,1
2464 Corporate Systems	\$ 1,528,679		\$ 15,184	\$ 57,494	\$ 480,727	\$ 90,166		<u>\$ 4,1</u> \$ 4,7
2554 Corporate Systems 2511 Operations-General	\$ 1,306,928		\$ 21,183	\$ 37,338	\$ 426,868	\$ 58,661		\$ 2,8
2521 Grid Operations	\$ 1,375,314		\$ 28,559	\$ -	\$ 119,655	\$ -	· · · · · · · · · · · · · · · · · · ·	\$ 2,0
2522 Real-Time Operations	\$ 9,551,257		\$ 187,780	s -	\$ 1,270,296	\$ -		\$ 15,6
2523 Scheduling	\$ 1,303,553		\$ 27,301	s -	\$ -	s -	· · · · · · · · · · · · · · · · · · ·	\$ 1,9
2524 Outage Management	\$ 2,013,700		\$ 89,293	\$ -	\$ 31,471	\$ -		\$ 2,1
2531 Alhambra Grid Operations	\$ 2,982,496	.\$ -	\$ -	\$ -	\$.	\$-	\$ -	\$ 2,9
2541 Market Services	\$ 41,285	s -	\$ -	\$ 38,546	\$ 339,329	\$ 60,569	\$ 287,367	\$ 7
2542 Market Operations	\$ 96,497		s - ·	\$ 245,635	\$ 1,052,790	\$ 385,968	\$ 96,497	\$ 1,8
2543 Billing and Settlements	\$ 441,974		\$ -	\$ -	s -	\$		\$ 3,5
2544 Settlement Projects	\$ -	\$ -	s -	\$ -	\$ -	\$ -		\$ 10
2545 Market Information	\$ -	\$	<u> </u>	\$ -	\$ 2,426,030	\$ -		\$ 2,4
2551 Operations Support	\$ 307,663		\$ -	<u>s</u>	\$ 14,033	<u>s</u> -	1 C	\$ 7
2552 Operations Data and Compliance	\$ 890,621		\$ -	s -	\$ - \$ -	\$	the second s	\$ 2,1
2553 Operations Procedures and Training 2554 Model & Contract Implementation	\$ 1,379,342 \$ 612,157		\$ - \$ -	s - s -	\$ - \$ 151,093	\$ - \$ -	······································	\$ 2,1 \$ 1.7
2555 Information Engineering & Analysis	\$ 302,820		\$ -	s -	\$ 151,055	\$	· · · · · · · · · · · · · · · · · · ·	\$ 1,7 \$ 3,4
2555 Information Engineering & Analysis 2561 Reliability Coordination	\$ 302,620	\$ 1,050,555	\$ <u>-</u>	s -	\$ -	\$ -		<u>\$</u>
2611 General Counsel-General	\$ 2,877,641		\$ 32,628	\$ 317,107	\$ 985,504	\$ 261,617		\$ 7,3
2621 Asst General Counsel-Corporate	\$ 680,382		\$ 7,715	\$ 74,976	\$ 233,010	\$ 61,856		\$ 1,7
2631 Asst General Counsel-Regulatory	\$ 580,335		\$ 6,580	\$ 63,951	\$ 198,747	\$ 52,760		\$ 1,4
2641 Asst General Counsel Tariff & Compliance	\$ 604,115		\$ 6,850	\$ 66,572		[1.	
2651 Asst Corporate Secretary	\$ 245,842	\$ 95,489	\$ 2,787	\$ 27,091	\$ 84,193	\$ 22,350	\$ 154,336	
2711 Market Development-Program Mgmt-General	\$ 50,234			\$ 50,234				\$6
2721 Market and Product Development	\$ 166,018			\$ 166,018				\$ 2,2
2722 Tariff and Regulatory/Policy Development	\$ -	\$ 88,486		\$ 176,972				\$ 9
2723 Infrastructure Policy & Contracts	\$ 616,742			\$ -			\$ 137,048	
2731 Program Office	\$ 2,416,555			\$ 266,297				\$ 6,2
2741 MRTU Program 2811 External Affairs-General	\$ - \$ 131,532		\$	\$	\$ \$ 45,045	\$ -		\$
2811 External Affairs-General 2821 Communications & Public Relations	\$ 131,532 \$ 489,331			\$ 14,494 \$ 53,923				
2822 Information Products & Services	\$ 409,331	\$ 190,063	\$ 0,040 \$ -	\$ 33,923 \$ -	\$ 107,001	\$ 44,467	\$ 307,194	
2831 State/Federal Affairs	\$ 563,199			\$ 62,063				
2841 Customer Services and Industry Affairs	\$ -	\$ -	\$ -	\$	\$	\$ -	\$ 4,064,890	
							1,004,000	<u> </u>
perations and Maintenance	\$ 64,024,341	\$ 26,029,740	\$ 734,937	\$ 6,119,980	\$ 21,308,363	\$ 4,783,476	\$ 39,547,293	\$ 162,5
ng and Capital Project Budgets					ut daal			
1998/2000 Bond Financed Capital	s -		\$ -	s -	\$ -	s -	· · · · · · · · · · · · · · · · · · ·	\$
2004 Bond Financed Capital	\$ -		\$	<u>\$</u>	\$	\$ -		\$
2007 Bond Financed Capital	\$ 2,141,982			\$ 3,210,973				
2008 Bond Financed Capital	\$ 4,466,883			\$ 2,548,229				
2009 Bond Financed Capital	\$ 2,011,120	\$ 895,446	\$ 24,082	\$ 1,232,704	\$ 1,292,195	\$ 699,244	\$ 1,776,459	\$ 7,9

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			nia Independent S 2011 Cost Allocati					
		De	etailed Revenue R	equirement	· · · · ·			
	Core Reliability	Energy Transmission Services	CRS/ETS TOR	Forward Scheduling	Market Usage	Market Usage Forward Energy	Settlements, Metering and Client Relations	Total
otal Financing and Capital Project Budgets	\$ 15,466,351	\$ 6,406,102	\$ 179,368	\$ 11,188,347	\$ 9,453,040	\$ 8,650,847	\$ 19,364,695	\$ 70,708,750
Revenue Requirement before application of credits (debits)	\$ 79,490,692 34.1%			\$ <u>17,308,327</u> 7.4%	\$ <u>30,761,403</u> 13.2%			\$ 233,256,880
Credits								
Expense Recovery Budget	\$ (4,807,952	destances and the second s		the second s			\$ (1,156,663)	\$ (7,600,000
Operating and Capital Reserves	\$ (6,520,332	a la constante de la constante					\$ (4,638,281)	\$ (30,568,955
fotal Credits	\$ (11,328,284)	\$ (8,435,436)	\$ (124,578)	\$ (2,748,436)	\$ (7,892,688)	\$ (1,844,588)	\$ (5,794,944)	\$ (38,168,95
fotal Revenue Requirement	\$ 68,162,408	\$ 24,000,405	\$ 789,727	\$ 14,559,891	\$ 22,868,715	\$ 11,589,735	\$ 53,117,044	\$ 195,087,926
Percent of Total	34.9%	12.3%	0.4%	7.5%	11.7%	5.9%	27.2%	100.09
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Notes								

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Rev Req Summary

				Summ	Summary of Revenue Requirement	ie Requi	rement						
		Core Reliability	bility	Energy Transmission Services	CRS/ETS TOR	IOR	Forward Scheduling	Market Usage	Market Usage Forward Energy		Settlements, Metering and Client Relations	Total	tal
perations	Operations and Maintenance									+			
210	2100 CEO	\$ 1,4!	,459,382 \$	293,971	1 \$	8,582 \$	283,341	\$ 1,899,700	\$	584,784 \$	695,235 \$		5,224,993
220	2200 Planning and Infrastructure		-	3,323,050		1.1			\$	+	+		8.049.896
230	2300 CFO & Corporate Services			2.910.404		83.610 \$	634.687	\$ 1,992,836	\$	969,805 \$	4.724.187 \$	ľ	18.593,631
234	2340 Human Resources		-	969.697	•				\$	-			5.818.763
240	2400 IT		-	4.951.457			6	9	\$		+		49.862.202
250	2500 Operations	1		9.947.684		1			5	-	+		47,581,499
260	2600 Legal		1	2.048.413	\$				67	479,459 \$			13,559,500
270	2700 Market & Product Development			1,125,157	\$	\$	393,225	\$ 2,511,731	\$	•	353,301 \$		5,216,410
280	2800 External Affairs	\$ 1,18		459,906	\$	13,424 \$	130,480	\$ 405,504	\$	107,652 \$	6,340,208 \$		8,641,237
otal Oper	Total Operations and Maintenance	\$ 64.0	64.024.341 \$	26.029.740	8	734.937 \$	6.119.980	\$ 21.308.363	\$	4.783.476 \$	39.547.293 \$		162.548.130
	Percent Allocations	14 1990	1.0	16.0%		1.0				2.9%	<u> </u>		100.0%
otal Cinar	Total Eleancies Budeat - 2000 Dabi							ų					
otal Finar	Total Financing Budget - 2004 Debt	÷ 4		•	~				*				1.
otal Finar	Total Financing Budget - 2007 Debt		2.141.982 \$	620.156		22.393 \$	3.210.973	\$ 1.428,900	\$	3.177,490 \$	5,487,395 \$		16,089,290
otal Finar	Total Financing Budget - 2008 Debt			1.842.172	\$	_			\$	2,393,708 \$	–		19,688,210
otal Finar	Total Financing Budget - 2009 Debt			895,446	\$	1.00			\$	699,244 \$			7,931,250
otal Finar	Total Financing Budget - Cash funded	\$ 6,8	6,846,366 \$	3,048,327	\$	81,982 \$	4,196,441	\$ 4,398,961	\$	2,380,405 \$	6,047,519 \$		27,000,000
	Percent Alocations		21.9%	9.1%	%	0.3%	15.8%	13.4%		12.2%	27.4%		100.0%
otal Expe	Total Expense Recovery Buddet	\$ (4.8)	4.807.952) \$	(939.638)	\$	(10.191) \$	(192.927)	\$ (342,882)	\$	(149,746) \$	(1,156,663) \$		(7,600,000)
	Percent Allocations		63.3%	12.4%						2.0%	15.2%		100.0%
otal Oper	Total Operating and Capital Reserves Credit	\$ (6,5;	6,520,332) \$	(7,495,798)	\$	(114,386) \$	(2,555,508)	\$ (7,549,806)	\$	(1,694,842) \$	(4,638,281) \$		(30,568,955)
	Percent Allocations		21.3%	24.5%	8	0.4%	8.4%	24.7%		5.5%	15.2%		100.0%
otal Reve	Total Revenue Requirement	\$ 68,1	68,162,408 \$	24,000,405	9	789,727 \$	14,559,891	\$ 22,868,715	\$ 11,589,735	9,735 \$	53,117,044 \$		195,087,926
	Percent Allocations		34.9%	12.3%	%	0.4%	7.5%	%1.11		5.9%	27.2%		100.0%
Notes:			-			-							
	Divisions represent organizational structure as of late 2007, and this organizational structure is maintained for rate purposes, as allocation factors by cost center are specified in Appendix F or MRTU Tarift.	e as of late	2007, and	this organiza	tional structure	e is main	tained for rate pu	rrposes, as allocati	on factors by	/ cost ce	nter are specified	in Appe	endix F
								_					

