October 11, 2007

The Honorable Kimberly D. Bose
Secretary
Federal Energy Regulatory Commission
888 First Street, NE
Washington, D.C. 20426

Re: California Independent System Operator Corporation
Docket No. OA08-____

Dear Secretary Bose:

The California Independent System Operator Corporation ("CAISO") hereby submits this filing to comply with the non-transmission planning requirements of Order No. 890.[1] The instant filing sets forth revisions to the CAISO's existing open access transmission tariff ("ISO Tariff") to (1) reflect the CAISO's current methodology for calculating available transmission capacity ("ATC") and (2) incorporate certain revised definitions adopted in Order No. 890. The CAISO's filing also demonstrates how the provisions of the CAISO's tariff implementing the Market Redesign and Technology Upgrade ("MRTU Tariff")[2] are consistent with or superior to the provisions of the *pro forma* Open Access Transmission Tariff ("*pro forma* OATT") revised by Order No. 890. In addition, as further described herein, the CAISO requests a waiver (or partial waiver) of certain posting requirements adopted in Order No. 890 that are incompatible with the CAISO's service and operational model. In this filing letter, much of the discussion focuses on the terms and conditions of the MRTU Tariff on file with the Commission and scheduled to be implemented on March 31, 2008. Where relevant, however, this filing letter also discusses the terms and conditions of the existing ISO Tariff.[3]

I. EXECUTIVE SUMMARY

The CAISO supports the Commission's stated goal in Order No. 890 of preventing undue discrimination and preference in the provision of transmission

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[1] *Preventing Undue Discrimination and Preference in Transmission Service*, Order No. 890, 72 FR 12266 (March 15, 2007), FERC Stats. & Regs. ¶ 31,241 (2007), *reh'g pending.*

[2] Capitalized terms not otherwise defined have the meaning given them in the MRTU Tariff on file with the Commission or the existing ISO Tariff, as applicable.

[3] The Tariff sheets submitted in this filing are from the currently-effective ISO Tariff. The CAISO intends to incorporate these changes into the MRTU Tariff prior to MRTU implementation.

services. The CAISO submits that the ISO Tariff and the MRTU Tariff satisfy this goal and that the terms and conditions specified in the ISO Tariff and the MRTU Tariff are consistent with or superior to the provisions of the *pro forma* OATT, as revised by Order No. 890. In particular, the transparency of the CAISO's operations, procedures, and congestion management mechanisms address any concerns about undue discrimination or preference. The CAISO also notes that many of the changes to the *pro forma* OATT adopted in Order No. 890 are inapplicable to or incompatible with the CAISO's service model which the Commission has previously found to be consistent with the non-discrimination goals of Order No. 888. Given that the Commission is not intending to "upset the market designs used by existing ISOs and RTOs" (Order No. 890 at P 158), the Commission should (1) accept the instant compliance filing, (2) find that the CAISO complies with Order No. 890, and (3) not require the CAISO to make further modifications to the existing ISO Tariff or MRTU Tariff in order to comply with Order No. 890 other than those proposed herein.

In compliance with Order No. 890, the CAISO is submitting a new Appendix L (as a substitute for Attachment C as contemplated in Order No. 890) to its tariff that explains how the CAISO calculates ATC.[4] In addition, the CAISO is submitting tariff language that incorporates the definitions of Good Utility Practice and Affiliate as adopted in Order No. 890. The CAISO is not incorporating the revised definitions of Non-Firm Sales and Pre-Confirmed Application into its tariff because these terms do not appear in the ISO Tariff or MRTU Tariff and are not applicable to the services that the CAISO provides.

The CAISO requests that the Commission grant the CAISO a partial waiver of the Order No. 890 requirement that transmission providers post load data, *i.e.,* load forecasts and daily peak load, for load-serving entities ("LSEs") or control areas in their footprint, by permitting the CAISO to post such load data for the three former investor-owned-utility ("IOU") regions that now comprise the CAISO control area. The CAISO submits that requiring the CAISO to post individual load data for every LSE in the CAISO's control area footprint is unnecessary and would be unduly burdensome. First, the CAISO prepares its own forecast of system load that is based on an extremely complex analysis with a significant number of variables. The CAISO does not simply add together load forecasts provided by individual LSEs in order to project system requirements – which appears to be the assumption underlying the load posting requirement in Order No. 890. Indeed, the CAISO does not even receive individual load forecasts from LSEs; so, the CAISO is not able to aggregate individual LSE forecasts into a system forecast. Also, the CAISO does not have a contractual relationship with each of these LSEs, whereby the CAISO can require them to provide individual load forecast data to the CAISO for public posting. Second,

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[4] Order No. 890 uses the term the term "Available Transfer Capability." The ISO Tariff uses the term "Available Transfer Capacity." Appendix L is the next available Appendix/Attachment in the CAISO Tariff.

there are approximately 40 LSEs in the CAISO's control area footprint. It would be inefficient and counter-productive to require the CAISO to create individual LSE load forecasts for each LSE, which forecasts the CAISO would not otherwise utilize in determining its system requirements. Third, requiring the CAISO to prepare load forecasts for approximately 40 LSEs would increase costs and resource needs in order to, among other things, implement the necessary software and modeling changes in order to forecast load by LSE. Fourth, providing load data for the three IOU regions is consistent with the objectives of Order no. 890 because (1) the three regions correspond to the three former control areas that now comprise the CAISO control area and to major electrical connections and paths on the grid, and (2) the proposal will provide for more granularity than exists today. Finally, during the CAISO's stakeholder process, no stakeholder submitted comments objecting to the CAISO's proposal to post load data for the three regions described above.

The CAISO further requests that the Commission clarify that the changes adopted in Order No. 890 do not alter the Commission's prior decisions that transmission facilities are not eligible for a network credit under the CAISO Tariff unless the customer becomes a Participating Transmission Owner and places the facilities under the CAISO's Operational Control. In that regard, the Commission has found that facilities can be integrated with the CAISO system – and therefore eligible for a credit – only if such facilities are placed under the CAISO's Operational Control. The Commission did not adopt any changes in Order No. 890 that would undermine the basis for the Commission's prior determination on this issue. In any event, as explained in greater detail below, it remains inappropriate to require the CAISO to offer credits for facilities over which it does not have Operational Control and which the CAISO does not have the ability to use to provide service to its customers.

With respect to the remainder of the CAISO's Order No. 890 compliance obligations, the CAISO submits that the terms of its existing ISO Tariff and the approved MRTU Tariff to be implemented on March 31, 2008 are consistent with or superior to the *pro forma* OATT as revised by Order No. 890.

Many of the specific reforms adopted in Order No. 890 simply are not applicable to, or are incompatible with, the CAISO's service model which differs significantly from the *pro forma* OATT service model. For example, the CAISO does not offer traditional Order No. 888 network and point-to-point transmission services; the CAISO offers only a single "daily" transmission service that is available to all eligible customers. There are no firm, long-term transmission reservations of capacity under the CAISO's service model. Likewise, there is no formal application process for transmission service. Instead, service is scheduled on a daily basis. The following changes to Order No. 888 point-to-point and network transmission services that the Commission adopted in Order No. 890, as well as certain posting requirements related to these services, do not apply to the CAISO's "daily" transmission service model and, as such, the

Commission should not require the CAISO to adopt them: (1) elimination of the price cap on reassigned capacity; (2) unreserved use penalties for customers that have a transmission service reservation but use transmission service in excess of their reserved capacity; (3) new requirements regarding the processing of transmission service requests and transmission service request priorities; (4) new requirements regarding the qualification of resources as network resources and the provision of secondary service; and (5) OASIS posting requirements regarding denials of service, the designation of network resources and the posting of system impact studies, facilities studies and studies performed for the transmission provider's own network resources.[5] The Commission has previously found that the "daily" transmission service provided by the CAISO is consistent with the non-discrimination goals of Order No. 888 and that all customers have access to the CAISO Controlled Grid on a non-discriminatory basis. The Commission has also found that the combination of physical and financial rights provided by the Firm Transmission Rights ("FTRs") under the CAISO's existing congestion management scheme provides customers with an equivalent level of price certainty and service quality to the services under the *pro forma* OATT. Further, the Commission has concluded that the financial Congestion Revenue Rights ("CRRs") under the CAISO's MRTU market design are superior to a pure physical rights approach because the CRR congestion management scheme provides greater flexibility to accommodate changes in the usage of the transmission system over time, more accurate price signals, and an opportunity to receive revenues from CRRs or sell them. Nothing in Order No. 890 changes these previous conclusions or requires the CAISO to modify its service model.

The CAISO requests that the Commission reaffirm that the revised right-of-first-refusal ("ROFR") provision does not apply to the CAISO. The ISO Tariff does not contain a ROFR provision, and the Commission has previously found that the nature of the CAISO's transmission service is not compatible with a ROFR. The D.C. Circuit has upheld the Commission's findings in this regard. Order No. 890 merely modifies the Commission's rules governing the *pro forma* OATT to require that contracts have a minimum five-year term in order to be eligible for a ROFR (rather than the current minimum term of one year) and does not alter the premise underlying the Commission's prior decisions that the ROFR does not apply under the CAISO service model and that the CAISO is not required to include a ROFR provision in its tariff. Accordingly, the Commission should confirm that the revised ROFR requirements set forth in Order No. 890 are not applicable to the CAISO.

The CAISO also submits that its tariff provisions meet or exceed the Order No. 890 provisions regarding generator and imbalance penalties. In particular,

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[5] The CAISO requests that the Commission grant a waiver of these OASIS posting requirements that are incompatible with, and do not apply under, the CAISO's service model.

the CAISO's imbalance energy regime satisfies the three principles that the Commission enunciated in Order No. 890 regarding the pricing of imbalances, namely that: (1) the charges must be based on incremental cost or some multiple thereof, (2) the charges must provide an incentive for accurate scheduling, and (3) the provisions must account for the special circumstances presented by intermittent Generators and their limited ability to precisely forecast or control Generation levels. Under MRTU, the CAISO will operate an LMP-based, two settlement energy market in which Market Participants may resolve all imbalances through the optimized Real-Time Market ("RTM"), and settle such imbalances financially based on locational marginal prices ("LMPs") derived from that optimization. The MRTU approach to the pricing and settlement of Imbalance Energy satisfies the first principle enunciated in Order No. 890 because it provides a transparent and efficient mechanism for procuring and pricing Imbalance Energy and allocating costs that enables the CAISO to track the actual incremental costs that are incurred to meet Imbalance Energy needs. The CAISO's settlement scheme also satisfies the second principle because the more closely a Scheduling Coordinator's real-time energy use matches its supply in the Integrated Forward Market, the less exposure it will have to Imbalance Energy and related unit commitment costs. Moreover, the CAISO's proposed inclusion of an underscheduling mechanism under MRTU, in the absence of convergence bidding, furthers the Commission's second principle. The MRTU Tariff also satisfies the third principle because it recognizes the special circumstances faced by intermittent resources and appropriately treats such resources differently with respect to settlement of deviations from Day-Ahead Schedules. The special circumstances of intermittent resources are already addressed by the CAISO's Participating Intermittent Resource Program, which was first implemented in 2004 and which will be continued under MRTU. Specifically, the CAISO's approach allows (1) such resources to utilize an hour-ahead generation forecast, which is inherently much more accurate than a day-ahead forecast for these types of resources, as the basis for measuring deviations and thereby avoid being subject to charges associated with hourly variations from the Day-Ahead Schedule, and (2) Participating Intermittent Resources to "smooth out" their variations over the month.

The CAISO notes that Order No. 890 does not require the CAISO to provide conditional firm point-to-point transmission service because the CAISO operates a real-time energy market. Similarly, Order No. 890 does not require the CAISO to adopt the revisions to planning redispatch service because the Commission has previously found the CAISO's tariff to be just and reasonable without the inclusion of planning redispatch service.

The CAISO submits that it satisfies the requirement that transmission providers post on their websites all rules, standards, or business practices that relate to the terms and conditions of transmission service. In accordance with the Commission's direction in its orders on the MRTU Tariff, the CAISO has developed Business Practice Manuals ("BPMs") containing all rules, standards,

or business practices that relate to the terms and conditions of transmission service that the CAISO does not believe need be included in the MRTU Tariff. Consistent with Order No. 890, all BPMs will be maintained on the CAISO website. The change process for BPMs is set forth in Section 22.11.1 of the MRTU Tariff and is supplemented by a BPM for BPM change management. Consistent with the requirement that the change process be posted, the MRTU Tariff and the BPM for BPM change management are posted on the CAISO's website.

The CAISO also has a number of Operating Procedures, all of which are identified in postings on the CAISO website. Some, but not necessarily all, of these Operating Procedures "relate to transmission service" such that they must be posted under Order No. 890. The change procedure for Operating Procedures is described in Operating Procedure A-02 and is posted on the CAISO website consistent with the requirements of Order No. 890. The text of most Operating Procedures is also posted on the CAISO website. However, a limited number of Operating Procedures have restricted distribution due to system security, market sensitivity, or proprietary reasons. The categories and procedures for determining restricted distribution are included in Operating Procedure A-03.

Finally the CAISO submits that the provisions of Section 12 of the existing ISO Tariff satisfy the Commission's directives in Order No. 890 regarding the inclusion of credit procedures in an Attachment L to a transmission provider's transmission OATT. Prior to the MRTU implementation date, the CAISO will conform the MRTU Tariff to reflect applicable tariff provisions approved by the Commission since the CAISO first filed the MRTU Tariff in early 2006, including, *inter alia,* the provisions of Section 12. Thus, the provisions of the MRTU Tariff will likewise satisfy the credit procedure directives in Order No. 890. Given that the ISO Tariff already includes provisions that satisfy the requirements of Order No. 890 and those provisions will also be included in the MRTU Tariff, the CAISO requests that the Commission not require the CAISO to create a new Attachment L containing such provisions, but instead permit them to remain in their current location in the ISO Tariff.

II. BACKGROUND

A. Order No. 890

On February 16, 2007, the Commission issued Order No. 890, which it stated was designed to (1) strengthen the *pro forma* OATT to ensure that it achieves its original purpose of remedying undue discrimination; (2) provide greater specificity to reduce opportunities for undue discrimination and facilitate the Commission's enforcement efforts; and (3) increase transparency in the rules applicable to planning and use of the transmission system. The Commission adopted numerous reforms in Order No. 890 including, *inter alia,* the following:

(1) a requirement that transmission providers include in Attachment C to their OATTs tariff provisions to improve transparency and consistency in the determination of ATC; (2) modifications to the terms and conditions of point-to-point and network transmission services, as well as the type of information that must be posted on OASIS with respect to these services; (3) a requirement that transmission providers post on OASIS their business rules, practices and standards that relate to transmission service; (4) revisions to the rollover rights provision of the *pro forma* OATT; (5) a requirement that transmission providers include in Attachment L to their OATTs tariff provisions setting forth the transmission provider's basic credit standards; (6) changes to the pricing of energy and generator imbalances; and (7) the requirement to provide conditional firm service and planning redispatch under certain circumstances in connection with point-to-point service. In addition to the aforementioned non-transmission planning requirements adopted in Order No. 890, the Commission required transmission providers to implement a coordinated, open, and transparent transmission planning process that satisfies nine planning principles enunciated in the order.[6]

The Commission declined to exempt Regional Transmission Organizations ("RTOs") and Independent System Operators ("ISOs") from the compliance obligations of Order No. 890 and required ISOs and RTOs to submit compliance filings that either (1) contain tariff provisions that conform with the requirements of Order No. 890, or (2) demonstrate that their Commission-approved tariff provisions are consistent with or superior to the provisions of the revised *pro forma* OATT. As with non-RTO/ISO transmission providers, the Commission did not require RTOs and ISOs to re-justify provisions of their tariff that are not affected substantively by the revisions to the *pro forma* OATT contained in Order No. 890.[7] Moreover, the Commission recognized that some of the revisions to non-rate terms and conditions included in Order No. 890 are not relevant to RTOs and ISOs that, for example, use bid-based locational markets and financial congestion rights rather than the service model reflected in the *pro forma* OATT. The Commission affirmed that Order No. 890 is not intended to change the market designs employed by existing RTOs and ISOs.[8]

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[6] The Commission required that the transmission planning process be set forth in Attachment K to the transmission provider's OATT. The Commission has established December 7, 2007 as the date for transmission providers to submit filings to comply with the transmission planning requirements of Order No. 890. On October 9, 2007, the CAISO filed a motion requesting that the Commission grant the CAISO an extension of time – until December 21, 2007 – to make its filing to comply with the transmission planning provisions of Order No. 890.

[7] Order No. 890 at P 157.

[8] *Id.* at P 158.

B. Stakeholder Process

On August 17, 2007, the CAISO posted a Discussion Paper which explained how the CAISO was proposing to comply with the non-transmission planning requirements of Order No. 890.[9] On August 24, 2007, the CAISO held an in-person stakeholder conference to discuss the CAISO's Order No. 890 compliance efforts and its specific compliance proposals. Stakeholders were invited to submit written comments on the CAISO's Discussion Paper by September 7, 2007. Only one party – Pacific Gas & Electric Company ("PG&E") – submitted comments on the Discussion Paper and those comments are discussed in Section III.B. The positions reflected in the instant compliance filing are consistent with those set forth in the Discussion Paper. On September 14, 2007, the CAISO posted proposed tariff language setting forth the CAISO's methodology for calculating ATC. The CAISO requested that stakeholders provide comments on the tariff language by September 28, 2007. Only PG&E submitted comments on the tariff language, and the CAISO discusses those comments in Section III.A. On October 3, 2007, the CAISO held a conference call with stakeholders to discuss the proposed tariff language.

III. COMPLIANCE DEMONSTRATION

The CAISO's MRTU Tariff is scheduled to go into effect on March 31, 2008, *i.e.,* less than six months after the date of the instant filing. Implementation of MRTU will result in significant changes to the CAISO's tariff and market operations including, *inter alia,* introduction of a Day-Ahead market, congestion management based on LMPs, and CRRs. For this reason, the CAISO's compliance demonstration, as reflected in the instant filing, is based primarily on the provisions of, and services to be provided under, the MRTU Tariff. Where relevant, however, this filing does address certain provisions in the current ISO Tariff.

For example, the instant filing contains revisions to the CAISO's existing tariff to (1) reflect the CAISO's current methodology for calculating ATC (as set forth in a new Appendix L to the CAISO Tariff), and (2) incorporate certain revised definitions adopted in Order No. 890. The CAISO is making these changes to its existing tariff because the CAISO believes that the Commission's intent in Order No 890 was for transmission providers to file their **current** ATC calculation methodologies so as to provide more near-term transparency regarding such calculations. Further, because the CAISO will have to file revisions to Appendix L (*i.e.,* Attachment C under Order No. 890) after North American Electric Reliability Corporation ("NERC") and North American Energy Standards Board ("NAESB") complete their processes to develop ATC standards, the CAISO can include in that filing any changes to its ATC

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[9] The Discussion Paper is attached hereto as Attachment C.

calculation methodology resulting from implementation of MRTU.[10] However, the rest of the CAISO's compliance demonstration is based primarily on the service model that will be in effect under the MRTU Tariff and, as shown herein, the provisions of the MRTU Tariff and the service model that will be in place under MRTU are consistent with or superior to the provisions of the revised *pro forma* OATT. Accordingly, the CAISO does not believe that any changes to its MRTU Tariff are necessary to comply with Order No. 890, except to incorporate certain revised definitions and the MRTU ATC calculation methodology (which the CAISO will incorporate into its MRTU Tariff before it becomes effective).

The CAISO submits that good cause exists to permit the CAISO to make its compliance demonstration based on the service model and tariff provisions that will be in place on the effective date of MRTU implementation (except for items such as ATC and definitions). The CAISO believes that any effort to demonstrate compliance with Order No. 890 based solely on the currently effective ISO Tariff would be both irrelevant and a highly inefficient use of stakeholder and Commission resources because the current Tariff will be replaced with the MRTU Tariff in less than six months. Indeed, it is possible that the MRTU Tariff will become effective before the Commission is able to act on the instant filing. For these reasons, the CAISO requests that the Commission grant leave and any necessary waivers to permit the CAISO to demonstrate compliance with Order No. 890 based on the terms of the MRTU Tariff.

Each of the subjects which the Commission required an ISO or RTO to address in its compliance filing within 210 days after publication of Order No. 890 in the Federal Register is discussed below.

A. Attachment C

In Order No. 890, the Commission required that each public utility include an Attachment C to its OATT that includes (1) a clear identification of the NERC-approved methodologies it employs (*e.g.*, contract path, network ATC, or network AFC); (2) a detailed description of the specific mathematical algorithm the transmission provider uses to calculate firm and non-firm ATC for the scheduling horizon (same day and real-time), operating horizon (day ahead and pre-schedule), and planning horizon (beyond the operating horizon); (3) a process flow diagram that describes the various steps that it takes in performing the ATC calculation; and (4) a definition of each ATC component (*i.e.*, TTC, ETC, TRM and CBM) and a detailed explanation of how each one is derived in both the

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[10] Because the Order No, 890 Attachment C revisions are being incorporated into the CAISO's existing tariff, it makes sense to incorporate the revised definitions into the existing tariff at this time as well. The CAISO will incorporate the revised definitions into the MRTU Tariff either when it files a revised Appendix L to reflect the applicable NERC and NAESB requirements regarding ATC or when the CAISO files its final conformed MRTU Tariff.

operating and planning horizons.[11] To comply with Order No. 890, transmission providers must also document their processes for coordinating ATC calculations with their neighboring systems. Attachment C must also include a narrative description detailing CBM practices, including the definition of CBM and the databases used to derive the value.[12] Order No. 890 also requires ISOs and RTOs to include their current ATC calculation methodologies in the 210-day filing, and then file a revised Attachment C sixty days after the completion of the NERC and NAESB processes to adopt the appropriate standards.[13]

As described in greater detail in a new Appendix L to the ISO Tariff, which corresponds to Attachment C under Order No. 890,[14] the CAISO follows the general principles set forth in the NERC documents: *Transfer Capability* (May 1995)[15] and *Available Transfer Capability: Definition and Determination* (June 1996),[16] as those documents may be revised from time to time. Additional guidance in this regard is found in the methodology set forth in *Determination of Available Transfer Capability Within the Western Interconnection* (June 2001)[17] as applied in the WECC Reliability Region.

In collaboration with owners of rated paths and the WECC Operating Transfer Capability Policy Committee, the CAISO utilizes the NERC-approved Rated System Path Method to establish the Total Transfer Capability ("TTC") of CAISO branch groups. Under the Rated System Path method, the transfer capability for transmission networks is calculated by identifying critical transmission paths between areas of the network, determining appropriate

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11 Order No. 890 at P 323.

12 *Id.* at P 337.

13 *Id.* at P 325.

14 Order No. 890 contemplates that a new Attachment C will be added to each transmission provider's OATT setting forth how the transmission provider calculates ATC. However, the use of "Attachment C" would not be consistent with the numbering convention in the existing ISO Tariff. Thus, in this compliance filing, the CAISO is including the information required in Attachment C in a new "Appendix L" to the ISO Tariff, which is the next available appendix designation.

15 http://www.nerc.com/pub/sys/all_updl/docs/pubs/TransmissionTransferCapability_May1995.pdf.

16 http://www.nerc.com/pub/sys/all_updl/docs/pubs/atcfinal.pdf.

17 Detailed in the 2001 WSCC document "Determination of Available Transfer Capability Within the Western Interconnection", attached and also available on the WECC Website at: http://www.wecc.biz/documents/library/procedures/ATC-apprdec01.pdf.

system constraints, and rating each path's achievable transfer loading capabilities for a range of system conditions.[18]

As discussed in Appendix L, to calculate the TTC and Operating Capability ("OTC"), the CAISO's Regional Transmission Engineering ("RTE") Department (in conjunction with the WECC, as appropriate) determines specific annual and seasonal TTC and OTC.[19] The RTE's first step in calculating transfer capabilities for local area procedures is to develop one or more power flow base cases that model actual conditions such as area generation, area load, intertie flows, and outage status. Each base case is then split into five geographic regions for additional studies. RTE updates the base cases to represent current grid conditions during the applicable season and takes into account recent transmission network upgrades, ongoing scheduled outages, area load levels, major path flows, generation level, voltage level, and operating requirements. RTE next performs contingency analysis studies to determine limiting conditions, in particular for scheduled outages, using operating criteria derived from NERC and WECC standards and historical operating experience. Through analysis of these studies, RTE determines the crucial limitations and develops the transfer capability, and the procedures, nomograms, constraints, or transfer limits necessary to ensure that the transfer capabilities respect operating limits. That amount is then reduced by any Transmission Reliability Margin ("TRM") or Capacity Benefit Margin ("CBM"),[20] and by Existing Transmission Contract rights ("ETCs"). The remaining transfer capability is available to New Firm Uses, *i.e.*, the daily, open access transmission service that the CAISO provides to all transmission customers.

FTRs are subtracted from that transfer capability in the Day-Ahead time frame, and the remaining transfer capability is shown on the CAISO OASIS as ATC.[21] After the Day-Ahead time frame, any unused FTRs are made available as ATC through hour-ahead scheduling time frames and into real-time.

Based on the results of these calculations, the CAISO publishes daily and hourly ATC forecasts on OASIS. These forecasts consist of the following:

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[18] NERC document "Available Transfer Capability Definitions and Determination," Appendix B, is available on the NERC website at ftp://www.nerc.com/pub/sys/allupdl/docs/pubs/atcfinal.pdf.

[19] The CAISO'S Operating Procedure on TTC Methodology is publicly available at: http://www.caiso.com/1bfe/1bfe98134fa0.pdf.

[20] The CAISO's Operating Procedure on TRM and CBM is available at: http://www.caiso.com/docs/2003/07/17/200307171250053760.pdf. The CAISO currently does not utilize CBMs.

[21] Under MRTU, CRRs are not "physical rights" and therefore will not be accounted for in the ATC calculation.

Daily forecast (scheduled to occur by 1800 each day) includes:

- A 30 day look-ahead for scheduled outages with text reference to outages,
- A 7-day look ahead with forecast OTCs, and
- A daily forecast of finalized OTCs and ATCs for the following Day-Ahead Market Day (2 days in advance of Operating Day).

Hourly forecast (scheduled to occur at 40 minutes past hour) includes:

- Hour-ahead OTCs and ATCs

In its written comments on the proposed tariff language, PG&E suggested that the CAISO use language that is consistent with the NERC Reliability Standards. The CAISO's intent with Appendix L, as included in the instant filing, is to show how the CAISO *currently* calculates ATC, and the CAISO believes that was the Commission's intent in Order No. 890, *i.e.,* that transmission providers initially submit an attachment to their tariffs showing how they currently calculate ATC and then revise the attachment to conform with new standards to be developed by NERC and NAESB. The language contained in Appendix L is based on existing CAISO Operating Procedures which set forth how the CAISO calculates ATC. NERC and NAESB have not yet completed their processes regarding the development of ATC standards. After completion of those processes, the CAISO will update its Appendix L to incorporate the standards adopted by NERC and NAESB, as well as the appropriate terminologies used by NERC and NAESB.

PG&E's comments additionally suggested that Appendix L, Sections L.7 and L.8 be deleted or revised because they are unclear. The CAISO believes that these provisions contain information required by Order No. 890 and should not be deleted. In response to PG&E's comments, however, the CAISO revised the provisions to clarify that RTE is responsible for taking the described steps to ensure operating limits are not violated and that transfer limits may be updated to recognize a change in status and/or availability of the RAS or SPS.

