

September 7, 2018

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

**Re: California Independent System Operator Corporation
ER18-____-000**

Compliance with Order No. 844

Dear Secretary Bose:

The California Independent System Operator Corporation (CAISO) respectfully submits this filing to comply with Order No. 844, the Commission's final rule relating to uplift cost allocation and transparency in markets operated by Regional Transmission Owners (RTOs) and Independent System Operators (ISOs).¹ Pursuant to Order No. 844, the CAISO proposes tariff revisions to publish three new monthly reports: (1) a zonal uplift report; (2) a resource-specific uplift report; and (3) an operator-initiated commitment report. The CAISO proposes to start posting these reports after the month of January 2019. Order No. 844 also directs each RTO and ISO to include in its tariff rules the transmission constraint penalty factor values used in the CAISO market software. The CAISO tariff currently includes the transmission constraint penalty factor values used in the CAISO market software and specifies the circumstances in which those transmission constraint penalty factors can set locational marginal prices. The CAISO is not proposing any changes to these tariff provisions in this filing.

I. Background

In April 2018, the Commission adopted Order No. 844 to address uplift cost allocation and transparency, as part of its efforts to enhance price formation

¹ *Uplift Cost Allocation and Transparency in Market Operated by Regional Transmission Owners and Independent System Operators*, 163 FERC ¶ 61,041 (2018) (Order No. 844).

The CAISO submits this filing pursuant to Section 205 of the Federal Power Act (FPA), 16 U.S.C. § 824d, and Section 35.13 of the Commission's regulations, 18 C.F.R. § 35.13. Capitalized terms not otherwise defined herein have the meanings set forth in Appendix A to the CAISO tariff.

in markets operated by RTOs/ISOs. The purpose of Order No. 844 is to provide greater transparency regarding how prices reflect the marginal cost of serving load and the operational constraints of reliably operating the system.² In Order No. 844, the Commission directs each RTO/ISO to file tariff revisions that require monthly reports to be published that provide information concerning: (1) uplift payments in each transmission zone; (2) total uplift payments for each resource; and (3) operator-initiated commitments.³ In its Order No. 844, the Commission also requires each RTO/ISO to include in its tariff the transmission constraint penalty factors used in its market software, the circumstances under which those factors can set locational marginal prices, as well as any process by which the RTO/ISO can change these penalty factors.⁴ The Commission's final rule directs RTOs/ISOs to submit a compliance filing within 60 days of the effective date of the Final Rule. The final rule was published in the Federal Register on April 25, 2018, and took effect on July 9, 2018.⁵ Accordingly, the CAISO's compliance filing is due by September 7, 2018.

II. Proposed Tariff Revisions to Comply with Order No. 844

The CAISO supports measures to make information about uplift payments and the reasons for uplift payments transparent to market participants and other stakeholders. In this filing, the CAISO submits proposed tariff revisions to comply with the Commission's Order No. 844. The CAISO requests that the Commission accept these tariff revisions in full compliance with Order No. 844.

A. Zonal Uplift Report

In Order No. 844, the Commission directs each RTO/ISO to publish within 20 days of the end of each month a report that discloses the total daily uplift payments in dollars in each category of uplift paid to resources in each transmission zone.⁶ RTOs/ISOs must post the report in machine-readable format on a publicly-accessible portion of their website.⁷

² Order No. 844 at PP 6-7. In adopting its final rule, the Commission withdrew a proposal to require each RTO/ISO that currently allocates the cost of real-time uplift to deviations to allocate these uplift costs only to market participants whose transactions are reasonably expected to have costs the real-time uplift costs. Order No. 844 at P 9.

³ Order No. 844 at P 1. See also 18 C.F.R. § 35.28(g)(10).

⁴ *Id.* at P 1.

⁵ See Federal Register publication dated April 25, 2018: <https://www.federalregister.gov/documents/2018/04/25/2018-08609/uplift-cost-allocation-and-transparency-in-markets-operated-by-regional-transmission-organizations>.

⁶ Order No. 844 at P 50.

⁷ *Id.* at P 62.

The CAISO proposes to add section 6.5.14 - *Order No. 844 Zonal Uplift Report* - to its tariff to comply with this directive. The CAISO's proposed tariff language meets each of the requirements of Order No. 844 with respect to posting a zonal uplift report. These requirements include: (1) the timing of the report; (2) publication of the report in a machine-readable format on a publicly accessible portion of the CAISO's website; (3) reporting daily uplift paid in dollars by transmission zone; and (4) reporting daily uplift paid in dollars by uplift category.