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Finance

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kenue Requirement and Rates (Assuming previous pre-WRTU rate structure and prior to GMC settlement	1			California Inc 2011 C	California Independent System Operator 2011 Cost Allocation Model	em Operator Model				
Energy Transmission - Core Reliability Energy Transmission - Scheduling Forward Market Usage Market Usage M as filed) \$ 68,162,408 \$ 19,832,106 \$ 4,958,026 \$ 14,559,891 \$ 34,458,450 \$ 34,956,450 \$ 17,7% \$ 34,956,908 \$ 14,559,891 \$ 34,458,450 \$ 31,77% \$ 34,956,150 \$ 17,7% \$ 17,7% \$ 34,956,908 \$ 33,456 \$ 17,7% \$ 33,456 \$ 3		Summary o	if Revenue Requirement and	I Rates (Assuming	previous pre-MRTL	J rate structure ar	id prior to GMC sett	lement adjustments)		
Core Reliability Net Energy Deviations Scheduling Market Usage as filed) \$ 68,162,408 \$ 19,332,106 \$ 4,958,025 \$ 14,559,391 \$ 34,458,450 \$ of SMCR \$ 68,162,408 \$ 10,2% 2.5% 71,7% \$ 17,70% \$ 34,458,450 \$ of SMCR \$ 0,0% \$ 2,70,27,992 \$ 6,56,998 \$ 35,907 \$ 17,100,778 \$ SMCR \$ 0,0% \$ 2,70% \$ 17,76% \$ 33,4% \$ \$ SMCR \$ 0,0% \$ 7,5% \$ 71,70% \$ 34,9% \$	1			Energy Transmission -	Energy Transmission -	Forward		Settlements, Metering and Client		
as filed) \$ 68,162,408 \$ 19,832,106 \$ 4,958,026 \$ 14,559,391 \$ 34,458,450 \$ 01 SMCR \$ 34,9% 10,2% 2.5% 7.5% 17,7% 13,2% 0,7% 17,7% 13,4% 13,4% 13,2% 0,7% 14,918,968 5 15,55,428 5 13,4% 13,4	- 1		Core Reliability	Net Energy	Deviations	Scheduling	Market Usage	Relations		Total
34.9% 10.2% 2.5% 7.5% 17.7% 17.7% of SMCR \$ 2.4.9% 10.2% 2.5% 7.5% 17.1% 17.7% SMCR \$ 2.27,027,992 \$ 6.756,998 \$ 359,076 \$ 17,10,978 \$ SMCR \$ 0.0% 5.27,13 \$ 0.7% 33.4% 33.4% SMCR \$ 68,162,408 \$ 46,860,097 \$ 11,715,024 \$ 14,918,968 \$ 56,4% 33.4% intement \$ 68,162,408 \$ 46,860,097 \$ 11,715,024 \$ 14,918,968 \$ 56,4% 33.4% intement \$ 68,162,408 \$ 24,0% \$ 56,4% 26,4% <	1				4,958,026	\$		\$ 53,117,044	\$	195,087,926
Itional Association of SMCR \$. \$ 27/027/992 \$ 67/56,998 \$ 353,076 \$ 17,100,978 \$ Percent of SMCR 0.0% \$2.7% 13.2% 0.7% 33.4% 33.4% sted Revenue Requirement \$ 68,162,408 \$ 46,860,097 \$ 11,715,024 \$ 14,918,968 \$ 33.4% g Determinants 34,9% 24,0% \$ 46,860,097 \$ 11,715,024 \$ 14,918,968 \$ 56.4% 33.4% g Determinants 34,9% 24,0% \$ 24,0% \$ 26.4% 26.4% \$ 26.4% \$ 16.57 \$ 0.76% \$ 26.4% \$ \$ 26.4% \$ \$ 26.4% \$ \$ 26.4% \$ \$ 26.4% \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ <t< td=""><td>F</td><td></td><td>34.9%</td><td>10.2%</td><td>2.5%</td><td>7.5%</td><td>17.7%</td><td>27.2%</td><td></td><td></td></t<>	F		34.9%	10.2%	2.5%	7.5%	17.7%	27.2%		
Percent of SMCR 0.0% 52.7% 13.2% 0.7% 33.4% sted Revenue Requirement \$ 68,162,408 \$ 45,860,097 \$ 11,715,024 \$ 14,918,968 \$ 51,559,428 \$ g Determinants 34,9% 24,0% 24,0% 7.6% 7.6% 26,4% \$ g Determinants 34,9% 24,0% 24,0% 6,0% 7.6% 26,4% \$	1	Functional Association of SMCR	•		\$		\$	\$ (51,245,044)	\$	1
sted Revenue Requirement \$ 68,162,408 \$ 46,860,097 \$ 11,715,024 \$ 14,918,968 \$ 51,559,428 \$ g Determinants 34,9% 24,0% 24,0% 5,0% 7.6% 26,4% <td< td=""><td>1</td><td>Percent of SMCR</td><td>%0.0</td><td>52.7%</td><td>13.2%</td><td>0.7%</td><td></td><td></td><td></td><td></td></td<>	1	Percent of SMCR	%0.0	52.7%	13.2%	0.7%				
g Determinants 34.9% 24.0% 26.0% 7.6% 26.4% 28.4% g Determinants 543,154 228,945,222 9,132,519 9,003,837 402,280,239 MWh 10,02,80,239 MWh 8,003,837 402,280,239 8,012,81	1	Adjusted Revenue Requirement		s			\$		\$ 1	195,087,926
g Determinants 543,154 228,945,222 9,132,519 9,003,837 402,260,239 Units MW+months MWh Schedules MWh Schedules MWh Units MW+months MWh Schedules 0,002,860,239 MWh Schedules MWh Schedules MW+months 0,205 \$ 1,283 \$ 0,128 \$ 0,1	i i		34.9%	24.0%	6.0%	7.6%	26.4%	1.0%	10	100.0%
Units MW-months MWh Schedules MWh 125.494 \$ 0.205 \$ 1.283 \$ 1.657 \$ 0.128 \$ \$ 125.494 \$ 0.205 \$ 1.283 \$ 1.657 \$ 0.128 \$ \$ 125.494 \$ 0.205 \$ 1.283 \$ 0.1657 \$ 0.128 \$ \$ 125.494 \$ 0.205 \$ 1.283 \$ 0.1657 \$ 0.128 \$ \$ \$ \$ 0.205 \$ 1.283 \$ 0.128 \$ \$ \$ \$ \$ 0.205 \$ 1.283 \$ 0.128 \$ \$ \$ \$ \$ 0.205 \$ 1.283 \$ 0.128 \$ \$ \$ \$ \$ 0.205 \$ 1.283 \$ 0.128 \$ \$ \$ \$ \$ \$ \$ \$ \$	1	Billing Determinants	543,154	228,945,222	9,132,519	9,003,837	402,260,239	1,872		
Rate \$ 125.494 \$ 0.205 \$ 1.283 \$ 1.657 \$ 0.128 \$ Notes	1	Units	MW-months	ЧММ	UMW	Schedules	MWh	customer-months		
Notes Notes Notes In the structure and rates form the basis for the rate structure and rates under the subsequent GMC Settlement. 1. The as-filed October 2003 rate structure and rates form the basis for the rate structure and rates under the subsequent CMC Settlement. 1. This information is used in the structure and rates under the next worksheet "GMC Rate"	1				\$			\$ 1,000.00		
Notes Notes 1. The as-filed October 2003 rate structure and rates form the basis for the rate structure and rates under the subsequent GMC Settlement. 1. This information is used in the subsequent calculation of GMC rates under the next worksheet "GMC Rate"	1									
1. The as-filed October 2003 rate structure and rates form the basis for the rate structure and rates under the subsequent GMC Settlement. This information is used in the subsequent calculation of GMC rates under the next worksheet "GMC Rate"	. 1	Notes								
This information is used in the subsequent calculation of GMC rates under the next worksheet "GMC Rate"		1 The ac filed October 2003 rate c	the state form the	hacie for the rate c	tructure and rates	under the subsen	uent GMC Settleme	ť		
		This information is used in the	subsequent calculation of G	MC rates under the	next worksheet "(GMC Rate"				
	1	9/9/2010 10:47	10:47							

as filed Rates

Finance

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					California	California Independent System Operator	tem Operator						
			Developme	nt of 2011	GMC Rates (with application c	f Settlement relat	Development of 2011 GMC Rates (with application of Settlement related cost reallocations)	5)				
					-								
	CRS - Peak	CRS - Off Peak	CRS Export Rate		ETS-NE	ETS-UE	CRS/ETS TOR	FS	ρW	MUFE	SMCR	CB	Total
Revenue Requirement	5 68.162.408 5			~	19.042.379 \$	4.958,026	\$ 789,727	\$ 14,559,891	\$ 22,868,715	\$ 11,589,735	\$ 53,117,044	•	195,087,926
Reassigned SMCR			•	•	26,912,056 \$	6,756,998	115,936 \$	\$ 359,076 \$	\$ 11,349,245	\$	\$ (51,245,044)	•	0
Reassigned CB	- 5	- 5	•	•	•		۰	\$ (1,342,707)	•	\$ (1,560,732)	*	2,903,439 \$	
Adjusted Revenue Requirement	\$ 68,162,408	- 5 8	•		45,954,435 \$	11,715,024	\$ 905,663	\$ 13,576,261 \$	\$ 34,217,960	\$ 15,780,736	\$ 1,872,000	\$ 2,903,439 \$	195,087,926
											-		
Reassignment of revenues per 2004 GMC Settlement													
CRS discount (35%)	\$ (23,856,843)		•	\$	23,856,843 \$	•	\$ -	•	•	•	•		•
FS discount (20%)	•	•		\$	\$			• •	•	•	•		,
CRS split to off peak and export	\$ (9,949,780) \$	1,046,967	\$ 8,902,813	~	•	•	• \$	•	•	•	•		•
FS split to inter SC trade	•	•	•	\$	\$	•	•	•	•	•	•		•
Total Settlement reassignments	\$ (33,806,623) \$	1,046	,967 \$ 8,902,813	*	23,856,843 \$	•	•	•	•	•	•		0
											1		
Revenue Requirement	\$ 34,355,785	5 \$ 1,046,967	\$ 8,902,813	\$	69,811,277 \$	11,715,024	\$ 905,663	\$ 13,576,261 \$	\$ 34,217,960 \$	\$ 15,780,736 \$	\$ 1,872,000	2,903,439 4	195,087,926
Rilling units	407 354	18.809			28.945.222	9.132.519	3.899,961	9,003,837	17,073,396	325,186,844	1,872	44,975,274	
	MW-months	om-WM	ЧММ		MWh	MWh	MWh	Schedules	MWh		Customer months	ЧМИ	
Estimated 2011 Rates	\$ 84.3390	0 \$ 55.6640	1 \$ 1.7498	\$	0.3049 \$	1.2828	\$ 0.2322	\$ 1.5078	\$ 0.4440	\$ 0.0485	\$ 1,000	0.0646	
												-	
Total Settlement Reassignments and Reassigned SMCR (Used in Operating & Capital Reserve Calcutation)	\$ (33,806,623) \$	3) \$ 1,046,967	, \$ 8,902,813 \$		50,768,898 \$	6,756,998 \$	\$ 115,936 \$	\$ 359,076 \$	\$ 11,349,245 \$	\$ 5,751,733 \$	\$ (51,245,044) \$	'	

GMC rate

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GMC rate

			Developmen	it of 2011 GMC Rates	(with application	Development of 2011 GMC Rates (with application of Settlement related cost reallocation	reallocation
Development of Peak/Off Peak CRS Rates		000		97 OU			
		L nad	CKS reak	Load CKS OIT PERK	peak Export		
NCP	543,154	407,354	83,369	18,809	33,622		
Escalation							
Subtotal	543,154	407,354	83,369	18,809	33,622		
Additional Discounts @65%		0	095 56		33 637	Application of targeted CRS discoun	RS discoun
Escalated (0tal	543,154	401,104	800'00	£00'01	770'00		
Revenue collected	44,305,565	\$ 33,228,223	\$ 6,800,488	\$ 1,534,242 \$	\$ 2,742,611		
Off Deak discount @							
31.76%		\$ 1,127,562 \$	\$ 230,767	\$ (487,275)	\$ (871,053)	(871,053) Application of off peak CRS discount	RS discoun
Bevenile after off heat discolar				\$ 1 046.967	4 1.871.558		
	44.305.565	\$ 34,355,785 \$	5 7.031.255				
			14				
		Tae hur	00.00	10 0V	33.637		
		+00'10+	Enc'20	600101	440.100		
CRS NCP load rate		\$ 84.339		\$ 55.664			
				WUU FE			
Development of CRS Volumetric Export Rate							
	Total (MWh)	Load (MWh)	Export (MWh)				
	100 J. C 000	007 404 FOC	064 UEF 1				
Billing Units	777'CHR'077	771, 309, 403	ac l'act'i				
Subtotal	228,945,222	221,505,483	7,439,739				
ess Discounted volume @65%				Application of targeted ETS discount	ed ETS discount		
Escalated Total	228,945,222	221,505,483	7,439,739				
Export revenue (from above)			\$ 8,902,813	CRS demand revenu	ie requirement, sur	n of peak and off peak CRS	S
Remaining revenue red						8,902,813	
CRS volumetric export rate before revenue adjustment			s 1.1967				
votes: 1. Calculations in highlight above are show development of rates agreed to linder GMC Settlement	of rates accord to	under GMC Settlem					

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Worksheets

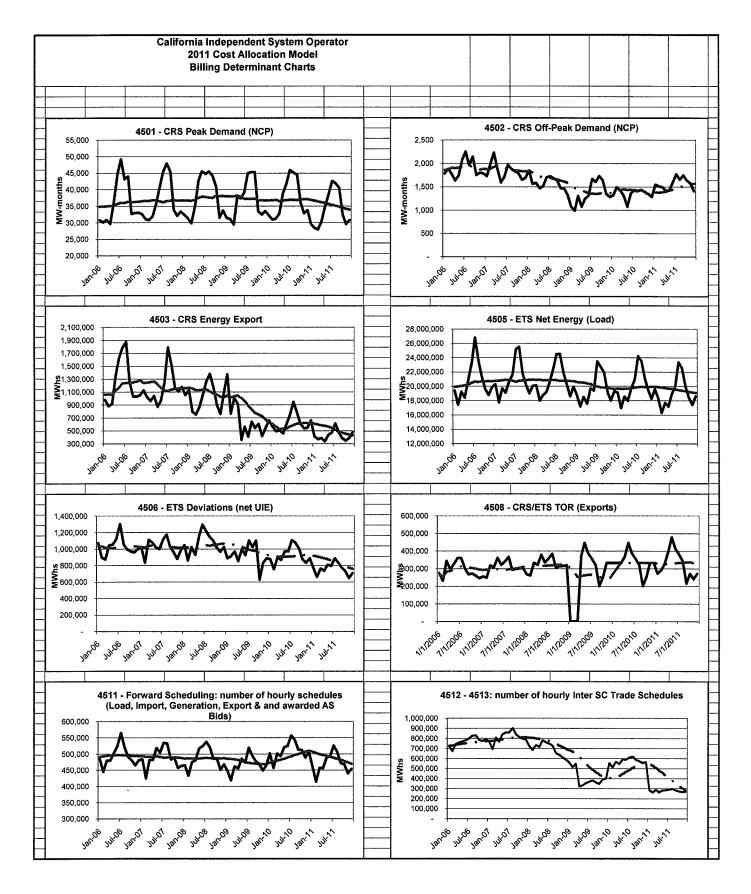
Worksheets on Billing Determinants, Revenue Forecast, Financing Budget, Capital Project Funding, Expense Recovery Budget, Operating and Capital Reserve and Revenue Requirement follow