For the foregoing reasons, the CAISO submits that its Appendix L satisfies the requirements of Order No. 890. The CAISO's calculation of ATC will be revised, as appropriate, following completion of the NERC and NAESB processes.

B. OASIS Issues

1. Data that Must Be Posted

Order No. 890 specifies new information categories that must be posted on a transmission provider's OASIS in addition to existing ATC posting and data-availability obligations. As discussed in greater detail below, certain of these information posting requirements are incompatible with, or inapplicable to, the CAISO's transmission system model, and, as such, the CAISO should not be required to post such information.

However, several of the information posting requirements adopted in Order No. 890 are applicable to the CAISO. In that regard, Order No. 890 establishes the following OASIS posting requirements pertaining to the calculation of ATC:

- The CBM amount for each path as well as the TRM values for the paths on which the transmission provider already posts ATC, TTC and CBM, and any transfer capability set aside for CBM but unused for such purpose (which must be available on a non-firm basis);[22] and

- A brief, but specific, narrative explanation of the reason for a change (or lack thereof) in monthly and yearly ATC values on a constrained path, when a monthly or yearly ATC value changes as a result of a ten percent change in TTC or when ATC remains unchanged at a value of zero for six months or longer.[23]

The CAISO already substantially complies with the Order No. 890 requirements for posting CBM and TRM information. The CAISO posts on its public website a daily CBM report that identifies by branch group the MWs reserved by the CAISO in the Day-Ahead Market to ensure the availability of adequate transmission capacity to serve CAISO native load. The daily CBM report is used in OASIS in determining ATC for each Branch Group. While the CAISO does not currently utilize CBMs (except to accommodate those which may be embedded in ETCs), if the CAISO were to use CBMs in the future, those quantities would be reflected in the daily CBM reports and released for the Hour Ahead Market or in Real Time when existing conditions permit. The TRM values that are required to be posted are available on the CAISO's OASIS in the Transmission Allocation Report, by hour, for each branch group.

The CAISO exceeds the Order No. 890 requirements for explaining a monthly or yearly change in ATC on a constrained path, or the absence of

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22 Order No. 890 at P 354.

23 *Id.* at PP 369, 371.

change in ATC for an extended period. Indeed, the CAISO posts on OASIS the impact and a brief description of the cause of *every* outage on a constrained path that causes a derate. This includes outages that cause partial derates, far below the 10 percent change in TTC that Order No. 890 contemplates as the threshold for posting a narrative explanation. The CAISO's postings also include outages of the path's total capacity for the short term, as well as those of an extended duration. The CAISO believes that posting the cause and impact of all outages significantly increases transparency and provides meaningful information to Market Participants well beyond the requirements of Order No. 890.

In Order No. 890, the Commission also required ISOs and RTOs to post on OASIS load data, *i.e.,* load forecasts and actual daily peak load, for the entire ISO/RTO footprint and for each LSE or control area footprint within the ISO or RTO.[24] The Commission concluded that ISO and RTO load data should be posted at a sufficient granularity to permit comparison of control area and LSE load levels.[25] The Commission stated that this would not create an undue burden on ISOs or RTOs because the load data for the entire footprint is an aggregation of load data across the LSEs or control areas in the footprint.[26]

Currently, the CAISO posts on OASIS several categories of load data. At the system level, the CAISO prepares its own forecast for load internal to the CAISO control area and posts that information on OASIS in the form of a two-day-ahead forecast, day-ahead forecast, and hour-ahead forecast. The CAISO also posts scheduled Load and actual system Load on an hourly basis to enable Market Participants to compare actual results with the forecasts. As part of the public market information to be made available under MRTU, the CAISO has proposed to maintain the system-level forecast but replace the hour-ahead forecast with five-minute forecasts in the Real-Time Market. At the more granular regional level, the CAISO currently posts peak load forecasts for two of the IOUs. These forecasts project the peak hour and peak daily load for each IOU for the next seven days and are updated on a daily, rolling basis.

To comply with Order No. 890 and enhance transparency to Market Participants, the CAISO proposes to post three regional day-ahead Load forecasts (in addition to the forecasts of CAISO system demand), as well as the corresponding actual peak load for the three regions. This regional load data will approximate the geographic configuration of the former control areas of the three investor-owned utilities – PG&E, SCE, and SDG&E – that now comprise the CAISO control area. Providing this additional granularity is consistent with the transparency objectives of Order No. 890 and will provide transmission

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24 *Id.* at P 416.

25 *Id.*

26 *Id.*

customers with useful information that is not available today. The proposal to post day-ahead load forecasts on a regional basis is supported by PG&E, which is the only stakeholder that submitted written comments on the CAISO's proposed regional approach during the stakeholder process.[27] The CAISO requests that the Commission grant the CAISO a partial waiver and permit the CAISO to post load data for the aforementioned three IOU regions in lieu of the directive in Order No. 890 that ISOs and RTOs post such data for each LSE or control area in the ISO or RTO footprint.

The CAISO submits that posting individual Load data for every LSE in the CAISO's control area footprint is unnecessary and would be unduly burdensome for several reasons. First, as previously indicated, the CAISO prepares its own forecast of system load. The CAISO's system forecast results from a complex analysis performed by a combination of neural network and regression models that utilize approximately 25 calendar variables and weather variables per model for five climatic zones, updated every half-hour to adapt for prior load forecast errors and changed conditions. The CAISO does not merely add together Load forecasts provided by individual LSEs in order to project system requirements -- as appears to be the assumption underlying the requirement in Order No. 890 that individual LSE load forecasts be posted. Indeed, the CAISO does not receive individual Load forecasts from LSEs; so the CAISO is not able to aggregate individual LSE forecasts into a system forecast. In that regard, the CAISO does not have a contractual relationship with each LSE whereby it can require them to provide individual load forecast data to the CAISO. The CAISO only has a relationship with Scheduling Coordinators ("SCs"). Because not all of the LSEs are SCs, the CAISO lacks the means to require these LSEs to submit their load data to the CAISO for public posting. Second, there are over 40 LSEs in the CAISO's control area footprint. It would be unreasonable to require the CAISO to create individual LSE load forecasts for each of these numerous LSEs, which forecasts the CAISO would not otherwise utilize in its determination of system requirements. Third, requiring the CAISO to prepare load forecasts for numerous LSEs would increase costs in order to implement necessary software and modeling changes, purchase additional temperature points from vendors on an ongoing basis, and possibly add personnel to RTE. It is inappropriate to require the CAISO to undertake costly measures such as these to compensate for the absence of Load data provided by individual LSEs when regional information presents a viable and more readily accessible alternative. In addition, providing load data based on the three IOU regions makes sense from

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[27] While PG&E did not address the posting of daily peak load on a daily basis, PG&E did object to posting daily peak load by LSE due to the market sensitivity of that information and requested that individual LSE data be made available only if time-lagged. The CAISO notes that its proposal is consistent with Order No. 890 which required the posting of LSE load data and did not provide for any time lag in the posting of such information. In Order No. 890, the Commission rejected the argument that posting this load data has competitive implications.

a practical perspective because the three geographical regions correspond to the three former control areas that now comprise the CAISO control area and to major electrical connections and paths on the grid. This makes weather reports and load trend information readily transferable to electricity system operations. Finally, during the CAISO's stakeholder process, no stakeholder submitted comments objecting to the CAISO's proposal to post load data for the three regions described above.

The CAISO also submits that its proposal to post Load data for the three IOU regions of the CAISO control area is consistent with the intent of Order No. 890 because Order No. 890 contemplated that such data could be posted either by LSE *or* by control area footprint within the ISO or RTO. The three regions for which the CAISO proposes to post load data represent the former control areas of the IOUs that are now within the CAISO's control area. In addition, the proposal will benefit Market Participants by providing more granular information than is currently available.

The CAISO recognizes that its proposed approach for complying with the load forecast posting requirements of Order No. 890 will require the Commission to permit the CAISO to depart, in part, from the plain language of Order No. 890. As such, the CAISO believes it is appropriate to wait for a Commission order on the CAISO's proposed compliance approach before posting load data based only on the three IOU regions. The CAISO therefore requests waiver of the applicable provisions of Order No. 890 to the extent necessary to permit the CAISO to implement this compliance approach as soon as possible after a Commission order on the instant filing.

2. Certificate cost

The Commission indicated that Certificates may be appropriate for OASIS access, but the cost of access must be nominal, *i.e.*, less than $100. The CAISO does not assess a fee for OASIS access and, as such, is in compliance with this directive.

3. Critical Energy Infrastructure Information

In order to provide transparency and avoid undue delay in providing information to those with a legitimate need for it, the Commission required that transmission providers establish a standard disclosure procedure for Critical Energy Infrastructure information ("CEII") that would permit customers to view CEII on OASIS.[28] Under the CAISO's service model, the disclosure of CEII will primarily arise in the context of the transmission planning process.[29] Accordingly, the CAISO will submit a comprehensive procedure for disclosing CEII in

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[28] Order No. 890 at PP 403-04.

[29] *See id.* at PP 470-71.

conjunction with its filing to comply with the transmission planning elements of Order No. 890.

C. Energy and Generator Imbalance Charges

Energy Imbalance service is one of the six ancillary services that must be provided under Order No. 888. Under Order No. 888, Energy Imbalance service is service provided by a transmission provider to make up the difference over a single hour between the scheduled and actual delivery of Energy to Load within the control area. In Order No. 888, the Commission found that Energy Imbalance service should have an energy deviation band for load variations and a price for exceeding the deviation band.[30] Order No. 888 did not specify a pricing methodology for Energy Imbalance service, but required transmission providers to propose rates for such service.

In Order No. 888, the Commission also recognized that imbalances might arise for differences between energy scheduled from a generator and the amount of energy actually generated during the hour, *i.e.*, a generator imbalance. The Commission concluded that allowing a generator to deviate from its schedule by 1.5 percent without penalty, so long as it returned the energy in-kind at another time, would discourage good generator operating practices. The Commission stated that a generator's interconnection agreement with its transmission provider should specify the requirements for the generator to meet its schedule and any consequences for persistent failure to meet its schedule. In Order No. 2003-B, the Commission permitted the transmission providers to include a provision for generator balancing service agreements in the individual interconnection agreements.

In Order No. 890, in order to increase consistency among transmission providers in the application of imbalance charges and to ensure that the level of the charges provides appropriate incentives to keep schedules accurate without being excessive, the Commission adopted a three-tiered approach to imbalance penalties with graduated deviation bands and escalating penalties.[31] The

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[30] For energy imbalances within the deviation band, transmission customers are permitted to make up the difference within 30 days. Order No. 888 required customers to compensate the transmission provider for each imbalance that exceeds the hourly deviation band and for accumulated minor deviations that are not made-up within 30 days.

[31] Specifically, imbalances of less than or equal to 1.5 percent of the scheduled energy will be netted on a monthly basis and settled financially at 100 percent of incremental or decremental cost at the end of each month. Order No. 890 at P 664. Imbalances between 1.5 and 7.5 percent of the scheduled amounts will be settled financially at 90 percent of the transmission provider's system decremental cost for overscheduling imbalances that require the transmission provider to decrease generation or 110 percent of the incremental cost for underschedulng imbalances that require increased generation in the control area. *Id.* Imbalances greater than 7.5

imbalance pricing approach adopted in Order No. 890 applies both to energy imbalances and generator imbalances. The Commission stated that the graduated approach recognizes the link between escalating deviations and potential reliability concerns and reflects the following three principles: (1) the charges must be based on incremental cost or some multiple thereof; (2) the charges must provide an incentive for accurate scheduling; and (3) the provisions must account for the special circumstances presented by intermittent generators and their limited ability to precisely forecast or control generation levels.[32]

The specific provisions of Order No. 890 regarding charges for energy and generator imbalances are not compatible with ISO and RTO markets where energy and generator imbalances are resolved through market mechanisms. The Commission has recently approved the CAISO's transition to a LMP-based energy market and congestion management paradigm under MRTU. As explained below, the energy imbalance market and pricing structure under the CAISO's LMP-based market satisfies the three imbalance charge principles adopted in Order No. 890 and is consistent with or superior to the specific energy and generator imbalance penalty structure adopted in Order No. 890.

Under MRTU, the CAISO will operate an LMP-based, two-settlement energy market in which Market Participants may resolve all imbalances through the optimized Real-Time Market, and settle such imbalances financially based on LMPs derived from that optimization. The CAISO will first establish financially binding Day-Ahead Schedules by clearing demand and supply and will manage transmission congestion based on bids, including self-schedules submitted to the Day-Ahead Market. The Day-Ahead Schedule for Energy is financially binding based on LMPs derived from the Integrated Forward Market ("IFM"), which incorporates the energy market component of the Day-Ahead Market structure.[33] Subsequently, during Real-Time (*i.e.*, the actual operating day), the RTM clears submitted supply bids against the CAISO's short-term demand forecast, adjusted

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percent of the scheduled amounts will be settled at 75 percent of the system decremental cost overscheduling imbalances or 125% of the incremental cost for underscheduling imbalances. *Id.* Intermittent resources are exempt from the third tier. *Id.* at P 665.

[32] *Id.* at P 663.

[33] Under MRTU, the Day-Ahead Market Structure is comprised of three major components, which are conducted in the following sequence: (a) two "pre-IFM" passes in which the CAISO performs local market power mitigation and commits and dispatches RMR resources; (b) the IFM which clears submitted demand and supply bids and results in financially binding energy and ancillary services schedules; and (c) the Residual Unit Commitment ("RUC") process which enables the CAISO to commit additional supply resources if needed to ensure that adequate resources will be on-line in real-time to cover any gap between the level of supply and demand scheduled in the IFM and the CAISO's load forecast for the next day.

for real-time and interchange schedules, every five minutes to determine the optimal RTM dispatch for every five-minute interval. The short-term demand forecast used for this purpose is derived from a telemetry-based State Estimator representation of actual network conditions. Thus, the Real-Time Market provides parties with an opportunity to financially clear Imbalance Energy based on the CAISO's actual Imbalance Energy[34] needs for operating the transmission system and based on actual Energy bids.

Under Section 11.5 of the MRTU Tariff, the CAISO provides a Real-Time settlement structure that affords parties an opportunity to settle through the LMP-based RTM any positive or negative deviations from their Day-Ahead Schedules. Imbalance Energy is separated out between Instructed Imbalance Energy ("IIE") and Uninstructed Imbalance Energy ("UIE") to distinguish between deviations from the Day-Ahead Schedule resulting from Dispatch Instructions issued by the CAISO (*i.e.*, IIE) and deviations that occur due to actions taken by the Load or Generation resource that do not reflect CAISO issued Dispatch Instructions (*i.e.*, UIE). In other words, Energy dispatched by the CAISO is settled on the instructed amounts which are deemed delivered. IIE dispatched through the Real-Time Market is settled at the Resource-Specific Settlement Interval LMP, which is a weighted average LMP for a specific resource within each Settlement Interval.[35] The CAISO then charges or pays SCs for any UIE, *i.e.*, the difference between the delivered quantity (metered quantity) and the amount of the SC's IIE. Any uninstructed energy may also be subject to an Uninstructed Deviation Penalty ("UDP").[36]

UIE is settled in two tiers. The first tier is for the undelivered energy that was instructed Energy and is the quantity deviation from the resource's IIE. This

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[34] Imbalance Energy is defined as the deviation of Supply or Demand from a Day-Ahead Schedule that is either a positive or negative amount, measured by metered Generation, metered Load, and Real-Time Interchange schedules.

[35] A Settlement Interval in the RTM is a ten-minute interval comprised of two consecutive five-minute dispatch intervals. Thus, each Operating Hour is divided into 12 Dispatch Intervals and six Settlement Intervals and, therefore, the Settlement Interval LMP is the weighted average of two consecutive Dispatch Internal LMPs.

[36] UDP is defined in Section 11.23 of the MRTU Tariff. However, implementation of this charge would require further Commission authorization. At this time, the CAISO has not requested authorization to implement UDP but would do so if it finds deviations from Dispatch Instructions warrant such mitigation. UDP as currently reflected in Section 11.23 of the MRTU Tariff would include a tolerance band which provides for graduated penalties for deviations from instructed amounts. The tolerance band is currently defined as the maximum of 5 MW divided by the number of Settlement Intervals per Settlement Period or 3 percent of the resource's maximum output divided by the number of Settlement Intervals per Settlement Period. *See* the definition of Tolerance Band in the MRTU Tariff.

first-tier UIE price is based on the $/MWh rate that the resource was paid for its instructed Energy, including any Residual Imbalance Energy, *i.e.*, instructed Energy from Dispatch Instructions issued in Dispatch intervals outside the Settlement Interval. This price is a weighted price that is obtained by computing all payments to the resource for instructed Energy based on the resource-specific LMP, except for the Residual Imbalance Energy ("RIE") which is based on the relevant Bid price, divided by the sum of the respective quantities. The second-tier quantity of UIE consists of the quantity deviation from the resource's Day-Ahead Schedule. The Tier 2 UIE quantity is settled at the simple average of the Dispatch Interval LMP for the Settlement Interval.

This settlement structure for Imbalance Energy obviates the need to develop separate imbalance energy schedule charges based on incremental or decremental costs. With respect to the first of the three principles articulated in Order No. 890 regarding imbalance charges, *i.e.*, that imbalance charges must be based on incremental costs or a multiple thereof, the CAISO submits that the MRTU pricing and settlement of Imbalance Energy is a superior method to the revised *pro forma* OATT structure. The MRTU design provides transparent and efficient mechanisms for procuring and pricing Imbalance Energy and allocating costs which enable the CAISO to track and post the actual incremental costs that are incurred due to Energy redispatch, as well as any additional unit commitment that is necessary to meet Imbalance Energy needs. Imbalance Energy is settled based on the LMPs derived from the RTM optimization. These are market-based prices derived from the clearing of Supply Bids against a telemetry-based short-term load forecast that reflects actual system conditions.

Moreover, any additional unit commitment needed to meet imbalances is performed, tracked, and settled separately from the commitment costs associated with the Day-Ahead IFM, through the Day-Ahead Residual Unit Commitment procedure, and through the Real-Time Unit Commitment ("RTUC") and Short-Term Unit Commitment ("STUC") procedures[37] of the RTM. Thus, the incremental costs incurred to meet imbalances are reflected and settled through the combination of the real-time LMPs for Energy plus uplifts based on the RUC, RTUC, and STUC unit commitment costs.[38] Because Imbalance Energy costs

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[37] The RTUC is performed every 15 minutes based on a time horizon that covers the remainder of the current operating hour and the entire next hour and is thus able to commit additional resources that are capable of starting within that time horizon, if needed. The STUC is performed hourly at the top of each hour and has a time horizon that stretches five hours into the future, so it is able to commit resources that are capable of starting within that time horizon. Both procedures utilize telemetry-based load forecasts to provide as accurate an estimate as possible of commitment needs over their respective time horizons.

[38] When resources are committed by the CAISO market processes, any associated commitment costs incurred by such resources are guaranteed recovery of submitted bid costs for Energy, Start-up, and Minimum Load through the Bid Cost Recovery mechanism. The MRTU Bid Cost Recovery mechanism separately tracks commitment

are based on the costs actually incurred in the market to provide the service, the CAISO satisfies the first of the three principles enunciated by the Commission.

The settlement provisions associated with the incremental costs described above also address the second of the three principles enunciated above, namely, that the charges for Imbalance Energy should provide incentives for accurate scheduling. In this regard, it is important to reiterate that any additional unit commitment needed to meet imbalances is performed, tracked, and settled separately from the commitment costs associated with the Day-Ahead IFM. Thus, Energy that is scheduled in the IFM avoids a substantial portion of these additional costs, and the more closely a SC's actual Real-Time Energy demand and supply match its IFM schedule for each hour, the less exposure it will have to these additional unit commitment costs.

The second principle is furthered by the CAISO's proposed underscheduling mechanism which was filed recently in response to a Commission directive.[39] This mechanism is designed to mitigate the potential economic incentive for LSEs to persistently underschedule in the Day-Ahead Market in order to lower the Day-Ahead Market clearing price below economically efficient levels. If this mechanism is approved by the Commission, the CAISO would be required to create confidential weekly reports to inform SCs of their scheduling performance based on scheduling thresholds developed through the CAISO stakeholder process. Under this proposal, a charge will apply to SCs, if in any given month, a SC's Net Negative CAISO Demand Deviation (*i.e.*, the difference between metered Demand and Day-Ahead Scheduled demand) in their applicable Load Aggregation Point ("LAP") exceeds fifteen percent (15%) of the SC's cleared total CAISO Demand as represented in its Day-Ahead Schedule in its applicable LAP for five percent (5%) or more of the total Trading Hours for that given month.[40] This graduated penalty for persistent underscheduling

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costs associated with the IFM, the RUC, and the STUC and RTUC processes of the RTM.

[39] See the CAISO's September 28 compliance filing in Docket No. ER06-615-013.

[40] The charge will vary based on the magnitude of each SC's underscheduling. For any given Trading Hour in which the SC's Net Negative Deviation of CAISO Demand in its applicable LAP is greater than fifteen (15) percent and less than twenty (20) percent of the SC's cleared total CAISO Demand as represented in its Day-Ahead Schedule in its applicable LAP, the SC shall pay $150/MWh for its Net Negative Deviation of CAISO Demand that is greater than fifteen (15) percent and less than twenty (20) percent of its cleared total CAISO Demand as represented in its Day-Ahead Schedule in the applicable LAP in that Trading Hour. For any given Trading Hour in the applicable month in which the SC's Net Negative Deviation of CAISO Demand in its applicable LAP is greater than or equal to twenty (20) percent of the SC's cleared total CAISO Demand as represented in its Day-Ahead Schedule in its applicable LAP, the SC shall pay $250/MWh for its Net Negative Deviation of CAISO Demand greater than or equal to

provides an incentive for SCs to schedule appropriately in the Day-Ahead and further eliminates the need for additional Imbalance Energy charges under the *pro forma* OATT structure.[41]

The MRTU markets also satisfy the third of the three principles summarized above because the MRTU Tariff recognizes the special characteristics of and circumstances faced by intermittent resources and appropriately treats such resources differently with respect to settlement of deviations from Day-Ahead Schedules (*see* Section 11.12 of the MRTU Tariff). Specifically, the CAISO has implemented a Participating Intermittent Resource Program ("PIRP") under the current ISO Tariff. The PIRP will be continued under the MRTU Tariff and will allow intermittent resources to settle their UIE, based on their net balance over the month, at the monthly weighted average LMP of their deviations from their Real-Time self-schedules submitted by 75 minutes prior to the start of each operating hour. This allows Participating Intermittent Resources ("PIRs") to utilize an hour-ahead generation forecast – which is inherently much more accurate than a Day-Ahead forecast for these types of resources – as the basis for measuring deviations and thereby avoid being subject to charges associated with hourly variations from the Day-Ahead Schedule. This essentially allows such resources to "smooth out" their variations – which are often due to uncontrollable weather conditions – over the month, thereby accommodating the limited ability of intermittent resources to forecast or control their Generation levels, a goal enunciated in Order No. 890.

D. Credits for Network Customers

Under Order No. 888, network customers are eligible for credits for facilities if (1) the facilities are integrated into the operations and planning of the transmission provider to serve all customers and (2) if new, are jointly planned and constructed. Order No. 890 eliminates the requirement for joint planning, finding that this requirement discourages transmission providers from engaging in coordinated planning, but specifies that the facilities must be such that they would be eligible for inclusion in the transmission provider's transmission revenue requirement if they were owned by the transmission provider.[42] The

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twenty (20) percent of its cleared total CAISO Demand as represented in its Day-Ahead Schedule in the applicable LAP in that Trading Hour.

[41] Because convergence bidding is intended to eliminate the incentive of LSEs to underschedule load in the Day-Ahead Market to depress Day-Ahead Market prices in a manner inconsistent with efficient market operations, the Interim Scheduling Report and Charge will cease to apply when convergence bidding is implemented, which the Commission has directed must be by the first anniversary of the start of MRTU.

[42] Order No. 890 at PP 730, 735.

new test for determining credits will apply only to transmission facilities added subsequent to the effective date of Order No. 890.[43]

The Commission declined to exempt ISOs and RTOs generically from the requirement regarding credits for network transmission facilities. However, the Commission noted that it had previously determined that the existing tariffs of certain ISOs or RTOs provide customers with the opportunity to receive credit or the equivalent for building facilities or upgrades that are consistent with Order No. 888 requirements, and that each RTO and ISO would have the opportunity on compliance to demonstrate that such continues to be the case.[44]

In the case of the CAISO, the Commission has previously addressed arguments that non-Participating Transmission Owners should receive network customer credits against their Access Charges for their transmission facilities that are "integrated" with a Participating Transmission Owner's transmission system, in Opinion No. 445.[45] Network customers are only entitled to credits if their facilities are integrated into the operations and planning of the transmission provider to serve all customers. Citing *Florida Municipal Power Agency v. Florida Power & Light Co.*,[46] the Commission explained that facilities cannot be integrated with a transmission provider's system unless the transmission provider can provide service to itself or customers on the facilities. The Commission ruled that because the CAISO can only provide service on those facilities under its Operational Control, facilities that are not under the CAISO's Operational Control are not integrated. Thus, facilities can be integrated with the CAISO system – and the customer can receive a credit – *only* if the customer places the facilities under the CAISO's Operational Control, *i.e.,* becomes a Participating Transmission Owner. In the case of the CAISO, the "credit" is not in the form of a reduction in transmission rates, rather it is open access to the remainder of the CAISO Controlled Grid at a single, non-pancaked rate as well as return of their Transmission Revenue Requirement.[47] The Commission affirmed that conclusion on rehearing.[48]

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43 *Id.* at P 758.

44 *Id.* at P 773.

45 *Southern California Edison Co.*, 92 FERC ¶ 61,070 (2000).

46 67 FERC ¶ 61,167 (1994), *reh'g denied*, 74 FERC ¶ 61,006 (1996).

47 Under the MRTU Tariff, entities that construct merchant transmission are entitled to CRRs, and generators interconnecting to the CAISO grid that take responsibility for constructing network upgrades are entitled to receive either CRRs associated with such network upgrades or a credit for their expenditures. In each of these cases, however, the facilities (*i.e.,* the merchant transmission facilities and network upgrades paid for by interconnecting generators) are under the CAISO's Operational Control, unlike facilities owned by transmission customers that are not Participating TOs. In each case, unlike facilities owned by transmission customers who are not Participating TOs, the CAISO is

Although Order No. 890 eliminates the requirement of joint planning, it does not alter the requirement that, in order to be eligible for a credit, a customer's facilities must be integrated into the operations and planning of the transmission provider to serve all customers. The CAISO's service model has not changed since Opinion No. 445. With one exception, it remains the situation that the CAISO, under the terms of its tariff, can only provide service on facilities place under its Operational Control. This ensures that the CAISO has the necessary authority to provide nondiscriminatory open-access transmission on all such facilities and to incorporate those facilities into its planning to ensure continued reliable service. Customers that wish to make their facilities available to the CAISO such that the CAISO can provide service to customers on those facilities must become Participating Transmission Owners; upon doing so they receive the same credit that Opinion No. 445 accepted as an appropriate credit – open access to the remainder of the CAISO Controlled Grid at a single non-pancaked rate as well as return of their Transmission Revenue Requirement.