The CAISO proposes to post two versions of the zonal uplift report for each calendar month: an initial version of the zonal uplift report within 20 days of the end of each calendar month; and a revised version of the zonal uplift report within 90 days of the end of each calendar month. As part of Order No 844, the Commission recognizes the CAISO's concern that the 20-day deadline may not provide an RTO/ISO with sufficient time to compile the report given its existing uplift settlement timelines.⁸ The zonal uplift report the CAISO will publish within 20 days of each calendar month will include information from settlement statements that it issues 12 business days after an applicable trade date (Recalculation Settlement Statement T+12B).⁹ This settlement statement reflects final day-ahead market and real-time market prices, unless the CAISO needs to make a further price correction for the reasons enumerated in its tariff.¹⁰ The CAISO plans to repost the zonal uplift report for each month after it issues the settlement statement for the last trade day of an applicable month 55 business days after that trade date (Recalculation Settlement Statement T+55B). This settlement statement generally reflects final meter data provided by scheduling coordinators. In addition, scheduling coordinators must validate the Recalculation Settlement Statement T+55B. Once validated, the settlement statement is binding, except to the extent that the CAISO performs a subsequent recalculation settlement statement.¹¹ The CAISO expects that this version of the zonal uplift report will be available within 90 days of the end of each calendar month and will replace the initial version of the report.

The CAISO proposes to use its open access same-time information system (OASIS) to post its zonal uplift report. This is the platform the CAISO uses to deliver market operations and grid management information to

⁸ Order No. 844 at P 61.

⁹ See CAISO tariff section 11.29.7.1, which sets for the timing for CAISO settlement statements.

¹⁰ See CAISO tariff section 35.2, which sets forth the timing for the CAISO's price correction processes. See also CAISO tariff section 35.3, which lists the reason the CAISO will modify a price after the timelines specified in Section 35.2.

¹¹ See CAISO tariff section 11.29.8.3.2.

accommodate users other than market participants.¹² OASIS is accessible to the public *via* a link on the CAISO's website.¹³ By using OASIS, the CAISO can more easily automate the zonal uplift report so that it accurately reflects settlement data from the Recalculation Settlement Statement T+12B as well as update the posted report to reflect settlement data from the Recalculation Settlement Statement T+55B.

In its zonal uplift report, the CAISO will report daily uplift paid in dollars by transmission zone. Order No. 844 defines transmission zones as "a geographic area that is used for the allocation of local charges, such as a load zone that is used to settle charges for energy."¹⁴ For purposes of the report, the CAISO is proposing to identify a transmission zone within the CAISO as the transmission access charge area of each participating transmission owner.¹⁵ These are physical zones that encompass default load aggregation points and custom load aggregation points, which are a set of pricing nodes used for the submission of bids and settlement of demand.¹⁶ In addition, under its significant event or exceptional dispatch capacity procurement mechanism, the CAISO allocates the costs of securing this capacity to demand within the applicable transmission access charge area.¹⁷

For purposes of the western Energy Imbalance Market (EIM), the CAISO is proposing to define transmission zones as the EIM balancing authority area.¹⁸ For purposes of settling any load charges in the EIM, such as neutrality accounts, the CAISO issues a settlement statement to the applicable EIM entity's

¹² CAISO tariff section 6.2.2.2.

¹³ See OASIS tab under Related Websites at the bottom of the CAISO's website: www.caiso.com.

¹⁴ Order No. 844 at PP 52 and 59.

¹⁵ The CAISO notes that it currently publishes a monthly report that reflects uplift paid to resources within its local capacity areas pursuant to a separate Commission order. These local capacity zones are transmission constrained zones that serve to inform local resource adequacy requirements. These are not load zones that the CAISO uses to settle charges for energy. See e.g. Market Performance Report May 2018 dated July 26, 2018, Figure 22 at p. 24. <http://www.caiso.com/Documents/MarketPerformanceReportforMay2018.pdf>.

The CAISO currently reports this information pursuant to a separate Commission order *Cal. Indep. Sys. Operator Corp.*, 145 FERC ¶ 61,254 (2013) at PP41-42. See also Commission Letter Order in ER13-2452-002 dated April 24, 2015.

¹⁶ See Appendix A to the CAISO tariff for definitions of *Default LAP* and *Load Aggregation Point*. See also CAISO tariff section 27.2.

¹⁷ See CAISO tariff sections 43A.8.5 and 43A.8.6.