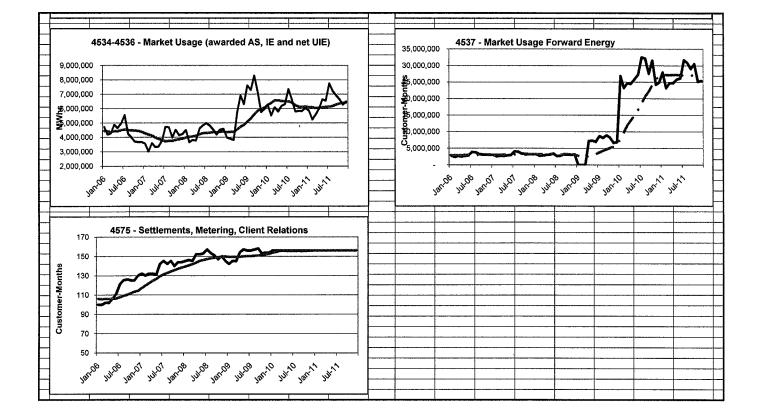
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Finance





Billing Determinants

California Independent System Operator 2011 Cost Allocation Model

4533	8	MWh																1																	1000 1000 1000 1000 1000														Contraction of the second s				NELL CARDING IN THE REAL
4575	SMCR	# of SC's	67 70	71	69	20	75	73	77	78	86	80	80	91	16	81	0)	- 16	11	76	9/	80	80	81	83	88	93	92	99	6	66	101	1312	12	106	109	110	106	109	100	100	102	108	111	121	126	125	125	132	130	132	132	131
4546	ETS MU PIRP Deviations	1.1																South States and	Stratification and									1.2.2.5.5.5.2.2	12.50 St. 20 St. 20		2012 2012 2012																						Constraints of the second s Second second s Second second se
4537	MU Forward Energy	Mwh FE																	a da se sa se	K.C. SPACEMENT STATE	1940 Y 1940						2.4.1.1.54.2020 - 1.1.222 2.4.1.1.54.2020 - 1.1.22				STATES -	1997 200	2,492,/14						3,273,951	2.5.5.5.5.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2	2,475,976						3,171,535		10000000000		2,809,566	2,712,694	2,090,139]
4536	Market Usage Net Uninstructed Deviations	Mwh UIE																	A CONTRACTOR OF												1.376.795	1,087,749	1,228,882	1,338,456	1,020.074	1,261,150	1,203,370										958,422	969'693	1,036,601 4 n7e 017	828,316	1,104,569	1,042,168	1,025,668
4535	Market Usage Instructed Energy	Mwh IE														Carses 2021200 40															1.579.199	1,590,403	1,839,853	1,393,594	1,013,320	1,563,558	1,547,331	1,133,132	1.214.214	1,503,1/6	1,460,615	1,543,451	2,152,964	1,774,618	1,962,814	1,194,555	930,406	1,116,574	1,118,651	810,514	1,063,433	924,422	887.863
4534	Market Usage AS	MWh AS	2,107,658	2.211,198	1,973,320	2,028,422	1,971,913	1,749,304	1,548,881	1,343,509	1,503.773	1,495,246	1,296,307	1,611,903	1,740,090	2,006,642	2,455,459	2 192 955	2,122,005	1,759,328	1,916,294	1,843,654	1,982,430	1,861.842	2,064,736	2,139,990	2,545,094	2,290,338	1,990,376	1,824,683	181,000,1	1,750,668	1,979,959	1,140,013	1,896,486	2,221,849	2,143,120	1,766,836	1,742,189	7,889,998	1,769,900	1,802,012	1,627,528 2.006.698	1,980,298	2,207,223	1,9/1,/42	1,818,451	1,585,579	1,528,962	1,386.380	1,418,341	1,369,477	1.438.237
4513	Forward Energy PGAB ISC Trades	# of PGAB ISC Trades	4,021	4,547	5,110		5,458				4.928	5		6.090	7,015	6,592	4,993	3.577	3,654	3,881	4,194	8,995	8,945	9,333	9,584	9,178	10.023	9,233	8,815	8,416	8,100 6.383	5,180	4,730	6.202	6,268	5,907	5,479	6,613	6,175	8,647	8,988	9,400	8,004	0	8,391			4,575	3,059	3.301	3,799	3,480	3 567
Billing Determinant Forecast 4511 4512 4512	Forward Scheduling ISC Trades	# of Inter SC Schedules	389,149	456,430	436,142	476,787	498,305	511,145	483,347	499,949	456.366	449,196	414,834	413,133	481,917	477,264	509,384	470 133	480,132	448,113	497,383	787,441	738.672	695,186	759,206	762 219	798 566	772.714	759,901	696,182	703 746	620,704	693,123	720 895	727,200	772,036	785,559	723,282	736,899	776,204	664,538	734,182	752,160	771,768	791,256	819,786	781,003	769,386	792,782	878 989	803,038	764,832	835 968
Billing Dete 4511	Forward	# of Schedules (no inter sc trades)	556,535	554.411	547,690	573,674	616.133	601,226	593,438	589,206 569,206	581.859	582,136	536,747	568 112	575,173	571,128	608,053	585 768	595 642	573,244	601,928	471,787	484 466	460,542	480,996	484,720	507,590	486,394	480,536	462,698	492,938	420,270	463,058	504 013	512,223	561,533	541,162 406 601	493.830	468.069	486,784	445,103	479,614	480,070	524,338	564,553	521,398	450,478	465,055	480,075	483,568 4747	481,665	481,951	618 3R4
4508	CRS/ETS TOR	ρ																																						775 770	231.156	343,935	297,421	360.752	360,402	303,326	272.262	259,093	246,626	254,742	318,269	306,879	1 261 614
4506	L L	MWh Net UE	1,266,091	2 963.418	1,144,779	1,300.906	1,511,511	1,604,789	1,664,232	1,296,238	1 583 960	1,217,053	1,336,049	1 335 996	1,626,439	1,428,150	1,777,830	1./44.328 1.6/6.650	1 430 294	1,167,014	1,342,013	1,168	1 314	1.295,945	1,470	1,479	1,740,039 1 RAA A17	1.863.055	1,205,115	1,013,323	1,050,815	903,310	1,104,550	1 100/.241	958,961	1,178,444	1,150,493	989,183	904,600	1,037.073	896.407	873,745	1.043.390	1,121,986	1,302,000	1.058,907	971.943	959,474	896,272	-1,020,666 836 040	1,110,212	1,078,379	1 010 155
4505	N N N N N N N N N N N N N N N N N N N		8,731,16	16,663,86 18,292,65	17,688,46	18,946,90	20,497,60 23 116 52	22,308,10	20,950,26	18,998,00	19 345 54	18,639,25	16,298,95	18,620,73	19,138,32	20,138,35	24,040,87	23,687.58	20 146 4F	18,115,11	19,733,8{	18,845,24	18 696 81	17.893.71	19,651,97	20,262,71	23,132,02	21 732 8	19,295,86	18,349.6	19,764,36	16,687,5	18,272,71	17,621,1 19 545 50	19 990.5	24,814.5	24,042,880	19,657,940	18,521,370	20,150,445	17 427,427	19,230,562	18,405,443	23,128,774	26,788,497	23,669,216	21,383,115	18,768,972	19,841,086	20,263,900 17 727 257	19,697,325	19,111,250	PD RAA 796
4503	CRS Energy Event	MWh Export NCP	1,085,519	1.074,148	845,986	1,050,390	1,785,151 2 322 675	1,893,621	1,359,705.	1,080,714	1 402 566	1,305,084	1,067,824	1,072,488 822 969	1,288,649	1,723,745	2,126,342	1,806,159	1 383 219	1,164,991	1,483,807	839,854	879,831	674.389	883,921	950,942	1,2/9,469	1.004.494	877,377	711,944	761.715	826,970	1,019,347	609,698 1 048 825	1.034.697	1,739,204	1,308,267	878 103	854,45	1,538,70	881 12	917,200	1,349,16(1 785 486	1,870,490	1,267,91	1,030,53(1,048,345	1,126,995	1,020,871	1,040,516	871,457	OKR 754
4502	S S S C	MWh Off Peak NCP		2,100								1000	0.000	Č.						ľ																			100					2.072	1						2,228		
9401	and	r san Mwh Peak NCP	30,931	28,431	28,717	33,554	36,125	37,358	39,316	32,826	31,020	28,273	27,990	29,082	36.927	37,466	41,630	42,468	36 183	28,788	31,177	29,542	29,254	36.752	40,090	37,425	42,382	44 332	33,625	31,816	32,390	29.577	29,562	29,102	38 156	45,247	43,843	400 AC	31,627	32,481	30,/62	30,816	29,619	36,060	49,171	43,160	43,963	32,958	33,040	32,590	30,775	31,887	1 35 707
Charne Code			Jan-02	Feb-02 Min-17	Apr-02	Mary-02	Jun-02 Italia	Aug-02	Sep-02	04-02	Nor-N2	Jan-03	Feb-03	8 1	Mar-03	Jun-03	1403	Aug-03	308	Nov-03	Dec-03	Jan-04	Feb-04	Apr-04	May-Od	Jun-04	Jui-04	H North	04-04	Nou-04	Decod	50-49-1	Mar-05	Apr-05	CU-VIEW Strendt	Juit-05	Aug-05	Sep-co	SD-NON	Dec05	Jen-06 Feh-06	Mer-05	Apr-06	Mey-06	Jui-D6	Aug-06	Sep-06	Nort06	Dec-06	Jan-07	Har-O/	Apr-07	201010

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1.1507605 26.437.968 1.17.16 26.647.96 3.706 4.802 1.105.7605 26.437.985 1907.16 27.907.85 660.236 4.802 1.105.7605 26.0018.843 960.236 259.225 643.445 2.643 1.105.7605 20.0018.843 960.234 3.050 453.445 728.916 2.643 1.105.760 20.0018.843 960.134 3.050 453.445 728.016 3.613 1.155.340 2.010.237 960.344 3.050 453.445 2.644 1.755.341 8.7148 3.0516 4.73.245 3.645 3.645 1.552.244 1.817.1583 1.101.231 3.744 5.7566 1.247.356 3.241 1.562.845 2.646.73 3.656 2.747.736 3.645 3.656 1.562.845 2.646.73 3.656.71 3.756.71 3.756.71 3.756.71 1.562.845 2.646.74 5.7566 1.220.346 5.756 2.247.750 3.246 1.562.8756 1.228.31		1,247,052 1,050,688 1,029,010 894,821	3,384,062	. 142 .	
1166.758 216.73.358 100.231 293.260 485.360 4002 1176.418 10.018.058 801.158 301.471 800.167 457.387 703.820 357.3 11776.418 10.018.053 801.158 301.471 457.347 708.514 3.65 1175.416 20.018.823 390.502 251.073 455.344 728.301 3.65 1175.410 20.018.823 390.502 221.734 465.344 728.301 3.65 1156.518 10.017.219 251.461 351.616 652.447 758.34 3.45 1156.518 10.011.201 251.754 455.753 759.45 2.230 3.45 1177.085 11.61.721 237.416 537.535 756.47 2.104 3.45 1177.085 11.61.717 20.85 11.61.218 2.16.54 3.45 3.45 1177.086 11.61.778 20.85 2.14.81 2.16.34 2.16.4 3.16 1177.086 11.61.778 2.16.61.61 2.17.5		1,050,688 1,029,010 894,821	3,384,062	And the second s	
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546,769 16,22,366 833,664 333,651 486,679 554,415 - 641,1417 16,281 19,597,560 866,755 333,651 566,826 565,516 - - 641,1417 16,231,356 770,886 272,676 460,227 287,163 - - 368,477 16,231,742 566,472 220,287 414,723 220,286 - - 388,477 16,231,742 566,472 220,287 414,723 220,286 - - 388,417 16,231,742 565,443 344,577 456,676 - - - 384,814 17,703,618 755,443 344,577 456,687 284,783 - - 443,979 16,413,438 677,226 473,716 493,633 - - - - 451,772 19,937,222 743,910 243,716 526,463 - - - - 61,7725 73,316,455 556,466 286,425 526,		032,020	107 010'10	1	
C661826 19,591,560 886,755 333651 506,591 - 411471 18,373,336 570,988 272,616 460,277 2871,986 - 389,477 16,821,425 566,471 2870,987 - - - 389,477 16,821,425 566,476 460,277 2820,886 - - 389,477 16,821,425 566,471 286,477 2820,886 - - 389,477 16,821,425 566,471 466,287 280,4927 - - 389,467 17,805,168 756,463 771 456,2867 - - 384,614 17,505,168 735,541 466,2877 280,517 - - 443,979 18,641,343 607,226 473,172 498,632 - - - 417,723 733,619,57 641,968 275,616 - - - - - 433,377 19,91,333 617,223 741,817 466,265 -		838,261	24,200,498	11 004 130	
411 18.373.356 770.888 272.676 460.227 287.168 383.101 16.291.742 560.472 320.287 441.723 222.866 383.101 16.291.742 560.472 350.471 16.291.742 560.472 574.332 541.761 456.287 224.853 - 473.472 456.287 224.853 - - 473.472 456.287 524.853 - <td>2,421,881 2,694,134</td> <td>908,343</td> <td>24,320,000</td> <td></td> <td></td>	2,421,881 2,694,134	908,343	24,320,000		
369,477 16,291,422 660,472 2290,287 414,723 2292,856 383,103 17,803,516 761,449 326,277 451,159 2290,327 383,104 17,803,516 756,544 364,571 466,567 284,167 443,979 16,41,343 804,571 449,333 224,853 - 453,272 19,907,225 473,716 496,667 284,163 - 612,773 53,543 856,402 371,605 550,606 232,616 -		803,793	21,323,201	1001 1001.1	0 202 200
383,130 17,669,335 761,169 326,287 467,198 220,902 - 384,664 17,203,618 7.85,943 394,571 466,267 284,873 - - 384,671 18,941,343 807,226 418,172 456,353 -		672,026	23,1/9,8/5	OCL RCZ	000/100/2
304/644 17.201.618 736.943 304.571 456.267 264.767 - 43.4379 16.941.343 807.226 418.702 448.033 224.665 - 43.4379 16.941.343 807.326 418.702 448.035 224.665 - 473.277 19.937.222 733.616.55 386.402 361.655 526.066 289.261 -		743,659	24,734,746		3,/42,500
434 379 18,641 343 607 226 428 702 488 333 224 853 - 412 727 19 907 322 784 301 412 766 428 165 - - 412 728 15 305 405 858 402 341 655 520 665 - - -		735,939	24,798,431	5,507 156	3,751,944
473_277 19,997,322 784,301 4.12,766 4.61,643 287,665 - 612,723 223,61,825 886,402 381,655 526,066 293,261 -	3,051,126 2,783,569	801,667	25,804,968	9,798 156	3,904,231
612,723 23,361,825 886,402 381,655 526,068 283,261	3,128,027 2,639,979	783,104	26,168,367		3,959,212
	3.645.991 3.214.220	876,914	31,647,930	1,690 156	4,788,257
205 5 5 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		823,551	30,827,150		4,664,075
		758,351	29,022,655	1,516 156	4,391,059
20231/ 2011//222 /11/102 2.13/#1 211/22 220000 2.13/#1 211/22 212/#1 211/22 220000		727 125	30.499.270	1.411 156	4,614,467
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432 240,400 4.23,330 200,010		608 813	25 A15 A53		3 845 298

