UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

San Diego Gas & Electric Company, Complainant,	)	
v.	)	**Docket No. EL00-95-106**
Sellers of Energy and Ancillary Services Into Markets Operated by the California Independent System Operator and the California Power Exchange Corporation, Respondents	)	
Investigation of Practices of the California Independent System Operator Corporation and the California Power Exchange	)	**Docket No. EL00-98-093**

COMMENTS OF THE CALIFONIA INDEPENDENT SYSTEM OPERATOR CORPORATION

I. INTRODUCTION AND SUMMARY

Pursuant to the Commission's Order on Rehearing issued on December 21, 2004[1], the California Independent System Operator ("ISO") provides the following initial comments[2] addressing the issues raised by the Commission in that order. As always, the ISO appreciates the opportunity to provide the Commission with its comments on this important issue. The interaction between the "must offer" requirements of the ISO Tariff and its Outage coordination procedures represents a unique and important set of provisions that culminate in increased grid reliability in California. The ISO continues to be very concerned about the impact on grid

[1] 109 FERC ¶ 61,306 (2004) ("December 21 Order")

[2] Capitalized terms not otherwise defined herein shall have the meanings set forth in the Master Definitions Supplement, Appendix A to the ISO Tariff.

reliability that could arise from any actions that reduce or undermine its authority to coordinate Generating Unit Outages on the ISO Controlled Grid. The ISO continues to fail to see that the June 22, 2004 Order on Remand, 107 FERC ¶ 61,294 (2004) ("Order on Remand") conveys any real benefit to the California Department of Water Resources ("CDWR") in terms of water delivery by removing their hydroelectric Generating Units from ISO Outage coordination[3]. The preferred alternative continues to be that all Generating Units subject to Participating Generator Agreements ("PGAs") be subject to ISO Outage coordination authority. The ISO feels strongly that the conditions in the ISO Market that first brought about the need for the Outage coordination provisions of the ISO Tariff[4] have not changed, and in fact, the need for the continuation of such provisions may have even increased since their introduction. In addition, the ISO does not believe that parsing through the hydroelectric Generating Units of CDWR or all the Generating Units on the grid, exempting some while maintaining others under the ISO's Outage coordination protocol is proper in terms of the reliability objective that the ISO seeks to achieve. Finally, the ISO was created to provide nondiscriminatory open access to the transmission system that it operates. The ability of one or more Generating Unit owners to keep their units outside ISO Outage coordination procedures represents a major market advantage over other Generating Unit owners who have to coordinate their Outages with the ISO. The ability to remove a Generating Unit from the ISO Market for an unplanned and uncoordinated Outage can impact prices through supply availability. This represents the creation of the very market advantage and the kind of inter-supplier discrimination that ISOs were created to eliminate.

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[3] The ISO's July 22, 2004 Request For Rehearing in this proceeding develops the basic rationale and the ISO Tariff basis for its Outage coordination procedures. See pages 6-10.

[4] See ISO Tariff ¶¶ 2.3.3.5 and the Outage Coordination Protocol ("OCP").

It should be stated at the outset that CDWR has provided exemplary performance in response to emergency requests by the ISO in the past. CDWR's cooperative and professional approach to improved system reliability has been a great benefit to ISO operations and to the ISO Market as a whole. In fact, as a member of the ISO Generation Maintenance Advisory Committee, CDWR actively participated in the initial development of Generation Maintenance Standards as required by the emergency order of the Governor following the energy crisis during the winter of 2000-2001. The standards developed by this committee were the forerunner of the currently effective California Public Utilities Commission General Order Number 167, Enforcement of Maintenance and Operation Standards For Electric Generating Facilities. The energy crisis itself was at least in part attributed to the lack of authority on the part of the ISO to coordinate generation Outages. Thus, the ISO finds it somewhat curious that CDWR now finds it so important to exempt its hydroelectric system from the ISO's Outage coordination procedures, a move that could jeopardize grid reliability. The only interest of the ISO is in furthering the reliability of the ISO Controlled Grid, and a fundamental concept of increased reliability is comprehensive Outage coordination. This concept goes beyond notification of an impending Outage by a Generating Unit owner to cover the planning and coordination of Outages on a system-wide basis. This fundamental principle was recognized by the Commission when it approved the ISO's Outage coordination authority effective May 29, 2001, and it remains an important aspect of ISO operation today. *San Diego Gas & Electric Co. v. Sellers of Energy and Ancillary Servs.*, 95 FERC ¶ 61,115 (2001) ("April 26 Order") at 61,355.

By way of organization of these comments, the ISO first specifically addresses the two issues raised by the Commission for comment in their Order on Rehearing. Then the ISO

reiterates the reasons why it believes that it is not necessary, or desirable, to grant CDWR an exemption from the ISO oversight over Outage scheduling.

II. BACKGROUND

A. The Commission's Recognition of the System-wide Need for ISO Outage Coordination.

The Commission has consistently recognized that ISO coordination of Generator Outages is a critical component of the ISO's ability to ensure the reliability of the ISO Controlled Grid. The Commission initially responded to the California energy crisis of 2000 by issuing its Order Proposing Remedies for California Wholesale Electric Markets, in which it solicited comments on its proposed remedies. *San Diego Gas & Elec. Co. v. Sellers of Energy and Ancillary Servs. Into Markets Operated by the Cal. Power Exch. and the Cal. Indep. Sys. Operator*, 93 FERC ¶ 61,121 (2000). At that time, the ISO's authority to coordinate long-term Maintenance Outage schedules of generating units was limited to Maintenance Outages associated with Reliability Must-Run ("RMR") Units. ISO authority over changes to other Outage schedules was limited to those made less than seven days before the scheduled date of the Outage. Such changes required ISO approval, and the ISO could withhold approval for reasons of System Reliability or security.[5] In its November 22, 2000 comments on the Commission's proposal in the November 15 Order, the ISO explained that inability to coordinate Outages effectively had created significant reliability problems:

> During the week of November 12, 2000, approximately 11,000 MW of generating unit capacity was either forced or planned to be out of service. These outages required the ISO to declare a Stage 2 Emergency (dropping interruptible load) on three consecutive days.

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[5] In addition, the ISO had the authority "to instruct a Participating Generator [whether or not its generating unit is a Reliability Must Run Unit] to bring its Generating Unit on-line, off-line, or increase or curtail the output of the Generating Unit . . . if such an instruction is reasonably necessary to prevent an imminent or threatened System Emergency or to retain Operational Control over the ISO Controlled Grid during an actual System Emergency."

ISO Comments at 4.

On December 15, 2000, the Commission issued its "Order Directing Remedies for California Wholesale Electric Markets." San Diego Gas & Elec. Co. v. Sellers of Energy and Ancillary Servs. into Markets Operated by the Cal. Power Exch. and the Cal. Indep. Sys. Operator, 93 FERC ¶ 61,294 (2000). Although the Commission did not direct any changes to the ISO's authority concerning Outages, it stated that it would be monitoring the market for evidence of market power, specifically including Outage schedules. Id. at 61,996-97. The Commission directed sellers to submit weekly reports, which were to include Outage information.

On February 7, 2001, in Comments solicited by the Commission in a technical conference held on January 23, 2001, the ISO specifically described the need for authority to require all Participating Generators to schedule Outages in a manner consistent with reliable operation of the system. In connection with the Comments, the ISO submitted a draft market power mitigation proposal prepared by its Department of Market Analysis. The proposal identified the importance of Outage coordination:

> This past year the ISO has witnessed a substantial increase in the number of generating unit outages. Both the magnitude and frequency of these outages (planned and forced) has risen to a level to cause severe operational problems for the ISO. In fact, it was in large part due to generating unit outages that, for the first time ever, the ISO had to initiate wide-scale interruptions of firm service on January 17, 2001. . . . Currently, the ISO authority to coordinate planned outages is limited to a small subset of units operating under Reliability Must Run contracts. The fact that the ISO does not have authority to fully coordinate planned generating unit maintenance with all unit owners has serious reliability and market efficiency implications. To address this problem, the ISO is developing a proposal through a stakeholder process for requiring all generators to coordinate their planned maintenance schedules with the ISO. Under such a proposal, the ISO would require all generators to submit their "preferred" annual planned maintenance schedules with the ISO and identify allowable "scheduling windows" for performing the necessary maintenance, repairs, and/or upgrades.

> The ISO would then assess each owner's plan and determine an optimal annual planned maintenance schedule for all generators in the ISO control area to levelize system reliability throughout the year.

The Commission released its Staff recommendations for market power mitigation on March 6, 2001. The Staff's discussion of outage coordination and control echoed that of the ISO's Department of Market Analysis:

> In order to limit the ability of generation owners to use the declaration of a forced outage as a means to withhold capacity from real-time markets, an ISO could require all generation owners that are connected to the ISO's system to schedule their maintenance and other planned outages on an annual basis. The ISO would require owners to adhere to the approved schedule unless alternative arrangements can be made without jeopardizing system reliability or market performance.

The Staff recommended that all planned outages by units owned by Participating Generators be coordinated with, and approved by, the ISO. In its March 22, 2001 comments on the Staff recommendations, the ISO expressed its agreement with the Commission Staff that all planned outages should be "coordinated and approved" by an entity within the state.

In its April 26 Order, the Commission adopted Staff's recommendation. It directed the ISO to file tariff amendments within 15 days to provide a mechanism "for control and coordination of outages." April 26 Order at 61,355. The ISO filed its amendment on May 11, 2001.

B. CDWR's Exemption.

CDWR sought rehearing of the April 26 Order, asserting that all of its hydroelectric generation has water management and control as a primary purpose and that it only makes its generation available to the electric grid under a PGA with the ISO to the extent its water management responsibilities permit.[6] CDWR contended that subjecting it to the ISO's Outage

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[6] "All of DWR's hydroelectric generation has a primary purpose of water management and control. Thus DWR makes its generation available to the electric grid under a [PGA] *as and to the extent that its water*

coordination authority would interfere with its water management responsibilities. It argued that the Commission had recognized such responsibilities by exempting hydroelectric facilities from the must-offer requirement and should similarly exempt CDWR with regard to Outage control.