The one exception noted above involves the portion of the Pacific AC Intertie that is owned by the Western Area Power Administration ("Western"). Under the Transmission Exchange Agreement, the CAISO is able to provide service on capacity owned by Western and Western is able to provide service on certain capacity under the Operational Control of the CAISO. This arrangement arose in the unique context of the California-Oregon Intertie. As the Commission noted when approving the Transmission Exchange Agreement, it is the bilateral exchange of transmission capacity between two electric systems, under which capacity acquired is made available to all Market Participants under the rates, terms, and conditions of either the ISO Tariff or Western's OATT.[49] This does not undermine the general proposition that, under the ISO Tariff and absent special arrangements otherwise, the CAISO can only provide service on facilities under its Operational Control. In any event, it is inappropriate to grant a credit for facilities which the CAISO cannot use to provide service to its customers.[50]

Because the requirement that customers who desire to integrate their facilities with the CAISO and receive a "credit" become Participating Transmission Owners furthers nondiscriminatory open-access and reliable

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able to provide service over the facilities, and the facilities are therefore integrated with the CAISO system. Indeed, they are part of the CAISO Controlled Grid.

[48] *Southern California Edison Co.*, 108 FERC ¶ 61,085, at PP 8-10 (2004).

[49] *Pacific Gas & Elec. Co.,* 109 FERC ¶ 61,255, at P 72 (2006).

[50] The CAISO notes that Order No. 890 contemplates credits for network transmission customers; however, the CAISO does not provide Order No. 888 network transmission service and does not have "network" customers, as opposed to point-to-point transmission customers.

service, and because such utilities are fully compensated under the ISO Tariff for the benefits their facilities provide, the ISO Tariff remains consistent with or superior to the *pro forma* OATT.

E. Order No. 890 Revisions that Are Inconsistent with the CAISO's Transmission Service Model

As discussed above, and as the Commission recognized in Order No. 890, many of the revisions to the *pro forma* OATT are specific to a physical rights transmission service model under which a public utility provides network and firm and non-firm point-to-point transmission service. Rather than offering the two distinct traditional transmission services contemplated in the *pro forma* OATT, the CAISO offers a single "daily" transmission service that is available on a non-discriminatory basis to all eligible customers on a day-to-day basis. The open access transmission service provided by the CAISO provides the advantages of traditional network service but with more flexibility. The *pro forma* OATT permits users, on a first-come, first-served basis, to make long-term reservations of available transmission capacity. In contrast, with the exception of certain transactions scheduled pursuant to contracts that preceded the existence of the CAISO (*i.e.*, so-called Existing Transmission Contracts), all energy transmitted under the MRTU Tariff – and under the existing ISO Tariff – is treated as "new firm use" and is scheduled on a day-to-day basis. There are no long-term reservations of physical transmission capacity under the CAISO's service model. Rather, all users of the CAISO Controlled Grid must schedule their use each day and cannot reserve available transmission capacity beyond the Day-Ahead timeframe, thus ensuring optimal flexibility and nondiscriminatory use of available capacity.[51]

Under the CAISO's MRTU transmission service model, SCs submit Bids (including Self-Schedules) for the Supply or Demand for Energy to the CAISO. SCs have equal access to all available capacity every day and can make changes to their Bids on an hourly basis. In contrast to traditional transmission services provided under the *pro forma* OATT, customers that take transmission service under the MRTU Tariff need not formally designate network resources. The CAISO utilizes a bid-based, security constrained economic dispatch/re-dispatch process to balance real-time Control Area requirements, utilize the full capability of the grid to maximize the transmission service that can be provided to eligible customers, provide customers with maximum flexibility to schedule transactions, and ration capacity when demand for transfer capability exceeds supply. Thus, the CAISO's transmission service provides comparable treatment to all customers and encourages efficient and flexible use of the transmission system.

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[51] Thus, under the CAISO's Commission-approved service model, there are no long-term transmission reservations of capacity or rollover rights.

The Commission has recognized that the CAISO's current market design as well as the MRTU market design provides customers with "physical" rights to inject energy at a source and withdraw energy at a sink through either the submission of self-schedules or a price bid that indicates a willingness to accept the spot market clearing price.[52] In addition to these "physical" rights, under MRTU, the CAISO provides financial rights to Market Participants in the form of CRRs. The "source-to-sink" CRRs offered by the CAISO allow Market Participants to obtain financial protection from the risk of congestion charges associated with the LMP congestion management design in the CAISO's Day-Ahead Market. Also, to the extent a Market Participant obtains CRRs on a particular path and is not physically transmitting energy between its designated source and sink, the Market Participant can profit by receiving congestion revenues from the CRR or by selling the CRR. The CAISO offers both short-term CRRs[53] and long-term CRRs.[54]

The CAISO explains in greater detail below how various revisions to the *pro forma* OATT included in Order No. 890 either do not apply to or are incompatible with the CAISO's "daily" transmission service model. As such, these provisions of Order No. 890 should not be imposed on the CAISO because the CAISO's service model is consistent with or superior to the transmission service model of the *pro forma* OATT.

The Commission has previously found that the "daily" transmission service provided by the CAISO is consistent with the broad non-discrimination goals of Order No. 888 and that all customers have access to transmission service on the CAISO Controlled Grid on a non-discriminatory basis.[55] The Commission has also found that the financial rights provided by the CAISO's FTRs (the predecessors to CRRs) were consistent with or superior to the physical transmission rights provided under the *pro forma* OATT.[56] The Commission also has approved CRRs under MRTU (including long-term CRRs)

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52 *California Independent System Operator Corp.*, 116 ¶ 61,274, at P 898 (2006), *order on reh'g,* 119 FERC ¶ 61,076 (2007) ("September 2006 MRTU Order").

53 Short-term CRRs consist of monthly CRRs which have a term of one month and are differentiated by time-of-use periods (*i.e.*, on-peak and off-peak) and seasonal CRRs which have a term of three months and are differentiated by time-of-use period each day within a season.

54 Long-term CRRs have a term of ten years and are differentiated by season and time-of-use period.

55 *Pacific Gas & Electric Co., et al.*, 81 FERC ¶ 61,122, at 61,435, 61,455-56 (1997) (hereinafter "*PG&E*").

56 *California Independent System Operator Corp.*, 88 FERC ¶ 61,156, at 61,525 (1999).

as an improvement to FTRs.[57] In the September 2006 MRTU Order, the Commission stated that it continues to find that the "combination of physical and financial rights provided by the CAISO's congestion management scheme is superior to a pure physical rights approach because the CRR congestion management scheme provides greater flexibility to accommodate changes in the usage of the transmission system over time, more accurate price signals, and an opportunity to receive congestion revenues from CRRs or sell them."[58] Nothing in Order No. 890 changes the Commission's previous conclusions or requires the CAISO to modify its transmission service scheme. Indeed, the changes to the traditional network and point-to-point services that the Commission adopted in Order No. 890 simply do not apply to or are otherwise incompatible with the CAISO's service model – a service model that, as discussed above, the Commission has found to be consistent with or superior to the Order No. 888 service model. The CAISO's "daily" transmission service does not give rise to the concerns identified in the rulemaking regarding artificial barriers to use of the grid, queuing, hoarding of capacity, and the various issues related to processing transmission service requests, reservation priorities, or receipt and delivery point flexibility. Moreover, because the CAISO offers only one type of transmission service, the discrimination concerns that arise from the provision of two different types of transmission service, *i.e.*, network and point-to-point, do not apply to the CAISO. Further, the CAISO's LMP congestion management scheme promotes efficient, flexible, and maximum utilization of the transmission system and provides transparent price signals to inform investment in new generation and transmission upgrades. In summary, the CAISO's transmission service model addresses the problems and concerns that the Commission sought to remedy in Order No. 890.

1. Price Cap on Reassignment of Capacity

Order No. 888 required transmission providers to permit the reassignment of all or part of a holder's firm point-to-point capacity to any eligible customer, but capped the rate for reassignment because it did not find the market sufficiently competitive. Order No. 890 eliminates the price cap and allows for negotiated

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[57] September 2006 MRTU Order at PP 704-900 (approving the CAISO's CRR proposal under MRTU); *California Independent System Operator Corp.*, 120 FERC ¶ 61,023 (2007) ("Long-Term CRR Order").

[58] September 2006 MRTU Order at P 900; *see also* Long-Term CRR Order at P 102. The Commission also noted that the LMP system of congestion management allows all available resources to participate in redispatch for congestion management and, as a result, Market Participants have more accurate price signals and can make more cost effective decisions concerning their energy consumption and use of the transmission system, as well as investment in new generation and transmission upgrades. September 2006 MRTU Order at P 899. Moreover, the Commission stated that the CAISO would be less likely to have to invoke transmission loading relief or service curtailments that would be the case under a pure physical rights model. *Id.*

rates between the customer and its assignee.[59] Order No. 890 institutes three protections to enhance oversight and monitoring: (1) all sales or assignments of capacity must be conducted through or otherwise posted on the transmission provider's OASIS on or before the date the reassigned service commences; (2) assignees of transmission capacity must execute a service agreement prior to the date on which the reassigned service commences; and (3) transmission providers must aggregate and summarize in an electronic quarterly report the data contained in these service agreements.[60]

The CAISO's existing Commission-approved ISO Tariff does not contain any capacity reassignment provisions, and Order No. 890's revisions regarding the reassignment of capacity are incompatible with – and unnecessary given – the nature of transmission service provided under the ISO Tariff. The CAISO does not provide long-term, reserved point-to-point service. Instead, as described in greater detail above, the CAISO provides a daily transmission service that is available to all potential customers. Thus, customers do not "hold" transmission capacity beyond individual hours in which they are scheduled for service and, as such, capacity reassignments are not necessary or even possible.

Inasmuch as Order No. 890 merely modifies the rate cap for reassigned capacity and imposes some new administrative requirements with respect to capacity assignments, *i.e.*, it does not substantively affect the CAISO's Commission-approved tariff, there is no basis to re-visit the issue of the need for a capacity reassignment mechanism in the ISO Tariff or the MRTU Tariff.[61] In any event, the CAISO's existing transmission service and the service it will provide under MRTU satisfy the three goals of capacity reassignment enunciated by the Commission, namely (1) helping parties manage the financial risk of their long-term commitments, (2) reducing the market power of transmission providers by enabling customers to compete, and (3) fostering efficient capacity allocation.[62]

First, CAISO transmission service customers do not bear any financial risk due to long-term transmission contracts because there are no long-term reservations of capacity; their service is daily. Transmission customers "schedule" the amount of service they need each day. Second, all of the CAISO's transmission capacity, except the capacity held under Existing Transmission Contracts, is made available to all customers by the CAISO every

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59 Order No. 890 at PP 808-810.

60 *Id.* at P 817.

61 *Id.* at P 157.

62 *Id.* at P 808.

day as "new firm use." Because all capacity is available for use by all customers, there is no unneeded capacity that could be denied to transmission customers. Thus, transmission providers cannot exercise market power, and transmission customers' options are maximized. Finally, transmission capacity is allocated on a daily basis to those entities that value it the most as indicated through their energy bids (including Self-Schedules) and who are willing to pay congestion charges, thereby sending more accurate price signals to identify the most valuable locations for the construction of new transmission facilities to reduce congestion.

2. Operational Penalties

Order No. 890 provides that a transmission customer will be subject to unreserved use penalties in any circumstance where the transmission customer uses transmission service that it has not reserved.[63] In particular, unreserved use penalties would apply in the following circumstances: (1) a transmission service customer has a transmission service reservation, but uses transmission service in excess of its reserved amount; and (2) a transmission service customer uses transmission service but does not have a transmission service reservation.[64] The order also provides guidance for the pricing of unreserved use penalties and the distribution of proceeds.[65]

Because the MRTU Tariff does not provide for the reservation of transmission service, these provisions do not apply to the CAISO's transmission service model, and the CAISO does not have unreserved use penalties.[66] As the Commission recognized in Order No. 890, unreserved use penalties are based on the transmission capacity that is reserved, not on the transmission service that has been scheduled.[67] Under the CAISO's transmission service model, SCs schedule service on the CAISO Controlled Grid on a daily basis; they do not reserve capacity.

3. Rollover Rights

Order No. 890 modifies the rollover provision in the *pro forma* OATT, which grants an ongoing right to transmission customers to renew or "rollover" their contracts, such that it will apply only to contracts that have a minimum term

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63 *Id.* at PP 834-40.

64 *Id.* at P 834.

65 *Id.* at PP 846-48, 859-62.

66 Imbalance Energy charges associated with deviations from Day-Ahead and HASP schedules were discussed *supra* in Section III.C.

67 Order No. 890 at P 837.

of five years, rather than the current minimum term of one year. Inasmuch as the Commission is limiting, rather than expanding, rollover rights, Order No. 890 does not call into question those previously approved tariffs that do not already include rollover rights, or a "right of first refusal."

Not only does the CAISO tariff not contain a ROFR provision, but a ROFR provision is incompatible with the CAISO's transmission service model both today and under MRTU. The Commission has found on prior occasions that the concept of a ROFR is not compatible with the CAISO's service model, and the Commission's findings have been upheld by the D.C. Circuit. Order No. 890 does not undermine the premise for the Commission's and the D.C. Circuit's decisions regarding the non-applicability of the ROFR to the CAISO.

At the formation of the CAISO, the Commission explicitly approved the absence of a ROFR provision in the ISO Tariff, noting that "[t]he ISO's proposal to schedule transmission in a day-ahead and hour-ahead basis is not compatible with the long-term reservation of discrete physical transmission rights."[68] The Commission ordered customers to take service under the ISO Tariff upon contract expiration.[69]

The Commission re-affirmed this policy in denying a complaint filed by the Sacramento Municipal Utility District ("SMUD") in which SMUD sought to invoke the Order No. 888 right of first refusal to extend the term of service under a pre-Order No. 888 contract with the California Utilities.[70] The Commission stated that the right of first refusal provision in Order No. 888 was not applicable to any customer in the CAISO service territory because the service model under the Order No. 888 *pro forma* OATT did not apply and has no meaning in relation to the California Utilities' transmission systems, which have been turned over to CAISO control.[71] Further, the Commission recognized that the ISO Tariff superseded the Order No. 888 *pro forma* OATT.[72] On November 1, 2005, the D.C. Circuit denied SMUD's petition for review in part and dismissed it to the

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68 *PG&E* at 61,472.

69 *Id.* at 61,463-65 n.196. To achieve consistency with the Pacific Gas and Electric Company, San Diego Gas & Electric Company, and Southern California Edison Company (collectively "California Utilities") Order No. 888 tariffs, which governed service until the CAISO commenced operations, the Commission struck the Section 2.2 right of first refusal provision from the California Utilities' tariffs, replacing it with a clause honoring existing contracts only for the term of the contract. *Id.* at 61,472.

70 *Sacramento Municipal Utility District v. Pacific Gas & Electric Co., et al.,* 105 FERC ¶ 61,358 (2003), *order on reh'g*, 107 FERC ¶ 61,237 (2004), *aff'd, sub nom Sacramento Municipal Utility District v. FERC*, 428 F.3d 294 (D.C. Cir. 2005) ("*SMUD*").

71 105 FERC ¶ 61,358, at 62,615.

72 107 FERC ¶ 61,237, at 62,010.

extent that it collaterally attacked the Commission's prior orders approving the ISO Tariff.[73]

On January 5, 2007, the D.C. Circuit rejected another appeal by SMUD of a different Commission order denying it the opportunity to continue purchasing transmission services through a contract that expired at the end of 2004.[74] The D.C. Circuit again found that SMUD's appeal constituted a collateral attack on the Commission's prior orders approving the ISO Tariff. The D.C. Circuit concluded that there was no basis "to overturn FERC's perfectly rational decision that SMUD must, in the meantime, operate under the same tariff and incur the same risks as other California utilities."[75] In other recent orders, the Commission has re-affirmed the basic principle that entities with pre-existing contracts that are terminating must take service under the ISO Tariff.[76]

Nothing in Order No. 890 alters – or is intended to alter – the basis upon which these prior decisions were made. As the Commission stated in Order No. 890, transmission providers would not be required to re-justify existing provisions in their tariffs that are not affected in a substantive manner by the revisions promulgated in Order No. 890. Given that Order No. 890 adopts a stricter ROFR standard than exists today, that modification cannot serve as the basis for importing a ROFR mechanism into the CAISO tariff where one does not exist today. Pre-existing contracts do not fit the CAISO service model, and the Commission has recognized on numerous occasions that such contracts are problematic and result in clear market inefficiencies.[77] Thus, as the Commission has consistently found, pre-existing customers should continue to be required to take transmission service under the CAISO's tariff when non-open access contracts expire.

4. Processing of Transmission Delivery Service Requests, Clustering Requests, and Transmission Service Request Priority

Section 17.5 of the *pro forma* OATT requires transmission providers to process requests for transmission service in a timely manner following

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73 *SMUD*, 428 F.3d at 298-99.

74 *Sacramento Municipal Utility District v. FERC,* 474 F.3d 797 (D.C. Cir. 2007).

75 *Id.* at 802.

76 *PacifiCorp, et. al.,* 120 FERC ¶ 61,113, at P 60 (2007) (as customers' contracts expire, they should take service under the ISO Tariff).

77 *See, e.g., California Independent System Operator Corp.*, 109 FERC ¶ 61,301, at PP 17-20 (2004), *order on reh'g,* 111 FERC ¶ 61,337 (2005); *California Independent System Operator Corp.*, 91 FERC ¶ 61,205, at 61,727(2000).

submission of a completed application. Section 18.4 requires the transmission provider to respond to transmission customer requests for the availability of firm and non-firm transmission capacity on a timely basis. Sections 19 and 32 of the *pro forma* OATT provide deadlines for transmission providers to complete system impact studies and facilities studies for point-to-point and network services, respectively.

Order No. 890 requires transmission providers to (1) post on their OASIS sites on a quarterly basis a detailed set of performance metrics related to the processing of transmission service requests and the service-related studies they conduct and (2) submit a filing to the Commission to the extent they process more than 20% of non-affiliates' studies outside of the due diligence deadline.[78] Order No. 890 also encourages transmission providers to cluster studies when reasonable and requires transmission providers to consider clustering if the customer so requests and the transmission provider can reasonably do so. A transmission provider must include tariff language describing how it will process a request to cluster request studies and how it will structure the transmission customers' obligations when they have joined a cluster.[79] Order No. 890 also provides that pre-confirmed transmission service requests (for non-firm point-to-point service and short-term firm point-to-point service) will have priority over non-confirmed requests submitted in the same time period.[80] In addition, longer duration requests for point-to-point transmission service will continue to have priority over shorter duration requests, with pre-confirmation serving as a tie-breaker for requests of equal duration. *Id.* Order No. 890 also establishes a number of other rules regarding priority for transmission service requests.

The aforementioned requirements are not applicable to the CAISO's transmission service model. The CAISO does not have an application process for requesting transmission service. Rather, all SCs are equally eligible to submit daily transmission schedules which are processed on a nondiscriminatory basis. Given that customers do not request transmission service through a formal application process – unlike the approach contemplated in the *pro forma* OATT – the CAISO does not conduct system impact studies and facilities studies in connection with individual requests for transmission service.[81] Instead, grid expansion and upgrade studies are conducted through the CAISO's formal transmission planning and generator interconnection processes. This allows for comprehensive and integrated planning for the entire CAISO Controlled Grid.

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78 Order No. 890 at PP 1308-23.

79 *Id.* at PP 1370-71.

80 *Id.* at P 1401.

81 Also, the CAISO does not have tariff provisions that equate to Sections 17.5, 18.4, 19 and 32 of the *pro forma* OATT.

Finally, the priorities between transmission services promulgated in the Final Rule do not apply to the CAISO because the CAISO only offers one type of transmission service, under which there are no long-term transmission subscriptions.

5. Designation of Network Resources and Clarifications Regarding Network Service

Order No. 890 makes a number of clarifications related to the types of arrangements that may be designated as network resources (Sections 30.1 and 30.7 of the *pro forma* OATT), the process for verifying whether agreements meet the requirements in the *pro forma* OATT (Section 29.2 of the *pro forma* OATT), and the requirement for transmission providers to designate and un-designate (Section 30.3 of the *pro forma* OATT) network resources on OASIS.[82] The Commission also clarifies that secondary service[83] under Section 28.4 of the *pro forma* OATT must be requested in accordance with Section 18 of the *pro forma* OATT, including the timing restrictions set forth in Section 18.3 so that network customers cannot lock-in such service in advance of other non-firm services.[84] Order No. 890 establishes that network customers may not redirect network service in a manner comparable to the way customers redirect point-to-point service because network service does not have an identified contract path and, as such, cannot be redirected.[85]

The new requirements for network service that the Commission has promulgated in Order No. 890 are not applicable to the CAISO's transmission service model, and neither the CAISO's existing tariff nor the MRTU tariff has any of the tariff provisions that the Commission proposes to modify. The designation of network resources and the need for secondary service under the *pro forma* OATT is relevant to the provision of network service and the relative priority of network and firm and non-firm point-to-point service. As discussed above, the CAISO does not have separate classes of transmission service; it only has one type of transmission service, *i.e.*, new firm use, and that service is equally firm for all transmission customers. Further, each day, transmission customers schedule the supply resources that they desire to serve their scheduled load or exports or to offer into the Energy market for that day. There is no need for a requirement or process to formally designate or un-designate network resources under these

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82 Order No. 890 at PP 90, 1452-61.

83 Secondary service allows a network customer to deliver energy to its network load from non-designated network resources on an as-available basis without an additional charge.

84 Order No. 890 at PP 1601, 1606.

85 *Id.* at P 1612.

circumstances. Likewise, the concept of secondary service is neither needed nor applicable under the CAISO's service model. In any event, the Commission's concerns about secondary service having a scheduling advantage over other non-firm transmission service (Order No. 890 at P 941) do not exist with respect to the CAISO because the CAISO does not offer non-firm service in addition to new firm use.

6. Certain OASIS and Information Requirements

In Order No. 890, the Commission maintained the requirement (found in Section 37.6(e)(2) of its OASIS regulations, 18 C.F.R. 37.6(e)(2)) that a transmission provider must post the reason for a complete denial of service, and extended the period for which a transmission provider must maintain information supporting the denial of service from three years to five years.[86] The Commission also clarified that the rule includes partial denials.[87] Further, the Commission expanded its Section 37.6(e)(2)(ii) to require a transmission provider to maintain and make available on request the information supporting the disposition of its own network resource designations and make such information available to any eligible customer, not just to that customer denied service.[88] The Commission stated that these new requirements would help ensure that customers receive transmission service that is not unduly discriminatory and that repeated denials of service over a particular path or flowgate will provide an indication of congestion that can be use for transmission planning purposes.[89]

The Commission also required that transmission providers and network customers use OASIS to request designation of new network resources and to terminate designation of network resources; this information must be posted on OASIS for 90 days and be available for audit for five years.[90] The Commission stated that this requirement would add transparency.

The aforementioned requirements and changes to existing regulations are not applicable to the CAISO's transmission service model which does not include formal transmission service requests or network resource designations/terminations. This fundamental fact is true today under the CAISO's existing market structure, and it does not change under the MRTU market structure. SCs simply submit Bids (including Self-Schedules) to the CAISO on a daily basis reflecting the locations and MWh quantities of Energy

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86 *Id.* at P 376.

87 *Id.* at P 377.

88 *Id.*

89 *Id.*

90 *Id.* at P 385.

they wish to inject into or withdraw from the CAISO grid during each hour of the next day, as well as the prices they are willing to accept or pay for such injections and withdrawals. The CAISO then "serves" these SC "requests" to use the grid by clearing their bids through the IFM and establishing firm, financially binding Day Ahead schedules. Thus, the CAISO does not deny transmission service requests as contemplated in the *pro forma* OATT. Because the CAISO's transmission service model is significantly different than those contemplated in the *pro forma* OATT, the Commission has previously granted the CAISO a waiver from existing OASIS standards.[91] Given that the CAISO's basic transmission service model does not change with the MRTU Tariff, the reasons underlying the previously granted waivers of the OASIS provisions pertaining to transmission service requests/denials are still valid. The revisions adopted by the Commission in Order No. 890 do not alter the basis upon which these prior waivers were granted. The CAISO thus requests that the Commission grant the CAISO a waiver of the revised OASIS standards pertaining to transmission service requests and denials of service.[92]

Similarly, the Commission should waive the additional requirement in Order No. 890 that Transmission Providers post a list of all system impact studies, facilities studies and studies performed for the transmission provider's own network resources and affiliated transmission customers, to be made available upon request.[93] The CAISO does not perform system impact studies or facilities studies of transmission service requests under its transmission service model. Further, the CAISO does not own any network resources or have affiliated transmission customers and does not perform studies of those matters.

The CAISO also requests that the Commission grant a waiver of the new requirement that network service designations and terminations be effectuated through OASIS. As discussed above, the CAISO only offers a single "daily" transmission service and does not offer separate firm point-to-point and network transmission services. Therefore, the need for network resource designations and terminations does not apply.

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91 *Pacific Gas & Electric Co, et al.,* 81 FERC ¶61,122, at 61,460 (1997); *California Independent System Operator Corp.,* 89 FERC ¶61,153, at 61,437-38 (1999); *California Independent System Operator Corp.,* 117 FERC ¶ 61,196 (2006) ("November 16 Order").

92 The November 16 Order requires the CAISO to file a renewed request for OASIS waivers 60 days prior to MRTU implementation. Because the November 16 Order pre-dates Order No. 890, it is not clear whether the CAISO should seek waivers of the revised OASIS standards promulgated in Order No. 890 in the instant Order No. 890 compliance filing, or its waiver filing in response to the November 16 Order. Accordingly, the CAISO is requesting such waivers in both filings.

93 Order No. 890 at P 349.

F. Conditional Firm Service and Planning Redispatch

Order No. 890 requires that, when requested firm point-to-point transmission service is not available, and transmission customers are willing to pay for a system impact study, transmission providers must offer (1) a "conditional firm" point-to-point service (which identifies either defined system conditions or an annual number of hours during which service will be conditional), and (2) a planning redispatch service. [94] Order No. 890 also makes certain modifications to the planning redispatch service adopted in Order No. 888.

However, in Order No. 890, the Commission concluded that it would be inappropriate to require that RTOs and ISOs with real-time energy markets adopt conditional firm point-to-point service.[95] Because the CAISO operates a real-time energy market, the CAISO is not required to implement conditional firm point-to-point service in order to comply with Order No. 890.

With respect to planning redispatch, the Commission directed ISOs and RTOs that already provide planning redispatch pursuant to Section 13.5 of the *pro forma* OATT to modify the relevant provisions of their tariffs consistent with the directives in the Final Rule.[96] However, the Commission concluded that RTOs and ISOs whose tariffs have previously been found to be just and reasonable without the inclusion of a section 13.5 planning redispatch provision, need not amend their tariffs at this time to include planning redispatch service.[97]

The CAISO's existing Commission-approved tariff does not include a Section 13.5 planning redispatch provision (or substitute provision). Likewise,

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[94] *Id.* at PP 911-15, 977-82. Planning redispatch is a product that Order No. 888 required transmission providers to use, in certain circumstances, to create additional transmission capacity to accommodate a request for firm point-to-point transmission service. Specifically, the existing *pro forma* OATT requires the transmission provider to expand or upgrade its transmission system or, if it is more economical, plan to redispatch its resources to provide requested firm point-to-point service, provided redispatch does not (1) degrade or impair the reliability of service to native load customers, network customers, and other transmission customers taking firm point-to-point service, or (2) interfere with the transmission provider's ability to meet prior firm contractual commitments to others.

[95] *Id.* at P 992.