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Finance

Revenue Forecast

Constraints brought Constraints brought Tendol (mode)						2011 Reve	2011 Revenue Requirement Forecast by Month	enue Requirement Forecast by	Month						
Disc Norbyto N		Core Reliability Services Peak		Core Reliability ServicesEnergy Export	Energy Transmission Services: Energy	Energy Transmission Services: Deviations	CRS/ETS TOR	Forward Scheduling	Inter SC Trades	Market Usage	Market Usage Forward Energy		Convergance Bidding		
mint mint<	4	NCD by Mo	NCP hv Mo	4MM	Control Area Metered Load	Monthiv Net UE		Total Sch Count	Total Sch Count	ЧМW	МWh	Cust Mo	MWh		
Fib 7344 7344 73444 74446 532,557 632,565 532,566 332,566	uate Jan-11		1.551	411.417	18.373.365	772,156	272,676	460,227	287,169	5,858,175	27,923,281	156	-		
Martin 7335 fields 73000 6501(11) 20000 6501(11) 20000 6501(11) 20000 6501(11) 20000 6501(11) 20000 6501(11) 20000 6501(11) 20000 100 20000 100 20000 100 20000 100 200000 200000 20000<	Feb-11			369,477	16,291,742	660,711	290,287	414,723	262,826	5,236,665	23,179,875	156	3,507,060		
Mprint 3238 V/48 70000 70000 664/101 20000 70000 700000 700000 700000 700000 700000 700000 700000 700000 700000 700000 700000 700000 70000000 70000000 70000000 700000000 7000000000000000000000000000000000000	Mar-11			383,130	17,689,335	761,756	326,287	457,198	290,902	5,568,768	24,734,746	156	3,742,308		
Mily-11 3,473 1,423 6,42,133 7,42,033 6,42,133 7,42,433 6,44,131 7,44,533 6,44,131 7,44,533 6,44,131 7,44,533 6,44,131 7,44,533 6,44,131 7,44,333 7,44,333 7,44,333 7,44,333 7,44,333 7,44,333 7,74,333 7,74,334 7,74,344 7,	Apr-11			334,664	17,203,618	741,450	394,571	456,267	264,787	5,971,131	24,798,431	156	3,751,944		
Imite Mathematic Mathmathematic Mathmathmathematic <th <="" td=""><td>May-11</td><td></td><td></td><td>434,979</td><td>18,941,343</td><td>817,025</td><td>478,702</td><td>489,333</td><td>284,853</td><td></td><td></td><td>156</td><td>3,904,231</td><td></td></th>	<td>May-11</td> <td></td> <td></td> <td>434,979</td> <td>18,941,343</td> <td>817,025</td> <td>478,702</td> <td>489,333</td> <td>284,853</td> <td></td> <td></td> <td>156</td> <td>3,904,231</td> <td></td>	May-11			434,979	18,941,343	817,025	478,702	489,333	284,853			156	3,904,231	
Juliii Grain Tranis Statisti St	Jun-1			473,227	19,937,322	798,507	412,765	491,643	287,685			156	3,959,212		
Maint1 Gal Tag Sacyan	Jul-11			612,723	23,351,825	888,092	381,655	526,068	293,261	7,738,815	31,647,930	156	4,788,257		
Superirl 3.6.11 3.8.11 3.8.11 3.8.11 3.8.11 3.8.11 3.8.11 3.8.11 4.8.1	Aug-11			480,587	22,553,860	833,871	343,990	505,563		7,199,339		156	4,664,075		
Obe-11 22,45 (45) 34,64 71,315 64,54,10 27,3470 6,55,10 26,164 14,17 24,165 14,17	Sep-11			382,317	20,117,623	771,671	215,441	471,170		6,900,309		156	4,391,059		
No.r11 25/15 1/57 3/4/45 7/47/305 7/47/3	Oct-11			346,254	18,432,921	733,079	271,315	468,354	273,424	6,635,359		156	4,614,467		
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	Nov-11			384,418	17,437,036	646,992	240,466	439,938	268,616	6,269,028	25,164,718	156	3,807,362		
407.364 1,8936 5,007/32 2,393,66/25 9,122,515 3,993,615 6,644,400 3,366,446 1,872 4,477,274 A	Dec-11			474,539	18,615,232	707,208	271,806	453,915	272,357	6,494,340	25,415,453	156	3,845,298		
407,341 16,301 5,407,122 233,45,21 9,17,214 9,389,461 9,334,461 9,344,461 9,344,461 9,344,461 9,34,461 9,34,461 9,34,461 9,34,461 9,34,461 9,34,461 9,34,461 9,34,461 9,34,461 9,34,461 9,34,461 9,34,461 9,34,461								and the second second second		and the second		670 L	44 075 774		
Constantion Services Formation Formation Formation Formation Services	otal	407,354	18,809		228,945,222	8,132,019	102'20'7	nn+'troin	antiporte	apple tof t 1					
Forward services for the services Forward services Forward services Forward services Settle services Settle services <th cols<="" td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th>	<td></td>														
Core Reliability Services: Of Services: Correct Energy Expont Energy Services: Creating Services: Services: Services: Creating Services: Services: Services: Services: Creating Services: Services: Ser								Fore	casted Monthly R	evenue					
Truestream rank Control Contro Control Contro		Core Reliability	Core Reliability Services Off	Core Reliability ServicesEnergy		Energy Transmission Services: Deviations	CRSIETS TOR	Forward	Inter SC Trades	L	Market Usage Forward Energy		Convergance Bidding	Total	
3 $2.335,124$ 5 $6.465.16$ 5 $4.66.711$ 5 8.7471 5 $8.66.732$ 5 $6.466.776$ 5 $6.466.771$ 5 $6.66.732$ 5 $6.236.460$ 5 $1.76.70$ 5 $1.66.700$ 5 $1.66.700$ 5 $1.66.700$ 5 $1.66.700$ 5 $1.66.700$ 5 $1.66.700$ 5 $1.66.700$ 5 $2.66.400$ 5 $1.66.700$ 5 $2.66.400$ 5 $1.66.000$ 2 $2.66.400$ 5 $1.66.000$ 2 $2.66.400$ 5 $1.66.000$ 2 $2.66.400$ 5 $1.66.000$ 2 $2.66.400$ 5 $1.66.000$ 2 $2.66.400$ 5 $1.66.000$ 2 $2.66.400$ 5 $1.26.60.75$ 2 $1.66.000$ 2 $2.66.403$ 5 $1.266.406$ 5 $1.266.406$ 5 $1.266.406$ 5 $1.266.406$ 5 $1.266.406$ 5 $1.266.406$ 1.2	100	Ser.	Lea	5	Sel Vice				_	.,		\$ 156,000	•	1	
x x	Jan-1	•	* •	~ ~	* *		\$ 67.412	j.	- 47			156,000	226,403	\$ 13,865,507	
2 2557,544 5 73,755 5 566,375 5 1.262,276 5 1.565,001 5 2455,001 <th< td=""><td>Mar-1</td><td>•</td><td>• •</td><td></td><td>-</td><td>\$ 977,167</td><td>\$ 75,771</td><td>-</td><td></td><td></td><td>*</td><td>\$ 156,000</td><td>241,590</td><td></td></th<>	Mar-1	•	• •		-	\$ 977,167	\$ 75,771	-			*	\$ 156,000	241,590		
\$ 2,295,660 \$ 76,104 \$ 6,175,702 \$ 1,044,064 \$ 11,116 \$ 73,332 \$ 2,95,016 \$ 1,522,280 \$ 765,000 \$ 265,622 \$ 265,622 \$ 265,602 \$ 265,602 \$ 265,672 \$ 265,672 \$ 265,672 \$ 265,672 \$ 265,672 \$ 265,672 \$ 265,672 \$ 265,672 \$ 265,672 \$ 265,672 \$ 265,672 \$ 265,672 \$ 265,672 \$ 265,672 \$ 265,672 \$ 265,672 \$ 265,672 \$ 201,016 \$ 265,672 \$ 201,016 \$ 265,672 \$ 201,016 \$ 201,016 \$ 201,016 \$ 201,016 \$ 201,016 \$ 201,016 \$ 201,016 \$ 201,016 \$ 201,016 \$ 201,016 \$ 201,016 21,223,203 \$	Apr-1		\$,		\$	\$ 91,629	\$	\$	\$	\$	\$ 156,000	242,212	1	
8 3.265,660 5 86,73 5 7.43,734 5 4.43,736 5 7.55,540 5 7.55,540 5 7.55,540 5 7.55,540 5 7.55,540 5 7.55,540 5 7.55,541 5 7.55,543 5 7.55,543 5 7.55,543 5 7.55,543 5 7.55,543 5 7.55,543 5 7.55,543 5 7.55,543 7.55,543 7.56,653	May-1	\$	\$	•		\$	111,166	~	\$	•	•	\$ 156,000	252,043	10,482,90/	
5 3,533,733 5 9,43,705 5 7,120,571 5 7,120,571 5 7,120,571 5 7,120,571 5 7,120,511 5 1,305,561 5 1,465,506 5 1,665,501 5 1,665,501 5 31,056 5 2,31,056 5 7 5 31,056 5 31,056 5 31,056 5 31,056 5 31,056 5 31,056 5 31,056 5 31,056 5 31,056 5 31,056 5 31,056 5 31,056 5 31,056 5 31,056 5 31,056 5 31,056 5 31,056 5 32,371 5 32,371 5 32,371 5 32,371 5 32,371 5 32,371 5 32,371 5 33,355,755 5 31,66,501 5 36,301 5 32,371 5 32,343 5 32,343 5 32,343 3 32,343 3	Jun-1		÷	5	5	••	95,854	: •	•	•	~ •	4 139,000	300,032		
s 3.413.04 s 7.4466 s 4.27.576 s 3.063.502 s 1.408.075 s 156.000 s 233.471 s 234.47236 s 234.271 s 234.271 s 234.271 s 234.271 s 234.271 s 234.271 s 234.2736 s 244.607 s 166.000 s 243.0736 s 1230.436 s 246.0736 s 243.27506 s 166.000 <td>t-Inf</td> <td>1</td> <td>\$</td> <td></td> <td>~</td> <td>~ *</td> <td>79.883</td> <td></td> <td>, ,</td> <td>, ,</td> <td></td> <td>\$ 156,000</td> <td>301,096</td> <td></td>	t-Inf	1	\$		~	~ *	79.883		, ,	, ,		\$ 156,000	301,096		
\$ 2/34/50 \$ 9/400 \$ 64,190 \$ 1/36,00 \$ 2/34,500 \$ 1/36,00 \$ 2/34,500 \$ 1/36,00 \$ 2/34,500 \$ 1/36,00 \$ 2/34,500 \$ 2/34,500 \$ 1/36,00 \$ 2/34,500 \$ 1/36,00 \$ 2/34,500 \$	Aug-1		• •	• •			50.031		•	\$	\$	\$ 156,000	283,471		
5 2484,602 5 87,739 5 65,342 5 663,352 5 406,027 5 71,2119 5 156,000 5 245,739 5 1,221,199 5 156,000 5 245,739 5 1,221,199 5 156,000 5 245,739 5 1,223,347 5 156,000 5 245,739 5 245,739 5 155,780 7 156,000 5 245,739 5 245,730 5 245,730 5 157,780,736 5 157,780,736 5 157,780,736 5 1,872,000 5 2,903,439 5 5 34,355,785 5 1,046,967 5 8 5,080,541 5 34,217,960 5 1,872,000 5 2,903,439 5 5 34,355,785 5 1,046,967 5 8 1,375,00 5 2,903,439 5 2,903,439 5 2,903,439 5 3,335,785 5 1,872,000 5	Oct-1	, .,					\$ 63,006	**	\$	\$	\$7	\$ 156,000	297,893		
\$ 2.857,480 \$ 7.8,631 \$ 5.676,262 \$ 907,153 \$ 6.3,120 \$ 6.44,256 \$ 4.10,668 \$ 2.863,265 \$ 1.233,367 \$ 166,000 \$ 2.493,239 \$ 2.493,239 \$ 1.243,335 \$ 1.872,000 \$ 2.493,339 \$ 2.493,339 \$ 2.493,339 \$ 2.493,339 \$ 2.493,339 \$ 2.493,339 \$ 2.493,339 \$ 2.493,339 \$ 2.493,339 \$ 2.493,339 \$ 2.493,339 \$ 2.493,339 \$ 2.493,339 \$ 2.493,339 \$ 2.493,339 \$ 2.493,339 \$ 2.493,339 \$ 2.433,339 \$ 2.433,339 \$ 2.433,339 \$ 2.433,339 \$ 2.433,339 \$ 2.433,339 \$ 2.433,339 \$ 2.433,339 \$ 2.433,339 \$ 2.433,339 \$ 2.433,339 \$ 2.433,339 \$ 2.433,339 \$	Nov-1	5	\$	\$	\$	*	\$	\$	\$	\$	•	\$ 156,000	245,789		
\$ 34,355,785 \$ 1,046,967 \$ 8,902,813 \$ 69,811,277 \$ 11,715,024 \$ 905,663 \$ 8,495,720 \$ 5,080,541 \$ 34,217,960 \$ 15,780,736 \$ 1,872,000 \$ 2,903,439 \$ \$ 34,355,785 \$ 1,046,967 \$ 8,902,813 \$ 69,811,277 \$ 11,715,024 \$ 905,663 \$ 8,495,720 \$ 5,080,541 \$ 34,217,960 \$ 15,780,736 \$ 1,872,000 \$ 2,903,439 \$ \$ 34,355,785 \$ 1,046,967 \$ 8,902,813 \$ 69,811,277 \$ 11,715,024 \$ 905,663 \$ 8,495,720 \$ 5,080,541 \$ 34,217,960 \$ 15,780,736 \$ 1,872,000 \$ 2,903,439 \$ \$ 84,335,786 \$ 1,046,967 \$ 8,902,813 \$ 69,811,277 \$ 11,715,024 \$ 905,663 \$ 8,495,720 \$ 5,080,541 \$ 34,217,960 \$ 1,572,000 \$ 2,903,439 \$ \$ 84,335,786,78 \$ 1,046,967 \$ 0,0486 \$ 0,0440 \$ 0,0440 \$ 0,0445 \$ 1,000 \$ 0,0646 \$ 84,335,786,78 \$ 1,5778 \$ 0,2322 \$ 1,5078 \$ 0,0445 \$ 1,000 \$ 0,0646 \$ 84,335,786,78 \$ 1,5078 \$ 0,04440 \$ 0,0445 \$ 0,0485 \$ 0,0646 \$ 0,0646 \$	Dec-1		\$	\$	\$	\$	\$		\$		*	156,000	248,238	\$ 15,769,121	
\$ 34,355,785 \$ 1,046,967 \$ 8,902,813 \$ 69,811,277 \$ 11,715,024 \$ 905,663 \$ 8,495,720 \$ 5,080,541 \$ 34,217,960 \$ 1,872,000 \$ 2,903,439 \$ \$ 84,3350 \$ 55,6640 \$ 1,7498 \$ 0,3049 \$ 1,2828 \$ 0,2322 \$ 1,5078 \$ 1,5078 \$ 0,4440 \$ 0,0445 \$ 1,000 \$ 0,0645	otal GMC	\$ 34,355,785	\$	~	11			\$ 8,495,720	\$ 5,080,541		\$ 15,780,736	\$ 1,872,000	+	\$ 195,087,926	
\$ 34,355,786 \$ 1,046,967 \$ 8,902,811 \$ 11,715,024 \$ 905,663 \$ 8,495,720 \$ 5,080,541 \$ 34,217,960 \$ 1,372,000 > 2,3905,433 3 \$ 8495,720 \$ 5,080,541 \$ 3,217,960 \$ 1,372,000 > 2,305,433 3 \$ 843390 \$ 553,640 \$ 11,718 \$ 11,2828 \$ 0.2322 \$ 1.5078 \$ 1.5078 \$ 0.0445 \$ 1,000 \$ 0.0466	ther revenue	8	-							++			╋╼╍╋╴		
\$ 84.3390 \$ 55.6640 \$ 11.7498 \$ 0.3049 \$ 1.2828 \$ 0.2322 \$ 1.5078 \$ 1.5078 \$ 0.04440 \$ 0.0485 \$ 1.000 \$ 0.0646	otal collectic	+ + +	\$	\$ 8,902,813		1	\$	\$ 8,495,720					-+-	\$ 195,087,926	
	tate		~					19		\$			\$ 0.0646		
	Notes:														