In its June 19 Order, the Commission noted that a number of entities had requested exemption from the ISO's Outage coordination authority. It affirmed that the ISO must have the authority to coordinate and control the Outages of *all* units with PGAs. June 19 Order at 62,551.

CDWR sought review of the Commission's orders in the U.S. Court of Appeals for the Ninth Circuit. The Ninth Circuit did not rule on the merits of CDWR's request for an exemption, but found that the Commission had not explained adequately its denial of CDWR's request, and particularly the different treatment between Outage coordination and the must-offer requirement. The Court therefore remanded the case to the Commission. *California Dep't of Water Resources, et al. v. FERC,* 341 F.3d 906 (9th Cir. 2003), *reh'g denied*, 361 F.3d 517 (9th Cir. 2004).

In the Order on Remand, the Commission reversed its initial decision. The Commission's reasoning was summed up in three sentences:

> DWR persuades us that releasing and pumping water within coordinated time frames is essential to maintaining the operational integrity of the water system, and that any changes to scheduled outages of these facilities could be disruptive to its primary mission. . . .
>
> Neither CAISO nor any other party has stated in the record in this proceeding that exempting DWR would place the reliability of the electric grid at risk. We believe that CAISO has a wide range of options at its disposal to maintain reliability and that DWR should be able to perform its primary water management mission without accommodating CAISO scheduling requests.

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management responsibilities permit." Request for Rehearing of the California Department of Water Resources, May 29, 2001, at 5 (emphasis added).

Order on Remand at PP 8-9.

On July 22, 2004, the ISO requested rehearing of the Order on Remand. Therein, the ISO argued that CDWR does not require an exemption from the ISO's Outage Coordination authority in order to fulfill its water delivery obligations, and that removing CDWR units from the ISO's Outage coordination authority would interfere with the ISO's ability to ensure the reliability of the ISO Controlled Grid.

In the December 21 Order, the Commission invited the ISO, DWR, and any other interested parties to comment on the issues raised in the ISO's rehearing request. The Commission specifically invited parties to comment on "whether it would be feasible to examine the need for Outage coordination on a unit-by-unit basis, and "whether conditions affecting CAISO grid reliability have changed appreciably" since we Commission imposed the Outage coordination requirements in 2001. December 21 Order at P 12.

C. The ISO's Outage Coordination Authority.

Although the revised Outage coordination procedures of the ISO Tariff provide the ISO with additional control over Outage schedules, the circumstances in which the ISO can exercise that control remain limited. Under those procedures, it is the Participating Generator, not the ISO, that in the first instance schedules Outages, and the Participating Generator may submit changes to its schedule. ISO Tariff Sections 2.3.3.5, Outage Coordination Protocol ("OCP") 2.2.1. The Tariff also allows for scheduling an Outage as little as 72 hours before the event. ISO Tariff Sections 2.3.3.3, OCP 2.2.1.1.[7] Under sections 2.3.3.5.2 and 2.3.3.5.3, the

[7] Under the revised terms of the ISO Tariff as filed on May 11, 2001, the notice period would have been 120 hours. The Commission rejected that provision of the tariff in its order of October 23, 2001. *San Diego Gas*

ISO must approve the Outage unless it is likely to have a detrimental effect on the efficient use and reliable operation of the ISO Controlled Grid; *see also* ISO Tariff §§ OCP 2.2.3, 2.2.4.[8] Once the Outage is approved, the ISO can cancel the Outage only if necessary to maintain System Reliability. ISO Tariff § OCP 4.3.9. These tariff restrictions act as safeguards for the Participating Generator, such as CDWR.

III. COMMENTS

A. The Infeasibility of Coordinating Outages on a Unit-By-Unit Basis.

It is economically improper and operationally unworkable for the ISO to attempt to coordinate Outages of Generating Units on a unit-by-unit basis.

The Commission, in its December 21 Order, raised the issue of whether it would be feasible, meaning economically proper and operationally workable, to implement the ISO's Outage coordination procedures on a unit-by-unit basis instead on a system-wide basis.[9] The ISO believes that it is not. This issue raises the specter of the Commission's exemption of some Generating Units, be they hydroelectric or other wise, while other units would remain subject to the ISO's Outage coordination authority. The Commission's Order on Rehearing mentions no objective criteria upon which a Generating Unit may be exempted from the ISO's Outage coordination authority, nor does it propose any means of verifying that those criteria remain in place. The end product of a process that exempts some, while maintaining jurisdiction over others, is a never-ending parade of parties seeking exemption, until the ISO's

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& Elec. Co. v. Sellers of Energy and Ancillary Servs. into Markets Operated by the Cal. Power Exch. and the Cal. Indep. Sys. Operator, 97 FERC ¶ 61,066 (2001) ("October 23 Order") at 61,356.

[8] Under the revised terms of the ISO Tariff as filed on May 11, 2001, the ISO could also reject an Outage schedule if the Outage would cause an unduly significant market impact. The Commission also rejected that provision of the tariff in its order of October 23, 2001. October 23 Order at 61,356.

[9] December 21 Order at P 5

Outage coordination authority has been rendered useless or toothless and the ISO has lost a major tool in maintaining reliability of the transmission grid.

At the outset, it should be stressed that the ISO's Outage coordination authority consists of maintenance Outage coordination procedures not maintenance Outage control procedures.[10] The purpose of the procedures contained in the ISO Tariff and OCP is to see that there is adequate available generation to meet demand by asking that Maintenance Outages be planned and coordinated in advance. The purpose is not for the ISO to mandate what Generating Unit or specifically when a Generating Unit Outage must occur. The success of these procedures at maintaining grid reliability is generally unquestioned.

Coordinating unit Outages on a unit-by-unit basis will disrupt the long-range Outage coordination planning process as currently implemented by the ISO. When a Generating Unit that has been exempted from the ISO's Outage coordination authority schedules an Outage it will still have an impact on the operational conditions of the ISO Control Area, and transmission and generation Outages that were coordinated with the ISO through the OCP will be forced to cancel or reschedule their planned Outages to allow for the unplanned Outage. The exemption of certain Generation Units from the ISO's Outage coordination authority will give them an automatic and unfair priority to prime Outage periods. In addition, the rescheduling of Outages at the whim of the exempted unit operators will increase the workloads of the ISO Outage Coordination department and its operation engineers. Becoming a Participating Generator in the ISO Market gives rise to both benefits and obligations. One of the benefits to Participating Generators, such as CDWR, is the ability to sell Energy into the ISO Market. However, one of the obligations that come with the relationship is the requirement to coordinate Outages with the ISO pursuant to the terms of the ISO Tariff and OCP.

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[10] *See* ISO Tariff OCP 1.1.

It may be beneficial to look at the impact that the process of granting exemptions could have on the number of megawatts ("MW") subject to the ISO's Outage coordination procedures. At least initially, it will be assumed that exemptions are not limited to hydroelectric Generating Units. It is essentially true by definition that for every Generating Unit for which the ISO is not granted Outage coordination authority the ISO's ability to maintain reliability of the ISO Controlled Grid is incrementally that much less. Currently, within the ISO Controlled Grid there is 8,593 MW of nonparticipating thermal generation. In addition, CDWR operates 1,926 MW of generation on the ISO grid along with 2,368 MW of generation operated by municipalities that could claim exemptions similar to that of CDWR. If CDWR resources remain exempt from the ISO's Outage coordination authority, it is reasonably likely that the municipalities associated with the 2,368 MW referred to above will also request exemptions. This means that a total of 4,294 MW of generation would become exempt from the ISO's Outage coordination authority. When that total is added to the nonparticipating MW discussed above, nearly 13,000 MW of generation will fall outside of the ISO's Outage coordination procedures. This is a recipe for disaster on the ISO Controlled Grid.

B. Conditions Affecting ISO Grid Reliability.

The need for the ISO Outage Coordination Procedures, initially required by the operating conditions on the ISO Controlled Grid in 2001, remains generally unchanged, and under these conditions, exempting CDWR's units would pose a reliability problem.

In the December 21 Order, the Commission invited the parties to comment on whether conditions affecting ISO grid reliability "have changed appreciably since we first imposed the Outage coordination requirements in 2001."[11] As Mr. Gregory Van Pelt, the ISO's Manager of Outage Coordination testifies in the attached affidavit, in the most basic sense, the ISO still

[11] December 21 Order at P 12.

performs the same mission that it did in 2001 – to ensure the reliable operation of a transmission system that covers over 25,000 circuit miles, with a peak load of over 45,000 MW.[12] Van Pelt Affidavit at P 9. The ISO does so with essentially the same set of tools that it did in 2001. *Id*. The most important factor with respect to all of the ISO's activities and functions is its ability to understand and coordinate conditions on the ISO Controlled Grid, both in real-time and on a longer term basis. Any reduction in the ISO's authority to coordinate conditions on the grid will inherently lead to a reduction in its ability to ensure the reliability thereof. It is in this sense that the ISO's ability to coordinate Outage scheduling is so important. It provides the ISO with critical flexibility to ensure that sufficient generation and transmission assets are available for reliable operation of the grid at all times. In a more empirical sense, data shows that the major reliability challenges that faced the ISO in managing the grid in 2001 still exist today. Based on this data, Mr. Van Pelt explains that it is essential for the ISO to continue to have the comprehensive Outage coordination authority approved by the Commission in 2001.