[96] *Id.* at P 993. The Commission noted that planning redispatch can remedy undue discrimination by making comparable transmission services available to transmission customers, facilitate the provision of long-term transmission service, and provide customers with greater flexibility in choosing resources to meet their needs. *Id.* at PP 911-12.

[97] *Id.* at P 993.

the MRTU Tariff accepted by the Commission does not include a planning redispatch provision. As such, Order No. 890 does not require the CAISO to modify its tariff in this regard. Moreover, because the CAISO does not provide point-to-point transmission service, planning redispatch requirements as specifically contemplated in the OATT and Order No. 890 do not apply to the CAISO's service model.

In any event, the CAISO already makes the full capability of the grid available to all transmission customers on a daily basis using a security constrained, economic dispatch/redispatch process. The CAISO's approach to transmission service – which utilizes day-ahead, bid-based access to transmission and full utilization of generation dispatch/redispatch – provides transmission customers with maximum market-based scheduling flexibility that is not unduly discriminatory and that is consistent with, or superior to, the service that would be provided by conditional firm service and planning redispatch service.

G. OASIS Posting of Cost of Redispatch

Order No. 890 imposes a requirement that transmission providers post certain redispatch cost information associated with the existing redispatch services that must be provided under the *pro forma* OATT.[98] The Commission stressed that its posting requirement relates only to the existing redispatch services required under the *pro forma* OATT; it does not expand those service obligations.[99] *Id.*

Because the CAISO does not provide, and the CAISO's Commission-approved tariff does not contain, the planning and reliability redispatch services set forth in Sections 13.5 and 19.3, respectively, of the *pro forma* OATT, the new posting requirements do not apply to the CAISO. However, the CAISO believes that transparency of the costs of redispatch is a necessary part of open and nondiscriminatory transmission access. Under MRTU, the CAISO will post LMP prices derived from the Day-Ahead and Real-Time Markets, which reflect real-time, transparent, economic dispatch for Energy (including the costs of congestion and transmission losses). In addition, the CAISO will post the price of capacity committed in the Day-Ahead Market through the Residual Unit Commitment as well as the Ancillary Services Marginal Prices associated with

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98 *Id.* at P 1157. Order No. 890 requires that transmission providers post on OASIS their monthly average cost of redispatch for each internal congested transmission facility or interface over which they provide redispatch using planning redispatch or reliability redispatch under the *pro forma* OATT. To demonstrate the range of redispatch costs, the Commission directs transmission providers to post a high and low redispatch cost for the month for each of these same transmission constraints. *Id.* at P 1162.

99 *Id.*

each Ancillary Service as cleared through its Day-Ahead and Real-Time Markets. Thus, the information that the CAISO will post under MRTU is consistent with the Commission's stated objectives of "providing customers with additional transparency and greater information regarding the cost of congestion" and promoting "more efficient use of the grid" (*see* Order No. 890 at P 1157).

H. Transmission Curtailments

Transmission providers, working through NAESB, must develop a detailed template for posting of additional information on OASIS regarding firm transmission curtailments. The posting must include all circumstances and events contributing to the need for a firm service curtailment, specific services and customers curtailed (including the transmission provider's own retail loads), and the duration of the curtailment.[100]

Because NAESB has not acted yet, the CAISO does not have any compliance obligations at this time.

I. Posting of all Rules, Standards, and Practices, and of Change Management Process

Order No. 890 requires that transmission providers post on their public websites all rules, standards, or business practices that relate to the terms and conditions of transmission service and how that transmission service is provided to customers, and provide a link to this information on OASIS.[101] Order No. 890 also requires transmission providers to post on their public websites a statement of the process by which the Transmission Providers will amend these rules, standards, and practices that are accessible via OASIS.[102]

The CAISO satisfies the requirement that transmission providers post on their websites all, rules, standards, or business practices that relate to the terms and conditions of transmission service. Consistent with the Commission's direction in its orders concerning the MRTU Tariff,[103] the CAISO has developed BPMs containing all rules, standards, or business practices that relate to the terms and conditions of transmission service that the CAISO does not believe need be included in the CAISO Tariff. All BPMs will be maintained on the CAISO website. Although not required by Order No. 890 to be included in the tariff, the change process for BPMs is set forth in Section 22.11.1 of the MRTU Tariff, as

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100 *Id.* at PP 1626-32.

101 *Id* at PP 1649-61.

102 *Id.* at P 1655.

103 *California Independent System. Operator Corp.,* 116 FERC ¶ 61,274, at P 1370.

revised by the CAISO's August 3, 2007, compliance filing in Docket No. ER06-615, and is supplemented by a BPM for BPM change management. Consistent with the requirement that the change process be posted, the MRTU Tariff and the BPM for BPM change management are posted on the CAISO's website. The process includes the right of Market Participants and other parties to propose revisions to BPMs, notice provisions, stakeholder involvement, and a right to appeal the CAISO's decisions to an executive committee and right to raise concerns with the CAISO Board of Governors.

The CAISO also has a number of Operating Procedures, all of which are identified on the CAISO website. Some, but not necessarily all, of these Operating Procedures "relate to transmission service" such that they must be posted under Paragraph 1652 of Order No. 890. The change procedure for Operating Procedures is described in Operating Procedure A-02 which, consistent with the requirements of Order No. 890, is posted on the CAISO website. Operating Procedure A-02 is included as Attachment D to the instant filing.

Operating Procedure A-02 provides for notice and comment on new or revised CAISO Operating Procedures whenever there is sufficient time to obtain external review and obtain comments prior to implementation of the procedure. If there is insufficient time for stakeholder review prior to implementation, the CAISO receives comments after the implementation. Indeed, if a party misses the opportunity to respond to the draft procedure, Operating Procedure A-02 provides that stakeholders will have the opportunity to provide comments anytime after the time that the procedure becomes effective, and the CAISO will consider the comments and determine whether to make further modifications to the Operating Procedure.

Most Operating Procedures are also posted on the CAISO website. In a limited number of cases, however, an Operating Procedure is not posted either in whole or in part. These Operating Procedures have restricted distribution due to system security, market sensitivity, or proprietary reasons. The currently effective ISO Tariff is silent as to whether Operating Procedures are posted or not. Due to an oversight, the MRTU Tariff indicates that all CAISO Operating Procedures are posted on the CAISO website. The CAISO will amend Section 22.11 of the MRTU Tariff to indicate that Operating Procedures are posted to the CAISO website, except for any procedure or part thereof that cannot be made publicly available due to system security, market sensitivity or proprietary reasons, as discussed below. The CAISO will make this change to its MRTU Tariff in a tariff amendment filing to be made on or about December 21, 2007.

The categories and procedures for determining restricted distribution are included in Operating Procedure A-03.[104] The CAISO restricts distribution of Operating Procedures for system security, market sensitivity or proprietary reasons. Each CAISO Operating Procedure is evaluated for these concerns to determine if any restrictions on distribution are necessary. If certain information must be protected, the CAISO will attempt to segregate the confidential material in a separate attachment in order to allow public distribution of the basic requirements and processes reflected in the Operating Procedure. If the confidential material cannot be segregated, then the CAISO will assess whether the sensitive material can be deleted from the distribution copy to create an abbreviated version of the Operating Procedure. If there are no remaining sensitive areas, then the Operating Procedure is posted on the CAISO website.

The need to restrict distribution of particular procedures is evident from the criteria that the CAISO applies in identifying such procedures. The CAISO restricts distribution of Operating Procedures for system security only if the information contained in them could be used to threaten or jeopardize either (1) the reliability or security of the CAISO Controlled Grid, or (2) the security of personnel operating the CAISO Balancing Authority or internal power systems, (so by definition release of the information would endanger human life or the electric grid). Distribution is also restricted for market sensitivity reasons only if the procedures contain information that could financially harm competitive markets or other parties if that information was obtained by external entities. Restricted access is therefore necessary to maintain the competition that is a fundamental prerequisite to a market-based electricity industry. Finally, access is restricted for procedures that include proprietary information such as (1) information that is specific to a single entity or party (*e.g.*, names and personal contact information), (2) contract information, or (3) information provided to the CAISO on a confidential basis. A failure to protect confidentiality in such circumstances would inhibit the CAISO's access to information necessary to reliably and effectively operate the CAISO Controlled Grid and the CAISO markets. The Commission historically has recognized the importance of maintaining the confidentiality of these types of Operating Procedures, as reflected, for example, in the Commission's Model Protective Order, which preserves the confidentiality of critical energy infrastructure information and "materials which customarily are treated by a Participant as sensitive or proprietary, which are not available to the public, and which, if disclosed freely, would subject that Participant or its customers to risk of competitive disadvantage or other business injury." To the extent that Order No. 890 requires posting the text of such procedures, the CAISO seeks waiver of such requirements.

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[104] Operating Procedure A-03 is included as Attachment E to the instant filing.

For the foregoing reasons, the CAISO submits that it has complied with the requirements of Order No. 890 regarding the posting of rules, practices and standards.

J. Creditworthiness Requirements

Order No. 890 requires that each transmission provider specify, in a new Attachment L to the *pro forma* OATT, the qualitative and quantitative criteria that the transmission provider uses to determine the level of secured and unsecured credit required of its customers.[105] Attachment L must contain the following elements: (1) a summary of the procedure for determining the level of secured and unsecured credit; (2) a list of the acceptable types of collateral/security; (3) a procedure for providing customers with reasonable notice of changes in credit levels and collateral requirements; (4) a procedure for providing customers, upon request, a written explanation for any change in credit levels or collateral requirements; (5) a reasonable opportunity to contest determinations of credit levels or collateral requirements; and (6) a reasonable opportunity to post additional collateral, including curing any non-creditworthy determination.[106] Transmission providers may supplement Attachment L with a credit guide or manual to be posted on OASIS.[107]

As explained below, the provisions of Section 12 of the ISO Tariff, as modified by the CAISO in Docket No. ER06-700, satisfy each of the Commission's directives in Order No. 890 regarding the inclusion of credit procedures in a transmission provider's transmission OATT. Prior to the MRTU implementation date, the CAISO intends to conform the MRTU Tariff to reflect the latest effective tariff language (as updated to reflect the MRTU market design and defined terms), including the provisions of Section 12. Thus, the provisions of the MRTU Tariff will likewise satisfy the directives in Order No. 890 on creditworthiness.

In Docket No. ER06-700, the CAISO filed an amendment to the ISO Tariff to substantially revise its credit requirements. Subsequently, in response to Commission orders in the proceeding, the CAISO submitted compliance filings containing further revisions to the credit requirements, which the Commission accepted.[108] In its orders, the Commission provided direction to the CAISO

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105 Order No. 890 at P 1656

106 *Id.* at P 1657.

107 *Id.*

108 *See* March 2006 Credit Policy Amendments to the Tariff of the California Independent System Operator Corporation, Docket No. ER06-700-000 (Mar. 7, 2006); *California Independent System Operator Corp.*, 115 FERC ¶ 61,170 (2006); California Independent System Operator Corporation Compliance Filing and Status Report, Docket No. ER06-700-003 (July 11, 2006); *California Independent System Operator Corp.*, 119

regarding the credit requirement provisions that the CAISO must include in the ISO Tariff and those provisions that the CAISO may include in a Business Practice Manual (the "Credit Policy & Procedures Guide" or Credit Guide under the currently effective ISO Tariff and the Business Practice Manual for Credit Management under the MRTU Tariff), which is available on the CAISO website and on OASIS.[109]

The ISO Tariff, as modified in Docket No. ER06-700, contains Commission-approved provisions regarding each of the subjects that Order No. 890 requires to be addressed in new Attachment L. These ISO Tariff provisions, and the subjects they address, are the following:

- Section 12.1.1.1 contains the qualitative and quantitative criteria that the CAISO uses to determine the level of unsecured credit required for each Market Participant, *i.e.*, the Market Participant's Unsecured Credit Limit. Further, Section 12.1.2 states that secured credit (*i.e.*, a Financial Security Amount) is required to the extent that a Market Participant's Unsecured Credit Limit is insufficient to cover the Market Participant's financial liability (*i.e.*, the Market Participant's Estimated Aggregate Liability).[110]

- Section 12.1.1A.2 contains the CAISO's process for calculating a Market Participant's Unsecured Credit Limit, and Section 12.1.2 contains the CAISO's process for determining the Financial Security Amount that is required from a Market Participant.

- Section 12.1.2 lists the types of Financial Security that are acceptable under the ISO Tariff.

FERC ¶ 61,053 (2007); California Independent System Operator Corporation Compliance Filing, Docket No. ER06-700-004 (May 31, 2007); *California Independent System Operator Corp.*, 120 FERC ¶ 61,147 (2007).

[109] *See California Independent System Operator Corp.*, 115 FERC ¶ 61,170, at PP 20-22, 32, 34, 36, 42-44; *California Independent System Operator Corp.*, 119 FERC ¶ 61,053, at PP 15-17, 37-38, 47. When the MRTU Tariff goes into effect, a modified version of the Credit Guide will become the Business Practice Manual for Credit Management.

[110] The sum of a Market Participant's Unsecured Credit Limit and its Financial Security Amount is its Aggregate Credit Limit. Each Market Participant is required to maintain an Aggregate Credit Limit that is equal to or greater than its Estimated Aggregate Liability. *See* ISO Tariff, §§12.1, 12.1.2.

- Sections 12.1.1, 12.1.1.1, and 12.4 contain the CAISO's procedures for providing Market Participants with reasonable notice of changes in Unsecured Credit Limits and Financial Security posting requirements.[111]

- Sections 12.1.1 and 12.4.2 contain the CAISO's procedures for providing Market Participants, upon request, with a written explanation for any change in Unsecured Credit Limits or Financial Security posting requirements.[112]

- Sections 12.4.1 and 12.4.2 provide a reasonable opportunity for Market Participants to contest determinations of Unsecured Credit Limits or Financial Security posting requirements.[113]

- Section 12.4 provides a reasonable opportunity for Market Participants to post additional Financial Security, including for the purpose of curing any

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111 "In the event the ISO determines that the Unsecured Credit Limit of a Market Participant or FTR Bidder must be reduced as a result of a subsequent review, the ISO shall notify the Market Participant or FTR Bidder of the reduction . . . ." ISO Tariff, § 12.1.1. "A Market Participant or FTR Bidder, upon request, will be provided a written analysis as to how the provisions in Section 12.1.1A and this section were applied in setting its Unsecured Credit Limit." ISO Tariff, § 12.1.1.1. "Following the date on which a Market Participant commences trading, if a Market Participant's Estimated Aggregate Liability, as calculated by the ISO, at any time exceeds its Aggregate Credit Limit, the ISO shall direct the Market Participant to post an additional Financial Security Amount within five (5) Business Days that is sufficient to ensure that the Market Participant's Aggregate Credit Limit is at lease equal to its Estimated Aggregate Liability. The ISO shall also notify a Market Participant if at any time its Estimated Aggregate Liability exceeds 90% of its Aggregate Credit Limit." ISO Tariff, § 12.4.

112 "In the event the ISO determines that the Unsecured Credit Limit of a Market Participant or FTR Bidder must be reduced as a result of a subsequent review, the ISO shall notify the Market Participant or FTR Bidder of the reduction, and shall, upon request, also provide the Market Participant or FTR Bidder with a written explanation of why the reduction was made." ISO Tariff, § 12.1.1. "The following steps are required for a Market Participant to dispute a Financial Security request resulting from the ISO's calculation of Estimated Aggregate Liability: (1) Request by the Market Participant to review the ISO calculation . . . ." ISO Tariff, § 12.4.2.

113 "A Market Participant has five (5) Business Days to review an ISO request for additional Financial Security and submit proposed changes . . . . Within the five (5) Business Days, the Market Participant must either demonstrate to the ISO's satisfaction that the ISO's Financial Security request is entirely or partially unnecessary, or post the required Financial Security Amount calculated by the ISO." ISO Tariff, § 12.4.1. "Market Participants may dispute the Estimated Aggregate Liability calculated by the ISO and, as a result, the ISO may reduce or cancel a requested Financial Security adjustment." ISO Tariff, § 12.4.2.

determination by the CAISO that the Market Participant is not creditworthy.

Because the ISO Tariff provisions include all of the material required for Attachment L, the CAISO believes that these ISO Tariff provisions are consistent with or superior to the *pro forma* OATT contained in Order No. 890. Moreover, the ISO Tariff provisions satisfy the Commission's stated reasons for requiring transmission providers to include basic credit requirements in their OATTs. In that regard, in Order No. 890, the Commission stated that it was directing each transmission provider to include its basic credit requirements in Attachment L in order to (1) ensure that all customers have clear information as to the credit process and standards used by the transmission provider and (2) give customers an opportunity to comment on any changes to the standards proposed by the transmission provider in a rate filing with the Commission.[114] The ISO Tariff provisions described above ensure that all Market Participants have clear information as to the CAISO's credit process and standards, and the presence of these provisions in the ISO Tariff gives Market Participants an opportunity to comment on any changes to them that the CAISO may propose. Given that the CAISO's tariff already includes tariff provisions that satisfy the requirements of Order No. 890 and those provisions will also be included in the MRTU Tariff, the CAISO requests that the Commission not require the CAISO to create a new Attachment L containing such provisions (*see* Order No. 890 at PP 157, 1660), but instead permit them to remain in their current location in the ISO Tariff.

K. Revised OATT Definitions

The CAISO is revising the terms Affiliate and Good Utility Practice as they are defined in the ISO Tariff consistent with Order No. 890. The terms Non-Firm Sales and Pre-Confirmed Application that are adopted in Order No. 890 do not appear in the ISO Tariff or MRTU Tariff because these terms are not relevant to the CAISO's service model.

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114 Order No. 890 at P 1656.

IV. COMMUNICATIONS

Communications regarding this filing should be addressed to the following individuals, whose names should be placed on the official service list established by the Secretary with respect to this submittal:

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V. SERVICE

The CAISO has served copies of this transmittal letter, and all attachments, on the California Public Utilities Commission, the California Energy Commission, the California Electricity Oversight Board, and all parties with effective Scheduling Coordinator Service Agreements under the ISO Tariff. In addition, the CAISO is posting this transmittal letter and all attachments on the CAISO website.

VI. ATTACHMENTS

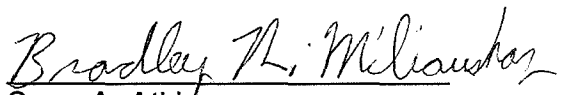
The following documents, in addition to this transmittal letter, support the instant filing:

Attachment A	Revised ISO Tariff sheets to comply with the non-transmission planning elements of Order No. 890
Attachment B	Tariff revisions shown in black-line format
Attachment C	The CAISO's August 17, 2007 Discussion Paper Regarding Non-Transmission Planning Elements in FERC Order No. 890
Attachment D	CAISO Operating Procedure A-02
Attachment E	CAISO Operating Procedure A-03

VII. CONCLUSION

For the foregoing reasons, the Commission should accept the instant filing as satisfying the CAISO compliance obligations with respect to the non-transmission planning elements of Order No. 890. The CAISO also requests that the Commission grant all necessary waivers consistent with the discussion herein.

Respectfully submitted,



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Dated: October 11, 2007

ATTACHMENT A

Attachment A – Clean Sheets

FERC Order 890 Compliance Filing

October 11, 2007

Administrative Price	The price set by the ISO in place of a Market Clearing Price when, by reason of a System Emergency, the ISO determines that it no longer has the ability to maintain reliable operation of the ISO Controlled Grid relying solely on the economic Dispatch of Generation. This price will remain in effect until the ISO considers that the System Emergency has been contained and corrected.
Adverse System Impact	The negative effects due to technical or operational limits on conductors or equipment being exceeded that may compromise the safety and reliability of the electric system.
Affected System	An electric system other than the ISO Controlled Grid that may be affected by the proposed interconnection, including the Participating TOs' electric systems that are not part of the ISO Controlled Grid.
Affected System Operator	The entity that operates an Affected System.
Affiliate	With respect to a corporation, partnership or other entity, each such other corporation, partnership or other entity that directly, or indirectly through one or more intermediaries, controls, is controlled by, or is under common control with, such corporation, partnership or other entity.
AGC (Automatic Generation Control)	Generation equipment that automatically responds to signals from the ISO's EMS control in real time to control the power output of electric generators within a prescribed area in response to a change in system frequency, tie-line loading, or the relation of these to each other, so as to maintain the target system frequency and/or the established interchange with other areas within the predetermined limits.
Aggregate Credit Limit	The sum of a Market Participant's or FTR Bidder's Unsecured Credit Limit and its Financial Security Amount, as provided for in Section 12 of the ISO Tariff.
Alert Notice	A Notice issued by the ISO when the operating requirements of the ISO Controlled Grid are marginal because of Demand exceeding forecast, loss of major Generation, or loss of transmission capacity that has curtailed imports into the ISO Control Area, or if the Hour-Ahead Market is short on scheduled Energy and Ancillary Services for the ISO Control Area.

Good Utility Practice Any of the practices, methods, and acts engaged in or approved by a significant portion of the electric utility industry during the relevant time period, or any of the practices, methods and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety and expedition. Good Utility Practice is not intended to be limited to the optimum practice, method, or act to the exclusion of all others, but rather to be acceptable practices, methods, or acts generally accepted in the region, including those practices required by Federal Power Act section 215(a)(4).

Grid Management Charge The ISO monthly charge on all Scheduling Coordinators that provides for the recovery of the ISO's costs listed in Section 11.2.2.2 through the eight service charges described in Section 11.2.2.3 calculated in accordance with the formula rate set forth in Appendix F, Schedule 1, Part A of this Tariff. The eight charges that comprise the Grid Management Charge consist of: 1) the Core Reliability Services - Demand Charge, 2) the Core Reliability Services – Energy Exports Charge, 3) the Energy Transmission Services Net Energy Charge, 4) the Energy Transmission Services Uninstructed Deviations Charge, 5) the Forward Scheduling Charge, 6) the Congestion Management Charge, 7) the Market Usage Charge, and 8) the Settlements, Metering, and Client Relations Charge.

Grid Operations Charge An ISO charge that recovers Redispatch costs incurred due to Intra-Zonal Congestion in each Zone. These charges will be paid to the ISO by the Scheduling Coordinators, in proportion to their metered Demand within, and metered exports from, the Zone to a neighboring Control Area.

Gross Load For the purposes of calculating the transmission Access Charge, Gross Load is all Energy (adjusted for distribution losses) delivered for the supply of End-Use Customer Loads directly connected to the transmission facilities or directly connected to the Distribution System of a UDC or MSS Operator located in a PTO Service Territory. Gross Load shall exclude 1) Load with respect to which the

ISO TARIFF APPENDIX L

Methodology to Assess Available Transfer Capability

METHODOLOGY TO ASSESS AVAILABLE TRANSFER CAPABILITY

L.1 Description of Terms
The following descriptions augment existing definitions found in Appendix A "Master Definitions Supplement."

L.1.1 Available Transfer Capability (ATC) is a measure of the transfer capability in the physical transmission network resulting from system conditions and that remains available for further commercial activity over and above already committed uses.

ATC is defined as the Total Transfer Capability (TTC) less applicable operating Constraints due to system conditions and Outages (i.e., OTC), less the Transmission Reliability Margin (TRM), less the total of Existing Transmission Commitments (ETC), less the Capacity Benefit Margin (CBM).

L.1.2 Total Transfer Capability (TTC) is defined as the amount of electric power that can be moved or transferred reliably from one area to another area of the interconnected transmission system by way of all transmission lines (or paths) between those areas. In collaboration with owners of rated paths and the WECC Operating Transfer Capability Policy Committee (OTCPC), the ISO utilizes Rated Path Methodology to establish the TTC of ISO branch groups.

L.1.3 Operating Transfer Capability (OTC) is the TTC reduced by any operational Constraints caused by seasonal derates or Outages. ISO Regional Transmission Engineers determine OTC through studies using computer modeling.

L.1.4 Existing Transmission Commitments (ETC) include Existing Contracts, and as appropriate, Firm Transmission Rights, and Transmission Ownership Rights.

L.1.5 Transmission Reliability Margin (TRM) is that amount of transmission transfer capability necessary to ensure that the interconnected transmission network is secure under a reasonable range of uncertainties in system conditions. TRM reserves sufficient transmission capacity from the Day-Ahead (DA) Market to ensure that the interconnected transmission network is secure under a reasonable range of uncertainties in system conditions. This DA implementation avoids real time schedule curtailments that would otherwise be necessary due to:

- Load forecast error
- Anticipated uncertainty in transmission system topology
- Unscheduled Flow
- Simultaneous path interactions
- Variations in generation dispatch
- Operating reserve actions

The level of TRM for each branch group will be determined by ISO Regional Transmission Engineers (RTE).

L.1.6 **Capacity Benefit Margin (CBM)** is that amount of transmission transfer capability reserved by Load Serving Entities (LSEs) to ensure access to generation from interconnected systems to meet generation reliability requirements. In the DA Market, CBM may be used to provide reliable delivery of Energy to ISO Control Area Loads and to meet ISO responsibility for resource reliability requirements in real time. The purpose of this DA implementation is to avoid real time schedule curtailments and firm load interruptions that would otherwise be necessary. CBM may be used to reestablish Operating Reserves. CBM is not available for non-firm transmission in the ISO Control Area. CBM may be used only after:

- all non-firm sales have been terminated,
- Direct-control Load management has been implemented,
- customer interruptible demands have been interrupted,
- if the LSE calling for its use is experiencing a Generation deficiency and its transmission service provider is also experiencing transmission constraints relative to imports of Energy on its transmission system.

The level of CBM for each branch group is determined by the amount of estimated capacity needed to serve firm Load and provide Operating Reserves based on historical, scheduled, and/or forecast data using the following equation to set the maximum CBM:

CBM = (Demand + Reserves) - Resources

Where:

- Demand = forecasted area demand
- Reserves = reserve requirements
- Resources = internal area resources plus resources available on other branch groups

L.2 **ATC Algorithm**

ATC = OTC – (TRM + ETC + CBM)

or

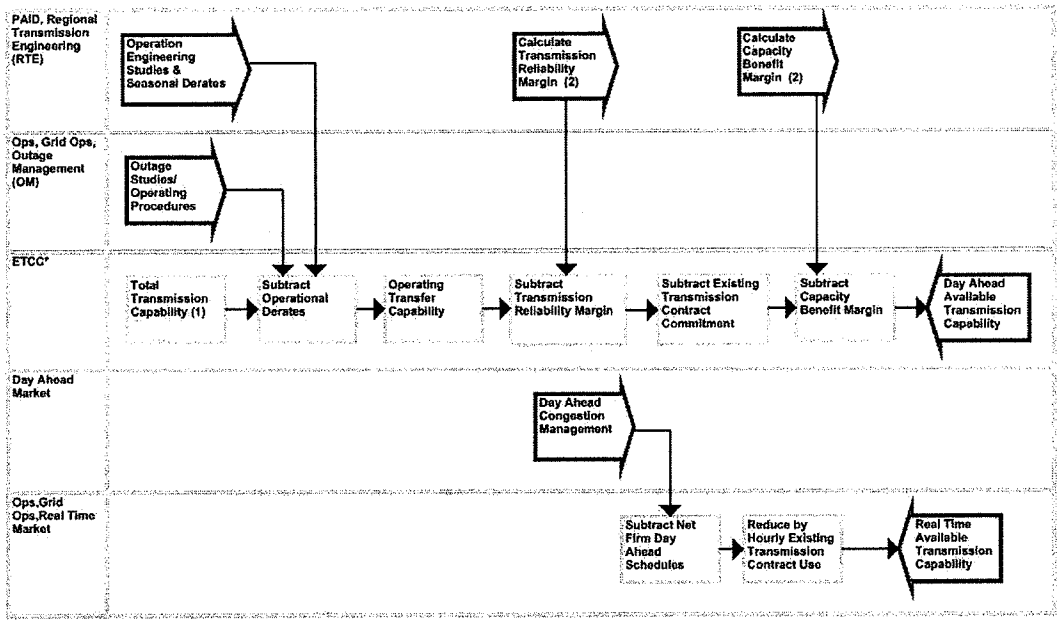
ATC = (TTC – Operating Constraints) - (TRM + ETC + CBM)

Where:

OTC = TTC – Operating Constraints
TTC = Total Transfer Capability
OTC = Operating Transfer Capability
TRM = Transmission Reliability Margin
ETC = Existing Transmission Commitments
CBM = Capacity Benefit Margin

L.3 ATC Process Flowchart

Available Transmission Capability



* ETCC - Existing Transmission Contract Calculator
(1) WECC rated path methodology
(2) S-322

L.4 TTC – OTC Determination

All transfer capabilities are developed to ensure that power flows are within their respective operating limits, both pre-Contingency and post-Contingency. Operating limits are developed based on thermal, voltage and stability concerns according to industry reliability criteria (WECC/NERC) for transmission paths. The process for developing TTC or OTC is the same with the exception of inclusion or exclusion of operating Constraints based on system conditions being studied. Accordingly, further description of the process to determine either OTC or TTC will refer only to TTC.