¹⁸ The EIM enables entities with balancing authority areas outside of the CAISO to buy and sell energy as part of the CAISO's real-time market to satisfy energy imbalance needs.

scheduling coordinator based on its measured demand.¹⁹ The granularity of that settlement is at the EIM balancing authority area level.²⁰

With respect to uplift categories, the CAISO proposes to list these categories in its tariff based on relevant charge codes. In Order No. 844, the Commission states that it expects the uplift categories in the zonal report to be based on the RTO's or ISO's uplift charge codes, *i.e.* individual charges for settlement purposes.²¹ The CAISO has proposed to include five uplift categories in its zonal uplift report: (a) Integrated Forward Market (IFM) Bid Cost Uplift; (b) Real-Time Market (RTM) Bid Cost Uplift; (c) Exceptional Dispatch uplift;²² (d) Excess Cost Payments; and (e) monthly Exceptional Dispatch capacity procurement mechanism (CPM) payments.

IFM Bid Cost Uplift reflects the sum of various bid costs of a resource in the CAISO's integrated forward market netted against the resource's integrated forward market revenue.²³ This uplift category corresponds to CAISO charge code 6630 - IFM Bid Cost Recovery Settlement. This charge code calculates the integrated forward market bid cost recovery settlement for various bid cost recovery eligible resources.²⁴

RTM Bid Cost Uplift reflects the sum of various bid costs of a resource in the CAISO's real-time market netted against the resource's real-time market revenue.²⁵ These amounts also include bid costs

¹⁹ CAISO tariff section 29.11 (e).

²⁰ *Id.*

²¹ Order No. 844 at P 60. The CAISO's current monthly market performance reflects additional uplift sub-categories but these categories do not reflect the charge codes used by the CAISO for settlement purposes. The CAISO undertakes additional analysis of its market systems to publish information about these additional uplift sub-categories.

²² Exceptional Dispatch uplifts and Exceptional Dispatch Excess Cost Payments can include both payments and charges depending on whether the exceptional dispatch is for an incremental or decremental energy dispatch and whether the locational marginal price is positive or negative. These uplift categories do not include commitment costs associated with exceptional dispatch commitments, which are included in the bid cost recovery uplift categories.

²³ See *generally* CAISO tariff section 11.8.5.1.

²⁴ A copy of the CAISO configuration guide for Charge Code 6630 is available on the following website: <https://bpmcm.caiso.com/Pages/SnBBPMDetails.aspx?BPM=Settlements%20and%20Billing>.

²⁵ CAISO tariff section 11.8.5.2.

form the CAISOs residual unit commitment process.²⁶ This uplift category corresponds to CAISO charge code 6620 - RUC and RTM Bid Cost Recovery Settlement. This charge code calculates the combined residual unit commitment and real-time market bid cost recovery settlement for various bid cost recovery eligible resources.²⁷

Exceptional Dispatch uplift reflects payments above the locational marginal price made to resources for one category of exceptional dispatch. Specifically, this uplift category corresponds to CAISO charge code 6488 - Exceptional Dispatch Uplift Settlement and reflects payments made to resources for exceptional dispatches to address transmission modelling limitations, which address transmission outages as well as voltage issues associated with a transmission system. These uplift costs are allocated to the responsible transmission owner.²⁸

Excess Cost Payments reflects uplifts for payments above locational marginal prices associated with exceptional dispatches to address emergency conditions, to avoid a market disruption, or avoid an imminent system emergency. This uplift category corresponds to CAISO charge code 6482 - Real Time Excess Cost for Instructed Energy Settlement.²⁹ This uplift is allocated to scheduling coordinators.

Monthly Exceptional Dispatch CPM payments reflect payments made to resources under the CAISO's CPM. This uplift category corresponds to the exceptional dispatch CPM type portion of charge

²⁶ *Id.*

²⁷ A copy of the CAISO configuration guide for Charge Code 6620 is available on the following website: <https://bpmcm.caiso.com/Pages/SnBBPMDetails.aspx?BPM=Settlements%20and%20Billing>.

²⁸ A copy of the CAISO configuration guide for Charge Code 6488 is available on the following website: <https://bpmcm.caiso.com/Pages/SnBBPMDetails.aspx?BPM=Settlements%20and%20Billing>.

²⁹ A copy of the CAISO configuration guide for Charge Code 6482 is available on the following website: <https://bpmcm.caiso.com/Pages/SnBBPMDetails.aspx?BPM=Settlements%20and%20Billing>.

code 7891 - Monthly CPM Settlement.³⁰ This charge code reflects the payment for capacity services under the CPM that the scheduling coordinator provided to the CAISO for the applicable trading month.