One of the challenges that continues to face the ISO today is a tight margin between supply and demand. Although new generation has come on line since 2001, the pace of generation addition has slowed significantly over the past two years, according to the California Energy Commission ("CEC").[13] This slowdown in capacity addition is coupled with an estimated 6% growth in load on the ISO Controlled Grid during the 2003-2004 period,[14] as well as the ongoing retirement of generating units. Between the years of 2001-2004, over 3,300 MW of generating capacity was retired in the ISO Control Area, and an additional 1,700

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[12] Mr. Van Pelt's affidavit is included as Attachment A to these comments.

[13] Integrated Energy Policy Report, 2004 Update, California Energy Commission (November, 2004) ("CEC Report") at 11. http://www.energy.ca.gov/reports/index.html .

[14] *See* attached excerpt from "2004 Winter Assessment," California ISO Presentation to the Western Power Trading Forum Northwest Chapter (Nov. 2, 2004) at 3-4, included with these comments as Attachment B.

MW of capacity has informed the ISO that it will retire by 2006. In addition, the ISO and the CEC have identified a number of units "at risk" to retire within the next three years.

Based on these factors, the CEC has developed forecasts that show continued expected tightness between supply and demand on the ISO Controlled Grid. CEC estimates that Northern California (Pacific Gas & Electric service territory) will have adequate reserve margins under normal weather conditions from 2005-2008, but that the retirement of at-risk units and a hot summer could cause reserves to drop below WECC requirements by 2008.[15] On the other hand, in Southern California (Southern California Edison service territory), the CEC forecasts that even under normal weather conditions and without the retirement of at-risk units, there will be serious reserve deficiencies beginning this summer.[16]

Another challenge which still faces the ISO is the numerous transmission constraints in California. These transmission "bottlenecks" effectively reduce the amount of generation available to serve load in constrained areas. Van Pelt Affidavit at P 14. Also, load on the ISO Controlled Grid is still served by suppliers selling at market-based rates, rather than vertically integrated utilities. Under such conditions, there is a natural incentive for Generating Unit owners to schedule Outages prior to peak load periods. For instance, many Generating Unit owners would be inclined to schedule Outages during the spring in order to be prepared to make available the maximum amount of capacity and energy possible during the summer months, when load, and prices, tend to be higher. Thus, without the ability to coordinate Outage schedules, Outages will tend to "cluster" together prior to peak load periods. If the ISO were to lose its Outage coordination authority, it stands to reason that Generating Unit owners would have the same incentive to cluster their Outages as they did prior to 2001. Van Pelt

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15 CEC Report at 8.

16 *Id*.

Affidavit at P 13. This would represent a serious obstacle to the ISO's ability to maintain grid reliability.

Given these conditions, the ISO's ability to coordinate the scheduling of Generating Unit Outages continues to be critical in order for the ISO to ensure the availability of sufficient energy resources, as well as the safety and reliability of transmission and generation assets. *See* Van Pelt Affidavit at PP 16-17. Moreover, it is important that that authority continue to be comprehensive, rather than reduced to a piecemeal system of exemptions. *Id*. In this sense, it is not appropriate to exempt CDWR from the ISO's authority to coordinate Outage scheduling. As noted in the ISO's request for rehearing of the Order on Remand, an exemption granted to CDWR would remove nearly 2,000 MW of Generating capacity from the ISO's Outage coordination authority. Such capacity could prove critical to maintaining the reliability of the ISO Controlled Grid, especially during periods of tight supply and demand. *Id*. at P 16. Even putting aside the scenario that CDWR's capacity was directly needed to serve an overall demand shortfall, the ISO's ability to coordinate and plan Outages in a larger sense would be compromised by its inability to account for the CDWR units in its planning. For instance, the lack of ISO Outage coordination authority over CDWR could mean that the ISO would have to compromise the safety and/or reliability of other Participating Generators in order to ensure the reliability of the ISO Controlled Grid. *Id*. at P 17. Allowing CDWR to exempt its resources from the ISO's Coordinated Outage Planning process will disadvantage other Market Participants by disrupting the ISO's Long Range Outage Plan when a CDWR Outage is taken that conflicts with other planned Outages or affects transmission path limitations, further undermining the ISO's authority to coordinate Outages. As the ISO explained in its request for rehearing, such a result would undermine the very uniformity the

Commission concluded was necessary to ensure reliability and correct the shortcomings that led to the California energy crisis.

C. Exemption of CDWR from the ISO's Outage Coordination Authority. Requiring CDWR to Coordinate its Outage Scheduling With the ISO Will Not Prevent it From Fulfilling its Water Management Obligations.

The ISO continues to believe that the record does not support CDWR's need for an exemption from the ISO's Outage coordination requirements. CDWR identified as a basis for an exemption six factors it must consider in planning maintenance schedules, "most of which" it asserts do not impinge upon gas-fired merchant generation. As the ISO explained in its request for rehearing of the Order on Remand, a number of these factors do not distinguish CDWR from any Market Participant and should not be a basis for Commission preferment.

With respect to the factors that are unique to CDWR's water management functions, the ISO's Outage Coordination authority is already designed to appropriately take these factors into account. The fact is that CDWR remains largely in control of its Outages. As noted above, the ISO's Outage coordination procedures simply requires hydroelectric generating units to submit their Outage schedules to the ISO and allows the ISO to modify those schedules only if the ISO determines that a modification is necessary to protect the reliability and efficient operation of the ISO Controlled Grid. Once it has approved an Outage, the ISO can only cancel it for reasons of System Reliability. ISO Tariff, OCP 4.3.9.

Moreover, the ISO Tariff ensures that the ISO will not abuse its authority in connection with hydroelectric units, such as those operated by CDWR. T*he provisions of the ISO Tariff expressly prevent such a result.* Section 2.2.1 of the ISO Tariff explicitly provides:

> Nothing in this ISO Tariff is intended to permit or require the violation of Federal or California law concerning hydro-generation and Dispatch, including but not

> limited to fish release requirements, minimum and maximum dam reservoir levels for flood control purposes, and in-stream flow levels.

Although the ISO believes that it is important that it maintain its authority to coordinate Outage scheduling for all Participating Generators, its goal is to do so in a way that minimizes disruption to Generating Unit Operators, while still ensuring system reliability. One example of this emphasis is the fact that the ISO Operating Protocol that relates to Outage Coordination directs the ISO, in prioritizing Outages, to take into account the special circumstances of operators such as CDWR. ISO Operating Procedure T-113 lists factors to be considered in prioritizing Outages to include "uncontrollable but predictable fuel . . . or water limitations," "regulatory or other legal constraints," "seasonal constraints," and "environmental benefits."[17] The ISO's success in achieving this goal with respect to CDWR is borne out by the facts. With respect to a total of 746 CDWR Outages in the past 23 months, only 16 of these Outages were cancelled by the ISO, and of those, 14 were cancelled because they were scheduled as duplicate Outages. Thus, out of nearly 750 Outages scheduled by CDWR in the past two year period, only two have been cancelled pursuant to the ISO's Outage coordination authority.[18]

In light of these facts, it is clear that the exemption of such hydroelectric facilities, such as those operated by CDWR, from the must-offer requirement, does not equate to a need for an exemption for those entities from the ISO's Outage coordination authority. Under the must-offer requirement, Participating Generators must offer all of their available capacity in the ISO's Real Time Market. The Commission exempted hydroelectric facilities from the must-offer obligation because of perceived difficulties in applying such obligations due to the multi-

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[17] Operating Procedure T-113 is attached to these comments as Attachment C.

[18] *See* Van Pelt Affidavit at 20. One of these Outages was rescheduled due to a conflicting transmission Outage, and one was cancelled due to it being scheduled on an ISO restricted maintenance day, which means that supply and demand were significantly tight on the ISO Controlled Grid.

purpose limitations of hydro-electric facilities (*e.g.,* irrigation, recreation, and power production). April 26 Order at 61,357. As the ISO explained in its rehearing request of the Order on Remand, if hydroelectric Generating Units were subjected to the must-offer obligation, they would indeed surrender to the market their control over the ability to increase and curtail generation as necessary to perform their obligations and functions such as water delivery, irrigation, and recreation. In contrast, Outage coordination is a planning function; it occurs primarily on an annual basis. Unlike the must-offer obligation, the ISO's Outage coordination Tariff provisions do not give the ISO the authority to dictate on a day-by-day basis (365 days a year) whether a specific unit should be running or not running. This authority does not in any manner threaten the ability of hydroelectric generating units to increase and curtail generation on a day-to-day basis as necessary to meet their other obligations. The Outage coordination function simply does not present the same need for an exemption that the must-offer requirement presents.[19]

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[19] Section 2.2.1 would also protect hydroelectric Generating Units in the case of the must-offer requirement, but would be difficult to apply and enforce in the context of the day-to-day and hour-to-hour demands of the Real Time Market.

IV. CONCLUSION

The ISO respectfully asks the Commission to accept these initial comments as requested by the Commission in its Order on Rehearing of December 21, 2004, relative to why the ISO's Outage coordination authority should continue to extend to all Generating Units in the ISO system who have signed Participating Generator Agreements with the ISO.

Respectfully Submitted,

/s/ Gene L. Waas

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January 14, 2005

ATTACHMENT A

AFFIDAVIT OF GREGORY VAN PELT

THE UNITED STATES OF AMERICA
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FEDERAL ENERGY REGULATORY COMMISSION

San Diego Gas & Electric Company, Complainant,	)	
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AFFIDAVIT OF MR. GREGORY VAN PELT CONCERNING THE NEED FOR CONTINUED OUTAGE COORDINATION ON THE ISO CONTROLLED GRID

1. My name is Gregory Van Pelt and I am currently employed by the California Independent System Operator (ISO) as Manager of Outage Coordination. My business address is 151 Blue Ravine Road, Folsom, California 95630.