L.4.1 Transfer capabilities for studied configurations may be used as a maximum transfer capability for similar conditions without conducting additional studies. Increased transfer capability for similar conditions must be supported by conducting appropriate studies.

L.4.1.2 At ISO, studies for all major inter-area paths (mostly 500 kV) OTC are governed by the California Operating Studies Subcommittee (OSS) as one of four sub-regional Study Groups of the WECC OTCPC (i.e., for California Sub-region), which provides detailed criteria and methodology. For transmission system elements below 500 kV the methodology for calculating these flow limits is detailed in C.4.3 and is applicable to the operating horizon.

L.4.2 **Transfer capability** may be limited by the physical and electrical characteristics of the systems including any one or more of the following:

- **Thermal Limits** – Thermal limits establish the maximum amount of electric current that a transmission line or electrical facility can conduct over a specified time-period as established by the Transmission Owner.

- **Voltage Limits** – System voltages and changes in voltages must be maintained within the range of acceptable minimum and maximum limits to avoid a widespread collapse of system voltage.

- **Stability Limits** – The transmission network must be capable of surviving disturbances through the transient and dynamic time-periods (from milliseconds to several minutes, respectively) following the disturbance so as to avoid generator instability or uncontrolled, widespread interruption of electric supply to customers.

L.4.3 **Determination of transfer capability** is based on computer simulations of the operation of the interconnected transmission network under a specific set of assumed operating conditions. Each simulation represents a single "snapshot" of the operation of the interconnected network based on the projections of many factors. As such, they are viewed as reasonable indicators of network performance and may ultimately be used to determine Available Transfer Capability. The study is meant to capture the worst operating scenario based on the RTE experience and good engineering judgment.

L.4.3.1 **System Limits** – The transfer capability of the transmission network may be limited by the physical and electrical characteristics of the systems including thermal, voltage, and stability consideration. Once the critical Contingencies are identified, their impact on the network must be evaluated to determine the most restrictive of those limitations. Therefore, the TTC_1 becomes:

TTC_1 = lesser of {Thermal Limit, Voltage Limit, Stability Limit} following $N\text{-}1_{worst}$

L.4.3.2 Parallel path flows will be considered in determining transfer capability and must be sufficient in scope to ensure that limits throughout the interconnected network are addressed. In some cases, the parallel path flows may result in transmission limitations in systems other than the transacting systems, which can limit the TTC between two transacting areas. This will be labeled TTC_2. Combined with C.4.3.1 above TTC becomes:

TTC = lesser of {TTC_1 or TTC_2)

L.5 **Developing a Power Flow Base-Case**

L.5.1 **Base-cases** will be selected used to model reality to the greatest extent possible including attributes like area Generation, area load, intertie flows, etc. At other times (*e.g.,* studying longer range horizons), it is prudent to stress a base-case by making one or more attributes (load, Generation, line flows, path flows, etc.) of that base-case more extreme than would otherwise be expected.

L.5.2. **Power Flow Base-Cases Separated By Geographic Region**
The standard RTE base-cases are split into five geographical regions in the ISO Controlled Grid including the Bay Area, Fresno Area, North Area, SDG&E Area, and SCE Area.

L.5.3. Power Flow Base-Cases Selection Methodology

The RTE determines the studied geographical area of the procedure. This determines the study base-cases from the Bay Area, Fresno Area, North Area, SCE Area, or SDG&E Area.

The transfer capability studies may require studying a series of base-cases including both peak and off-peak operation conditions.

L.5.4 Update a Power Flow Base-Case

After the RTE has obtained one or more base-case studies, the base-case will be updated to represent the current grid conditions during the applicable season. The following will be considered to update the base-cases:

- Recent Transmission Network Changes and Updates
- Overlapping Scheduled and Forced Outages
- Area Load Level
- Major Path Flows
- Generation level
- Voltage Levels
- Operating Requirements

L.5.4.1 Outage Consideration

Unless detailed otherwise, the RTE considers modeling outages of:

- Transmission lines, 500 kV
- Transformers, 500/230 kV
- Large Generating Units
- Generating Units within the studied area
- Transmission elements within the studied area

At the judgment of the RTE, only the necessary outages will be modeled to avoid an unnecessarily burdensome and large number of base-cases.

L.5.4.2 Area Load Level

Base-case demand levels should be appropriate to the current studied system conditions and customer demand levels under study and may be representative of peak, off-peak or shoulder, or light demand conditions. The RTE estimates the area load levels to be utilized in the peak, partial-peak and/or off-peak base-cases. The RTE will utilize the current ISO load forecasting program (e.g., ALFs), ProcessBook (PI) or other competent method to estimate load level for the studied area. Once the RTE has determined the correct load levels to be utilized, the RTE may scale the scale the base-case loads to the area studied, as appropriate.

L.5.4.3 Modify Path Flows

The scheduled electric power transfers considered representative of the base system conditions under analysis and agreed upon by the parties involved will be used for modeling. As needed, the RTE may estimate select path flows depending on the studied area. In the event that it is not possible to estimate path flows, the RTE will make safe assumptions about the path flows. A safe assumption is more extreme or less extreme (as conservative to the situation) than would otherwise be expected.
If path flow forecasting is necessary, if possible the RTE will trend path flows on previous similar days.

L.5.4.4 Generation Level

Utility and non-utility Generating Units will be updated to keep the swing Generating Unit at a reasonable level. The actual unit-by-unit Dispatch in the studied area is more vital than in the un-studied areas. The RTE will examine past performance of select Generating Units to estimate the Generation levels, focusing on the Generating Units within the studied area. In the judgment of the RTE, large Generating Units outside the studied area will also be considered.

L.5.4.5 Voltage Levels

Studies will maintain appropriate voltage levels, based on operation procedures for critical buses for the studied base-cases. The RTE will verify that bus voltage for critical busses in within tolerance. If a bus voltage is outside the tolerance band, the RTE will model the use of voltage control devices (e.g., synchronous condensers, shunt capacitors, shunt reactors, series capacitors, generators).

L.6 Contingency Analysis

The RTE will perform Contingency analysis studies in an effort to determine the limiting conditions, especially for scheduled Outages, including pre- and post-Contingency power flow analysis modeling pre- and post-Contingency conditions and measuring the respective line flows, and bus voltages.

Other studies like reactive margin and stability may be performed as deemed appropriate.

L.6.1 Operating Criteria and Study Standards

Using standards derived from NERC and WECC Reliability Standards and historical operating experience, the RTE will perform Contingency analysis with the following operating criteria:

Pre-Contingency

- All pre-Contingency line flows shall be at or below their normal ratings.
- All pre-Contingency bus voltages shall be within a pre-determined operating range.

Post-Contingency

- All post-Contingency line flows shall be at or below their emergency ratings.
- All post-Contingency bus voltages shall be within a pre-determined operating range.

The RTE models the following Contingencies:

- Generating Unit Outages (including combined cycle Generating Unit Outages which are considered single Contingencies).
- Line Outages
- Line Outages combined with one Generating Unit Outage
- Transformer Outages
- Synchronous condenser Outages
- Shunt capacitor or capacitor bank Outages
- Series capacitor Outages
- Static VAR compensator Outages
- Bus Outages – bus Outages can be considered for the following ongoing Outage conditions.
    - For a circuit breaker bypass-and-clear Outage, bus Contingencies shall be taken on both bus segments that the bypassed circuit breaker connects to.
    - For a bus segment Outage, the remaining parallel bus segment shall be considered as a single Contingency.
    - Credible overlapping Contingencies – Overlapping Contingencies typically include transmission lines connected to a common tower or close proximity in the same right-of-way.

L.6.2 Manual Contingency Analysis

If manual Contingency analysis is used, the RTE will perform pre-Contingency steady-state power flow analysis and determines if pre-Contingency operating criteria is violated. If pre-Contingency operating criteria cannot be preserved, the RTE records the lines and buses that are not adhering to the criteria. If manual post-Contingency analysis is used the RTE obtains one or more Contingencies in each of the base cases. For each Contingency resulting in a violation or potential violation in the operating criteria above, the RTE records the critical post-Contingency facility loadings and bus voltages.

L.6.3 Contingency Analysis Utilizing a Contingency Processor

For a large area, the RTE may utilize a Contingency processor.

L.6.4 Determination of Crucial Limitations

After performing Contingency analysis studies, the RTE analyzes the recorded information to determine limitations. The limitations are conditions where the pre-Contingency and/or post-Contingency operating criteria cannot be conserved and may include a manageable overload on the facilities, low post-Contingency bus voltage, etc. If no crucial limitations are determined, the RTE determines if additional studies are necessary.

L.7 Traditional Planning Methodology to Protect Against Violating Operating Limits

After performing Contingency analysis studies, the RTE next develops the transfer capability and develops procedures, nomograms, RMR Generation requirements, or other constraints to ensure that transfer capabilities respect operating limits.

L.8 Limits for Contingency Limitations

Transfer limits are developed when the post-Contingency loading on a transmission element may breach the element's emergency rating. The type of limit utilized is dependent on the application and includes one of the following limits:

- Simple Flow Limit - best utilized when the derived limit is repeatable or where parallel transmission elements feed radial load.

- RAS or SPS – existing remedial action schemes (RAS) or special protection systems (SPS) may impact the derivation of simple flow limits. When developing the limit, the RTE determines if the RAS or SPS will be in-service during the Outage and factors the interrelationship between the RAS or SPS and the derived flow limit. RTE will update the transfer limits in recognition of the changing status and/or availability of the RAS or SPS.

ATTACHMENT B

Attachment B – Blacklines

FERC Order 890 Compliance Filing

October 11, 2007

* * *

ISO TARIFF APPENDIX A

Master Definitions Supplement

Affiliate	With respect to a corporation, partnership or other~~An~~ entity, each such other corporation, partnership or other entity ~~company or person~~ that directly, or indirectly through one or more intermediaries, controls, ~~or~~ is controlled by, or is under common control with, such corporation, partnership or ~~the subject~~ other entity~~, company, or person.~~

* * *

Good Utility Practice	Any of the practices, methods, and acts engaged in or approved by a significant portion of the electric utility industry during the relevant time period, or any of the practices, methods, and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety~~,~~ and expedition. Good Utility Practice is not intended to be ~~any one of a number of~~limited to the optimum practice~~s~~, method~~s~~, or act~~s~~ to the exclusion of all others, but rather to be acceptable practices, methods, or acts generally accepted in the region, including those practices required by Federal Power Act section 215(a)(4).

* * *

ISO TARIFF APPENDIX L

~~[not used]~~
Methodology to Assess Available Transfer Capability

* * *

METHODOLOGY TO ASSESS AVAILABLE TRANSFER CAPABILITY

L.1 Description of Terms

The following descriptions augment existing definitions found in Appendix A "Master Definitions Supplement."

L.1.1 Available Transfer Capability (ATC) is a measure of the transfer capability in the physical transmission network resulting from system conditions and that remains available for further commercial activity over and above already committed uses.

ATC is defined as the Total Transfer Capability (TTC) less applicable operating Constraints due to system conditions and Outages (i.e., OTC), less the Transmission Reliability Margin (TRM), less the total of Existing Transmission Commitments (ETC), less the Capacity Benefit Margin (CBM).

L.1.2 Total Transfer Capability (TTC) is defined as the amount of electric power that can be moved or transferred reliably from one area to another area of the interconnected transmission system by way of all transmission lines (or paths) between those areas. In collaboration with owners of rated paths and the WECC Operating Transfer Capability Policy Committee (OTCPC), the ISO utilizes Rated Path Methodology to establish the TTC of ISO branch groups.

L.1.3 Operating Transfer Capability (OTC) is the TTC reduced by any operational Constraints caused by seasonal derates or Outages. ISO Regional Transmission Engineers determine OTC through studies using computer modeling.

L.1.4 Existing Transmission Commitments (ETC) include Existing Contracts, and as appropriate, Firm Transmission Rights, and Transmission Ownership Rights.

L.1.5 Transmission Reliability Margin (TRM) is that amount of transmission transfer capability necessary to ensure that the interconnected transmission network is secure under a reasonable range of uncertainties in system conditions. TRM reserves sufficient transmission capacity from the Day-Ahead (DA) Market to ensure that the interconnected transmission network is secure under a reasonable range of uncertainties in system conditions. This DA implementation avoids real time schedule curtailments that would otherwise be necessary due to:

- Load forecast error
- Anticipated uncertainty in transmission system topology
- Unscheduled Flow
- Simultaneous path interactions
- Variations in generation dispatch
- Operating reserve actions

The level of TRM for each branch group will be determined by ISO Regional Transmission Engineers (RTE).

L.1.6 Capacity Benefit Margin (CBM) is that amount of transmission transfer capability reserved by Load Serving Entities (LSEs) to ensure access to generation from interconnected systems to meet generation reliability requirements. In the DA Market, CBM may be used to provide reliable delivery of Energy to ISO Control Area Loads and to meet ISO responsibility for resource reliability requirements in real time. The purpose of this DA implementation is to avoid real time schedule curtailments and firm load interruptions that would otherwise be necessary. CBM may be used to reestablish Operating Reserves. CBM is not available for non-firm transmission in the ISO Control Area. CBM may be used only after:

- all non-firm sales have been terminated,
- Direct-control Load management has been implemented,
- customer interruptible demands have been interrupted,
- if the LSE calling for its use is experiencing a Generation deficiency and its transmission service provider is also experiencing transmission constraints relative to imports of Energy on its transmission system.

The level of CBM for each branch group is determined by the amount of estimated capacity needed to serve firm Load and provide Operating Reserves based on historical, scheduled, and/or forecast data using the following equation to set the maximum CBM:

CBM = (Demand + Reserves) - Resources

Where:

- Demand = forecasted area demand
- Reserves = reserve requirements
- Resources = internal area resources plus resources available on other branch groups

L.2 ATC Algorithm

ATC = OTC – (TRM + ETC + CBM)

or

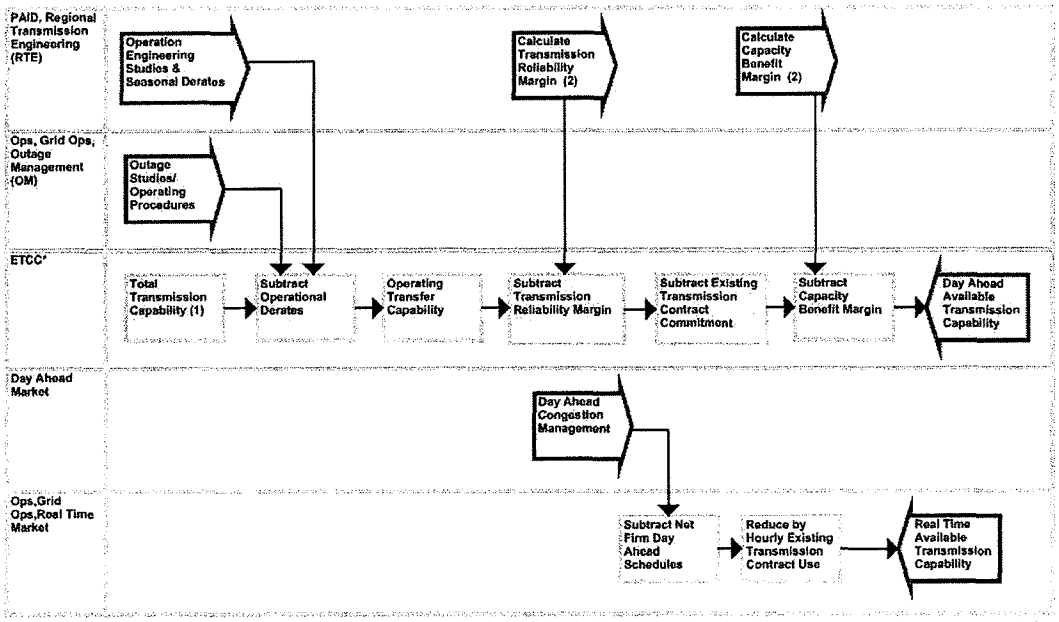
ATC = (TTC – Operating Constraints) - (TRM + ETC + CBM)

Where:

OTC = TTC – Operating Constraints
TTC = Total Transfer Capability
OTC = Operating Transfer Capability
TRM = Transmission Reliability Margin
ETC = Existing Transmission Commitments
CBM = Capacity Benefit Margin

L.3 ATC Process Flowchart

Available Transmission Capability



* ETCC - Existing Transmission Contract Calculator
(1) WECC rated path methodology
(2) S-322

L.4 TTC – OTC Determination

All transfer capabilities are developed to ensure that power flows are within their respective operating limits, both pre-Contingency and post-Contingency. Operating limits are developed based on thermal, voltage and stability concerns according to industry reliability criteria (WECC/NERC) for transmission paths. The process for developing TTC or OTC is the same with the exception of inclusion or exclusion of operating Constraints based on system conditions being studied. Accordingly, further description of the process to determine either OTC or TTC will refer only to TTC.

L.4.1 Transfer capabilities for studied configurations may be used as a maximum transfer capability for similar conditions without conducting additional studies. Increased transfer capability for similar conditions must be supported by conducting appropriate studies.

L.4.1.2 At ISO, studies for all major inter-area paths (mostly 500 kV) OTC are governed by the California Operating Studies Subcommittee (OSS) as one of four sub-regional Study Groups of the WECC OTCPC (i.e., for California Sub-region), which provides detailed criteria and methodology. For transmission system elements below 500 kV the methodology for calculating these flow limits is detailed in C.4.3 and is applicable to the operating horizon.

L.4.2 **Transfer capability** may be limited by the physical and electrical characteristics of the systems including any one or more of the following:

- **Thermal Limits** – Thermal limits establish the maximum amount of electric current that a transmission line or electrical facility can conduct over a specified time-period as established by the Transmission Owner.

- **Voltage Limits** – System voltages and changes in voltages must be maintained within the range of acceptable minimum and maximum limits to avoid a widespread collapse of system voltage.

- **Stability Limits** – The transmission network must be capable of surviving disturbances through the transient and dynamic time-periods (from milliseconds to several minutes, respectively) following the disturbance so as to avoid generator instability or uncontrolled, widespread interruption of electric supply to customers.

L.4.3 **Determination of transfer capability** is based on computer simulations of the operation of the interconnected transmission network under a specific set of assumed operating conditions. Each simulation represents a single "snapshot" of the operation of the interconnected network based on the projections of many factors. As such, they are viewed as reasonable indicators of network performance and may ultimately be used to determine Available Transfer Capability. The study is meant to capture the worst operating scenario based on the RTE experience and good engineering judgment.

L.4.3.1 **System Limits** – The transfer capability of the transmission network may be limited by the physical and electrical characteristics of the systems including thermal, voltage, and stability consideration. Once the critical Contingencies are identified, their impact on the network must be evaluated to determine the most restrictive of those limitations. Therefore, the TTC_1 becomes:

TTC_1 = lesser of {Thermal Limit, Voltage Limit, Stability Limit} following $\hat{N}\text{-}1_{worst}$

L.4.3.2 Parallel path flows will be considered in determining transfer capability and must be sufficient in scope to ensure that limits throughout the interconnected network are addressed. In some cases, the parallel path flows may result in transmission limitations in systems other than the transacting systems, which can limit the TTC between two transacting areas. This will be labeled TTC_2. Combined with C.4.3.1 above TTC becomes:

TTC = lesser of {TTC_1 or TTC_2)

L.5 Developing a Power Flow Base-Case

L.5.1 Base-cases will be selected used to model reality to the greatest extent possible including attributes like area Generation, area load, intertie flows, etc. At other times (*e.g.*, studying longer range horizons), it is prudent to stress a base-case by making one or more attributes (load, Generation, line flows, path flows, etc.) of that base-case more extreme than would otherwise be expected.

L.5.2. Power Flow Base-Cases Separated By Geographic Region
The standard RTE base-cases are split into five geographical regions in the ISO Controlled Grid including the Bay Area, Fresno Area, North Area, SDG&E Area, and SCE Area.

L.5.3. Power Flow Base-Cases Selection Methodology
The RTE determines the studied geographical area of the procedure. This determines the study base-cases from the Bay Area, Fresno Area, North Area, SCE Area, or SDG&E Area.

The transfer capability studies may require studying a series of base-cases including both peak and off-peak operation conditions.

L.5.4 Update a Power Flow Base-Case
After the RTE has obtained one or more base-case studies, the base-case will be updated to represent the current grid conditions during the applicable season. The following will be considered to update the base-cases:

- Recent Transmission Network Changes and Updates
- Overlapping Scheduled and Forced Outages
- Area Load Level
- Major Path Flows
- Generation level
- Voltage Levels
- Operating Requirements

L.5.4.1 Outage Consideration
Unless detailed otherwise, the RTE considers modeling outages of:

- Transmission lines, 500 kV
- Transformers, 500/230 kV
- Large Generating Units
- Generating Units within the studied area
- Transmission elements within the studied area

At the judgment of the RTE, only the necessary outages will be modeled to avoid an unnecessarily burdensome and large number of base-cases.

L.5.4.2 Area Load Level
Base-case demand levels should be appropriate to the current studied system conditions and customer demand levels under study and may be representative of peak, off-peak or shoulder, or light demand conditions. The RTE estimates the area load levels to be utilized in the peak, partial-peak and/or off-peak base-cases. The RTE will utilize the current ISO load forecasting program (e.g., ALFs), ProcessBook (PI) or other competent method to estimate load level for the studied area. Once the RTE has determined the correct load levels to be utilized, the RTE may scale the scale the base-case loads to the area studied, as appropriate.

L.5.4.3 Modify Path Flows

The scheduled electric power transfers considered representative of the base system conditions under analysis and agreed upon by the parties involved will be used for modeling. As needed, the RTE may estimate select path flows depending on the studied area. In the event that it is not possible to estimate path flows, the RTE will make safe assumptions about the path flows. A safe assumption is more extreme or less extreme (as conservative to the situation) than would otherwise be expected.
If path flow forecasting is necessary, if possible the RTE will trend path flows on previous similar days.

L.5.4.4 Generation Level

Utility and non-utility Generating Units will be updated to keep the swing Generating Unit at a reasonable level. The actual unit-by-unit Dispatch in the studied area is more vital than in the un-studied areas. The RTE will examine past performance of select Generating Units to estimate the Generation levels, focusing on the Generating Units within the studied area. In the judgment of the RTE, large Generating Units outside the studied area will also be considered.

L.5.4.5 Voltage Levels

Studies will maintain appropriate voltage levels, based on operation procedures for critical buses for the studied base-cases. The RTE will verify that bus voltage for critical busses in within tolerance. If a bus voltage is outside the tolerance band, the RTE will model the use of voltage control devices (e.g., synchronous condensers, shunt capacitors, shunt reactors, series capacitors, generators).

L.6 Contingency Analysis

The RTE will perform Contingency analysis studies in an effort to determine the limiting conditions, especially for scheduled Outages, including pre- and post-Contingency power flow analysis modeling pre- and post-Contingency conditions and measuring the respective line flows, and bus voltages.

Other studies like reactive margin and stability may be performed as deemed appropriate.

L.6.1 Operating Criteria and Study Standards

Using standards derived from NERC and WECC Reliability Standards and historical operating experience, the RTE will perform Contingency analysis with the following operating criteria:

Pre-Contingency

- All pre-Contingency line flows shall be at or below their normal ratings.
- All pre-Contingency bus voltages shall be within a pre-determined operating range.

Post-Contingency

- All post-Contingency line flows shall be at or below their emergency ratings.
- All post-Contingency bus voltages shall be within a pre-determined operating range.

The RTE models the following Contingencies:

- Generating Unit Outages (including combined cycle Generating Unit Outages which are considered single Contingencies).
- Line Outages
- Line Outages combined with one Generating Unit Outage
- Transformer Outages

- Synchronous condenser Outages
- Shunt capacitor or capacitor bank Outages
- Series capacitor Outages
- Static VAR compensator Outages
- Bus Outages – bus Outages can be considered for the following ongoing Outage conditions.
    - For a circuit breaker bypass-and-clear Outage, bus Contingencies shall be taken on both bus segments that the bypassed circuit breaker connects to.
    - For a bus segment Outage, the remaining parallel bus segment shall be considered as a single Contingency.
    - Credible overlapping Contingencies – Overlapping Contingencies typically include transmission lines connected to a common tower or close proximity in the same right-of-way.

L.6.2 Manual Contingency Analysis

If manual Contingency analysis is used, the RTE will perform pre-Contingency steady-state power flow analysis and determines if pre-Contingency operating criteria is violated. If pre-Contingency operating criteria cannot be preserved, the RTE records the lines and buses that are not adhering to the criteria. If manual post-Contingency analysis is used the RTE obtains one or more Contingencies in each of the base cases. For each Contingency resulting in a violation or potential violation in the operating criteria above, the RTE records the critical post-Contingency facility loadings and bus voltages.

L.6.3 Contingency Analysis Utilizing a Contingency Processor

For a large area, the RTE may utilize a Contingency processor.

L.6.4 Determination of Crucial Limitations

After performing Contingency analysis studies, the RTE analyzes the recorded information to determine limitations. The limitations are conditions where the pre-Contingency and/or post-Contingency operating criteria cannot be conserved and may include a manageable overload on the facilities, low post-Contingency bus voltage, etc. If no crucial limitations are determined, the RTE determines if additional studies are necessary.

L.7 Traditional Planning Methodology to Protect Against Violating Operating Limits

After performing Contingency analysis studies, the RTE next develops the transfer capability and develops procedures, nomograms, RMR Generation requirements, or other constraints to ensure that transfer capabilities respect operating limits.

L.8 Limits for Contingency Limitations

Transfer limits are developed when the post-Contingency loading on a transmission element may breach the element's emergency rating. The type of limit utilized is dependent on the application and includes one of the following limits:

- Simple Flow Limit - best utilized when the derived limit is repeatable or where parallel transmission elements feed radial load.
- RAS or SPS – existing remedial action schemes (RAS) or special protection systems (SPS) may impact the derivation of simple flow limits. When developing the limit, the RTE determines if the RAS or SPS will be in-service during the Outage and factors the

interrelationship between the RAS or SPS and the derived flow limit. RTE will update the transfer limits in recognition of the changing status and/or availability of the RAS or SPS.