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Financing Budget

		Californi 20	California Independent System Operator 2011 Cost Allocation Model	tem Operator Model				
	Core Reliability	Energy Transmission Services	CRS/ETS TOR	Forward Scheduling	Market Usage	Market Usage Forward Energy	Settlements, Metering and Client Relations	Total
1498-2000 Bourds	39.9 0	%9 8	0.3%	11.9%	16.6%	1.2%	31.5%	100.0%
2004 Bonds	16.1%			17.7%		L		100.0%
007 Bonds Team and the second s	13.3%		0.1%	20.0%		19.7%		100.0%
2008 Bonds	22.7%	9.4%	0.3%	12.9%	11.8%	12.2%		100.0%
2009 Bonds	40.9%		0.5%	3.0%	10.1%	6.0%	22.9%	100.0%
2010 Cash Financed	25.4%	11.3%		15.5%	16.3%	8.8%		100.0%
1998-2000 Bonds Debt Service	•	-	- 5	•	• \$	• \$	\$ - \$	
2004 Bond Debt Service	-	.	•	•	ج	\$	\$	
2007 Bond Debt Service	\$ 2,141,982	\$ 620,156	\$ 22,393	\$ 3,210,973	s	s,	\$	16,089,290
2008 Bond Debt Service	\$ 4,466,883	\$ 1,842,172	\$ 50,911	\$ 2,548,229	\$ 2,332,984	\$ 2,393,708	\$ 6,053,323 \$	19,688,210
2009 Bond Debt Service	\$ 2,011,120	\$	\$ 24,082	\$ 1,232,704	s	\$	\$	
2010 Cash Financed	\$ 6,846,366	\$ 3,048,327	\$ 81,982	\$ 4,196,441	\$ 4,398,961	\$ 2,380,405	\$ 6,047,519 \$	27,000,000
Capital and Debt Service	\$ 15,466.351	\$ 6,406,102	\$ 179,368	\$ 11,188,347	\$ 9,453,040	\$ 8,650,847	\$ 19,364,695 \$	70,708,750
				15.8%	13.4%	12.2%		100%
and the second secon								
See "Debt Mapping worksheet" to determine mapping of debt service costs related to the 2008 bond offering that refinanced previous debt	apping of debt service	costs related to the	2008 bond offering	that refinanced pre-	vious debt	-		
and provided new money for zouo-zu i i capital expenditures.	li experiarines.				· .			

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DebtMapping

		California integration system Operator 2011 Cost Allocation Model	2011 Cost Allocation Model	-				
2008 Bonds. Total Debt Service for 2011	Principal 31,412,500	Interest 4,365,000	Total Debt Service 35,777,500	Percent of Total 100%				
(Budgeted at 125% of debt service)								
Comprised of: (see allocation below)								
Refinancing 2000 Bonds	•	-		%0			-	_
2004 Bond Offering	44.476.324	1 062 050	16 089 240	45%			-	· · · · · · · · · · · · · · · · · · ·
2008 Bond Offering (new money portion)	17,286,169	2,402,041	19,688,210	55%		-		- - -
2009 Bonds, Total Debt Service for 2011	4,318,750	3,612,500	7,931,250				-	
(Budgeted at 125% of debt service)								
In June 2008, the ISO issued new bonds to provide funding for capital expenditures and to refinance/retire all previously outstanding debt. A second more and to refinance/retire all previously outstanding debt. A second more and to refere the new bonds, but in this cost allocation model, amounts must be attributed to "old" and "new" money. It therefore becomes necessary to allocate the annual debt service related to only the new bonds, but in this cost allocations can be made to the GMC service categories based on ISO system allocations.	penditures and to refinance td to only the new bonds, b ents to "new" and "old" mo	e/retire all previously ut in this cost altocati ney so that cost alloc	outstanding debt. on model, amounts must ations can be made to th	be attributed to "old" and Be GMC service categorie	"new" money. s based on ISO syst	em allocations.		
Year debt service is collected in GMC Year debt service is due	2008 2009	2009 2010	2010 2011	2011 2012	2012 2013	2013 2014	Total	
Principal Payments of Bonds issued in June 2008 for new money and to	noney and to refinance existing debt	sting debt			26 MTE MM	33.465.000	106 070 000	
2008 Bonds	31,000,000	39,100,000	42,250,000			000'00''S		
Schedule of Principal Payments from previously outstanding bonds 2004 Bonds 2007 Bonds	a bonds 28,900,000	46,200,000 5,500,000	000'000'61	15,300,000	20,200,000		75,100,000 60,000,000	
Total newine hunds	000.000	51,700,000	19.000.000	15,300,000	20,200,000		135,100,000	Ratio of Total Old Debt to Total June 69% Issuance
Ratio of each series to total previously outstanding bonds 2004 Bonds 2007 Bonds		89%		0% 100%	0% 100%			
Allocation is by year, with old money portion the lessor of							- - -	
New Money Portion Old Money Portion	2,100,000	39,100,000	23,250	9,830,000	15,825,000 20,200,000	23,465,000	74,470,000	
Ratios: New Money Portion	7%	%00F	55%	39% 61%	44% 56%	100%	38%	

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F&C Op Reserve

		Californi 20	nia Independent System Op 2011 Cost Allocation Model	California Independent System Operator 2011 Cost Allocation Model	Ŀ					
		Summai	v of Operating an	Summary of Operating and Capital Reserves						
		Core Reliability	Energy Transmission Services	CRS/ETS TOR	Forward Scheduling	Market Usage	Market Usage Forward Energy	Settlements, Metering and Client Relations	Total	
Onerating	Discretion and Conital Becories Credit	¢ 6 573 545	4 7 556 977	ىچىدىغ بىڭ ئىرلايا - 7 د " - 	\$ 2 555 508	\$ 9.244.648		\$ 4.638.281	\$ 30.568.955	8.955
Allocation	Allocation to new charges		* *	\$ 114.386		\$	\$ 1,694,842		\$	
		6,	\$ 7,		\$ 2,555,508	\$	\$ 1,694,842	\$ 4,638,281	\$ 30,568,955	8,955
Note	Notes: Mapping of Reserve Credit Amounts from Operating & Capital Reserve Worksheet to these Service Categories:	Capital Reserve Wo	rksheet to these So	ervice Categories:						
	CRS>CRS									
	ETS->ETS									
	Forward Scheduling>Forward Scheduling									
	Congestion Management & Market Usage>Market Usage	Jsage								
	Settlements, Metering and Client Relations>Settlements, Metering and Client Relations	ents, Metering and	Client Relations							
	In "Allocation to new charges", 20% of the Market Usage	rket Usage Operating and Capital Reserves credit is allocated to Market Usage Forward Energy.	pital Reserves cred	it is allocated to Ma	rket Usage Forwar	d Energy.				
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Expense Recovery Budget