2. As the Manager of Outage Coordination, I am responsible for managing operations and staff relating to scheduled and forced Outages of facilities (transmission, generation, telecommunications) on the ISO Controlled Grid. My duties include managing planned facility Outages (i.e., minimizing the risk of allowing grid facilities to be out of service) to provide for appropriate maintenance opportunities, connecting new resources, and

reconfiguring existing facilities, all in an effort to ensure the continuing reliability of grid operations. I also analyze and recommend policy and procedure changes relating to Outages and I represent the ISO in related industry forums.

3. I have approximately 30 years of experience in the field of power systems operations. I began my career at Southern California Edison, where I held various positions including Operations Support Supervisor and Manager of Emergency Planning & Preparedness. I came to the ISO in 1997. Prior to assuming my current position as Manager of Outage Coordination in 2000, I was one of five Real-time Reliability Coordinators (who, with the two Reliability Coordinators in other regions of the WECC, endeavor to ensure WECC-wide system reliability and direct operations before, during, and after problems or disturbances that have regional impacts). Prior to that at the ISO, I was responsible for developing emergency planning and integrating the ISO into existing emergency management structures, the support of real-time dispatching functions, and acting as a liaison with state emergency response agencies and participating transmission owners and utility distribution companies.

4. The purpose of this affidavit is to explain that conditions affecting ISO grid reliability have not changed appreciably since the Commission augmented the ISO's Outage coordination authority in 2001. Thus, I believe that the ISO will continue to require Outage coordination authority in order to maintain reliability in the ISO Control Area, and that authority should

continue for all Generating Units under a Participating Generator Agreement ("PGA"), including units operated by the California Department of Water Resources ("CDWR").

BACKGROUND ON ISO OUTAGE COORDINATION AUTHORITY

5. Prior to 2001, the ISO's authority to coordinate generator long-term Outage scheduling was limited to maintenance Outages associated with Reliability Must-Run ("RMR") Units. The ISO's authority with respect to these non-RMR Outage schedules was limited to changes made to those schedules less than seven days prior to the scheduled date of an Outage. During the later part of 2000, the ISO encountered several instances in which its lack of coordination over general Outage scheduling created serious reliability problems. For instance, during the week of November 12, 2000, approximately 11,000 MW of Generating Unit capacity was either forced or planned to be out of service. These Outages required the ISO to declare a Stage 2 emergency (which occurs when reserves fall below 5%) on three consecutive days. Moreover, it was in large part due to generating unit Outages that, for the first time ever, the ISO had to initiate wide-scale interruptions of firm service on January 17, 2001.

6. Based on these circumstances, Commission Staff recommended, and the Commission staff approved, changes to the ISO Tariff to provide the ISO with the authority to coordinate Outage schedules with respect to all

generators that have a Participating Generator Agreement ("PGA") with the ISO.

7. Under the ISO's Outage system, generators with a PGA must submit Outage schedules to the ISO, and the ISO must approve these schedules unless they are likely to have a detrimental effect on the efficient use and reliable operation of the ISO Controlled Grid. ISO Tariff Section 2.3.3.5.2. If the ISO does reject an Outage schedule, it must identify the reliability, security and market concerns which prompt the rejection, and suggest possible remedies or schedule revisions which might mitigate those concerns. ISO Tariff, Outage and Coordination Protocol ("OCP") 4.3.5. Once the ISO approves an Outage, it can only cancel that Outage if necessary to maintain System Reliability. ISO Tariff, OCP 4.3.9.

CONDITIONS AFFECTING RELIABILITY ON THE ISO CONTROLLED GRID AND THE CONTINUING NEED FOR COMPREHENSIVE OUTAGE SCHEDULE COORDINATION AUTHORITY, INCLUDING CDWR

8. In its December 21 order requesting comments, the Commission asked that parties provide comments on whether conditions affecting ISO grid reliability have changed appreciably since the Commission first imposed Outage coordination requirements in 2001. For several reasons, I believe they have not.

9. First, the ISO still operates, fundamentally, the same System and performs the same role in operating the ISO Controlled Grid and ensuring the reliability thereof, as it did in 2001. The ISO performs these missions

with essentially the same mechanisms that it did in 2001 (e.g. markets for Imbalance Energy and Ancillary Services, Reliability Must Run units, etc.). The ability to centrally coordinate Outage scheduling continues to be one of the most important tools the ISO has in this regard.

10. In addition, one of the main reasons that the ISO required Outage coordination authority in this first instance was because of the lack of supply in relation to demand in the ISO Control Area that existed during the critical period of 2000 through 2001. This tightness of supply and demand made it particularly difficult for the ISO to maintain grid reliability when multiple Generating Units scheduled Outages during the same times. At present, there continues to be a relatively tight margin between supply and demand in the ISO Control Area. New generation has come on-line in the ISO Control Area since 2000-2001. However, according to the California Energy Commission ("CEC"), the pace of power plant additions has slowed significantly in the last two years (the report can be located at http://www.energy.ca.gov/reports/index.html entitled "*Integrated Energy Policy Report 2004 Update, Commission Final Report*"). Moreover, there has also been substantial load growth in California during the 2000 to 2004 period. Currently, demand for electricity in the ISO Control Area is at levels not projected to occur until 2006. Demand during the mild-weather summer of 2004, during which California set seven usage records, showed a growth of approximately 6-8%, and ISO forecasts a 6% growth in demand for the winter of 2004.

11. Another factor that is contributing to tight margins between supply and demand in the ISO Control Area is the retirement of Generating Units. Between the years of 2001 and 2004, over 3,300 MW worth of generating capacity was retired in the ISO Control Area. An additional 1,700 MW worth of generating capacity has informed the ISO that it will retire by 2006. On top of these known figures, there are a number of units that have been identified as "at risk" to retire within the next three years. The CEC has identified 32 such units that it has classified as having a "medium-to-high risk" of retiring between 2005 and 2008, because they do not have an RMR contract with the ISO, or other assured revenue source. These units represent over 9,000 MW of capacity.

12. Given these figures, the CEC estimates that Northern California (Pacific Gas & Electric service territory) should have adequate reserve margins under normal weather conditions from 2005-2008. However, assuming the retirement of the units identified as "medium-to-high risk," the CEC shows that under adverse weather conditions, reserve margins would be just slightly over seven percent in 2007, and rotating outages could become necessary in 2008.

13. However, in Southern California (Southern California Edison and San Diego Gas & Electric Company service territory) the situation is more serious. Even assuming normal weather conditions and no retirements of the "medium-to-high risk" units during the 2005-2008 period, the CEC forecasts that there will be serious reserve deficiencies in Southern

California beginning this summer (2005) – consistently under the 7% target, and often below 5%, which is the level at which the ISO begins to shed interruptible load (Stage 2 Emergency). Factoring in either or both adverse weather conditions and the retirement of the "medium-to-high risk" units results in an even bleaker assessment in Southern California. Under such conditions, the CEC forecasts that reserves will be consistently below 5%, and often below the 1.5% mark at which the ISO institutes rolling outages (Stage 3 Emergency).

14. Another important factor which contributes to the tight margin between supply and demand in the ISO Control Area is transmission constraints. There continue to be a number of transmission "bottlenecks" in the ISO Control Area which effectively reduce the amount of generation available to serve demand in transmission-constrained areas (these are sometimes referred to as "locational constraints").

15. In the absence of the ISO's authority to coordinate Outage scheduling, the market incentive is for all generators to schedule Outages prior to peak load periods. For instance, many generators are naturally inclined to schedule Outages during the spring in order to be ready to sell the maximum amount of capacity and energy possible during the summer months, when load, and prices, tend to be higher. Thus, without the ability to coordinate Outage schedules, Outages naturally tend to "cluster" during certain periods. Such behavior is highly detrimental to the reliability of the ISO Controlled Grid, especially given the continued tight supply conditions

in the ISO Control Area, and compounds reliability concerns when considering the need to simultaneously coordinate Outages for transmission facilities. If the ISO's authority to coordinate Outages was removed, either in whole or in part, generators will have the same incentive to cluster their Outages as they did prior to the Commission having granted the ISO this authority in 2001.

16. What all of this information shows is that there continue to be significant challenges to the ISO's ability to ensure the reliability of the ISO Controlled Grid, and that these conditions are likely to continue over the next several years (and may even become worse, depending on unit retirements and load growth). I firmly believe that one of the most important tools that the ISO has in maintaining reliability under such conditions is its ability to coordinate the Outage schedules of all Participating Generators. Under these conditions, the ability to obtain energy from even a few units can mean the difference between the ability to avoid a System Emergency or the need for curtailments. Therefore, I do not believe that it is appropriate to exempt any Generating Units under a PGA from the ISO's Outage scheduling requirements, including CDWR. Exempting CDWR would remove nearly 2,000 MW of capacity from the ISO's Outage coordination authority. I believe that given the current and forecasted conditions on the ISO grid, that that capacity could prove essential in maintaining grid reliability. As an example, on July 19, 2004, the ISO system reached a new demand peak of 44,042 MW, during which

time CDWR's Hyatt-Thermalito facility operated at peak load for approximately 8 hours supporting California load requirements.

17. Moreover, the ISO's ability to centrally coordinate the Outage schedules of all PGA generators greatly enhances the reliability of all Generating Units connected to the ISO Controlled Grid. Removing units from this process will lessen the effectiveness of the ISO's Long Range Outage Plan when those exempt units take Outages that conflict with other planned Outages or affect transmission path limitations. This could require the ISO to cancel planned Outages of other units or transmission facilities in order to maintain grid reliability, which then negatively affects the reliability of those units and transmission facilities, and by extension, the entire ISO Controlled Grid.