* * *

ATTACHMENT C

California ISO
Your Link to Power

California Independent
System Operator Corporation

California ISO Discussion Paper Regarding Non-Transmission Planning Elements in FERC Order No. 890

August 17, 2007

The purpose of this Discussion Paper is to initiate discussions regarding the myriad non-transmission planning elements addressed in the Federal Energy Regulatory Commission's (FERC or Commission) Order No. 890. It outlines how the practices and procedures of the California Independent System Operator Corporation (CAISO) are either consistent with or superior to the provisions of the *pro forma* OATT, or how the CAISO intends to comply with the requirements and objectives of Order No. 890.

I. BACKGROUND

On February 16, 2007, the Commission issued Order No. 890, which FERC stated was designed to (1) strengthen the *pro forma* OATT to ensure that it achieves its original purpose of remedying undue discrimination; (2) provide greater specificity to reduce opportunities for undue discrimination and facilitate FERC's enforcement efforts; and (3) increase transparency in the rules applicable to planning and use of the transmission system.

In the final rule, the Commission declined to exempt RTOs and ISOs from the requirement of a compliance filing revising tariffs to conform with Order No. 890 or demonstrating that the approved tariff provisions of such ISOs and RTOs are consistent with or superior to the provisions of the *pro forma* OATT. The Commission did not require RTOs and ISOs to rejustify provisions of their tariff that are not affected substantively by the revisions to the *pro forma* OATT contained in Order No. 890. P 157.

Moreover, the Commission specifically recognized that some of the revisions to non-rate terms and conditions included in the final rule are not relevant to RTOs and ISOs that, for example, use bid-based locational markets and financial transmission rights to address congestion rather than the service model of the *pro forma* OATT. Importantly, the Commission affirmed, as it had stated in the NOPR, that Order No. 890 is not intended to change the market designs employed by existing RTOs and ISOs. P 158.

II. COMPLIANCE DEMONSTRATION

Each of the subjects for which the Commission required an ISO or RTO compliance filing within 210 days after publication of Order No. 890 in the Federal Register is discussed below.

A. Methodology to Assess Available Transfer Capacity(Attachment C)

Each public utility must include an Attachment C to its OATT that includes (1) a clear identification of the NERC-approved methodologies it employs (*e.g.*, contract path, network ATC, or network AFC); (2) a detailed description of the specific mathematical algorithm the transmission provider uses to calculate firm and non-firm ATC for the scheduling horizon (same day and real-time), operating horizon (day ahead and pre-schedule), and planning horizon (beyond the operating horizon); (3) a process flow diagram that describes the various steps that it takes in performing the ATC calculation; and (4) a definition of each ATC component (*i.e.*, TTC, ETC, TRM and CBM) and a detailed explanation of how each one is derived in both the operating and planning horizons. P 323. Transmission Providers also must document their processes for coordinating ATC calculations with their neighboring systems. Appendix C also must provide a narrative description detailing CBM practices, including the definition of CBM and the databases used to derive the value. P 337. Order No. 890 requires ISOs and RTOs to include their current ATC calculation methodologies in the 210-day filing, and then file a revised Attachment C sixty days after the completion of the NERC and NAESB processes to adopt the appropriate standards. P 325.

As will be described in Attachment C, the CAISO follows the general principles set forth in the NERC documents: *Transfer Capability* (May 1995)[1] and *Available Transfer Capability: Definition and Determination* (June 1996),[2] as those documents may be revised from time to time. Additional guidance in this regard is found in the methodology set forth in *Determination of Available Transfer Capability Within the Western Interconnection* (June 2001)[3] as applied in the WECC Reliability Region.

To establish the Total Transfer Capability (TTC) and Operating Capability (OTC), the Regional Transmission Engineering (RTE) Department of the CAISO Planning and Infrastructure Development (PAID) Division (in conjunction with the

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1 http://www.nerc.com/pub/sys/all_updl/docs/pubs/TransmissionTransferCapability_May1995.pdf

2 http://www.nerc.com/pub/sys/all_updl/docs/pubs/atcfinal.pdf

3 Detailed in the 2001 WSCC document "Determination of Available Transfer Capability Within the Western Interconnection", attached and also available on the WECC Website at: http://www.wecc.biz/documents/library/procedures/ATC-apprdec01.pdf

WECC, as appropriate) determines specific annual and seasonal TTC and OTC.[4] That amount is then reduced by any Transmission Reliability Margin (TRM) or Capacity Benefit Margin (CBM),[5] and by Existing Transmission Contract rights (ETC). The remaining transfer capability is available to New Firm Uses.

Firm Transmission Rights (FTR) are subtracted from that transfer capability in the Day-Ahead time frame, and the remaining transfer capability is shown on the CAISO OASIS as Available Transmission Capacity (ATC).[6] After the Day-Ahead time frame, any unused FTRs are made available as ATC through hour-ahead scheduling time frames and into real-time.

The following forecasts are published on the CAISO OASIS:

Daily (scheduled to occur by 1800 each day) which include:

- A 30 day look-ahead for scheduled outages with text reference to outages
- A 7-day look ahead with forecast OTCs
- A daily forecast of finalized OTCs and ATCs for the following Day-Ahead Market Day (2 days in advance of Operating Day).

Hourly (scheduled to occur at 40 minutes past hour) which include:

- Hour-ahead OTCs and ATCs

The CAISO calculation of ATCs (as well as OASIS postings) will be revised, as appropriate, upon revision of NERC standards.

B. OASIS Issues

1. Data that Must Be Posted

Order No. 890 identifies various types of information that must be posted on a transmission provider's OASIS in addition to existing requirements. Certain of these requirements are incompatible with, or irrelevant to, the CAISO's transmission system model and are discussed in section E. 6, below.

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[4] A copy of the CAISO Total Transfer Capability (TTC) Methodology can be found at: http://www.caiso.com/1bfe/1bfe98134fa0.pdf.

[5] Transmission Reliability Margin (TRM) and Capacity Benefit Margin (CBM) Operating Procedure S-322. Most recent version of this procedure attached, and also available at: http://www.caiso.com/docs/2003/07/17/20030717125005376O.pdf

[6] Under MRTU, CRRs are not "physical rights" and are therefore not accounted for in the ATC calculation.

The following other matters must be included: all system impact studies, facilities studies, and studies performed for the transmission provider's own network resources and affiliated transmission customers (to be made available on request for five years) P 349; the CBM amount for each path as well as the TRM values for the paths on which the transmission provider already posts ATC, TTC and CBM, P 354, and any transfer capability set aside for CBM but unused for such purpose (which must be available on a non-firm basis); a brief, but specific, narrative explanation of the reason for a change (or lack thereof) in monthly and yearly ATC values on a constrained path, when a monthly or yearly ATC value changes as a result of a ten percent change in TTC or when ATC remains unchanged at a value of zero for six months or longer. PP 369, 371.

The CAISO already substantially complies with several of these Order No. 890 requirements. The CAISO posts on its website a daily CBM report that identifies by branch group the MWs reserved by the CAISO in the Day-Ahead Market to ensure the availability of adequate transmission capacity to serve CAISO native load. The daily CBM report is used in OASIS in determining ATC for each Branch Group. While the CAISO does not currently utilize CBMs (except to accommodate those which may be embedded in ETCs), to the degree CBMs are used those quantities may be released for the Hour Ahead Market or in Real Time when existing conditions permit.

In addition, the CAISO posts on OASIS the impact and cause for every outage on a constrained path that causes a derate. This includes outages of the path's total capacity for short term, as well as extended duration. We believe this exceeds the requirement for posting narrative explanations of a significant change in ATC or lack of ATC for an extended period of more than six months. The CAISO proposes to publish system impact studies and facilities studies, to the extent that it performs any, as required by Order No. 890, subject to appropriate protection of information they contain that is confidential, proprietary, or Critical Energy Infrastructure Information (CEII).

The Commission also required ISOs to post Load data for the entire ISO footprint and for each LSE in the footprint. P 416 Currently, the CAISO prepares its own forecast for Load internal to the CAISO Control Area and posts that information on OASIS in the form of a two-day ahead forecast, day-ahead forecast, and hour-ahead forecast. The CAISO also posts actual system Load on an hourly basis. As part of the public market information to be made available under MRTU, the CAISO has proposed to maintain the system-level forecast but replace the hour-ahead forecast with five-minute forecasts in the Real-Time Market.

In order to enhance transparency for Market Participants, the CAISO would propose to post three regional day-ahead Load forecasts in addition to the forecasts of CAISO system demand just discussed. These three regional forecasts would approximate the geographic configuration of the former control

areas of the IOUs – PG&E, SCE, and SDG&E. Providing this additional granularity would be consistent with Order No. 890 and provide to transmission customers useful information that is not available today.

The CAISO, however, will seek exemption from the requirements of Order No. 890 to the extent they contemplate that the CAISO prepare an individual Load forecast for over 40 LSEs within the CAISO Control Area. It would be burdensome to prepare individual Load forecasts for numerous LSEs, which the CAISO would not otherwise utilize in its determination of system requirements.

The CAISO will not challenge the Commission's determination that Load data should be posted on OASIS for each LSE or control area footprint within the CAISO and intends to post that data to the extent that it is available to the CAISO. Based on the input we receive from stakeholders on this point, the CAISO also would consider posting actual hourly Load data for each of the three forecast regions if that would provide meaningful information to Market Participants.

2. Certificate Cost

The Commission indicated that Certificates may be appropriate for OASIS access, but the cost of access must be nominal, *i.e.*, less than $100. The CAISO does not assess a fee for OASIS access and is in compliance with this directive.

3. Critical Energy Infrastructure Information (CEII)

The Commission required that transmission providers establish a standard disclosure procedure for CEII required to be disclosed by Order No. 890. The CAISO treats CEII received from Participating Transmission Owners, Generating Unit Owners, and other Market Participants as confidential information subject to CAISO Tariff Section 20. That provision requires the CAISO to maintain the confidentiality of such information and authorizes its disclosure to third parties only when there is a legal requirement to do so, advance notice has been provided to the affected Market Participant, and appropriate protective terms apply to the receiving party. Under the umbrella of this Tariff authority, the CAISO will develop a formal procedure for identifying CEII and providing access to it by third parties, with necessary safeguards, in compliance with Order No. 890.

C. Energy and Generator Imbalance Charges

Energy imbalance service is service provided by the transmission provider to make up the difference over a single hour between the scheduled and actual delivery of Energy to Load within the control area. P 627. Under Order No. 888, Energy Imbalance accommodates a degree of Load variation through a Load deviation band, outside of which customers are subject to a cost for exceeding the deviation band. The Commission also has permitted the transmission

provider to include a provision for Generator balancing service agreements in the individual interconnection agreements (Order No. 2003).

In Order No. 890, the Commission adopts the three-tiered approach to imbalance penalties with a graduated bandwidth, and further provides that intermittent resources are exempt from the third tier. The Commission believes that this graduated approach recognizes the link between escalating deviations and potential reliability concerns and adheres to the three principles it adopted in Order No. 890: (1) the charges must be based on incremental cost or some multiple thereof; (2) the charges must provide an incentive for accurate scheduling; and (3) the provisions must account for the special circumstances presented by intermittent Generators and their limited ability to precisely forecast or control Generation levels. P 663.

The provisions of Order No. 890 regarding charges for Energy and Generator imbalances are not compatible with ISO and RTO markets where imbalances are resolved through market mechanisms. The Commission has recently approved the CAISO's transition in its markets to a Locational Marginal Pricing (LMP) energy market and congestion management paradigm under the CAISO's Market Redesign and Technology Upgrade (MRTU). The energy imbalance market and pricing structure under the approved LMP-based markets comply with the three imbalance charge principles adopted in Order No. 890 and are consistent with or superior to the specific imbalance Energy structure set forth in the *pro forma* OATT.

Under MRTU, the CAISO will operate an LMP-based, two settlement energy market in which market participants may resolve all imbalances through the Real-Time Market as optimized, and settle financially such imbalances based on Locational marginal prices ("LMPs") derived from that optimization. Under the FERC-approved MRTU construct, the CAISO will first clear demand and supply and manage transmission congestion based on bids, including self-schedules submitted to the Day-Ahead Market. The Day-Ahead Schedule for Energy is financially binding based on LMPs derived from the Integrated Forward Market (IFM), which incorporates the energy market component of the Day-Ahead Market structure.[7] Subsequently, during the real-time (*i.e.*, the actual operating day) the Real-Time Market ("RTM") clears submitted supply bids against the CAISO's short-term demand forecast, adjusted for real-time and

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[7] Under MRTU the Day-Head Market Structure is comprised of three major components conducted in the following sequence: (a) two "pre-IFM" passes which perform local market power mitigation and commitment and dispatch of RMR resources, (b) the IFM which clears submitted demand and supply bids and results in financially binding energy and ancillary services schedules, and (c) the Residual Unit Commitment (RUC) process which enables the CAISO to commit additional supply resources if needed to ensure that adequate resources will be on-line in real time to cover any gap between the level of supply and demand scheduled in the IFM and the CAISO's load forecast for the next day.

interchange schedules, every five minutes to determine the optimal RTM dispatch for every five-minute interval. The short-term demand forecast used for this purpose is derived from a telemetry-based state estimator representation of actual network conditions. The Real-Time Market therefore provides parties with an opportunity to financially clear Imbalance Energy based on the CAISO's actual Imbalance Energy needs for operating the transmission system. Imbalance Energy is defined as the deviation of Supply or Demand from its Day-Ahead Schedule that is either a positive or negative amount, measured by metered Generation, metered Load, and Real-Time Interchange schedules.

Under the CAISO MRTU Tariff (Section 11.5) the CAISO provides a Real-Time settlement structure that affords parties an opportunity to settle through the LMP-based RTM any such positive or negative deviations from their Day-Ahead Schedules. Imbalance Energy is separated out between Instructed Imbalance Energy (IIE) and Uninstructed Imbalance Energy (UIE) to distinguish between deviations from the Day-Ahead Schedule resulting from Dispatch Instructions issued by the CAISO (IIE) as opposed to deviations occurring due to actions taken by the Load or Generation resource that do not reflect CAISO Dispatch Instructions (UIE). IIE dispatched through the Real-Time Market is settled at the Resource-Specific Settlement Interval LMP, which is a weighted average LMP for a specific resource within each Settlement Interval.[8] The CAISO deems delivered the IIE that it dispatches. The CAISO then charges or pays Scheduling Coordinators for any UIE (the difference between the delivered amounts and its IIE. UIE is accounted for in two tiers: (1) Tier 1 UIE is the deviation from the resource's IIE; and (2) Tier 2 UIE is the quantity deviation from the resource's Day-Ahead Schedule.

This settlement structure of Imbalance Energy obviates the need to develop separate imbalance energy schedule charges based on incremental or decremental costs. The MRTU pricing and settlement of Imbalance Energy provides a superior method to the revised OATT structure in that it provides a transparent pricing mechanism that enables the CAISO to track and post costs associated with dispatch and commitment to meet Imbalance Energy needs. Imbalance Energy is settled based on the LMPs derived from the RTM optimization, which are market-based locational marginal prices derived from the clearing of Supply Bids against a telemetry-based short-term load forecast that reflects actual system conditions. Spot markets providing transparent pricing mechanisms, such as the LMP-based markets being implemented by the CAISO, enable market participants to meet their Energy needs through efficient means other than bilateral transactions, without hampering their ability to rely on bilateral transactions if they so choose. Compared to the revised OATT structure, the

[8] A Settlement Interval in the RTM is a ten-minute interval comprised of two consecutive five-minute dispatch intervals. Thus each Operating Hour is divided into 12 Dispatch Intervals and six Settlement Intervals, and the Settlement Interval LMP is the weighted average of two consecutive Dispatch Internal LMPs.

economic dispatch conducted by the CAISO through the RTM is a more economic, transparent and efficient method for calculating the cost of serving deviations from the Day-Ahead Schedule. Such cost is based on the combination of redispatch costs, capacity commitment costs and additional regulating reserve costs, and are appropriately allocated to parties through the combination of the LMPs on which the Imbalance Energy is settled, plus uplifts for day-ahead and real-time unit commitments, and charges for ancillary services.

To the extent resources are committed by the CAISO to meet Imbalance Energy needs, any associated commitment costs incurred by such resources are guaranteed recovery of submitted bid costs for Energy, Start-up and Minimum Load through the Bid Cost Recovery mechanism. The CAISO's Bid Cost Recovery mechanism under MRTU separates out commitment of resources resulting from the Integrated Forward Market, the Residual Unit Commitment and the Short Term Unit Commitment conducted as part of the RTM. The latter two commitment processes are directed specifically at meeting Imbalance Energy needs, *i.e.*, the Energy needed to meet the forecast or actual Demand above and beyond that submitted and cleared in the IFM as reflected in the Day-Ahead Schedule. Any uplift associated with RUC commitment costs is allocated based on cost causation principles using the tiered allocation approach which allocates such uplift first to metered Demand that deviates from the CAISO Demand scheduled in the Day-Ahead Schedule. Any remaining uplift is then allocated in a second tier to all metered CAISO Demand. This approach to allocating RUC commitment costs provides parties with an incentive to schedule their usage of the grid in the Day-Ahead Market. In addition, the CAISO is developing an interim under-scheduling measure to encourage parties to schedule their demand in the Day-Ahead as required by FERC until the CAISO has adopted convergence bidding. The allocation of uplift costs associated with resources committed by CAISO in the RUC process as well as the under-scheduling measures promotes good scheduling practices by users of the grid as it provides the opportunity to avoid costs associated with meeting Load deviations from Day-Ahead Schedules.

Consistent with the reformed *pro forma* OATT, the CAISO MRTU Tariff recognizes the special circumstances faced by intermittent resources and appropriately treats such resources differently in its settlement of deviations from the Day-Ahead Schedule (Section 11.12). More specifically, the CAISO has implemented a Participating Intermittent Resource Program (PIRP) which allows such resources to settle their UIE based on their net balance over the month, at the monthly weighted average LMP, of their deviations from their Real-Time self-schedules submitted by 75 minutes prior to the start of each operating hour. This allows such resources to utilize a more accurate hour-ahead generation forecast as the basis of measuring deviations and thereby avoid being subject to charges associated with hourly variations from the Day-Ahead Schedule, and allows them

to smooth out their variations -- which are often due to uncontrollable weather conditions -- over the month.

D. Credits for Network Customers

Under Order No. 888, Network customers are eligible for credits for facilities if (1) the facilities are integrated into the operations and planning of the transmission provider to serve all customers and, (2) if new, are jointly planned and constructed. P 729. Order No. 890 eliminates the requirement for joint planning, finding that this requirement discourages transmission providers from engaging in coordinated planning, but specifies that the facilities must be such that they would be eligible for inclusion in the transmission provider's transmission revenue requirement if they were owned by the transmission provider. PP 730, 735. The new test for determining credits will apply only to transmission facilities added subsequent to the effective date of the Final Rule (May 14, 2007). P 758.

The Commission declined to exempt all ISOs and RTOs generically from the requirement regarding credits for network transmission facilities, but the existing tariffs of certain ISOs or TRO had been determined to be consistent with Order No. 888 requirements and that each RTO and ISO would have the opportunity on compliance to demonstrate that such determinations continue to be the case.

The Commission has previously addressed arguments that non-Participating Transmission Owners should receive network customer credits against their CAISO Access Charges for their transmission facilities that are "integrated" with a Participating Transmission Owner's transmission system in Opinion No. 445.[9] Because the CAISO can provide service only on those facilities under its operational control, that meant that facilities can be integrated with the CAISO system -- and the customer can receive a credit -- *only* if the customer places the facilities under the CAISO's operational control, *i.e.*, becomes a Participating Transmission Owner.

Order No. 890 does not alter the requirement that, in order to be eligible for a credit, a customer's facilities must be integrated into the operations and planning of the transmission provider to serve all customers. The CAISO's transmission service model has not changed since Order No. 445. With one exception, it continues to be the case that the CAISO, under the terms of its Tariff, can provide service only on facilities placed under its Operational Control[10]. This ensures that the CAISO has the necessary authority to provide

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[9] *Southern California Edison Co.*, 92 FERC ¶ 61,070 (2000).

[10] The one exception involves the portion of the Pacific AC Intertie that is owned by the Western Area Power Administration ("Western"). Under the Transmission Exchange Agreement, the CAISO is able to provide service on capacity owned by Western and Western is able to

nondiscriminatory open-access transmission on all such facilities and to incorporate those facilities into is planning to ensure continued reliable service. Customers that wish to make their facilities available to the CAISO such that the CAISO can provide service to customers on those facilities must become Participating Transmission Owners; upon doing so they receive the ultimate credit – open-access to the remainder of the CAISO Controlled Grid at a single non-pancaked rate as well as return of their Transmission Revenue Requirement.

Because the requirement that customers desiring credit become Participating Transmission Owners furthers nondiscriminatory open-access and reliable service, and because Participating Transmission Owners are fully compensated under the CAISO Tariff, the CAISO Tariff remains consistent with or superior to the *pro forma* OATT in this regard.

E. Order No. 890 Revisions that Are Inconsistent with the CAISO's Transmission Service Model

As discussed above, and as the Commission recognized in Order No. 890, many of the revisions to the *pro forma* OATT are specific to a transmission service model under which a public utility provides network and firm and non-firm point-to-point transmission service. Rather than offering the two traditional transmission services, the CAISO offers a single "daily" transmission reservation service that is available to all eligible customers. The open access transmission service provided by the CAISO provides the advantages of traditional network service but with more flexibility. The *pro forma* OATT permits users, on a first-come first-served basis, to make long-term reservations of available transmission capacity. In contrast, with the exception of certain transactions scheduled pursuant to contracts that preceded the existence of the CAISO (*i.e.*, so-called Existing Transmission Contracts), all Energy is treated as "new firm use" on a day-to-day basis. There are no long-term reservations of physical transmission capacity under the CAISO's service model. All users of the CAISO Controlled Grid must schedule their use each day and cannot reserve available transmission capacity beyond the Day-Ahead timeframe, thus ensuring optimal nondiscriminatory use of available capacity.

Under the CAISO's transmission service model, Scheduling Coordinators ("SCs") submit Bids (including Self-Schedules) for Supply or Demand to the CAISO. SCs have equal access to all available capacity every day. In contrast to traditional transmission services provided under the *pro forma* OATT, customers that take transmission service under the Tariff need not formally designate network resources. The CAISO utilizes a bid-based, security constrained economic dispatch/re-dispatch process to balance real-time Control

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provide service on certain capacity under the Operational Control of the CAISO. This arrangement arose in the unique context of the California-Oregon Intertie.

Area requirements, utilize the full capability of the grid to maximize the transmission service that can be provided to eligible customers, provide customers with maximum flexibility to schedule transactions, and ration capacity when demand for transfer capability exceeds supply. Thus, the CAISO's transmission service provides comparable treatment to all customers and encourages efficient and flexible use of the transmission system.

The Commission has recognized that the CAISO's market design provides customers with "physical" rights to inject Energy at a source and withdraw Energy at a sink through either the submission of self-schedules or a price Bid that indicates a willingness to accept the spot market clearing price.[11] In addition to these "physical" rights, under MRTU, the CAISO provides financial rights to market participants in the form of Congestion Revenue Rights ("CRRs"). The "source-to-sink" CRRs offered by the CAISO allow market participants to obtain financial protection from the risk of congestion charges associated with the LMP congestion management design in the CAISO's Day-Ahead Market. Also, a CRR Holder will receive revenue associated with the allocated or auctioned CRR on a particular CRR Source/Sink combination regardless of any actual physical transmission of Energy between the designated source and sink. The CAISO offers both Short-Term CRRs[12] and Long-Term CRRs.[13]

The CAISO explains in greater detail below how various revisions to the *pro forma* OATT included in Order No. 890 either do not apply to or are incompatible with the CAISO's "daily" transmission service model. As such, these provisions of Order No. 890 should not be applied to the CAISO because the CAISO's service model is consistent with or superior to the transmission service model of the *pro forma* OATT. Further, the Commission has previously found that the CAISO's transmission service model, including the CAISO's financial rights scheme, is consistent with or superior to the physical rights model under the *pro forma* OATT.[14]

The CAISO does not believe that anything in Order No. 890 changes the Commission's previous conclusions or requires the CAISO to modify its transmission service scheme. The changes to the traditional network and point-to-point services that the Commission adopted in Order No. 890 simply do not apply to or are otherwise incompatible with the CAISO's service model, a service

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11 *California Independent System Operator Corp.*, 116 ¶ 61,274 at P 898 (2006), *order on reh'g*, 119 FERC ¶ 61,076 (2007) ("MRTU Order").

12 Short-term CRRs consist of monthly CRRs which have a term one month and are differentiated by time-of-use periods (*i.e.*, on-peak and off-peak) and seasonal CRRs which have a term of three-months and are differentiated by time-of-use period each day within a season.

13 Long-term CRRs have a renewable term of ten years.

14 September 21 MRTU Order at P 899.

model that the Commission has found to be consistent with or superior to the Order No. 888 service model.

1. Price Cap on Reassignment of Capacity

Order No. 888 required transmission providers to permit the reassignment of all or part of a holder's firm point-to-point Capacity to any eligible customer, but capped the rate for reassignment because it did not find the market sufficiently competitive. P 778. Order No. 890 eliminates the price cap and allows for negotiated rates between the customer and its assignee. PP 808-810.

The CAISO's existing Tariff does not contain any Capacity reassignment provisions, and Order No. 890's revisions regarding the reassignment of capacity are incompatible with (and unnecessary given) the form of service provided under the CAISO Tariff. In that regard, the CAISO does not provide long-term, reserved point-to-point service. Instead, the CAISO provides a daily transmission service that is available to all potential customers. Thus, Capacity reassignments are not applicable nor necessary. Under these circumstances, the CAISO's Commission-approved service model is consistent with or superior to the *pro forma* OATT.

2. Operational Penalties

Order No. 890 provides that a transmission customer will be subject to unreserved use penalties in any circumstance where the transmission customer uses transmission service that it has not reserved. PP 834-40. The Order also provides guidance for the pricing of penalties and the distribution of proceeds. PP 846-48, 859-62. Because the MRTU Tariff does not provide for the reservation of transmission service, these provisions do not apply to the CAISO's transmission service model. Scheduling Coordinators schedule service on the CAISO grid on a daily basis through their economic bids or self-schedules; they do not reserve Capacity. As the Commission recognized in Order No. 890, unreserved use penalties are based on the transmission Capacity that is reserved, not on the transmission service that has been scheduled. P 837.

3. Rollover Rights

Order No. 890 modifies the rollover provision in the *pro forma* OATT, which grants an ongoing right to transmission customers to renew or "rollover" their contracts, and which will apply to contracts that have a minimum term of five years, rather than the current minimum term of one year.

The CAISO's Tariff does not contain a Right of First Refusal ("ROFR") provision, and a ROFR provision is incompatible with the CAISO's transmission service model. The Commission has found on two prior occasions that the concept of a ROFR is not compatible with the CAISO's daily transmission service model (and that customers should take service under the CAISO Tariff upon

contract expiration), and the Commission's findings have been upheld by the D.C. Circuit. Order No. 890 does not undermine the premise for the Commission's and the D.C. Circuit's decisions regarding the non-applicability of the ROFR to the CAISO. Because Order No. 890 actually seeks to limit, not expand, rollover rights and nothing in Order No. 890 alters the basis on which these prior decisions were made, the CAISO does not believe that any changes to its Tariff are necessary.