B. Resource-Specific Uplift Report

In Order No. 844, the Commission directs each RTO/ISO to publish within 90 days of the end of each month a report that discloses the monthly uplift payments in dollars paid to each resource.³¹ RTOs/ISOs must post the report in machine-readable format on a publicly-accessible portion of their website.³²

The CAISO proposes to add section 6.5.15 - *Order No. 844 Resource-Specific Uplift Report* - to its tariff to comply with this directive. The CAISO's proposed tariff language meets each of the requirements of Order No. 844 with respect to posting a resource-specific uplift report. These requirements include: (1) the timing of the report; (2) publication of the report in a machine-readable format on a publicly accessible portion of the CAISO's website; and (3) reporting monthly uplift paid in dollars resource name. In addition, the CAISO proposes to report daily uplift paid in dollars by uplift category.³³

The CAISO proposes to post the report within 90 days of the end of each calendar month. As explained above in connection with the CAISO's proposed zonal uplift report, this timeline will reflect uplift payments in the Recalculation Settlement Statement T+55B. Scheduling coordinators have an obligation to validate the Recalculation Settlement Statement T+55B. Once validated, the settlement statement is binding, except to the extent that the CAISO performs a subsequent recalculation settlement statement.³⁴ The CAISO also plans to use its OASIS to post the resource-specific uplift report. By using OASIS, the CAISO can more easily automate the resource-specific uplift report so that it accurately reflects settlement data. The CAISO will identify payments by resource name. The CAISO's practice is to use the resource ID, which is a unique set of characters associated with a resource participating in the CAISO markets or the

³⁰ A copy of the CAISO configuration guide for Charge Code 7891 is available on the following website: <https://bpmcm.aiso.com/Pages/SnBBPMDetails.aspx?BPM=Settlements%20and%20Billing>.

³¹ Order No. 844 at PP 74 and 78.

³² Order No. 844 at P 81.

³³ Order No. 844 does not require RTO/ISOs to report resource-specific uplift by category but signal that RTO/ISOs may choose to do so and must indicate on compliance whether they plan to do so. See Order No. 844 at P 82.

³⁴ See CAISO tariff section 11.29.8.3.2.

EIM.³⁵ Finally, based on relevant charge codes, the CAISO proposes to use the same categories to disclose uplift payments on a resource-specific basis that it proposes to use for the zonal uplift report.

C. Operator-Initiated Commitment Report

In Order No. 844, the Commission directs each RTO/ISO to publish within 30 days of the end of each month a report that discloses each operator-initiated commitment made during the previous month by transmission zone with the following information: (a) the size of commitment; (b) the commitment reason, including, but not limited to, system wide capacity, constraint management, voltage support; and (c) the commitment start time.³⁶ RTOs/ISOs must post the report on a publicly-accessible portion of their website.³⁷

In Order No. 844, the Commission defines operator-initiated commitment to mean “a commitment after the day ahead market, whether manual or automated, for a reason other than minimizing the total production costs of serving load.”³⁸ The Commission directs that, for each commitment process that is executed after the day-ahead market, RTOs/ISOs must explain whether the Commission’s definition includes some or all commitments from the process and justify any commitments that it does not plan to report.³⁹

The CAISO proposes to add section 6.5.16 - *Order No. 844 Operator Initiated Commitment Report* - to its tariff. The CAISO’s proposed tariff language meets each of the requirements of Order No. 844 with respect to posting an operator initiated commitment report. These requirements include (1) the timing of the report; (2) publication of the report on a publicly accessible portion of the CAISO’s website; (3) reporting the size of the commitment; (4) reporting each commitment by transmission zone; and (4) reporting the reason for each commitment.

The CAISO’s proposed tariff revisions state that it will post an operator-initiated commitment report within 30 days of the end of each calendar month. The CAISO proposes to post this report on OASIS. The CAISO will report both

³⁵ The CAISO publishes a list of resource IDs on its website that includes associated common English names each resources. This list is available as part of the CAISO’s full network model mapping file that the CAISO posts after each database promotion: <http://www.caiso.com/market/Pages/NetworkandResourceModeling/Default.aspx>.

³⁶ Order No. 844 at PP 99, 103-105.

³⁷ Order No. 844 at PP 83, 99. 18 C.F.R. § 35.28(g)(10)(ii).

³⁸ Order No. 844 at P 100.