18. I also believe that the continuing obligation of CDWR to coordinate its Outages with the ISO will not prevent CDWR from fulfilling its water management obligations. As I stated above, under the ISO Tariff, the ISO is authorized to deny an Outage schedule only if it has a detrimental effect on the efficient use and reliable operation of the ISO Controlled Grid, and can cancel an approved Outage only when necessary to maintain System Reliability. In the case where the ISO believes that approving a requested Outage schedule would detrimentally impact the ISO Controlled Grid, the OCP 4.3.5 requires the ISO to identify these concerns to the relevant Generating Unit Operator, and suggest possible remedies or schedule revisions that might mitigate such concerns. Also, the ISO Tariff

specifically protects hydroelectric operators such as CDWR, in that it prohibits the ISO from taking action that would require an Operator from violating Federal or California law concerning hydro-generation and Dispatch.

19. Moreover, the ISO is committed to working with entities such as CDWR in order to accommodate their special limitations in Outage scheduling. The ISO's goal is to exercise its Outage coordination authority in a manner that ensures grid reliability, but also accommodates, to the maximum extent possible, the Outage planning desires of Generating Unit Operators. For instance, the ISO's Operating Procedure addressing Outage coordination, T-113, specifies that the ISO should consider, in prioritizing Outage schedules, such factors as uncontrollable but predictable fuel or water limitations, regulatory or other constraints (including meeting environmental requirements), seasonal constraints, and environmental benefits.

20. With respect to CDWR, I believe the ISO has been successful in meeting CDWR's Outage planning desires. Out of 746 CDWR-related Outages in the past 23 months, only 16 were cancelled by the ISO, and of those, 14 were cancelled because they were scheduled as duplicate Outages. Of the remaining two cancellations, one was due to a conflicting transmission Outage, and the other because, after approval of the CDWR Outage, system conditions devolved to a point where overall reliability was becoming marginal, and a Restricted Maintenance Operation ("RMO") day

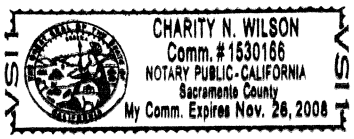
(formerly known as a “No Touch” day) was declared by the ISO, warranting the cancellation of the CDWR Outage. It is important to note that the declaration of an RMO in itself is not cause to cancel any specific Outage. Rather during an RMO each Outage must come under greater scrutiny to assure that reliability concerns, which prompted the RMO, will not be exacerbated by that specific Outage. Even then the ISO will attempt to accommodate the Outage by minimal changes including, for example, reshaping of the Outage hours but maintaining the Outage day. Outages which must be deferred because of an RMO are rescheduled on a prioritized basis. Thus, out of nearly 750 Outages scheduled by CDWR in the past two year period, only two have been cancelled pursuant to the ISO’s Outage coordination authority.

I swear that the facts contained in the affidavit provided above are true to the best of my knowledge, information, and belief.

Gregory Van Pelt

State of California
County of Sacramento

Subscribed and sworn to ~~(or affirmed)~~ before me on this 14 day of January, 2005, by Gregory Van Pelt, personally known to me or proved to me on the basis of satisfactory evidence to be the person who appeared before me.



Notary Public

ATTACHMENT B

EXCERPT OF ISO 2004 WINTER ASSESSMENT PRESENTATION TO WESTERN POWER TRADING FORUM

Presentation to the WPTF Northwest Chapter

November 2nd, 2004

Portland, OR

"2004 Winter Assessment"

Jim McIntosh
Director of Grid Operations

Summary

- ISO Winter 2004 Outlook
- Challenges
  - Transmission Constraints
  - Scheduled Work and Generation Outages
- New Generation
- Five Year Outlook (2004 – 2008) *published 10/10/03*
- Retirements at Risk

2004 Winter Challenges

- Winter Peak Load
  - Last Year: 33140 MW
  - This Year: 35128 MW – Mac's *"W.A.G."*
    - ☑ 6% Load Growth
  - The ISO has NO formal Winter Peak Prediction

2004 Winter Challenges

- Resource Assessment
  - 2004 Summer Demand Levels showed 6 – 8% Load Growth
    - Demand for electricity is presently at 2006 projected levels. California set 7 usage records during a mild summer
  - State-wide transmission bottlenecks at 17 to 30 points reduce generation available to serve demand
  - Weather Assumptions – Long Term Forecasts:
    - Oct-Nov: Cold and Wet - Dunklee
    - Dec-Jan: Normal Conditions
    - Jan-Mar: El Nino is Predicted
  - CAISO Imports have been running 4000 to 8000 MW with low hydro conditions in the Northwest. Imports are anticipated to decline through January and while the DC Intertie is out of service. The DC is scheduled to be back in service January 1, 2005.
  - Adequate Fuel Supplies are Expected
  - Adequate Resource Capacity Margins are Anticipated

2004 Winter Challenges

- Transmission Assessment
  - Transmission Constraints at:
    - Miguel – New Bank Should be in November
    - Palo Verde
    - Antelope-Vincent
    - COI (after DC goes out of service)
  - New Los Banos-Gates line estimated in service 12/15/04, which will bring the Path 15 rating up to 5400

2004 Winter Challenges

- Operational Issues
  - Three Nuclear Units and DC out of service at various times this Fall.
  - Load Growth Phenomena
  - WAPA/SMUD Transition Update
  - Environmental Issues
    - NOx/SOx Requirements
  - Delay Retirements – 676 MW (thru 2005)
  - Ensure effective resource adequacy requirements are implemented by Summers 2005 & 2006

ATTACHMENT C

ISO OPERATING PROCEDURE T-113

CALIFORNIA ISO California Independent System Operator	OPERATING PROCEDURE	Procedure No.	T-113
		Version No.	5.1
		Effective Date	10/15/04
Scheduled and Forced Outages		Distribution Restriction: NONE	

Table of Contents

PURPOSE

- Details the process for coordination of scheduled maintenance, repair and construction of new facilities or Generating Units, and Interconnections.
- Covers Forced Outages of facilities under the CAISO jurisdiction.

ACTIONS

1. Communication with CAISO Outage Coordination Office

NOTE: All communications concerning a request or change shall be between the ISO and the designated single point of contact for each participant. No scheduled Outage will commence without prior approval of the CAISO Control Center.

Market Participants, PTOs, SCs and Participating Generators

- **IF** SLIC Web is available,
  THEN use Attachment L, "SLIC Extended Use Manual", to assist in submitting the Outage request.
- **IF** SLIC is not available,
  THEN complete either a "Transmission Outage Request" (Attachment B), or a "Generator Owner Availability Notice and Outage Request" (Attachment C), and **submit** to the CAISO OCO (Outage Coordination Office) by e-mail, fax or telephone (refer to Attachment A, "ISO Outage Coordination Contact Information").

NOTE: Requests are not deemed received unless receipt is confirmed by the respective OCO within a reasonable time. All OCO phone calls may be recorded to document official business.

- **IF** sufficient or complete information is not received by the OCO within the times outlined in the Outage Coordinator Protocol,
  THEN the CAISO OCO approval of a request may be delayed.

2. Short-Range Outage Requests and Planning

NOTE: The CAISO OCO develops the short-range Outage plan by the coordination of Outages scheduled through the long-range process (refer to section 3.) and requests received for Outages (i.e., not included in the long-range plans) with a start date up to 30 days in advance. SCs must confirm their planned Outages 30 days prior to the start of the Outage. Starting and ending times, and dates, along with work specific details are required before an Outage is approved. Minimum request times to allow appropriate coordination for specific types of Outages are covered in the following.

2.1. Outage That Affects Interconnections or WECC Paths

Market Participants, PTOs and SCs

- **IF** the Outage affects transmission equipment or resources which includes an Interconnection with adjacent Control Areas, or which are part of a WECC Path,
  THEN submit requests for CAISO approval no later than 1130 hours at least three (3) working days prior to the starting date of the Outage.

2.2. Outage That Affects Transmission Equipment

- **IF** a Transmission Outage request is one of the following types:
  - A 500kV facility (including line, circuit breakers, reactive devices, and transformers)
  - Any line Outage (including open one-end only)
  - Any Load transformer Outage
  - Any bus Outage
  - Relay protection Outages that reduce the level of protection or for which there is not (in the judgment of the CAISO) adequate back-up protection.
  - Relay protection if the line or equipment is opened or the path transfer capability reduced during trip-testing or other related work.
  - Under-frequency Load Shedding relays that represent more than two percent (2%) of armed capability (refer to appendices).
  - Any RAS (Remedial Action Scheme) or SPS (Special Protection Scheme)
  - Any Outage that requires coordination by two (2) or more connected entities.

- Communication system Outages affecting the operation of the CAISO Control Area, including SCADA facilities.
- Any other Outage that the CAISO considers affects the transfer capability of a line or path comprising any part of the CAISO Control Area.

THEN submit the request for CAISO approval no later than 1130 hours at least three (3) working days prior to the starting date of the Outage.

- **IF** the transmission Outage or change request is one of the following types:
  - Energized line or station facilities
  - Circuit breaker Outages that do not reduce the transfer capability of a line or path.
  - Relay protection maintenance or changes to relay settings that do not open the line or equipment or otherwise reduce the transfer capability of a line or path, or compromise relay protection.
  - Reactive device maintenance that does not reduce the transfer capability of a line or path.

  THEN submit the request no later than 1130 hours one (1) working day prior to the starting date of the Outage.

2.3. Outage That Affects Generation Resource

NOTE: Requests for Generation Outages or Generation Derates follow terminology consistent with NERC GADS.

Participating Generators and SCs

- **IF** a Planned or Immediate Forced Transmission Outage causes:

  1) A single generator to be limited to some value less than Pmax,

  OR,

  2) Two or more generators to be limited to 0 MW output,

  THEN refer to Attachment O for guidance on the actions and communications that are necessary by all parties to prepare for or react to the generation outage(s).

- **IF** a Generation Outage request is one of the following types,
  - o Requests for any equipment which may affect the maximum output of:
    - A unit designated as Reliability Must Run/Regulatory Must Take.
    - A Participating Generator with a rated capacity of 10 MW or greater.
  - o Requests for Ancillary Service certification testing.
  - o EMS control equipment including communication circuits.