4. Processing of Transmission Delivery Service Requests, Clustering Requests, and Transmission Service Request Priority

Section 17.5 of the *pro forma* OATT requires transmission providers to process request for transmission service in a timely manner following submission of a completed application. Section 18.4 requires the transmission provider to respond to transmission customer requests for the availability of firm and non-firm transmission capacity on a timely basis. Sections 19 and 32 of the *pro forma* OATT provide deadlines for transmission providers to complete system impact studies and facilities studies for point-to-point and network services, respectively.

Order No. 890 also requires Transmission Providers to (1) post on their OASIS sites on a quarterly basis a detailed set of performance metrics related to the processing of transmission service requests and the service-related studies they conduct and (2) submit a filing to the Commission to the extent they fail to process 20% of non-affiliates' studies outside of the due diligence deadline. Order No. 890 at PP 1308-23. A Transmission Provider must include tariff language describing how it will process a request to cluster request studies and how it will structure the transmission customers' obligations when they have joined a cluster. PP 1370-71.

Order No. 890 also provides that pre-confirmed transmission service requests (for non-firm point-to-point service and short-term firm point-to-point service) will have priority over non-confirmed requests submitted in the same time period. *Id* .at P 1401. In addition, longer duration requests for point-to-point transmission service will continue to have priority over shorter duration requests, with pre-confirmation serving as a tie-breaker for requests of equal duration. *Id.*

The aforementioned requirements do not apply under the CAISO's transmission service model. The CAISO does not have an application process for requesting transmission service, nor does it offer transmission service beyond the day-ahead timeframe. Under MRTU, Scheduling Coordinators are able to submit Bids, including Self-Schedules, to reflect their intended use of the grid. These schedules are all afforded equal opportunity to use the grid to the extent that the CAISO has sufficient economic Supply Bids to clear Bids (in the Day-Ahead) or the Demand forecast (Real-Time). In the event that the CAISO cannot

clear the market economically, these schedules are pro-rated depending on the scheduling priority assigned to these schedules.

Because customers do not request transmission service through a formal application process, the CAISO does not conduct system impact studies and facilities studies in connection with individual requests for transmission service.[15] Instead, grid expansion and upgrade studies are conducted through the CAISO's formal transmission planning and Generator interconnection processes. This allows for comprehensive and integrated planning for the entire CAISO-Controlled Grid. Finally, the priorities between transmission services promulgated in the Final Rule do not apply to the CAISO because the CAISO offers only one type of transmission service, and there are no long-term transmission subscriptions.

5. Designation of Network Resources and Clarifications regarding Network Service

Order No. 890 makes a number of clarifications related to the types of arrangements that may be designated as network resources (Sections 30.1 and 30.7 of the *pro forma* OATT) the process for verifying whether agreements meet the requirements in the *pro forma* OATT (Section 29.2 of the *pro forma* OATT), and the requirement for transmission providers to designate and undesignate (Section 30.3 of the *pro forma* OATT) network resources on OASIS. PP 90, 1452-1461. The Commission also clarifies that secondary service[16] under Section 28.4 of the *pro forma* OATT must be requested in accordance with Section 18 of the *pro forma* OATT, including the timing restrictions set forth in Section 18.3 so that network customers cannot lock-in such service in advance of other non-firm services. *Id.* at PP 1601,1606.

The new requirements for network service that the Commission has promulgated in Order No. 890 are not applicable to the CAISO's transmission service model, and the CAISO Tariff does not contain any of the tariff provisions that the Commission proposes to modify. These requirements are relevant to the provision of network service and the relative priority of network and firm and non-firm point-to-point service. The CAISO has only one type of transmission service, *i.e.*, new firm use, and that service is equally firm for all transmission customers. Further, each day transmission customers schedule the Supply resources they desire to serve their scheduled Load and/or exports for that day. The designation of network resources and requests for secondary service are not neither needed nor applicable under the CAISO's service model.

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[15] Also, the CAISO does not have tariff provisions that equate to Sections 17.5, 18.4, 19 and 32 of the pro forma OATT.

[16] Secondary service allows a network customer to deliver Energy to its network Load from non-designated network resources on an as-available basis without an additional charge.

6. Certain OASIS and Information Requirements

In Order No. 890, the Commission maintained the requirement (found in Section 37.6(e)(2) of its Regulations) that a transmission provider must post the reason for a complete denial of service and extended the requirement that a transmission provider maintain information supporting the denial of service from three years to five years. P 376. Further, the Commission expanded its OASIS regulations (Section 37.6(e)(2)(ii)) to require a transmission provider to maintain and make available on request the information supporting the disposition of its own network resource designations and make such information available to any eligible customer not just to that customer denied service. *Id.* The Commission stated that these new requirements would help ensure that customers receive transmission service that is not unduly discriminatory. *Id.*

The Commission also required that transmission providers and network customers use OASIS to request designation of new network resources and to terminate designation of network resources; this information must be posted on OASIS for 90 days and be available for audit for five years. P 386.

The aforementioned requirements and changes to existing regulations are not applicable to the CAISO's transmission service model which, as described above, does not include formal transmission service requests or network resource designations/terminations.

Because the CAISO's transmission service model is significantly different than those contemplated in the *pro forma* OATT, the Commission has previously granted the CAISO a waiver from existing OASIS standards. Given that the CAISO's basic transmission service model has not changed, the CAISO believes the reasons underlying the previously granted waivers of the OASIS provisions pertaining to transmission service requests and denials are still valid.

The CAISO will request that the Commission grant a waiver of the new requirement that network service designations and terminations be effectuated through OASIS because the need for network resource designations and terminations does not apply to the CAISO service model.

F. Conditional Firm Service and Planning Redispatch

Order No. 890 requires that when requested firm point-to-point transmission service is not available, and transmission customers are willing to pay for a system impact study, transmission providers must offer a "conditional firm" service (which identifies either defined system conditions or an annual number of hours during which service will be conditional, and allows the customer to select one of them) and a planning redispatch service. PP 977-82.

However, the Commission concluded that it would be inappropriate to require that RTOs and ISOs with real-time Energy markets adopt conditional firm

point-to-point service. P 992. Because the CAISO operates a real-time Energy market, the CAISO is not required to implement conditional firm point-to-point service in order to comply with Order No. 890.

In Order No. 890, the Commission also directed ISOs and RTOs that already provide planning redispatch[17] pursuant to Section 13.5 of the *pro forma* OATT to modify the relevant provisions of their tariffs consistent with the directives in the Final Rule. However, the Commission concluded that RTOs and ISOs whose tariffs have previously been found to be just and reasonable without the inclusion of section 13.5 of the Order No. 888 *pro forma* OATT, which provide for planning redispatch, need not amend their tariffs at this time to include planning redispatch service.

The MRTU Tariff does not include a Section 13.5 planning redispatch provision (or substitute provision) and has been approved as just and reasonable. Therefore, Order No. 890 does not require the CAISO to modify its Tariff in this regard.

G. Transmission Curtailments

Transmission providers, working through NAESB, must develop a detailed template for posting of additional information on OASIS regarding firm transmission curtailments. The posting must include all circumstances and events contributing to the need for a firm service curtailment, specific services and customers curtailed (including the transmission provider's own retail Loads), and the duration of the curtailment. PP 1626-1632.

The CAISO currently does not have any obligations on this matter until NAESB acts.

H. OASIS Posting of Cost of Re-dispatch

As part of its requirements regarding conditional firm transmission and planning redispatch, Order No. 890 requires that transmission providers post on OASIS their monthly average cost of redispatch for each internal congested transmission facility or interface over which it provides redispatch using planning redispatch or reliability redispatch under the *pro forma* OATT. To demonstrate the range of redispatch costs, the Commission directs transmission providers to post a high and low redispatch cost for the month for each of these same transmission constraints. PP 1156-63.

Although the CAISO is not subject to the requirements regarding conditional firm transmission and planning redispatch, the CAISO believes that

[17] Planning redispatch is a product that Order No. 888 required transmission providers to use, in certain circumstances, to create additional transmission capacity to accommodate a request for firm point-to-point transmission service.

transparency of the costs of redispatch is a necessary part of open and nondiscriminatory transmission access. Under MRTU, the CAISO will post LMP prices derived from the Day-Ahead and Real-Time Market, which reflect real-time, transparent, economic dispatch for Energy. In addition, the CAISO will dispatch the price of capacity committed in the Day-Ahead through the Residual Unit Commitment as well as the Ancillary Services Marginal Prices associated with each Ancillary Services as cleared through its Day-Ahead and Real-Time Markets.

I. Posting of all Rules, Standards, and Practices and of Change Management Process

Order No. 890 requires that Transmission Providers post on their public websites all rules, standards, or business practices that relate to the terms and conditions of transmission service and how that transmission service is provided to customers, and provide a link to this information on OASIS. PP 1649-61. It also requires that Transmission Providers must post on their public websites a statement of the process by which the Transmission Providers will amend these rules, standards, and practices that are accessible via OASIS. P 1655.

Consistent with the Commission's direction in its orders concerning the MRTU Tariff,[18] the CAISO has developed Business Practice Manuals ("BPMs") containing all rules, standards, or business practices that relate to the terms and conditions of transmission service that the CAISO does not believe need be included in the CAISO Tariff. The BPMs were developed through an extensive stakeholder process and are now subject to a FERC technical conference to evaluate whether any of the included terms and conditions included in the BPMS should instead be included in the MRTU Tariff. All BPMs are posted on the CAISO website.

The CAISO also has a number of Operating Procedures, all of which are identified in postings on the CAISO website. Some, but not necessarily all, of these Operating Procedures "relate to the terms and conditions of transmission service." The change procedure for Operating Procedures is described in Operating Procedure A-02, which is posted on the CAISO website. The CAISO is currently considering whether any revisions to the change procedure are advisable.

Operating procedure A-02 provides for notice and comment on new or revised CAISO Operating Procedures whenever there is sufficient time to obtain external review and obtain comments prior to implementation of the procedure. The MRTU Tariff provides for 30 days notice except when emergencies require a shorter notice, in which case the CAISO must provide as much notice as is reasonably practical. If there is insufficient time for stakeholder review prior to

[18] *California Independent System Operator Corp.*, 116 FERC ¶ 61,274 at P. 1370.

implementation, the CAISO receives comments after the implementation. Indeed, if a party misses the opportunity to respond to the draft procedure there is always the opportunity to provide comments anytime after the time that the procedure becomes effective.

All Operating Procedures are currently identified in postings on the CAISO website. In a limited number of cases, however, the text is not posted. These Operating Procedures have restricted distribution due to system security, market sensitivity, or proprietary reasons. Although, because of an oversight, the MRTU Tariff does not provide an exception to posting requirements for Operating Procedures, the CAISO intends to file an amendment to correct this inconsistency. The categories and procedure for determining restricted distribution are included in Operating Procedure A-03 and summarized below.

The CAISO restricts distribution of Operating Procedures for system security if the information contained in them could be used to threaten or jeopardize either 1) the reliability or security of the CAISO Controlled Grid, or 2) the security of personnel operating the CAISO Balancing Authority or internal power systems. Distribution is for market sensitivity if the procedures contain information that could financially harm competitive markets or other parties if that information was obtained by external entities. Finally, procedures are restricted if they include proprietary information that is 1) specific to a single entity or party such as names and personal contact information, 2) contract information, or 3) provided to the CAISO under a confidential basis.

Each CAISO Operating Procedure is evaluated for these concerns to determine if any distribution restrictions are necessary. If certain information must be protected, the CAISO attempts to segregate the confidential material in an attachment to facilitate distribution management of this material and to allow public distribution of the basic requirements and process included in the Operating Procedure. If the confidential material cannot be segregated, then the CAISO evaluates whether the sensitive material can be deleted from the distribution copy to create an abbreviated version. If there are no remaining sensitive areas then the Operating Procedure is posted on the CAISO website.

A party can obtain partial information within a restricted procedure if the requesting party contacts the CAISO and explains the information they seek, unless the information they are requesting is the reason for the restrictions. In certain cases the CAISO Legal Department may need to be consulted for the applicability of confidentiality statements and non-disclosure agreements.

The Commission historically has recognized the importance of maintaining the confidentiality of these types of Operating Procedure, for example, granting protective orders in proceedings when such procedures are at issue. To the extent that Order No. 890 requires posting the text of such procedures, the CAISO will seek waiver of such requirements of Order No. 890.

J. Creditworthiness Procedures (Attachment L)

As discussed in Section II.I, above, Order No. 890 establishes posting requirements for procedures. Order No. 890 also requires each transmission provider to include in its OATT only those rules, standards, and practices that significantly affect transmission service.[19] Specifically, with regard to a transmission provider's credit requirements, Order No. 890 amends the *pro forma* OATT to include a new Attachment L. Order No. 890 also states that each transmission provider may supplement its Attachment L with a credit guide or manual posted on its OASIS.[20]

The provisions of Section 12 of the CAISO Tariff, as modified by the CAISO in the proceeding for Docket No. ER06-700, satisfy these Commission directives concerning the inclusion of credit procedures in a transmission provider's transmission tariff. In Docket No. ER06-700, the CAISO filed an amendment to the CAISO Tariff to substantially revise its credit requirements. Subsequently, in response to Commission orders in the proceeding, the CAISO submitted compliance filings containing further revisions to the credit requirements.[21] *Inter alia*, the Commission provided direction in its orders on the provisions concerning credit requirements that the CAISO must include in the ISO Tariff, as distinguished from the provisions that the CAISO may include in its Credit Policy & Procedures Guide (Credit Guide), which is available on the CAISO Website and the CAISO's OASIS.[22] The CAISO has complied with the Commission's orders and has done so consistent with the Commission's directives concerning which provisions on credit requirements must be included in the transmission provider's tariff and which provisions can be included in a credit guide available on the transmission provider's OASIS under Order No. 890.

The CAISO Tariff, as modified in Docket No. ER06-700, contains Commission-approved provisions regarding each of the subjects that Order No.

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19 Order No. 890 at P 1649. The Commission affirmed the use of the "rule of reason" to determine what rules, standards, and practices significantly affect transmission service and, as a result, must be included in the transmission provider's OATT. *Id.*

20 Order No. 890 at P 1657.

21 *See* March 2006 Credit Policy Amendments to the Tariff of the California Independent System Operator Corporation, Docket No. ER06-700-000 (Mar. 7, 2006); *California Independent System Operator Corp.*, 115 FERC ¶ 61,170 (2006); California Independent System Operator Corporation Compliance Filing and Status Report, Docket No. ER06-700-003 (July 11, 2006); *California Independent System Operator Corp.*, 119 FERC ¶ 61,053 (2007); California Independent System Operator Corporation Compliance Filing, Docket No. ER06-700-004 (May 31, 2007); *California Independent System Operator Corp.*, 120 FERC ¶ 61,147 (2007).

22 *See* California Independent System Operator Corp., 115 FERC ¶ 61,170, at PP 20-22, 32, 34, 36, 42-44; California Independent System Operator Corp., 119 FERC ¶ 61,053, at PP 15-17, 37-38, 47. When the MRTU Tariff goes into effect, a modified version of the Credit Guide will become the Business Practice Manual for Credit Management.

890 requires to be addressed in new Attachment L. These CAISO Tariff provisions, and the subjects they address, are the following:

- Section 12.1.1.1 contains the qualitative and quantitative criteria that the CAISO uses to determine the level of unsecured credit required for each Market Participant, *i.e.*, the Market Participant's Unsecured Credit Limit. Further, Section 12.1.2 states that secured credit (*i.e.*, a Financial Security Amount) is required to the extent that a Market Participant's Unsecured Credit Limit is insufficient to cover the Market Participant's financial liability (*i.e.*, the Market Participant's Estimated Aggregate Liability).[23]

- Section 12.1.1A.2 contains the CAISO's process for calculating a Market Participant's Unsecured Credit Limit, and Section 12.1.2 contains the CAISO's process for determining the Financial Security Amount that is required from a Market Participant.

- Section 12.1.2 lists the acceptable types of Financial Security that are acceptable under the CAISO Tariff.

- Sections 12.1.1, 12.1.1.1, and 12.4 contain the CAISO's procedures for providing Market Participants with reasonable notice of changes in Unsecured Credit Limits and Financial Security posting requirements.[24]

- Sections 12.1.1 and 12.4.2 contain the CAISO's procedures for providing Market Participants, upon request, with a written explanation for any change in Unsecured Credit Limits or Financial Security posting requirements.[25]

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[23] The sum of a Market Participant's Unsecured Credit Limit and its Financial Security Amount is its Aggregate Credit Limit. Each Market Participant is required to maintain an Aggregate Credit Limit that is equal to or greater than its Estimated Aggregate Liability. *See* CAISO Tariff, §§12.1, 12.1.2.

[24] "In the event the ISO determines that the Unsecured Credit Limit of a Market Participant or FTR Bidder must be reduced as a result of a subsequent review, the ISO shall notify the Market Participant or FTR Bidder of the reduction . . . ." CAISO Tariff, § 12.1.1. "A Market Participant or FTR Bidder, upon request, will be provided a written analysis as to how the provisions in Section 12.1.1A and this section were applied in setting its Unsecured Credit Limit." CAISO Tariff, § 12.1.1.1. "Following the date on which a Market Participant commences trading, if a Market Participant's Estimated Aggregate Liability, as calculated by the ISO, at any time exceeds its Aggregate Credit Limit, the ISO shall direct the Market Participant to post an additional Financial Security Amount within five (5) Business Days that is sufficient to ensure that the Market Participant's Aggregate Credit Limit is at lease equal to its Estimated Aggregate Liability. The ISO shall also notify a Market Participant if at any time its Estimated Aggregate Liability exceeds 90% of its Aggregate Credit Limit." CAISO Tariff, § 12.4.

[25] "In the event the ISO determines that the Unsecured Credit Limit of a Market Participant or FTR Bidder must be reduced as a result of a subsequent review, the ISO shall notify the Market Participant or FTR Bidder of the reduction, and shall, upon request, also provide the Market Participant or FTR Bidder with a written explanation of why the reduction was made."

- Sections 12.4.1 and 12.4.2 provide a reasonable opportunity for Market Participants to contest determinations of Unsecured Credit Limits or Financial Security posting requirements.[26]

- Section 12.4 provides a reasonable opportunity for Market Participants to post additional Financial Security, including for the purpose of curing any determination by the CAISO that the Market Participant is not creditworthy.

Because the CAISO Tariff provisions include all of the material required for Attachment L, the CAISO believes that these CAISO Tariff provisions are consistent with or superior to the *pro forma* OATT. Moreover, the CAISO Tariff provisions satisfy the rationales stated in Order No. 890 for requiring the filing of credit requirements. In Order No. 890, the Commission stated that it was directing each transmission provider to include its basic credit requirements in Attachment L in order to (1) to ensure that all customers have clear information as to the credit process and standards used by the transmission provider and (2) to give customers an opportunity to comment on any changes to the standards proposed by the transmission provider in a rate filing with the Commission.[27]

K. Revised OATT Definitions

The CAISO is revising the terms Affiliate and Good Utility Practice as they appear in the MRTU Tariff, consistent with Order No. 890. The terms Non-Firm Sales and Pre-Confirmed Application that are adopted in Order No. 890 do not appear in the MRTU Tariff. Because they are not relevant to the CAISO's service model, which, as discussed above, is consistent with or superior to the *pro forma* OATT, the CAISO has not incorporated them in the MRTU Tariff.

CAISO Tariff, § 12.1.1. "The following steps are required for a Market Participant to dispute a Financial Security request resulting from the ISO's calculation of Estimated Aggregate Liability: (1) Request by the Market Participant to review the ISO calculation . . . ." CAISO Tariff, § 12.4.2.

[26] "A Market Participant has five (5) Business Days to review an ISO request for additional Financial Security and submit proposed changes . . . . Within the five (5) Business Days, the Market Participant must either demonstrate to the ISO's satisfaction that the ISO's Financial Security request is entirely or partially unnecessary, or post the required Financial Security Amount calculated by the ISO." CAISO Tariff, § 12.4.1. "Market Participants may dispute the Estimated Aggregate Liability calculated by the ISO and, as a result, the ISO may reduce or cancel a requested Financial Security adjustment." CAISO Tariff, § 12.4.2.

[27] Order No. 890 at P 1656.

ATTACHMENT D

California ISO Your Link to Power	OPERATING PROCEDURE	Procedure No.	A-02
		Version No.	3.3
		Effective Date	5/25/07
Development and Distribution Of Operating Procedures		**Distribution Restriction:** NONE	

Table of Contents

PURPOSE

Describes the formalized document control program used to maintain accurate and up-to-date versions of the CAISO Operating Procedures.

ACTIONS

1. Identification of Operating Procedure Needs

The Procedure Program Manager (PPM) performs the following steps to identify the Operating Procedure needs:

Step	Procedure Program Manager (PPM) Action
1	**Survey** the operational needs identified by the following: • CAISO employees • Seasonal updates conducted by Procedure Owners • Periodic reviews conducted by Procedure Owners • Other Affected Parties • Other physical system demands • Tariff changes affecting Operating Procedures (See Attachment A) • Operating standards changes
2	**Evaluate** whether each identified operational need should be satisfied by the following: • Update to existing Operating Procedure • Development of a new Operating Procedure • Legal and Regulatory consideration. The CAISO Legal Services Department will determine whether Tariff changes are required (see Attachment A)

2. Drafting CAISO Operating Procedures

IF...	THEN...
The need for a new or modified Operating Procedure has been evaluated,	The Procedure Program Manager/Procedure Owner prepares a draft as follows:

Step	Procedure Program Manager (PPM) Action
1	**Prepare** a draft outline (2 days), including: • Procedure and version number assignment • Selection of Content Experts • Assignment of Drafter • Identification of CAISO Affected Parties • Identification of stakeholder Affected Parties
Step	**Procedure Owner Action**
2	**Compose** a draft Operating Procedure (5 days) using: • Draft outline established by PPM

3. Internal Technical Review and Approval of Operating Procedures

The CAISO individuals listed below have the following corresponding responsibilities:

Step	PPM Action
1	**Review** draft (2 days) for: • Tariff compliance • Format • Clarity • Terminology (to be consistent with Tariff)
2	**Evaluate** Operating Procedure for security criteria prior to Internet posting (1 day): • Exclude Operating Procedures that are security-sensitive, market- sensitive, or of a proprietary nature. • Move sensitive data to an Attachment and exclude from Internet posting and distribution, as necessary. • Refer to the Background section of this procedure for a description of these distribution restrictions.
3	**Evaluate** Operating Procedure to determine if the change is minor in nature: • Minor Revisions, as defined, do not require a review process. The Content Expert will make the necessary Minor Revisions. The PPM will determine the need for other Content Expert reviews, and will organize and distribute.
4	**IF...** / **THEN...** An Operating Procedure change is needed immediately **And** cannot wait for a full signature review, / **Implement** a Partial Signature Distribution that includes both of the following: o Signature of the drafter, o Signature of the drafter's director.

Continued on next page

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Step	Procedure Program Administrator (PPA) Action	
5	**IF...**	**THEN...**
	The draft procedure has been approved by both parties on a Partial Signature Distribution,	**Distribute** the copies to the Control Room and post the document on the Intranet **And continue** to route the document for the remainder of the signature approvals (maximum 3 Days). DO NOT post the procedure on the Internet until the full signature process is completed.
Step	**Content Expert/Procedure Owner Action**	
6	**Review** draft (3 days) for: • Operational compliance (both Market and Grid Operations) • Technical detail	
Step	**Director of the Procedure Owner Actions And Grid Operation's Director Actions**	
7	**Approve** draft (3 days) by completing the following: • **Review** for the criteria as described in above two sections **and include** appropriate end-users in the review, • **Approve** the procedure distribution restriction classification, • **Authorize** (sign) for distribution.	

4. External Affected Party review of Operating Procedures

The individuals external to the CAISO that are listed below have the following corresponding responsibilities:

Step	Procedure Program Manager (PPM) Action
1	**Whenever** time allows, • **Post** the draft of key Operating Procedures on the CAISO Internet, • **Notify** CAISO Client Relations of Posting (same day), indicating: - Comment period (The length of the comment period should consider the time constraints of the Affected Parties, the complexity of the changes, and the Board's policy to encourage stakeholder involvement). - Effective date of Operating Procedure (either established or proposed).
Step	**CAISO Client Relations Action**
2	**Issue** a notice to stakeholders stating the draft has been posted and the time line for review and final posting.
Step	**Affected Parties Action**
3	**Review** Operating Procedure Draft and comment as appropriate (1-2 weeks) either through the CAISO website or through e-mail.
Step	**Procedure Program Manager (PPM)**
4	**Download** and review Affected Party comments.
5	**Distribute** comments to appropriate CAISO personnel.
6	**Coordinate** with the Procedure Owner and respond to the stakeholders comments via the CAISO website or via e-mail, as appropriate (3 days).

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Step	Procedure Program Manager (PPM)	
7	**IF...**	**THEN...**
	Any of the following conditions need to be met: • Avert a System Emergency, • Avoid a threat to System Reliability, • Maintain the reliability of Interconnections, • Correct an obvious error or a minor change, • Avoid substantial economic costs being imposed on the market.	**Implement** and post the internally approved Operating Procedure, **Without** prior Affected Party review. (Affected Parties will be given the opportunity to comment after the implementation/ posting of the Operating Procedure. The CAISO will then consider the comments and determine whether to make further modifications).
8	**Coordinate** with the Procedure Owner and evaluate which suggested changes, (made by the reviewers and the Stakeholders) should be incorporated into the procedure.	
9	**Evaluate** whether the procedure needs to be distributed again for signature approval.	

5. Procedure Deployment and Distribution

The individuals listed below take the following actions to make the approved Operating Procedure effective:

Step	Procedure Program Administrator (PPA) Action
1	**Post** any new or revised Operating Procedure to the CAISO Intranet for CAISO Employees (same day).
2	**Post** any new or revised Operating Procedures that do not have any distribution restrictions to the CAISO Internet (same day).
3	**Update** hard copies in internal CAISO libraries (same day).
4	**Transmit** non-posted Operating Procedures to the affected parties (same day).
5	**Issue** a notification of the posting to CAISO Operations personnel and to Client Relations (same day).
Step	**CAISO Client Relations**
6	**Issue** notifications of CAISO Internet website postings to Stakeholders (same day).

6. Training The following training actions must be evaluated:

Step	Procedure Owner Action	
1	**IF…**	**THEN…**
	Self-study of the new or revised Operating Procedure is not adequate,	**Develop** formal training.
Step	**Procedure Program Manager (PPM) Action**	
2	**Coordinate** with Procedure Owners, other Content Experts, Trainers, and Affected Parties to schedule formal Operating Procedure training.	