California Independent System Operator Solution Model Solution Model Solution Model Solution Model Core Reliability Services CRS/ETS TOR Scheduling Market Usage Market Usage Settlements, 0000 \$ - \$ - \$ 5 - \$ 5 - \$ - 5 - \$ - 5 - \$ - 5 - \$ - 5 - \$ - \$ - 5 - \$	
California Independent System Operator Soft Cost Allocation Model Summary of Expense Recovery Budget Summary of Expense Recovery Budget Soft Cost Allocation Model Core Reliability Transmission Core Reliability Services Core Reliability Services Core Reliability Services Core Reliability Services Setheduling	
California Independent System Operator Summary of Expense Recovery Budget Summary of Expense Recovery Budget Summary of Expense Recovery Budget Core Reliability Transmission Core Reliability Recovery Budget Core Reliability Forward Market Usage Market Usage Market Usage Core Reliability Services Scheduling Market Usage Market Usage Market Usage Core Reliability Services Scheduling Market Usage Market Usage 5 - \$ - \$	
California Independent System Operator Summary of Expense Recovery Budget Summary of Expense Recovery Budget Summary of Expense Recovery Budget Core Reliability Transmission Core Reliability Services CRS/ETS TOR Scheduling Market Usage Forward Services Services Scheduling Market Usage Core Reliability Services \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - 5 - \$ - 5 - \$ - 5 - 5 - 5 - 5 - 5 - 5	
California Independent System Operator Summary of Expense Recovery Budget Summary of Expense Recovery Budget Summary of Expense Recovery Budget Core Reliability Transmission Core Reliability Scheduling Market Usage Forward Core Reliability Scheduling Market Usage Forward 5 - \$ - \$ - \$ - \$ - \$<	
California Independent System Operator 2011 Cost Allocation Model Summary of Expense Recovery Budget Summary of Expense Recovery Budget Core Reliability Transmission Core Reliability Scheduling Market Usage Scheduling Astronom CRS/ETS TOR Scheduling Market Usage Services Scheduling Sche	
California Independent System Operator Summary of Expense Recovery Budget Summary of Expense Recovery Budget Summary of Expense Recovery Budget Core Reliability Transmission Core Reliability Services CRS/ETS TOR Scheduling Marke 5 - 5 - 5	
California Independent System Operator 2011 Cost Allocation Model Summary of Expense Recovery Budget Summary of Expense Recovery Budget Core Reliability Transmission Core Reliability Senduling Senduling Senduling Scheduling	
California Independent System Operator 2011 Cost Allocation Model Summary of Expense Recovery Budget Summary of Expense Recovery Budget Core Reliability Transmission CRS/ETS TOR Services Services Services Services <td></td>	
California Independent System Operator 2011 Cost Allocation Model Summary of Expense Recovery Budget Energy Core Reliability Transmission Core Reliability Services 5 - 5 - 5 - 5 - 5 5 (10,191) 5 5 (4,807,952) 5 (339,638) 5 (10,191) 5 5 (4,807,952) 5 (339,638) 5 (10,191) 5 5 (339,638) 5 (10,191)	
California Independent System 2011 Cost Allocation Mo 2011 Cost Allocation Mo Summary of Expense Recovery I Summary of Expense Recovery I Core Reliability Transmission Core Reliability Services \$ - \$ \$	
Core R Core R	
Core R (4) (2) (2) (2) (2) (2) (2) (2) (2) (2) (2	
Core R Core R	
Core R Core R	
Budget (500,00 (2,500,0 (7,600,0	
covery Budget SC Application and Training Fees WECC Reimbursement/NERC Reimbursement COI Path Operator Fee Large Generator Interconnection Project Interest Eamings se Recovery Budget Percent Percent	
covery Budget covery Budget SC Application and Training Fees WECC Reimbursement/NERC Reimburse COI Path Operator Fee Large Generator Interconnection Project Interest Earnings se Recovery Budget Percent 99/2010 10.47	
Expense Recovery Budget Expense Recovery Budget SC Application and Trai WECC Reimbursement WECC Reimbursement COI Path Operator Fee Large Generator Interco Interest Earnings Interest Earnings Total Expense Recovery Budget Percent 9/9/2010 10:47	
Cotal Expense Re	

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	California Independent System Operator 2011 Cost Allocation Model	nia Independent System Op 2011 Cost Allocation Model	nt Syster cation M	n Operat odel	or
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Function	Charge	# 00	Amo	Amount	Billing Unit
	CRS Peak	4501	\$	84.3390	MW-months
CRS	CRS Off-Peak	4502	s	55.6640	MW-months
	CRS-Export Energy	4503		1.7498	MWh
	ETS-NE	4505	1	0.3049	MWh
ETS	ETS-UE	4506		1.2828	MWh
CRS/ETS	CRS/ETS-TOR	4508		_	MWh
	Non-IS Trades	4511	\$	1.5078	Schedules
FS	IS Trades	4512		1.5078	IS Trade
	PGAB	4513	\$	1.1399	PGAB IS Trade
	AS	4534	\$	0.4440	MWh
	E	4535	\$	0.4440	MWh
DW	UE	4536	\$	0.4440	MWh
-	Forward Energy	4537	\$	0.0485	MWh
ç	CB fee	4520	\$	0.0050	per bid segment
9	CB	4533	s	0.0646	MWh
ETS/MU	PIRP	4546	\$	1.7267	MWh
SMCR	SMCR	4575	\$	1,000	Customer months
The revised (The revised CAISO GMC Rate Proposal includes:	osal include	SS:		
80/20 revenu	80/20 revenue split between ETS-withdrawals (CC4505) and ETS-UE (CC4506)	hdrawals ((CC4505)	and ETS-	UE (CC4506)
Recovery of	Recovery of excess SMCR revenue based on Functional Association of Charge Types	based on F	unctional	Associat	ion of Charge Types
No discount 1	No discount for Forward Scheduling (CC4511) or Inter SC trades (CC4512), but retain	(CC4511) (or Inter S(C trades (CC4512), but retain
discount for F	discount for Path 15 Facilitator Inter SC trades (CC4513)	SC trades ((CC4513)		
MU-Forward	MU-Forward Energy (CC4537) based on cost of service less 9% for CB	d on cost o	f service	ess 9% fo	or CB
ETS/MU UIE	PIRP rate (CC 4546) to	o be simple	sum of E	TS-withd	ETS/MU UIE PIRP rate (CC 4546) to be simple sum of ETS-withdrawals (CC4505) and MU-
Ueviations (C	deviations (CC4330) rates	opom oj on	100 of 00/	of MITEC	and 0% of EC
CONVEIGENCE	conveigence biduing per iniviri charge is made up or 3% or mor E. and 3% or r o SMCR rate (CC4575) ramains at \$1000	yon Un	ov.≊ in dn		
Forward Ene	Forward Energy bill determinant set to 20% of net of withdrawals and injections	to 20% of n	let of with	drawals a	nd injections
CRS/ETS TC	CRS/ETS TOR rate based on cost of service	f service			-
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			Californ 2(a Independ 11 Cost Al	California Independent System Operator 2011 Cost Allocation Model	Derator					
			Summary	of Revenue	Summary of Revenue Requirement Calculation	liculation					
			Energy	04-10-00	L		Market Usage		Settlements,		
		Core Reliability n Services	I ransmissio n Services	TOR	Scheduling	Market Usage	Energy	mete	metering and client Relations	ř	Total
Rev	Revenue Requirement										
	Onerations and Maintenance	\$ 64.024.341	64 024 341 \$26 029 740 \$	\$ 734.937	\$ 6.119.980	\$ 6.119.980 \$ 21.308.363 \$	\$ 4.783.476 \$	76 \$	39.547 293 \$ 162.548.130	\$ 16	2.548.13(
		\$	\$	1.1	\$	•		57		\$	
	Financing Budget-2004 debt	•	•	• •	•	•	*	\$	•	\$	•
	Financing Budget-2007 debt	\$ 2,141,982	\$ 620,156	\$ 22,393	\$ 3,210,973	\$ 1,428,900	\$ 3,177,490	\$ 06	5,487,395	\$ 16	16,089,290
	Financing Budget-2008 debt	\$ 4,466,883	\$ 1,842,172	\$ 50,911	\$ 2,548,229	\$ 2,332,984	\$ 2,393,708	\$ 80	6,053,323	\$ 19	19,688,210
14 P	Financing Budget-2009 debt	\$ 2,011,120	\$ 895,446	\$ 24,082	\$ 1,232,704	\$ 1,292,195	\$ 699,244	44 \$	1,776,459	\$ 7	7,931,250
	Financing Budget-cash funded	\$ 6,846,366	\$ 3,048,327	\$ 81,982	\$ 4,196,441	\$ 4,398,961	\$ 2,380,405	05 \$	6,047,519	\$ 27	27,000,000
Reve	Reventie Requirement hefore										
appl	application of other credits	\$ 79,490,692	79,490,692 \$32,435,841 \$		914,304 \$17,308,327	\$ 30,761,403	\$ 13,434,323 \$	23 \$	58,911,989	\$	233,256,880
	Percent of Total	34%	14%	%0	%2 9	13%		%9	25%		100%
1	Other Credits										
	Expense Recovery Budget	\$ (4,807,952)	(4,807,952) \$ (939,638) \$		(10,191) \$ (192,927) \$	\$ (342,882) \$		(149,746) \$	(1,156,663) \$		(7,600,000)
	Operating and Capital Reserves	*7	(6,520,332) \$ (7,495,798) \$	1.1	(114,386) \$ (2,555,508) \$ (7,549,806) \$	\$ (7,549,806)	\$ (1,694,842) \$	42) \$	(4,638,281) \$	2.1	(30,568,955)
Tota	Total Other Credits	\$ (11,328,284)	\$ (8,435,436)	\$ (124,578	\$ (11,328,284) \$ (8,435,436) \$ (124,578) \$ (2,748,436) \$ (7,892,688) \$	\$ (7,892,688)	\$ (1,844,588) \$	88) \$	(5,794,944) \$	1.1	(38,168,955)
Tota	Total Revenue Requirement	\$ 68,162,408	68,162,408 \$24,000,405	\$ 789,727		\$14,559,891 \$22,868,715	\$ 11,589,735	35 \$	53,117,044	\$ 195	195,087,926
	Percent of Total	35%	12%	%0	6 7%	12%		6%	27%		100%

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Dollar Comparison-YeartoYear