  THEN submit the request no later than 1130 hours at least three (3) working days prior to the starting date of the Outage.
- **IF** a Generation Outage or change request is one of the following types:
  - o Energized station facilities.
  - o Circuit breaker Outages that do not reduce the transfer capability of a Generating Unit.
  - o Reactive device maintenance that does not affect RMR status.
  - o Outages or derates during ambient or regulatory derates that do not affect generating capacity (see 2.6)

  THEN submit the request no later than 1130 hours at least one (1) working day prior to the starting date of the Outage.

2.4. CAISO Acknowledgment of Request

NOTE: It is the responsibility of the Outage requester to identify generating stations affected by an EMS-related Outage. Acknowledging receipt of the Outage request does not constitute approval or denial of that request. Similarly, assignment of SLIC Outage numbers does not constitute approval or denial, only that the Outage has been received and entered into the SLIC system for processing.

CAISO OCO

- **IF** an Outage Request is received through the SLIC interface,

  THEN the acknowledgement to the SC upon receipt is an automatic update to the users SLIC Web workspace.

- **IF** an Outage Request is received by a method other than SLIC,

  THEN acknowledge the request within a reasonable time.

- **IF** the Outage request affects EMS control equipment,

  THEN notify the SC responsible for each Generating Unit affected by the Outage, identified in the request.

2.5. CAISO Approval or Rejection of Request

CAISO OCO

- **Approval Notification**
  - **Refer** to Attachment I for the Generation Facility(ies) Outage Notification Process flow diagram (regarding transmission Outages that affect generation and generation Outages that affect transmission) for submittal and approval notifications.
  - **IF** an Outage Request is received,
    THEN approve or reject each request based on the impact to reliable system operations,
    AND notify the requester of the decision no later than 1530 hours of the third working day following the receipt of the request for a "three (3) day prior notification Outage" and by 1530 of the same working day after receipt of the request for a "one (1) day prior notification Outage".
- **Rejection Notification**
  - **IF** a request is rejected,

    THEN identify the reliability and security concerns that initiated the rejection.
  - **Request** additional information (if required) to prioritize the Outage and/or identify scheduling opportunities.

    AND suggest possible remedies or Schedule revisions, as available, to mitigate CAISO concerns.
  - **IF** adjustments cannot be exercised to remedy the Outage conflict,

    THEN reject the request. The only exception applies to OCP 6 (Management of Forced Outages or Immediate Nature Maintenance).

2.6. Ambient Derate

NOTE: Ambient Derates occur when the available prime moving force (i.e., water in hydroelectric plants or the primary process in a co-generation plant) changes to decrease available power production. The ability to produce power may be reduced (i.e., Ambient Derate) or may be completely interrupted (i.e., Ambient Outage).

CAISO OCO or Generation Dispatcher

- **IF** an Outage or derate is requested for an Ambient Derate or for a forecasted period of an Ambient Outage
  AND there is ***not*** an additional loss of generating capacity,
  THEN approve the request as a scheduled Outage.
- **IF** an additional loss of generating capacity results,
  THEN designate the Outage a Forced Outage, unless scheduled in advance as prescribed in section 2.3.

Participating Generators and SCs

- **Communicate** to the CAISO in the same manner as Outages, through the SLIC interface for Ambient Derates.
- **Refer** to Attachment M, "PTO Web Client".

3. Long-range Outage Requests and Planning

3.1. Submittal of Long-range Plans

Market Participants, PTOs, SCs and Participating Generators

- **Submit** long range plans, selecting the OC Long Term Planning attribute (i.e., identify work planned for which Outages or derates are required), to request Outages or derates starting at the beginning of the quarter and for at least the next twelve months.
- **Include** the preferred start date, the duration of the Outage, the work to be done, and information relative to the necessary Outage window (i.e., lead-time required to prepare for the Outage, duration of work, and required completion date, if any).
- **Provide** alternative start dates, information relative to linkages with other Outages or derates (Example: if needed for providing start-up steam to adjacent units), or other pertinent information (refer to 3.5) to assist the CAISO in scheduling Outage opportunities.

CAISO OCO

NOTE: Plans received after the 15th of the beginning of each quarter will be handled on a first come, first serve basis.

- **Coordinate** a rolling twelve-month Outage plan for plans received by the 15th day of the beginning of each quarter.
- **Respond** to the requests within 30 days from receipt.

3.2. Resolving Conflicts

CAISO OCO

- **IF** there are conflicts in the long-range plans which were not resolved by the information provided,
  THEN notify the requester a conflict exists and **request** additional information to either resolve the conflict or to prioritize the requests to fill Outage opportunities that remain open (refer to 3.5). (This may include any scheduling flexibility by the requester to separate the overall Outage into multiple, smaller Outages or derates.)

NOTE: A requester may choose to select an alternative date or plan, as suggested by the CAISO, or may elect to be "wait-listed" for the starting date of their preference.

- **IF** the Outage is wait-listed for a specific start date,
  THEN list the Outage start date on a prioritized basis.

3.3. Coordinated Long-range Plan

CAISO OCO

- **Document** the coordinated long-range plan, no later than the 45th day of the quarter, for the twelve-month period.
- **Notify** each PTO or Participating Generator as to the status (i.e., approved or denied) of his or her submitted plans.
- **Assign** priority, in each subsequent quarter, to previously approved scheduled Outages or derates.
- **Assign** priority for Outages or derates listed in the approved coordinated plan over Outage requests for subsequent coordinated plans.
- **IF** a change is requested for an Outage listed in an approved CAISO coordinated plan,
  THEN assign that Outage request on a first come first serve basis. (The Outage no longer has priority associated with the previous CAISO coordinated Outage plan.)
- **Include** a prioritized list of all Outages or derates scheduled to start on any given day in the coordinated Outage plan, including those Outages or derates wait-listed for that start date.
- **Offer** any additional Outage opportunity (based on adjusted assumptions or rescheduled Outages or derates) to the first requester on the wait-list for that start date.

- **IF** the Outage opportunity is refused,
  THEN offer the opportunity to the next requester on the wait list,
  AND remove the requester from further consideration for the affected Outage.

- **IF** there is a need to cancel a scheduled Outage due to system reliability concern,
  THEN request that volunteers reschedule their Outage without loss of their priority status.
- **IF** insufficient volunteers are identified,

  THEN cancel and **re-schedule** Outages or derates starting with the lowest prioritized Outage listed for that start date.

Market Participants, PTOs, SCs and Participating Generators

- **IF**, prior to the final approval for a generator Outage, a requester wishes to substitute another unit Outage without cancellation of the scheduled Outage,
  THEN request to replace the scheduled Outage with a like-sized unit Outage starting on the same date, from the same portfolio, and that meets the necessary reliability requirements.

3.4. Reporting Reliable Resource Adequacy

CAISO OCO

- **Establish** reliability thresholds with an appropriate balance between generating and transmission grid resources to maintain electric system reliability.

NOTE: Long-range planning requires planning factors such as system demand, unit derates, forced outage rates, imported power levels, hydroelectric power availability, etc. It is expected that such assumptions be proportionately conservative relative to the distance in the future of the period. Example: Assumptions provided for the period twelve months ahead likely would be more conservative than those made for the period three months ahead. Combining these assumptions with reliability factors will identify the level of resource adequacy for any given period.

- **Report** the estimated resource adequacy on a yearly, quarterly and monthly basis.
  - **Utilize** current resource adequacy information to identify the amount of Outage opportunities throughout the next twelve-month period.
  - **Develop** a coordinated Outage plan for the twelve-month period starting the first day of the following quarter, which combines the available Outage opportunities with the submitted Outage requests.

NOTE: At each subsequent quarter, the assumptions are reviewed and it may be decided that additional Outage opportunities exist. Conversely, revised assumptions may indicate there are no additional opportunities, or even that there is less opportunity than previously estimated.

- **Adjust** both the resource adequacy information and Outage opportunity accordingly.
- **Include** notice of adjusted Outage opportunity, as required, in the adequacy reports.

3.5. Prioritization of Outage Requests

CAISO OCO

- **IF** there are conflicting Outage requests,
  THEN prioritize the requested Outages or derates for scheduling into available Outage opportunities.
- **Administer** short-range (i.e., 30 days or less) coordination of Outages or derates on a first come, first serve basis.
- **IF** Outage requests are received at the same time,
  THEN use the prioritization factors for long-range Outage coordination.

NOTE: Because long-range planning considers all long-range plans received by the 15th day of the beginning of each quarter as being received at the same time, first-come, first-serve does not apply and other prioritizing considerations must be used. Long-range plans received after the 15th day of the quarter are handled on a first-come, first-serve basis. Final approval or denial of a requested Outage or derate is at the sole discretion of the CAISO with the main focus on system reliability.

- **Use** the following factors as guidelines in prioritizing Outages or derates:
  1. First come, first serve
  2. Uncontrollable but predictable fuel (nuclear) or water (hydro) limitations (i.e., Ambient Outages or Derates)
  3. Regulatory or other legal constraints (including meeting nuclear, emissions, or other environmental requirements; i.e., Regulatory Outages or Derates)
  4. Joint ownership projects requiring coordination with entities outside the CAISO control area

5. Warranty requirements
6. Facilitation of additional (new) system resources
7. Seasonal constraints (restricted access due to weather or protected areas for migratory birds, protected species, etc.)
8. Linkage to other Outages or derates (overlapping equipment, required to enable return of other equipment, etc.)
9. Environmental benefits
10. Seniority lottery draft (refer to Attachment K, "ISO Outage Coordination Seniority Lottery Draft").

NOTE: Additional factors that affect Outage or derate prioritization may be reviewed on a case-by-case basis. These include the total MW curtailment required, the duration of the Outage or derate, and the time required in an emergency to return out-of-service facilities.