SUPPORTING INFORMATION

Background

A determination for each distribution restriction is made for each Operating Procedure. The applicable restrictions appear in the header of the procedure as the following restrictions:

Market Sensitivity

Any procedure that contains information that could harm competitive markets or harm a Market Participant or other party shall not be released to either the public or any party that may so use that information. This includes, but is not limited to:

- Naming of specific Generating Units and their ratings or their required operating levels
- References to increasing or decreasing the output of specific Generating Units or groups of Generating Units
- Naming specific Curtailable Loads or their ratings

System Security

Any procedure that contains information that could be used by any party to threaten or jeopardize either 1) the reliability or security of the CAISO Controlled Grid, or 2) the security of personnel operating the CAISO Control Area or internal power systems, shall be withheld from general public distribution, including but not limited to:

- Naming of facilities that connect or disconnect resources
- Naming of facilities that connect or disconnect critical elements of the CAISO Controlled Grid
- Naming of facilities that could affect the stability of the CAISO Controlled Grid or CAISO Control Area

Proprietary

Proprietary procedures include those that deal specifically with the operation of a single party, including but not limited to:

- Obligations or Agreements specific to individual Parties or Generating Units
- Names and contact information
- Proprietary information includes that information owned by specific parties and provided to the CAISO
- System diagrams that are not publicly available
- Utility Operating Procedure information that is clearly marked for limited distribution
- Study data that is not publicly available

Affected Parties

- External Market Participants
- Scheduling Coordinators

Responsibilities

Procedure Program Manager (PPM)	Responsible for assuring that all CAISO Operations personnel and Affected Parties' personnel have access to the effective versions of all CAISO Operating Procedures.
Procedure Program Administrator (PPA)	Responsible for assisting the PPM and managing the routing / distribution of the procedures.
Procedure Owner	Review assigned Operating Procedures annually, seasonally, or as assigned to evaluate the need for update.

Policy

Distinction between Tariff and Operating Procedures

It is the policy of the CAISO to distinguish between rules and policies appropriately contained in the CAISO Tariff, and those contained in Operating Procedures that merely implement the policies and authorities contained in the Tariff.

CAISO Accessibility

It is the policy of the CAISO to maintain printed and electronic copies of currently effective versions of the Operating Procedures, and to provide accessibility to these procedures to all CAISO Operations Division personnel. This is accomplished by posting current effective versions of the Operating Procedures on the CAISO Intranet Website as PDF files. The Intranet Website is synchronized with the CAISO Internet Website to avoid any disparities between versions of Operating Procedures.

Affected Party Accessibility

It is also the policy of the CAISO to provide public access to information, and to provide for stakeholder input into decisions affecting their interests. Public access to information (Operating Procedures) is provided through the CAISO Internet Website.

CAISO Operating Procedures that are not proprietary, and that do not contain information that is system security sensitive, market sensitive, or third party proprietary, will be posted on the CAISO Internet Website.

When public posting is precluded by the criteria mentioned above, the CAISO Operating Procedures will be made available to the appropriate Affected Parties by hard copies or e-mail of PDF files. Consultants, lawyers, or representatives of Affected Parties are not Affected Parties for purposes of distribution. Distribution should be limited to a single

contact for each entity. Consideration will be given to the segmentation of sensitive information into separate attachments so that the remainder of a procedure can be made public.

The CAISO Operating Procedures posted on the Internet Website shall be considered the official effective versions and will indicate the version numbers and the effective dates of the current procedures.

Involvement of all Affected Parties

Affected Parties (Stakeholders) input into the adoption or modification of Operating Procedures is accomplished through the maintenance of a formal mechanism.

The CAISO will solicit and consider the input and response of CAISO personnel and other Affected Parties for the development and revision of CAISO Operating Procedures. The CAISO will maintain a page on its Internet Website for public access, giving stakeholders the opportunity to comment on draft Operating Procedures, make suggestions with respect to the need for new Operating Procedures, or present concerns with regard to existing Operating Procedures.

Security

Maintenance of approved Operating Procedures in the CAISO's document control application, "Documentum" provides a secure base for all Operating Procedures.

References

Resources that have been studied in the development of this procedure and that may have an effect upon some steps taken herein include, but are not limited to the following:

• CAISO Tariff	20.3 and 13.3.9
• Participating Generator Agreement (PGA)	
• Transmission Control Agreement (TCA)	
• Utility Distribution Company (UDC) Operating Agreements	

Definitions

Unless the context otherwise indicates, any word or expression defined in the Master Definitions Supplement to the CAISO Tariff and capitalized herein shall have the same meaning where used in this procedure.

The following additional terms are capitalized in this document where used as defined as follows:

Affected Party (AP)	A CAISO department, Market Participant, or other Stakeholder affected by the implementation of a particular CAISO Operating Procedure, and potentially having an interest in its conception, development, and revision.
Board	The CAISO Governing Board.
Content Expert (CE)	An expert from one of various fields and departments within the CAISO assigned to assist in the development and review of an Operating Procedure and to make recommendations to the Drafter, the PPM, and the Directors.
Director	One of the departmental Directors of the CAISO Operations Division or other Affected CAISO Divisions. The Directors of the affected departments will review and approve an Operating Procedure to make it effective.
Drafter	The CAISO Content Expert that is assigned to research and draft a particular CAISO Operating Procedure.

Interim Operating Instruction	Temporary instruction necessitated by abnormal system conditions.
CAISO Operating Procedure	Authorized document that details the procedures and processes necessary to implement the policies and authorities contained in the CAISO Tariff.
Limited Distribution	Distribution to Affected Parties via e-mail of PDF files, internal CAISO Hard Copy Distribution, or CAISO Intranet posting.
Major Revision	An update or revision that effectively and materially changes procedures and/or operational decision-making, and therefore requires formal review and authorization. Major Revisions are identified by the digit to the left of the point in the Version number.
Market Sensitive	Any procedure that contains information that could benefit or harm a particular entity or give an unfair advantage to an entity and therefore should not be released to either the public or any party that may so use that information.
Minor Revision	An update or revision that does not effectively or materially change procedures and/or operational decision-making, and therefore does not require formal review and authorization. Minor Revisions are identified by the digit to the right of the point in the Version number. Minor Revisions include seasonal Nomogram and table updates, clarifications, additional instructions, necessary corrections, and format changes.
OPT	The Operations Procedures and Training Department within the CAISO Operations Division.
Procedure Owner	The Content Expert charged with the periodic review and/or revision of a particular CAISO Operating Procedure.
Procedure Program Manager (PPM)	The CAISO OPT representative responsible for developing and managing the CAISO Operating Procedure Management Program.
Procedure Program Administrator (PPA)	The CAISO OPT representative responsible for assisting the PPM and managing the routing / distribution of the procedures.
Proprietary	Proprietary procedures include those that deal specifically with the operation of a single party. Proprietary information includes that information owned by a specific party and provided to the CAISO for use in the development of procedures.

Seasonal Operating Procedure	A CAISO Operations Procedure that must be reviewed and revised on a seasonal basis to assure that graphs, Nomograms, and other technical specifications are up-to-date with engineering studies as appropriate to seasonal changes.
Sensitive procedure	Any CAISO Operating Procedure that contains Market Sensitive, System Security Sensitive, or Proprietary information.
System Security	Any procedure that contains information that could be used by any public party to threaten or jeopardize the reliability of the CAISO Controlled Grid and therefore should not be released to the pubic.
Shift Manager	The CAISO manager responsible for the real-time coordination of CAISO Controlled Grid operation. The Shift Manager is responsible for decisions regarding all real-time operations and the final determination for the implementation of CAISO Operating Procedures.
Time Critical	An Operating Procedure that must be authorized and distributed as soon as possible to minimize problems with system conditions, reliability needs and market needs.

Version History

Version	Change	By	Date
	Drafted	David Hawkins	11/9/98
	Revised	Mike McQuay	12/3/99
2.1	Revised	Jim Fee / Shelly Lines	4/10/01
2.2	Revised	Mike Peterson	5/17/01
2.3	Annual Update, minor	Mike Peterson	4/15/02
2.4	Annual review	Mike Peterson	9/3/03
3.0	Re-formatted, annual review	Mike Peterson	8/20/04
3.1	Annual Review	Mike Peterson	12/28/05
3.2	Annual Review	Mike Peterson	3/2/07
3.3	Annual Review Added Attachments D & E	Mike Peterson	5/25/07

TECHNICAL REVIEW

Reviewed By Content Expert	Signature	Date
OPT	Mike Peterson	5/28/07
Regional Transmission	Ron Calvert*	4/12/01
Grid Ops	Bill Ellard*	4/10/01
Market Ops	Brian Rahman*	4/23/01
Scheduling	Robert Sullivan*	5/03/01

APPROVAL

Approved By	Signature	Date
Director of Operations Procedures & Training	Deane Lyon*	4/12/01
Director of Grid Operations	Jim McIntosh	5/02/01

*Signed previous versions, last three versions had minor changes only.

APPENDIX

Attachment A: Operating Procedure Changes due to Tariff Changes
Attachment B: Procedure Development Normal Timeline
Attachment C: Operating Procedure Development Flowchart
Attachment D: Procedure Exam Development Process
Attachment E: Electronic Signature Approval Process

California ISO Your Link to Power	OPERATING PROCEDURE ATTACHMENT A	Procedure No.	A-02A
		Version No.	3.1
		Effective Date	5/25/07
Procedure Revisions Due to Tariff Changes		**Distribution Restriction: NONE**	

Purpose

The Procedure Program Manager (PPM) monitors CAISO Tariff developments and coordinates with CAISO Legal & Regulatory Department to maintain Operating Procedure conformance to the CAISO Tariff.

1. Identify CAISO Tariff References for Operating Procedures

As part of the new/revised Operating Procedure review process, the PPM uses the "reference" section of the Operating Procedure to include specific Tariff references.

Step	PPM Action
1	**Use** references supplied by Drafter/Content Experts.
2	**Review** the Tariff, **check** the Operating Procedure compliance with the Tariff, **and identify** additional references.

2. Monitor Tariff Change Process and Progress

Step	PPM Action
1	**Review** the CAISO FERC Filings and Rulings on the CAISO Internet Website.
2	**Maintain** close contact with CAISO Legal and Regulatory personnel for information regarding the Tariff change process, effective dates of changes, and applications of changes.

3. Identify Operating Procedure Changes

When Tariff changes become effective or imminent, the PPM prepares to have Operating Procedures in order to reflect new Tariff rules and language. Noting the Tariff sections changed or to be changed, the PPM considers which Operating Procedures require changes.

Step	PPM Action
1	**Review** existing Operating Procedures to determine if additional revisions are necessary.
2	**Consider** new Operating Procedures.

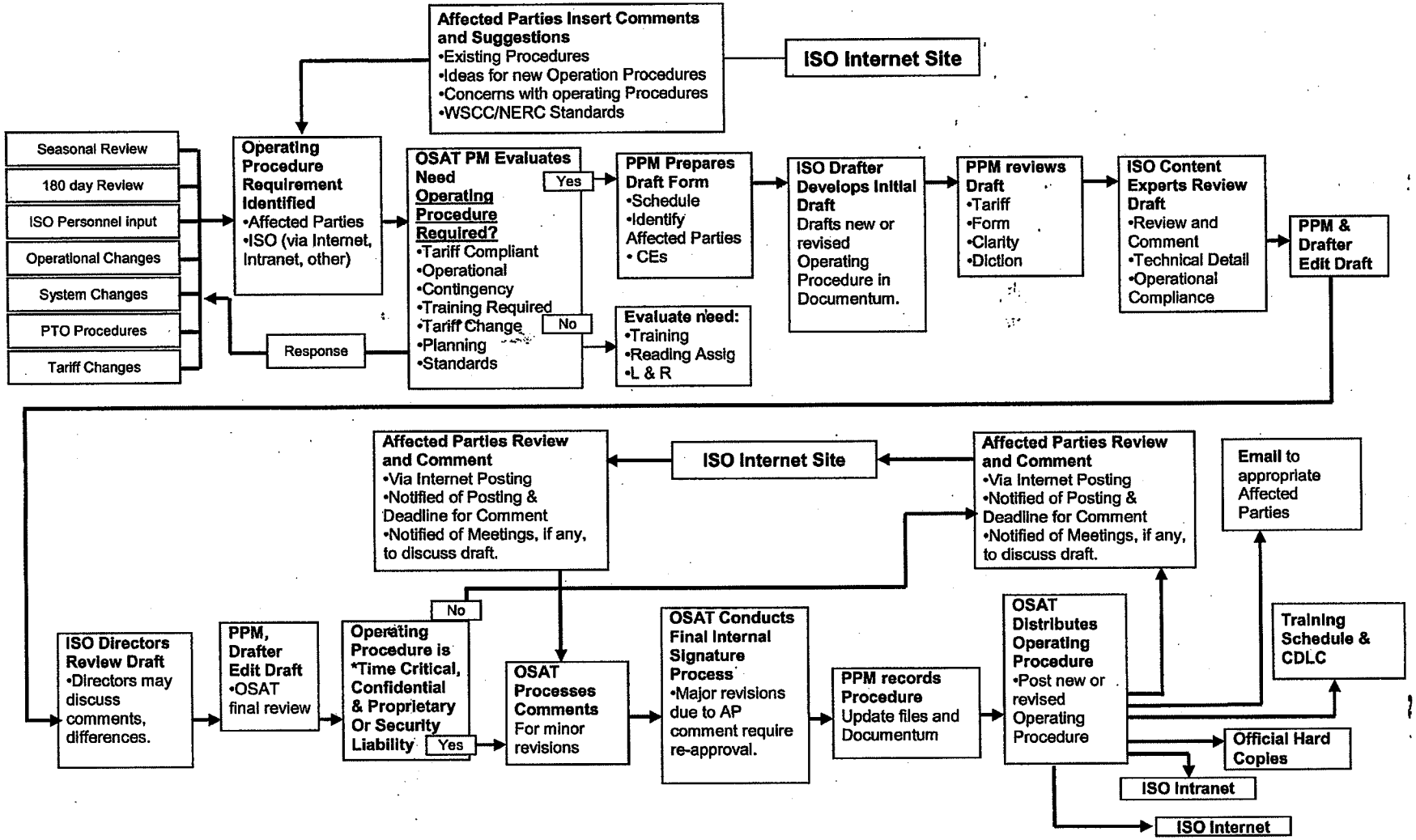
California ISO Your Link to Power	OPERATING PROCEDURE Attachment B	Procedure No.	A-02B
		Version No.	2.4
		Effective Date	5/25/07
Procedure Development Normal Timeline		**Distribution Restriction: NONE**	

Procedure Development Normal Timeline

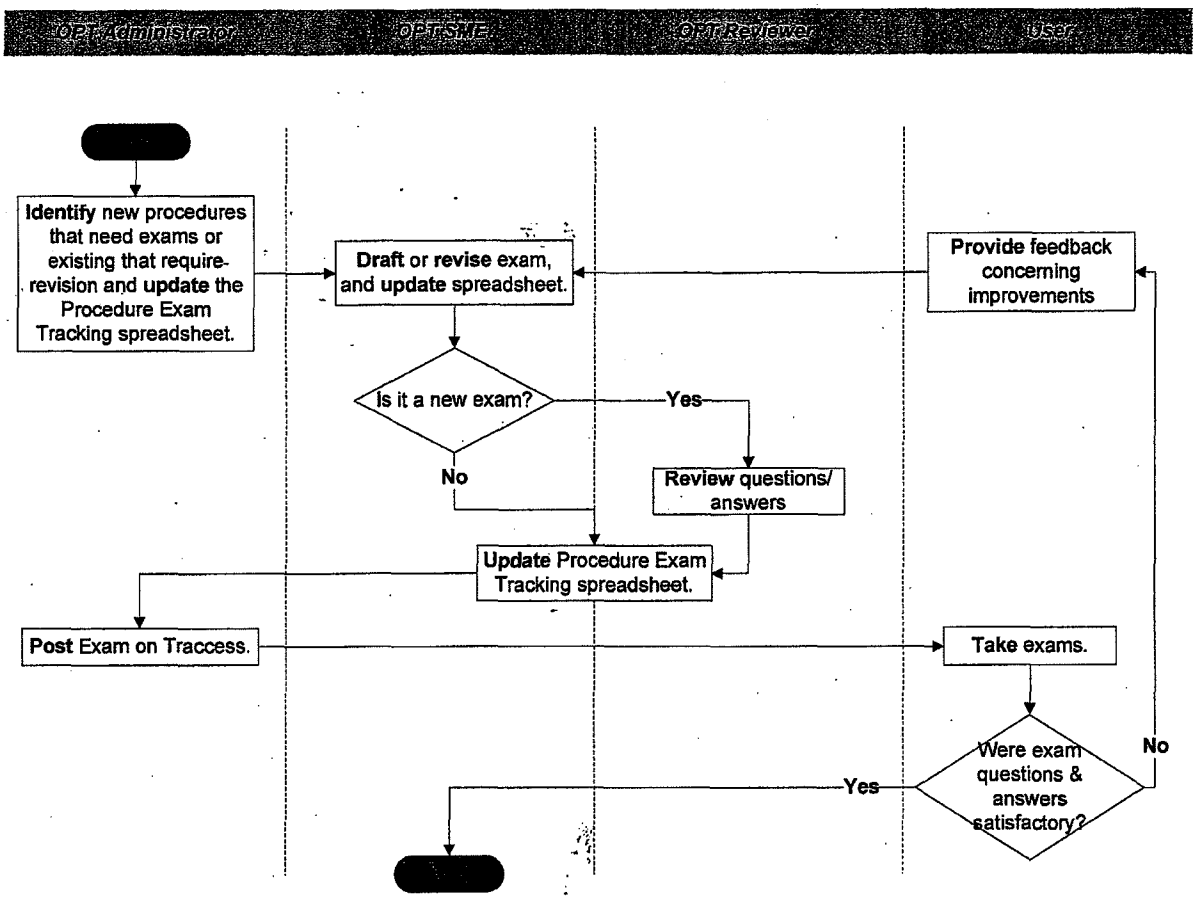
Section	Process	Completion Goal (working days)
1.1-1.2	Identify Need	0
1.3	PPM – Respond to requester	2
2.1	PPM – Prepare draft	2
2.2	Drafter – Complete draft	5
3.1	PPM – Review draft	2
3.2	CEs – Review draft	3
3.3	Directors – Review draft	3
3.4	PPM – Prepare for posting for comment	1
4.1	PPM – Post draft for comment	Same day
4.2-4.3	PPM – Notification	Same day
4.4	AP – Review and comment	10
4.6	ISO – Respond	3
5.1	PPM – Make final revisions	3
5.2	PPA – Obtain authorization	3
6.1-6.7	PPA – Release and distribute	2
Total maximum*		39 work days (8 weeks)

*Urgent need Operating Procedures will skip some steps. Time might be cut in half.

California ISO Your Link to Power	Operating Procedure Attachment C	Procedure No.	A-02C
		Version No.	1.2
		Effective Date	5/25/07
Operating Procedure Development Flowchart		Distribution Restriction: None	



California ISO Your Link to Power	Operating Procedure Attachment D	Procedure No.	A-02D
		Version No.	2.0
		Effective Date	6/14/07
Procedure Exam Development and Maintenance Process		Distribution Restriction: None	



California ISO Your Link to Power	Operating Procedure Attachment E	Procedure No.	A-02E
		Version No.	1.0
		Effective Date	5/25/07
Electronic Signature Approval Process		Distribution Restriction: None	

Electronic Signature Approval

When a draft Operating Procedure is complete then send the document for review and approval using the following steps:

Step	Action
1	**Open** the Electronic Signature form located in the Action function on the MS Outlook Menu Bar in the Procedure Control Desk Mailbox.
2	**Fill out** the form and include the following: • Procedure Title • Procedure Version Number • Due Date • Priority • Subject • Procedure Links (insert as a hyperlink) • Markup Links (insert as a hyperlink) • Description of Changes
3	**E-mail** the form to all parties that need to review and approve the document (listed in the back of each procedure).
4	**File** a copy of the e-mailed form in the Procedure Control Desk Mailbox in the Electronic Approval folder under the applicable procedure number and version number.
5	**Review** any approved or disapproved procedures as they are returned to the Procedure Control Desk Mailbox.
6	**Resolve** any discrepancies delivered by any of the parties.
7	**Review** the folder each time a response is delivered to determine if all of the signatures are back.
8	**When...** / **Then...** All of the responses have been returned and all discrepancies have been resolved, / Continue with the procedure distribution process. Refer to Sections 4 & 5 of A-02.

ATTACHMENT E

California ISO Your Link to Power	OPERATING PROCEDURE	Procedure No.	A-03
		Version No.	1.1
		Effective Date	11/22/06
Determining Distribution Restrictions for CAISO Operating Procedures		**Distribution Restriction: None**	

Table of Contents

Purpose

- Describes the methods to determine which Operating Procedures are public and which have limited distribution.
- Instructs the CAISO Procedure Manager how to facilitate limited distribution.

Procedure

1. Determining the Distribution Restriction

To determine whether there is a distribution restriction for a CAISO operating procedure, review the following three categories for distribution restrictions:

Restriction	Description
Market Sensitive:	Market Sensitive operating procedures containing information that could potentially harm competitive markets or a party, and should not be distributed to the public or any party (except in necessary cases where that party has established a firewall between them and the market/trading side of the business). This includes, but is not limited to the following: • Naming of specific generating unit's required operating levels; • References to increasing or decreasing the output of specific generating plants; • Naming specific curtailable loads and their ratings or required operating levels; • Start-up, fixed cost, or production cost data, or currently applicable operating characteristics or statistics for specific generating plants or curtailable loads;

Restriction	Description
System Security	System Security operating procedures containing information that could be used by any public party to threaten or jeopardize: • The security of personnel operating the CAISO Control Area and internal power systems; • The reliable operation of the CAISO Control Area; or • The security of the CAISO Controlled Grid including, but not limited to: o Naming specific CAISO or Operating Company personnel; o Names, addresses, phone numbers, e-mail addresses, and the like, of operations personnel at the CAISO or at other operating companies (e.g., generators, transmission owners, other control area operators, etc.); o Naming of specific facilities that can be operated to connect or disconnect generators, loads, or other power system equipment (e.g. breaker numbers, switch numbers, tower numbers, substation, power plant or power house names, etc.).

Restriction	Description
Proprietary	Any proprietary items, i.e., information owned by specific parties and provided to the CAISO for its use including, but not limited to: • Utility Distribution Companies' operating procedures, system one-line diagrams, switching diagrams, or operating instructions, (unless such information has been marked as available for public release or is already publicly available); • Participating Transmission Owner's operating procedures, system one-line diagrams, switching diagrams, or operating instructions, (unless such information has been marked as available for public release or is already publicly available); • Non-Participating Transmission Owners' (i.e., municipal, state or federal operating entities) operating procedures, system one-line diagrams, switching diagrams, or operating instructions, (unless such information has been marked as available for public release or is already publicly available); • Participating Generators' operating procedures, system one-line diagrams, switching diagrams, or operating instructions, (unless such information has been marked as available for public release or is already publicly available); • Operational data or operational study results, (unless such information has been marked as available for public release or is already publicly available).

2. Developing Operating Procedures

During the development of an Operating Procedure take the following steps to address procedures with distribution restrictions:

2.1. Procedure Layout

To prepare a draft operating procedure for public consumption, any of the following steps may be taken, as necessary, to maximize the amount of shared information:

Step	Action
1	**Group** sensitive sections/material together to make it easier to redact the material for a data request if necessary.
2	**Separate** sensitive sections/material into attachments to allow easier distribution management of this material and to allow the main concept of an operating procedure to be made public.
3	**Edit** sensitive material from the distribution copy to create an abbreviated version, making the entire version an attachment.

2.2. Distribution Restriction Disclaimer

Include the following Disclaimer statement at the beginning of each restricted operating procedure or attachment:
Disclaimer: "This is a confidential CAISO document for CAISO use and Affected Party use only. Distribution or copying requires permission."

3. Posting Non-Restricted Operating Procedures

To post non-restricted operating procedures to the CAISO Internet, take the following steps:

Step	Procedure Management Action
1	**Refer** to the OSAT Guidelines, 'Instructions to Post Documents to the Internet' to post non-restricted CAISO operating procedures on the CAISO Internet.  OSAT010- Instructions to Post Documents to the Internet.drl

4. Distribution of Operating Procedures

The following subsections address the distribution of different operating procedures and the parameters for extending restricted distribution.

4.1. Distribution Criteria

Once the distribution restrictions are determined for an operating procedure, take the following steps:

Step	Procedure Management Actions	
1	**If...**	**Then...**
	The operating procedure is public,	**Post** the operating procedure on the Internet.
	The operating procedure is restricted,	• **Distribute** operating procedures via e-mail to Affected Parties (if any) only. ▪ **DO NOT distribute** operating procedures that are Market Sensitive to entities that have not established a firewall between them and their Marketing or Trading business side. • **Limit** distribution to a single contact for any entity. • **Include** the following language with the distribution of the e-mail to the affected party: *The attached restricted CAISO Operating Procedure is supplied to you under the conditions specified in the Disclaimer therein. Accessing the attached document is an agreement to be bound by those conditions. It is intended for the designated recipients of this e-mail only.* ***Disclaimer: "This is a confidential CAISO document for CAISO use and Affected Party use only. Distribution or copying requires permission."***

4.2. Sharing Restricted Information

Consider the following steps, as necessary, when a party requests to receive a restricted (non-public) operating procedure:

Step	Procedure Management and/or Legal and Regulatory Action
1	**Review** any requests for procedure information with applicable CAISO personnel to determine if the information should be released.
2	**Consider** a face-to-face meeting with: 1) The party requesting the procedure information and, 2) Applicable CAISO staff, To satisfy the requestor's needs without sharing written or electronic information.
3	**Review** the procedure to determine if parts of the procedure can be shared with the requesting party.

If...	Then...
Parts of the procedure can be shared,	• **Consider** releasing only those portions of the procedures that are not sensitive. • **Consider** re-drafting the procedure using the actions in step 2.1 above.

4	• **Consider** providing limited temporary distribution to study groups or teams for development purposes.
5	• **Obtain** appropriate Confidentiality Statements and non-disclosure agreements.

Supporting Information

Affected Parties

- Market Participants

Responsibilities

CAISO-Procedure Management:	Management of sensitive operating procedures.
Affected Parties:	If receiving Market Sensitive procedures, parties maintain a firewall between Market functions and Transmission functions.

References

- CAISO Tariff- Section 20.3 S.B.P. 7.3
- CAISO Operating Procedure A-02, Development and Distribution of Operating Procedures

Policy

The CAISO makes public all Operating Procedures within its control except for information that is:

- System Security Sensitive
- Proprietary
- Market Sensitive

Definitions

Unless the context otherwise indicates, any word or expression defined in the Master Definitions Supplement to the CAISO Tariff shall have that meaning when capitalized in this Operating Procedure.

The following additional terms are capitalized in this Operating Procedure when used as defined below:

Limited Distribution:	Distribution to named individuals at the Affected Parties, via email.
Affected Party:	A Market Participant or other Stakeholder directly affected by the implementation of or having furnished to the CAISO data/information on a confidential basis for a particular CAISO Operating Procedure, therefore having an interest in its conception, development, revision, and/or distribution.

Version History

Version	Change	By	Date
1.0	Drafted	M. Peterson	1/1/05
1.1	Annual Review	M. Peterson	11/22/06

Technical Review

Reviewed By Content Expert	Signature	Date
OPAT	Michael D. Peterson	11/22/06
Regional Transmission	Ron Calvert *	7/7/05
Grid Ops	Bill Ellard *	6/17/05
Market Ops	Terry McKenzie *	7/7/05
Scheduling	Robert E. Sullivan *	7/7/05

Approval

Approved By	Signature	Date
Director of Operations Support	Nancy Traweek *	7/21/05
Legal & Regulatory	Stephen Morrison *	7/20/05

* Signed previous version only, changes to this version were minor and did not require full approval/

CERTIFICATE OF SERVICE

I hereby certify that I have served the foregoing document upon the entities that are described in that document as receiving service, 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 Folsom, California this 11th day of October, 2007.

Anthony J. Ivancovich BRM

Anthony J. Ivancovich