Anticipation Example of Revenue Requirement Calculation: Current Year Settlements, family and Client Total Revenue Requirement Core Reliability Termsmission CRSETIS TOR Erroward Market Usage Market Usage Ferroward Ferroward						Califor	California Independent System Operator 2011 Cost Allocation Model	it Sys ation	stem Operator Model								
						Summary of Re	evenue Requirem	ent Ca	Iculation: Current	Year							
			Core	s Reliability	Tra	Energy insmission iervices	CRS/ETS TOR		Forward Scheduling	Mark	tet Usage	Market U Forward E		Settler Metering a Relat	nents, ınd Client ions		Total
mance 5 64,024,341 5 734,937 5 6,103,63 5 4,783,476 5 33,647,203 5 162,64 debt 5 5 4 5	œ	svenue Requirement						$\left \right $									
0 debr 5 - 5 6 6	+	Operations and Maintenance	\$	64.024.341	s					÷	21,308,363				_	\$	162,548,130
q debt \$ \cdot \cdot \$ </td <td>ŀ</td> <td>Financing Budget-2000 debt</td> <td>4</td> <td></td> <td>*</td> <td></td> <td></td> <td>-</td> <td></td> <td></td> <td>_</td> <td></td> <td></td> <td></td> <td></td> <td>\$</td> <td></td>	ŀ	Financing Budget-2000 debt	4		*			-			_					\$	
7 debt 5 2,141,962 5 620,156 5 2,332,954 5 3,177,490 5 6,487,355 5 46,003 8 debt 5 4,466,833 5 1,442,172 5 5,0911 5 2,332,984 5 2,337,705 5 6,603,323 5 19,601 8 debt 5 6 6 5 3,043,571 5 8,196,410 5 2,332,914 5 6,047,513 5 6,047,513 5 7,93 Nunded 5 6 6 7 5 7,332,914 5 7,332,914 5 7,333 5 7,176,453 5 7,93 Nunded 5 7,932,713 5 914,304 5 17,308,323 5 7,193 7,93 5 6,047,513 5 2,33,254 Nunded 5 7,932,713 5 914,304 5 1,344,323 5 6,047,513 5 7,93 Reserves 5	\vdash	Financing Budget-2004 debt	\$	•	\$	•	\$	\$	•	\$	•	\$	-	\$,	\$	•
6 debt 5 4,466,863 5 1,824,172 5 5,0,911 5 2,438,236 5 2,333,708 5 6,053,323 5 6,053,323 5 6,053,323 5 6,053,323 5 7,33 9 debt 5 2,011,120 5 866,446 5 3,048,327 5 8,1382,515 5 6,037,519 5 6,047,519 5 7,33 9 debt 5 6,865,366 5 3,048,327 5 8,11369 5 7,30 e application of other 5 79,490,692 5 3,445 5 914,304 5 17,308,327 5 8,311,903 5 7,30 e application of other 5 79,490,692 5 3,2435,891 5 7,303 5 6,911,919 5 7,403 e application of other 5 7,496,301 5 7,494,323 5 6,911,919 5 7,503 e application of other 5 6,6520,323 5	\vdash	Financing Budget-2007 debt	\$		\$	620,156	\$ 22,3	93 \$	3,210,973	\$	1,428,900	\$ 3,1			5,487,395	\$	16,089,290
9 debt \$ 2.011,120 \$ 896,446 \$ 24,062 \$ 1.232,704 \$ 1.232,195 \$ 699,244 \$ 1,776,455 \$ 7,93 h funded \$ 6,846,366 \$ 3,048,327 \$ 8,1932 \$ 4,196,491 \$ 6,847,513 \$ 6,047,513 \$ 5 6,047,513 \$ 2,700 epplication of other \$ 79,490,692 \$ 3,743,644 \$ 17,308,327 \$ 4,343,323 \$ 6,047,513 \$ 2,37,00 epplication of other \$ 7 7 7 7 7 8 7,108,327 \$ 17,308,327 \$ 2,37,00 \$ 2,37,00 \$ 2,33,05 \$ 2,37,00 \$ 2,37,00 \$ 2,37,00 \$ 2,37,00 \$ 2,37,00 \$ 2,37,00 \$ 2,33,05 \$ 2,37,00 \$ 2,33,05 \$ 2,30,761,403 \$ 1,49,44	┢	Financing Budget-2008 debt	\$	4,466,883	\$	1,842,172	\$ 50,9	11 \$	2,548,229	\$	2,332,984					\$	19,688,210
h funded 5 6,346,366 5 3,043,327 5 81,962 5 4,396,961 5 2,380,405 5 6,047,519 5 2 7 2	-	Financing Budget-2009 debt	\$	2:011,120	\$	·		82 \$	1,232,704	\$	h				1,776,459	\$	7,931,250
e application of other 79,490.692 5 32,435,841 5 914,304 5 17,308,327 5 30,761,403 5 13,434,323 5 56,911,969 5 233,256 e application of other 2 73,434,323 5 30,761,403 5 13,434,323 5 56,911,969 5 233,256 dget 5 7 7% 7% 13% 6% 25% 25% 5 5 7 5 <td< td=""><td>┢</td><td>Financing Budget-cash funded</td><td>\$</td><td>6,846,366</td><td></td><td>t</td><td></td><td></td><td></td><td>\$</td><td></td><td></td><td></td><td></td><td></td><td>\$</td><td>27,000,000</td></td<>	┢	Financing Budget-cash funded	\$	6,846,366		t				\$						\$	27,000,000
e application of other 5 79,480,692 5 32,435,841 5 914,304 5 17,308,327 5 30,761,403 5 13,44,323 5 56,911,969 5 233,25 1										1					Sector 2		
40 7% 7% 13% 5% 25% dget \$ (4,807,952) \$ (339,638) \$ (10,191) \$ (132,927) \$ (149,746) \$ (1,156,663) \$ (7,60 Reserves \$ (4,807,952) \$ (339,638) \$ (10,191) \$ (132,927) \$ (149,746) \$ (1,156,663) \$ (7,60 Reserves \$ \$ (4,807,952) \$ (7,493,606) \$ (1,49,746) \$ (1,166,663) \$ (7,60 Reserves \$ \$ (6,520,332) \$ (11,4366) \$ (1,694,842) \$ (1,166,663) \$ (7,60 Reserves \$ \$ (14,366) \$ (14,9,746) \$ (1,160,484) \$ (39,160 Reserves \$ \$ (14,368) \$ (14,364) \$ (1,60,484) \$ (38,16) Reserves \$ \$ (14,	<u>₩</u> ,	svenue Requirement before application of other adits	4	79.490.692	4	32.435.841				v	30,761,403				8,911,989	\$	233,256,880
dget \$ (4,807,952) \$ (939,633) \$ (10,191) \$ (132,927) \$ (149,746) \$ (1,156,663) \$ (7,60) Reserves \$ (6,520,332) \$ (7,495,738) \$ (11,386) \$ (132,927) \$ (149,746) \$ (1,156,663) \$ (7,60) Reserves \$ (11,328,233) \$ (7,495,738) \$ (14,386) \$ (14,3436) \$ (7,50) Reserves \$ (11,328,233) \$ (7,495,738) \$ (14,348) \$ (1,694,842) \$ (1,60,436) \$ (7,60) Reserves \$ (11,328,233) \$ (14,386) \$ (1,544,800) \$ (1,694,842) \$ (1,60,436) \$ (7,60,563) \$ (7,60) \$ (1,569,730) \$ (7,60) \$ (1,61,61,61) \$ (1,60,436) \$ (1,60,436) \$ (1,60,436) \$ (1,60,436) \$ (1,61,61,61) \$ (1,60,61,61) \$ (1,61,61,61) \$ (1,61,61,61) <td></td> <td>Percent of Total</td> <td></td> <td></td> <td></td> <td>14%</td> <td></td> <td></td> <td></td> <td></td> <td>13%</td> <td></td> <td></td> <td></td> <td>25%</td> <td></td> <td>100%</td>		Percent of Total				14%					13%				25%		100%
dget \$ (4,807,952) \$ (132,927) \$ (132,927) \$ (149,746) \$ (141,6663) \$ (7,600 Reserves \$ (6,520,332) \$ (7,485,788) \$ (14,386) \$ (14,9,16) \$ (149,743) \$ (149,743) \$ (7,600 \$ (7,600 \$ (7,601 \$ (149,743) \$ (7,600 \$ (7,601 \$ (7,	1																
Reserves \$ (1,520,332) \$ (7,495,796) \$ (114,386) \$ (2,555,506) \$ (7,549,806) \$ (1,694,842) \$ (4,638,281) \$ (30,56) Reserves \$ (11,328,233) \$ (7,495,636) \$ (7,549,806) \$ (1,694,683) \$ (5,794,944) \$ (30,16) Reserves \$ (11,328,236) \$ (124,578) \$ (2,748,436) \$ (1,844,588) \$ (5,794,944) \$ (33,16) Reserves \$ (11,328,178) \$ (2,748,436) \$ (1,844,588) \$ (5,794,944) \$ (33,16) Reserves \$ (11,328,178) \$ (1,459,188) \$ (1,454,188) \$ (5,794,944) \$ (33,16) Reserves \$ (11,328,178) \$ (14,558,176) \$ (13,458,176) \$ (13,458,106) \$ \$ \$ (13,17044) \$ \$ \$ \$	2	Expense Recovery Budget	\$		_			1.								\$	(17,600,000)
\$ (11,328,384) \$ (8,435,435) \$ (124,579) \$ (7,892,688) \$ (1,844,588) \$ (5,794,344) \$ (38,16) 13% 61% 34% -34% -34% -34% -64% -65% 84% 134% 13% 61% 34% -34% -34% -54% -65% 84% 134% 13% 61% 34% -34% -34% -34% 84% 84% 135% 145,04,344 136% 136,05 136,16		Operating and Capital Reserves	4			(7,495,798)										*	(30,568,955)
13% 61% 34% -219% -64% -65% 84%	F	tal Other Credits	\$	(11,328,284)		(8,435,436)			1992							\$	(38,168,955)
tof Total \$ 68,162,408 \$ 24,000,405 \$ 789,727 \$ 14,559,899 \$ 22,868,715 \$ 11,589,735 \$ 53,317,044 \$ 135,08 tof Total 1 35% 12% 0% 789,777 \$ 22,868,715 \$ 11,589,735 \$ 53,317,044 \$ 135,08 tof Total 1 0% 7% 7% 12% 12% \$ 135,08 \$ \$ \$ \$ 135,08 \$				13%		61%		4%	-219%		-64%		-65%		84%		
\$ 68,162,408 \$ 24,000,405 \$ 789,727 \$ 14,559,891 \$ 22,868,715 \$ 5 53,117,044 \$ 135,08 t of Total 1 35% 12% 0% 7% 12% 11,589,735 \$ 53,117,044 \$ 135,08													1.1		·	ч ч т	1. 3. 3. 1.
35% 12% 12% 12% 12% 12% 12% 12% 12%	Ť	stal Revenue Requirement	\$	68,162,408	\$			-		\$	_					\$	195,087,926
		Percent of Total		35%		12%		%0	7%		12%		6%		27%	-	100%
						-		+									

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Dollar Comparison-YeartoYear

					Califor	nia independent System Of 2011 Cost Allocation Model	t syst ation I	California Independent System Uperator 2011 Cost Allocation Model							
					iummarv of f	Summary of Revenue Requirement Calculation: Prior Year	tent Ca	Iculation: Prior Y	ear						
		Š	Core Reliability	Trans Sei	Energy Transmission Services	CRS/ETS TOR		Forward Scheduling	Market	Market Usage	Market Usage Forward Energy		Settlements, Metering and Cli Relations	Settlements, Metering and Client Relations	Total
Reve	Revenue Requirement						\square								
	Operations and Maintenance	\$	63,845,241	\$	26,288,245 \$	\$ 724,380	\$ 00	6,431,708	\$ 21	21,162,404	\$	5,017,729	\$	39,226,102	\$ 162,695,809
	Financing Budget-2000 debt	*		\$	•		••	•	\$		\$		5 5		\$ -
	Financing Budget-2004 debt	\$	•	\$	•	\$	\$ 7 1	•	\$7	•	\$	•	\$	-	\$ •
	Financing Budget-2007 debt	\$	3,657,475	\$	1,060,935	\$ 38,229	\$ 62	5,470,544	\$	2,437,926	\$	5,404,979	\$	9,350,620	\$ 27,420,710
	Financing Budget-2008 debt	\$	7,684,021	\$	3,186,465	\$ 87,409	\$ 6	4,331,950	\$	4,013,024	\$ 3,	3,954,338	\$ 1	10,297,082	\$ 33,554,290
	Financing Budget-2009 debt	\$		÷,	•	-	\$		\$		\$	- \$	5	•	\$
	Financing Budget-cash funded	\$	3,292,665	\$	869,989	\$ 29,199	\$ 66	3,252,781	\$ 2	2,597,866	\$	801,747 \$	\$	4,155,754	\$ 15,000,000
Revenu credits	Revenue Requirement before application of other credits	\$	78,479,402	••	31,405,634	\$ 879,217	\$	19,486,984	\$ 30	30,211,220	\$ 15,	15,178,793	9 \$	63,029,559	\$ 238,670,809
	Percent of Total		33%		13%		%0	%8		13%		%9		26%	100%
Other	Other Credits														
	Expense Recovery Budget	\$	(4,499,752)	\$	(1,076,764)	\$ (13,814)	14) \$	(306,180)	\$	(474,679) \$		(238,489) \$		(1,490,322)	\$ (8,100,000)
	Operating and Capital Reserves	*	(5,524,617)	s	(4,176,370) \$	\$ (79,032)	32) \$	2,614,143	\$ (21	(21,580,124) \$		(5,091,959) \$		(1,651,988) \$	\$ (35,489,947)
Total	Total Other Credits	•	(10,024,368)	\$	(5,253,134)	\$ (92,846)	\$ (9)	2,307,963	\$ (22	(22,054,803) \$		(5,330,449) \$		(3,142,310)	\$ (43,589,947)
				·	1										
Total	Total Revenue Requirement	\$	68,455,033	\$	26,152,500	\$ 786,371	71 \$	21,794,947	\$ 8	8,156,417	ъ С	9,848,344	\$	59,887,249	\$ 195,080,862
	Percent of Total		35%		7021		7.0	11%		767		5%		31%	100%

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Dollar Comparison-YeartoYear

Overall change in revenue requirement Consisting of: 0&M Budget Change Debt Service and Capital Expense Recovery/ / Operating & C		Core Reliability \$ (292,625) \$ 179,100 \$ 332,191	Energy Transmission Services \$ (2,152,095) \$ (258,505) \$ 1,288,713	CRS/ETS TOR \$ 3,366 \$ 10,667 \$ 24,630	Forward Scheduling \$ (7,235,055) \$ (311,728) \$ (1,866,929)	Market Usage \$ 14,712,298 \$ 145,959 \$ 404,224	Marke Forwar \$	Settlements, Metering and Client Relations \$ (6,770,205) \$ 321,191	
rall change in reven insisting of: 0&M Budget Chang Debt Service and C Expense Recovery		(292,625) 179,100 832,191	(2,152,095) (258,505) 1,288,713		\$ (7,235,055) \$ (311,728) \$ (1,866,929)	↔ ↔ ↔	\$\$	v v	Total
nsisting of: O&M Budget Chany Debt Service and C Expense Recovery		179,100 832,191	(258,505)		\$ (311,728) \$ (1,866,929)	\$			\$ 7,064
O&M Budget Chary Debt Service and C Expense Recovery	Ital	179,100 832,191	(258,505) 1,288,713		\$ (311,728) \$ (1,866,929)	\$		Ś	
Debt Service and C Expense Recovery	tal .	832,191	1,288,713		\$ (1,866,929)	\$			\$ (147,678)
Expense Recovery							\$ (1,510,218)	(4,438,762)	\$ (5,266,250)
	Expense Recovery/ / Operating & Capital Reserve	(1,303,916)	\$ (3,182,302)	\$ (31,732)	\$ (5,056,398) \$	\$ 14,162,115	\$ 3,485,860	\$ (2,652,635)	\$ 5,420,992
Percentage of change due to:	nge due to:								
Total		-0.4%	-8.2%	0.4%	-33.2%	180.4%	17.7%	-11.3%	%00.0
O&M Budget Change	nge	0.3%	-1.0%	1.3%	-1.4%	1.8%	-2.4%	0.5%	~80.0-
Debt Service and Capital	Capital	1%	5%	3%	%6-	5%	-15%	-7%	-2.70%
Expense Recovery	Expense Recovery/ / Operating & Capital Reserve	-2%	-12%	-4%	-23%	174%	35%	4%	2.78%
Percentages cal	Percentages calculated as Dollar amount change divided		10 Revenue Reg	by 2010 Revenue Requirement by GMC Service Category	service Category.				