3.6. CAISO Short-Range Plan

CAISO OCO

NOTE: The short-range plan may change from day to day as new Outages or derates are received and coordinated on a short-term, as available basis.

- **Prepare** the Short-range plan covering the period from the current day through the next 30 days using the long-range plans, as well as requests made on a short-term basis (refer to section 2.).
- **Assign** priority of scheduling and approval to Outage or derate requests listed in the long-range maintenance schedules over those not listed.
- **Assign** other Outages or derates on a first-come-first-serve basis.

4. Changes to Scheduled and Active Approved Outages or Derates

4.1. Request Cancellation Prior to Outage

Market Participants, PTOs, SCs and Participating Generators

- **Withdraw** a request (if required) at any time prior to actual initiation of the Outage.
- **IF** a change is requested for an Outage which has been listed in an approved CAISO coordinated plan,
  THEN handle that Outage change request on a first-come-first-serve basis and no longer associate request with the previous CAISO coordinated Outage plan.

4.2. Request Modification within Minimum Notification Requirements

Market Participants, PTOs, SCs and Participating Generators

NOTE: The modification is subject to approval by the CAISO OCO on a first-come, first-serve basis.

- **Modify** a request (if necessary) at any time prior to the minimum notification requirements, or prior to notification of approval or rejection by the CAISO OCO, whichever occurs later.

CAISO OCO

- **IF** an Outage listed in the long-range plan is modified,
  THEN remove the priority assigned to Outages or derates listed in the long-range plan.
- **IF** the modification is too complex or there is insufficient time to assess the impact, **OR IF** a conflict occurs with a previously scheduled and approved Outage or derate,
  THEN reject the modified Outage request.

4.3. CAISO Notification of Real Time Change to an Approved Outage

Market Participants, PTOs, SCs and Participating Generators

- **IF** the time frame or scope of the work changes on an approved Outage or derate prior to its beginning, or during an Outage or derate,
  THEN notify the CAISO Control Center immediately when there is any change to an approved Outage or derate in the real-time environment (i.e., either when an Outage is in progress or scheduled to start on that same day).

CAISO Control Center

- **Record** all changes to the approved Outage in the SLIC program including the detailed reason for the change to the original scheduled Outage times.
- **Re-evaluate** any future approved Outages or derates for reliability,
- **IF** the revised Outage extends into the next Outage day,
  THEN notify the OCO.

4.4. CAISO May Extend an Approved Outage Without Issue of Forced Outage Designation

CAISO Control Center

NOTE: It is at the sole discretion of the CAISO Control Center if an approved Outage that is extended past its in-date/time is classified as a Forced Outage or as an approved Outage extension.

- **IF** an approved Outage of equipment is not returned as pre-scheduled or as last revised,
  AND IF all of the following items are observed:
  - The CAISO is notified no later than two hours before the scheduled return time.
  - The Outage has no direct effect on a Generating Unit.
  - No Branch Group is affected by Congestion due to the extended Outage.
  - No other planned Outages or derates are affected.

  THEN Notify the CAISO OCO of extensions to scheduled Outages or derates,
  AND extend the Outage without classifying it as a Forced Outage.

4.5. CAISO Shift Manager May Approve Unplanned Outages or Derates without Issuing Forced Outage Designation

Market Participants, PTOs, SCs and Participating Generators

- **IF** an CAISO non-critical grid facility requires to be switched out of service for work without prior approval from the OCO,
  THEN ask the CAISO Control Center for relaxed timelines for Outages or derates.

CAISO Control Center

NOTE: It is the sole discretion of the CAISO Shift Manager to determine if an Outage is approved and designated as a scheduled Outage. This does not preclude the SC from exercising a good faith effort to schedule such work through the OCO.

- **IF** it is determined (by using the following criteria) that the requested Outage is classified as planned or forced (other factors not listed below may effect the CAISO's final decision):
  - The equipment is not CAISO critical equipment.
  - The CAISO is notified no later than two hours before the requested start time.
  - The Outage has no direct effect on a Generating Unit.
  - No Branch Group is affected by Congestion by the Outage.
  - No other Planned Outages or derates will be affected

  THEN Notify the CAISO OCO of Outages or derates scheduled in real-time.

5. CAISO Control Center Reviews All Outages or Derates

CAISO Control Center

- **Review** all Outages or derates to ensure no reliability issues exist.
- **Complete** the Outage/derate review prior to the start of the Outage day, which begins at 0001 hours each day,
  AND review periodically during the Outage day.

6. Final Outage Approval from CAISO Control Center

Market Participants, PTOs, SCs and Participating Generators

NOTE: No Outage commences without final approval from the CAISO Control Center. The CAISO Control Center has the authority to withhold final approval of Transmission Grid Facilities and all Participating Generator resources for reasons of System Reliability.

- **Contact** the CAISO Control Center, on the approved request scheduled commencement day, for final approval of the request **AND provide** the:
  - Start time
  - Return time

CAISO Control Center

- **Access** the approved Outage in the SLIC program,
  AND review the Outage times and scope of work to be performed with the requestor before final approval is granted.
- **Notify** the Requestor immediately of any intention to withhold the final approval.

Market Participants, PTOs, SCs and Participating Generators

- **Reschedule**, with the OCO, any Outage that was not approved.

7. Outage Tracking

7.1. Tracking Grid Outages

CAISO Control Center

- **Record** in SLIC the time that the Final Outage Approval is given to the PTO.

PTO

- **Report** the time, to the CAISO Control Center, that the equipment is out of service.

NOTE: Do not return equipment to service without final approval from the CAISO Control Center.

- **Report** to the CAISO Control Center when the equipment is ready to be returned to service.

CAISO Control Center

- **Record** in SLIC the time the equipment is out of service, the final approval time to return the equipment to service, and time the equipment is returned to service.

PTO

- **Report** back to the CAISO Control Center the time the equipment was returned to service.

7.2. Tracking Generation Outages or Derates

CAISO Control Center

- **Record** in SLIC each generator outage along with all pertinent outage information relating to that outage.
- **Record** the time the Final Outage Approval is given to the Participating Generator or SC.

SCs and Participating Generators

- **IF** all work is complete,
  THEN report to the CAISO Control Center that all work is complete, the nature of the work performed on the Generating Unit, and what the Generating Unit Capacity is.
- **Request** to revise availability for all other active and planned outages affecting this resource if necessary.

8. Delegation of CAISO Grid Facilities to PTOs and UDCs

NOTE: The CAISO Control Center may, at its sole discretion, delegate to the PTO or UDC the authority to operate CAISO Controlled Grid facility equipment for real-time purposes only. When the CAISO delegates operational jurisdiction of any part of the CAISO Controlled Grid, the CAISO states, in writing, the exact limits of the delegated operational jurisdiction. These limits include, but are not limited to, the voltage levels, facility equipment, reporting procedures relating to the approved Outage, and any exceptions to a portion of the delegated CAISO Controlled Grid facility. This delegated authority may be changed at anytime by the CAISO Control Center for any reason.

- **Refer** to the following attachments for specific grid facility delegation approvals.
  - Attachment F (SDGE)
  - Attachment G (SCE)
  - Attachment H (PG&E)

9. Review PTO or UDC Records

CAISO

- **Review** PTO's or UDC's logging records as necessary for verifying the accuracy of CAISO Outage records.
- **Refer** to CAISO Tariff 2.3.3.11 and 4.8.4.3.

10. Notification of Changes to Approved Outages

PTO or UDC

- **IF** any approved Outage changes from its originally submitted and approved OCO time frame and/or scope of work,
  THEN notify the CAISO Control Center immediately.
- **Request** to revise availability for all active and planned outages affecting this resource if necessary.

CAISO Control Center

- **Record** the changes in the SLIC program as well as any other information needed to clarify the reasons for the change.

11. Special Procedures for More Complex Work

11.1. Requestor Prepares Written Procedure

Market Participants, PTOs, SCs and Participating Generators

- **Prepare** a written procedure that enables the CAISO to approve Outages in a manner that allows the necessary work to proceed.

11.2. Submit Requests Four Weeks Prior to Outage

Market Participants, PTOs, SCs and Participating Generators

- **Submit** the request to the OCO a minimum of four (4) weeks prior to the start of the first job in the overall project relative to work detailed in the procedure (refer to OCP 8.4. Special Procedures for More Complex Work, and also to Attachment E, “Program Preparation Outline for New Facilities”).
- **IF** there is any doubt to an Outage Program defined as Complex Work,
  THEN consult the CAISO OCO.
- **Use** the following guidelines to determine what Outages are considered Complex Work:
  - Adding new facilities
  - Removing existing facilities
  - Reconfiguration of existing line or station facilities
  - RAS, EMS, or SCADA changes

NOTE: With OCO approval, preparatory work necessary to be completed prior to the System Change will not be classified as More Complex Work.

12. Forced Outages or Derates

12.1. Communicate Directly with CAISO Control Center for Immediate Forced Outages or Derates

Participating TO or Participating Generators

NOTE: The Folsom and Alhambra Control Centers hours of operation are twenty-four (24) hours a day, seven (7) days per week. The CAISO retains the right to inspect any generating station to determine and report on the status of generator Outages and unit availability.

- **IF** a situation is likely to occur that results in a Forced Outage within the next twenty-four (24) hours unless immediate corrective action is taken, and requires removing or restricting from service an operating Generating Unit, removing transmission facilities from service, or causing RAS schemes to be disabled or lose redundancy,
  THEN communicate directly with the CAISO Control Center, as outlined in the emergency procedures of the Dispatch Protocol.
- **Report** all Forced Outage details to the CAISO as prescribed in Attachment N, Questionable Outages, of T-113 per the tariff section 2.3.3.9.5.
- **IF** a Planned or Immediate Forced Transmission Outage causes:

  3) A single generator to be limited to some value less than Pmax,

  OR,

  4) Two or more generators to be limited to 0 MW output,

  THEN refer to Attachment O for guidance on the actions and communications that are necessary by all parties to prepare for or react to the generation outage(s).