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ATTACHMENT D

California Independent System Operator Corporation



2011 - 2012 GMC Stakeholder Process ISO Folsom Facility, Building 101A *April 21, 2010* 10:00 a.m. - 4:00 p.m. *Meeting Notes*

Attendees:			
Name	Organization	Name	Organization
Sean Neal	MID	Jan Cogdill	CAISO
David Cohen	TANC	Judith Sanders	CAISO
Lisa Yoho	Citigroup Energy	Charles Snay	CAISO
Kolby Kettler	Citigroup Energy	Ryan Seghesio	CAISO
Burt Hansen	SCE	Christina Ernandes	CAISO
Steve Greenleaf	JP Morgan	Tom Cuccia	CAISO
Brian Theaker	Dynegy	Don Tretheway	CAISO
		Dennis Estrada	CAISO
		Michael Epstein	CAISO
		Chhanna Prak	CAISO
		Stephanie O'Guinn	CAISO
Via Telephone		Via Telephone	
Robert Bonner	ConocoPhillips	Lisa McGee	Mirant
Bob Caracristi	NCPA	Jim Mclellan	Morgan Stanley
Jon Chadbourne	Arclight Energy	Margaret Miller	CAISO
Jackie DeRosa	Customized Energy	Zahra Nazarali	TransAlta
Caroline Emmert	ACES Power Marketing	Sharon Oleksak	Portland General Electric
Saeed Farrokhpay	FEC	John Perry	TID
Thomas Flynn	SCE	Leslie Pompel	BPA
Carl Funke	SDG&E	Uma Ramanathan	CAISO
Steven Greenlee	CAISO	Abigail Seto	PG&E
Steve Hess	Edison Mission	Masoud Shafa	WAPA

Gifford Jung	Powerex	Tony Stapleton	COP
Natalie Karas	Duncan Weinberg	Virginia Thompson	EDF Trading
Jessica Kastarian	SMUD	Melie Vincent	APX
Maury Kruth	FERC	Michelle Volk	BPA
Nancy Le	City of Anaheim	Ellen Wolfe	Resero Consulting
Sue Mara	RTO Advisors	Kathleen Wright	CDWR
Rajani Mardella	CAISO	Ali Yadzi	Morgan Stanley

Questions or comments about the GMC should be directed to: GMC@caiso.com

Michael Epstein, Director of Financial Planning, opened the meeting with a brief introduction of the purpose of the meeting and a perspective of the Grid Management Charge (GMC) rate structure.

Following Mr. Epstein were:

Charles Snay, Lead Financial Analyst & Donald Tretheway, Sr Market and Product Developer

Stakeholders were given an opportunity to ask questions and provide comments and suggestions. Questions and comments received during the workshop are summarized in the following tables.

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#	Comment/Question/Suggestion	Stakeholder	CAISO	ISO's Initial Response/Views
			Respondent	
1	Will there be any budget data for 2011	TANC	M. Epstein	If the data is available, we will provide that to
	during the August GMC Stakeholder			you. Preliminary data will be provided at the
	meeting or will we have to wait until October?			August meeting.
7	Will the CAISO be holding a firm line on	TANC	M. Epstein	We anticipate holding the same dollar amount
	the Revenue Requirement cap?		l	for a straight forward rate extension.
ŝ	Will the rates and cost allocates be included	Dynegy	M. Epstein	The rates will be in the budget and the structure
	in the Convergence Bidding tariff filing or the GMC filing in Sentember?			will be in the tariff filing.
4	How can the CAISO complete the FFRC	TANC	M. Enstein	These are two senarate processes. We will file
	filing in November if there won't be board		-	on November 1 ^{st¹} and then we will go to the
	approval until December?			board in December for approval of the rates and
				the budget.
5.	Will the FERC filing on November 1 st have	TANC	M. Epstein	No. This will have the revenue cap and the
	the rate structure and the rate for 2011?			structure. It will also have the determinants, but
				no dollars. Once the budget is approved, then
				we can allocate dollars for each of the
				components.
6.	Will the structure of the Convergence	MID	C. Snay	We will present how the GMC structure works
	Bidding billing determinants be in the GMC			for Convergence Bidding and where the dollars
	filings?			are coming from.
7.	What is the contingency plan consider the	TANC	M. Epstein	We will not exceed the cap. If so, a 205 filing is
	worst case scenario in that the CAISO exceeds the \$197 million can?			the only other option.

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#	Comment/Question/Suggestion	Stakeholder	CAISO	ISO's Initial Response/Views
			Respondent	
-	It has been a few years since there has been	TANC	J. Sanders	These are issues we have yet to explore. We
	a full 23-13 filing and statements by FERC.			will take these comments under review.
	In this type of filing, will you provide the			
	Revenue Requirement for the forecasted			
	test year? If you are going to be thinking			
	about making a filing in June 2011, are you			
	committing yourself to a formula change			
	and rate redesign during that period?			
12	We are interested in the 2012 test year	MID	M. Epstein	We appreciate this comment and want to
	analysis for the cost of service. We would			address any concerns you may have.
	like to look back, analyze and provide input			
	as to how the process is working and how			
	we envision this to be.			

2001-2003 GMC Refund

#	Comment/Question/Suggestion	Stakeholder	CAISO	ISO's Initial Response/Views
			Respondent	
	What do you mean by elimination of	MID	M. Epstein	Billing for 2001 and serving for load. Part of
	dynamic scheduling?			the FERC order was to eliminate that.
2.	In regards to billing to SC's and invoicing	MID	M. Epstein	To the best of our knowledge, it was broken up
	for credits: were the credits broken up by			by charge type. MID has received all of this
	bucket?			data to validate.

April 2010 Rate Adjustment

	Comment/Question/Suggestion	Stakeholder	CAISO	ISO's Initial Response/Views	
	}		Respondent		
5	Will volumes come back after MUFE?	Dynegy	C. Snay	Probably, but it may take several months for the	
				increase.	
15	What caused the 36.3% reductions in	TANC	C. Snay	There is no real evidence as to what caused this	
4.5	exports?			decrease, but the costs are increasing so much	
				that we may continue to see a decline.	
1	Is the \$1.82/MW rate assuming that you are	TANC	C. Snay	No. It's calculated based on the Revenue	
	going to see a further decrease in exports?			Requirement and the revised revenue adjusted	
1	,			forecast. This is the rate considering that	
				everything stays the same from April onward.	
	Why does the CAISO feel the need to make	TANC	C. Snay	Before Payment Acceleration, we did not have	
~	a first quarter rate adjustment?			the visibility. We had to wait until June for	
	•			data. Now we can have a better vision of the	
				data and this is the first time we have made a	
				first quarter rate adjustment.	

Status of Market Usage Forward Energy Charge

#	Comment/Question/Suggestion	Stakeholder	CAISO	ISO's Initial Response/Views
			Respondent	
	Can you please tell us what the settlement	TANC	J. Sanders	The rate would be based on the same volume;
	MUFE rate is?			close to \$0.06/Mw.
તં	Is there a potential for a true-up or rate	TANC	J. Sanders	Only if FERC does not approve the charge
	adjustment?			before June 1 st .
				TT
			C. Snay	I de rale will de dillerent uten il is now.

Co	Convergence Bidding Overview			
#	Comment/Question/Suggestion	Stakeholder	CAISO	ISO's Initial Response/Views
			Respondent	
-	Do other ISO's also do a revenue credit in the following year?	TANC	D. Tretheway	The revenue credit is very similar to what other ISO's do today.
5	What have other ISO's rate designs looked like?	QIW	D. Tretheway	All are of a per cleared MW basis; MISO, PJM ISO NE all follow this. After benchmarking, our rates are very similar to other ISO's.
m	Nodal bids?	SCE	D. Tretheway	There will be 10 bid segments. If you put a full bid in, the charge will be \$0.05 per bid segment.
4.	How did you derive the 9%?	TANC	D. Tretheway	Assume you have 100% of the costs for physical. Once you increment, the virtuals will be 10% more. Then what we need to do to recover would be 10%/110%.
5.	Why not just allocate 10% if the above is the assumption?	TANC	D. Tretheway	We are looking at a way to develop a forecasted rate as to how we would be calculating this going forward. What percentage is virtual and what percentage is physical. We could agree that we should do 10%, but based upon the other ISO's establishing the rate first, this is a straightforward methodology
6.	If the costs of Convergence Bidding are now going to be recovered in a unique way, is this going to be part of the cost of service discussion in 2011?	Dynegy	C. Snay	Yes, that is correct.

Convergence Bidding Overview

7.	Does the bid segment recover the 9%	MID	D. Tretheway	Not in the current year. In the following year
	•			we would credit from the previous year. The
				primary reason for per bid segment charge is to
				discourage Market Participants from fishing
				bids on all nodes.
<u></u> %	Is this a one-time thing in 2012?	SCE	C. Snay	In 2012 we will have to see how the cost of
				service study goes. We may make some small
				modifications. Some kind of charge will be in
				place.
9.	The \$0.08 charge reminds us of the MUFE	Citigroup	C. Snay	An existing structure is in placed for netting.
	charge. Why are we looking at a gross MW	Energy		This is a transition to prevent major cost shifts
	cleared but at MUFE we are looking at the			to a few market participants. We will pursue a
	greater of?			gross charge for Convergence Bidding.
10.	Are all of the software costs for	TANC	J. Cogdill	They are in the 2010 rate and are coming
	Convergence Bidding in the revenue			through bond funds.
	requirement?			

GMC Revenue Requirement

	uggestion Stakeholder CAISO ISO's Initial Response/Views Respondent	the CAISO MID M. Epstein No. The costs are presented on the slide. describing all	illing impact MID C. Snay We do not have data for Convergence Bidding dding and how yet.	sredited in the TANC M. Epstein The clearing charge is just a recovery of costs. oss clearing	a specific TANC D. Tretheway This is already in the tariff. ate which 0?
And an and an and an and and and and and	Comment/Question/Suggestion Stake	For Convergence Bidding, is the CAISO MID contemplating a whitepaper describing all of the costs?		Will the half cent charge be credited in the TANC following year but not the gross clearing charge?	Since it is collected based on a specific TANC charge code, will the tariff state which bucket the credit will apply to?
5	#	-	5	4	5.

#	Comment/Question/Suggestion	Stakeholder	CAISO Respondent	ISO's Initial Response/Views
	Is the ISO willing to have a subset of internal meeting for stakeholders to participate in?	TANC	M. Epstein	Our initial thoughts were to develop an internal proposal for June 18 th and have further discussion later on. We will have a white paper in the August timeframe but are open to taking your suggestion under review.
2	Is the ISO planning on using the Excel model?	TANC	M. Epstein	We are planning on using the model with some updates.
m	Is the internal team thinking about the new cost allocations? Have you been in contact with other ISO to see their approaches and strategies?	TANC	C. Snay	We have not done this, but we will look into it. We first want to determine what the definitions are and they we will look to the allocations after that. Also, the internal team is looking at a lot of other options such as Activity Based Costing (ABC).
4	Can you please explain the SMCR allocation based on the settlement charge?	SCE	M. Epstein	The SMCR has been allocated to different buckets and then based on that. This is the existing structure and is not anything new. Things will be changing in 2014 since all of the bonds will be paid off; costs will go away and the debt service will be paid off.
5.	Looking at other ISO's, I think that the update to the whitepaper should be focused on what their customer charge (GMC) would be.	TANC	C. Snay	We will be looking at this.
6.	Is this the case that there is a time recording system? Has this been implemented?	SCE	C. Snay	We now have ABC. We currently have 10 cost codes at a high level.

2012 Cost of Service Study

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1RespondentRespondent1Can you please elaborate on what the long term proposal is for the revenue ceiling?TANCM. Epstein2Can you please elaborate on what the long term proposal is for the revenue ceiling?TANCM. Epstein2To what extent do you want to discuss a longer term revenue cap? I guess we would need to have some type of multi-year, big picture dollars for staffing to evaluate this?TANCM. Epstein3It appears that in developing the billing determinants that you have not taken price elasticity into consideration. Now that you have ten years of data, do you think you should be more sophisticated?M. Epstein	#	Comment/Question/Suggestion	Stakeholder	CAISO	ISO's Initial Response/Views
ng TANC M. Epstein uld TANC M. Epstein is? M. Epstein is? TANC M. Epstein ce				Respondent	
uld Es? TANC M. Epstein is? TANC M. Epstein ce ou M. Epstein	-	Can you please elaborate on what the long	TANC	M. Epstein	We do not have a long term forecast at this
TANC M. Epstein TANC M. Epstein M. Epstein		term proposal is for the revenue ceiling?			point in time. This is somewhere above the
TANC M. Epstein TANC M. Epstein					\$200 million mark, but we do not have an exact
TANC M. Epstein TANC M. Epstein					amount.
TANC M. Epstein	12	To what extent do you want to discuss a	TANC	M. Epstein	We will give you numbers to see where we are
TANC M. Epstein		longer term revenue cap? I guess we would			coming from. At the end of the process we will
TANC M. Epstein		need to have some type of multi-year, big			want to talk about the longer term visions and
TANC M. Epstein		picture dollars for staffing to evaluate this?			new mapping.
	m	It appears that in developing the billing	TANC	M. Epstein	If we subtract the ten years of old market data,
		determinants that you have not taken price			we will only have one year of new market data
think you		elasticity into consideration. Now that you			by the middle of 2011 and we will only have
should be more sophisticated?		have ten years of data, do you think you			eighteen months of data for 2012
		should be more sophisticated?			

CERTIFICATE OF SERVICE

I hereby certify that I have served the foregoing document upon all of the parties listed on the official service list for the above-referenced proceeding, in accordance with the requirements of Rule 2010 of the Commission's Rules of Practice and Procedure (18 C.F.R. § 385.2010).

Dated at Washington, D.C. this 21st day of December, 2010.

<u>/s/ Bradley R. Miliauskas</u> Bradley R. Miliauskas