CAISO Control Center

- **Process** the submitted Outage request, or if SLIC is unavailable to the SC's
  THEN Create an Outage record in the SLIC program when an Immediate Forced Outage occurs, to track the Forced Outage times and the detailed reasons for the Outage.

12.2. Communicate Directly with CAISO Control Center for Imminent Forced Outages or De-rates

Participating TO or Participating Generators

- **IF** a situation is likely to result in a Forced Outage, but of a nature not requiring a removal from service until some time more than twenty-four (24) hours in the future,
  THEN that Outage/de-rate is subject to the conditions outlined in 12.1.

CAISO Control Center

NOTE: Notification time requirements may be waived if requested by SC/PTO as long as notice is given as soon as possible.

- **Expedite** the request at the earliest opportunity.
- **Direct** the PTO/Generator to Schedule the Imminent Forced Outage with the CAISO OCO, when appropriate.

CAISO OCO

- **Program** the Outage and make notifications as required.

CAISO Control Center

- **Implement** the Outage request as programmed.
- **Advise** the CAISO OCO of Imminent Forced Outages or derates.

12.3. Reporting Factors Affecting Generator Availability

- Refer to CAISO Tariff 5.8.5.

Participating Generators

- **IF** there are predictable factors affecting availability such as emissions or run-time limitations, fuel or water concerns, anticipated low staffing levels, etc.,
  THEN provide the CAISO OCO information as needed to enable Outage Coordination as far in advance as possible.
- **IF** factors affecting the Outage/derate are:
  - o available run-time
  - o emissions limitations
  - o water or fuel limitations

  THEN e-mail a rolling 12-month Availability Report on the first of each month to the Outage Coordination office at outage.folsom@caiso.com. Reports shall be filed for each of these factors affecting availability. Such reports are generated for each unit,

Physical Scheduling Plant, or Resource ID at the discretion of the CAISO as described in Attachments C, "Generator Owner Availability Notice and Outage Report" and Attachment D, "Status of Emissions Limitations" of this procedure. Information from these reports is used to determine appropriate generation derates or Forced Outages as appropriate.

- **IF** an Availability Report is absent,
  THEN determine whether the unit is not in an Outage and it is fully available.

12.4. CAISO Reporting of Forced Outages or Derates

CAISO OCO

- **Report** on a daily basis, all Forced Outages or derates to appropriate monitoring agencies including but not limited to the FERC and the California Electricity Oversight Board (EOB).

12.5. Deferred Scheduled Outages or Derates

CAISO OCO

- **IF** the CAISO defers a scheduled Outage due to system reliability requirements,
  AND during that deferral period, the affected facility (i.e., generating unit or transmission grid equipment) has a failure, which is directly related to the deferred scheduled Outage,
  THEN:
  - **Designate** the Outage a scheduled Outage.
  - **Include** this Outage information in the daily report, as noted in section 12.3 (however it will be designated a scheduled Outage).
  - **Conduct** a review, as appropriate, to determine the nature and circumstance of the failure.
- **IF** such a review is conducted,
  THEN report the results of that review (including the forced or scheduled designation of the Outage) to the facility owner, the FERC, and the EOB.

13. Review of Disputes

Participating Generators or PTOs

- **IF** requests for Outages or derates are handled inappropriately by the CAISO **OR IF** the CAISO has abused its authority in scheduling Outages or derates,

THEN submit a written notice with these concerns to the CAISO Vice President of Grid Operations.

- **Request** immediate notice to FERC to enable an expeditious review (optional).

Vice President of CAISO Grid Operations

- **IF** such a notice has been received,
  THEN request specific information relative to the concern from the Outage Coordination Office,
  AND advise the Federal Energy Regulatory Commission (FERC).

SUPPORTING INFORMATION

Affected Parties

- California ISO
  - Client Relations
  - Operations Engineering and Maintenance
  - Grid Operations
  - Operations Support and Training (OSAT)
  - Outage Coordination
- Adjacent Control Area Operators
- Participating Generators
- Market Participants
- Participating Transmission Owners (PTOs)
- Scheduling Coordinators (SCs)
- Utility Distribution Companies

References

- CAISO Tariff 2.3.3.11, 3.0, 4.8.4.3, 5.0
- CAISO Tariff Outage Coordination Protocol (OCP)
- CAISO Tariff Dispatch Protocol (DP)
- CAISO Tariff Master Definitions

Definitions

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

OCO	CAISO Outage Coordination Office
OCP	Outage Coordination Protocol
SC	Scheduling Coordinator
PTO	Participating Transmission Owner

Responsibilities

Outage Coordination Office (OCO)

Coordinate the rolling twelve-month planned maintenance Outages and quarterly updates as described in the OCP and CAISO Tariff.

Coordinate and approve scheduled work and Outages on:

- Control Area Interconnections
- All facilities forming part of the CAISO Controlled Grid
- All Participating Generators having a rated capacity greater than 10 MW.
- All Reliability Must Run or Regulatory Must Take Generators.
- Work on energized transmission facilities and associated control and protective equipment
- EMS work that disables any portion of the CAISO Controlled Grid monitoring, control or protective equipment including EMS equipment and communications circuits.
- Ancillary Service certification testing
- Maintain records of each approved request as it is applied, see Attachment A for OCO Contact information
- Interconnections with responsible entities outside the CAISO Control Area.
- All 500 kV and lower voltage facilities on the CAISO Controlled Grid.
- Participating Generator Units and Reliability Must Run Units. All Outages including partial curtailments.
- EMS equipment Outages and communications circuits. All Outages affecting AGC or RIG equipment or communication circuits.
- Ancillary Service testing

PTOs, Resource Owners, Participating Generators or SCs

- Submit Outage requests for approval through CAISO OCOs including submittal of power flow studies as appropriate
- Submit the yearly planned maintenance Outages and quarterly updates for the CAISO approval as described in the Outage Coordination Protocol (OCP) and CAISO Tariff.

Policy

Outage Coordination is a fundamental and integral aspect of Maintenance Practices. Participating Transmission Owners (PTOs), Scheduling Coordinators (SCs), and Participating Generators coordinate maintenance with the CAISO as far in advance as possible to enable the CAISO to maintain System Reliability and to minimize the quantity and effect of Congestion on the CAISO Controlled Grid and Interconnections. All requests for Outages are submitted to the CAISO for approval. No scheduled Outage commences without prior approval of the CAISO Control Center.

Version History

Version	Change	By	Date
1.0	Draft	Leslie Torres	1/2/98
1.7.	Format changes.	MGM	3/17/00
2.0 Attach. C, D, E, F	Outage tracking, delegation of grid authority to PTOs, complex work, new Generator Outage request form, delegation of authority to PTOs.	G. Tillitson	4/25/00
2.1	Added sections for communication and record creation and updates	B. Rahman	8/17/00
3.0	Inclusion of all Participating Generators, required use of SLIC as available, and other clarifying changes including prioritization guidelines.	G. Van Pelt	1/15/02
4.0	Added SLIC web references, updated action statements of 2.4, 3.1, 7.2, 10., 12.1 and 12.2.	R. Wheeler	12/22/03
5.0	Moved Alhambra Outage Coordination to Folsom – changed responsibility section	M. Peterson	2/13/04
5.1	Added Attachment O, & links & references to it.	D. Douglass	10/15/04

TECHNICAL REVIEW

Reviewed By Content Expert	Signature	Date
OSAT	Mike Peterson	10/15/04
OE&M	Ron Calvert	1/9/04
Grid Ops	Bill Ellard	1/7/04
Market Ops	Jack Bellnap	1/5/04
Outage Coordination	Dave Douglass	10/15/04
Scheduling	Bob Sullivan	1/5/04

APPROVAL

Approved By	Signature	Date
Director of Grid Operations	Jim McIntosh	1/7/04
Director of Scheduling and Outage Coordination	Tracy Bibb	1/15/04

APPENDIX

Attachment A ISO Outage Coordination Contact Information

Attachment B Transmission Outage Request

Attachment C Generator Owner Availability Notice and Outage Request

Attachment D Status of Emissions Limitations

Attachment E Program Preparation Outline for New Facilities

Attachment F SDG&E Delegation Authority & Critical Facilities List

Attachment G SCE Delegation Authority & Critical Facilities List

Attachment H PG&E Delegation Authority & Critical Facilities List

Attachment I Generation Facility(ies) Outage Notification Process

Attachment J Grid Facility Outage That Limits Generation Facility(ies) Notification Process

Attachment K ISO Outage Coordination Seniority Lottery Draft

Attachment L SC SLIC Web Client (available electronically only)

Attachment M PTO Web Client (available electronically only)

Attachment N Questionable Outages

Attachment O Transmission Induced Generation Outages

NOTE:
ATTACHMENTS A, F, G and H are privileged and/or confidential documents.

CALIFORNIA ISO

California Independent
System Operator

January 14, 2005

BY ELECTRONIC TRANSMISSION

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

Re: California Independent System Operator Corporation
And California Power Exchange
Docket Nos. EL00-98-093
San Diego Gas & Electric Co., *et al*.
Docket Nos. EL00-95-106

Dear Secretary Salas:

Enclosed for electronic filing please find Comments of the California Independent System Operator Corporation in the above-referenced docket.

Thank you for your assistance in this matter.

Very truly yours,

/s/ Gene L. Waas
Gene L. Waas

Counsel for the California Independent
System Operator Corporation

Enclosures

cc: All parties of record

CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing document upon each person designated on the official service list for the captioned proceeding, in accordance with Rule 2010 of the Commission's Rules of Practice and Procedure (18 C.F.R. § 385.2010).

Dated at Folsom, CA, on this 14th day of January, 2005.

/s/ Gene L. Waas
Gene L. Waas