³⁹ *Id.* at P 101.

the commitment and the dispatch of any commitment capacity, which is consistent with its current reporting practices associated with exceptional dispatches.⁴⁰ For exceptional dispatch commitments made for local reliability needs, the MW value of an exceptional dispatch commitment will generally reflect the reliability need. In some cases, this MW value could reflect the maximum upper economic operating limit of the resource as contemplated by Order No. 844. This will be the case when the CAISO dispatches the resource to its maximum upper economic limit, which is a rare occurrence. In other cases, it will reflect a lesser MW value. Using the MW size of the dispatch provides a consistent level of transparency into the system need because the size of the commitment reflects how operators have positioned resources to meet a reliability need prior to allowing the market clearing process to continue.

In Order No. 844, the Commission determined there are transparency benefits to using the same set of transmission zones for the zonal uplift report and the operated-initiated commitment report.⁴¹ The CAISO proposes to report each operator initiated commitment by the transmission zones it will use for its zonal uplift report. These transmission zones within the CAISO reflect the Transmission Access Charge Area of each Participating Transmission Owner.⁴² These zones contain default load aggregation points that reflect a set of pricing nodes used for the submission of bids and settlement of demand.

With respect to commitment reasons, the CAISO proposes to specify a list of reason in its Business Practice Manual but will ensure they reflect at a minimum the commitment reason specified in Order No. 844. These reasons

⁴⁰ *Id.* at P 103. Although the Commission adopted a requirement that RTOs/ISOs report the upper economic operating limit of the resource in MW as the size of a resource commitment, the Commission states that RTOs/ISOs may propose on compliance an alternative metric and demonstrate it provides transparency into the size of the system need associated with this commitment that is consistent with or superior to that provided by the economic maximum of each committed resource.

⁴¹ *Id.* at P 104.

⁴² The CAISO notes that it currently files with the Commission monthly exceptional dispatch reports 60 days after the end of each calendar month. In addition to the transmission access charge area, these reports identify the local capacity area where the resource is located. See e.g. CAISO Exceptional dispatch Report for May 2018, Chart 2: Table of Exceptional Dispatches for Period 01/May/2018 - 31/May/2018. http://www.caiso.com/Documents/Aug30_2018_May_2018_ExceptionalDispatchReport_Chart2Data_ER08-1178_EL08-88.pdf.

The CAISO is also currently filing a report every 120 days that describe the status of the CAISO's efforts to reduce the frequency of exceptional dispatches and the status of the CAISO's development of operational and product enhancements that would reduce reliance on exceptional dispatch. See e.g. CAISO Report dated June 19, 2018 - Exceptional Dispatch Informational Report Covering Period from February 2014 Through June 2018. http://www.caiso.com/Documents/Jul19_2018_120-DayExceptionalDispatchReportCoveringPeriod_Feb2014-Jun2018_ER08-1178_EL08-88.pdf.

include: (i) system-wide capacity; (ii) constraint management; or (iii) voltage support. Appendix K.1 of the CAISO's Business Practice Manual for Market Operations contains a list of reasons for exceptional dispatches that CAISO operators use.⁴³ The CAISO proposes to continue to use this list but will provide a guide in its operator-initiated commitment report that reflect how these reasons map to a system-wide capacity; constraint management, voltage support need, or some other need. Where appropriate, the CAISO will continue to use additional reasons that do not correspond to the reasons identified in Order No. 844 (e.g. ancillary services testing).

After the close of the day-ahead market, the CAISO has several automated and manual processes that may commit resources. These include security constrained unit commitment, short-term unit commitment, real-time unit commitment, and exceptional dispatches (both commitments instructions as well as energy dispatches). The CAISO issues exceptional dispatch instructions primarily to ensure reliable operation of the grid due to contingencies. The CAISO also issues exceptional dispatches to address software limitations and market disruptions. Of the resource commitment processes that occur after the day-ahead market, the CAISO proposes to include resource commitments arising from exceptional dispatches in its operator-initiated report. The CAISO's other commitment processes are look-ahead commitment processes that seek to minimize total production costs. Order No. 844 excludes these processes from the definition of operator-initiated commitments because they are incorporated into and are part of the CAISO's market process.⁴⁴

The CAISO also may block certain schedules and awards (including commitment instructions). These operator actions do not include the commitment of resources after the close of the day-ahead market, and are taken to ensure reliability and feasible market schedules. The CAISO reports these actions as part of its monthly market performance metric catalog.⁴⁵

III. The CAISO's Existing Tariff Sets Forth Transmission Constraint Penalty Factor Values in its Market Software and the Circumstances Under Which these Penalty Factors Can Set Prices

In Order No. 844, the Commission directs each RTO/ISO to include in its tariff on an on-going basis: (1) the transmission constraint penalty factor values

⁴³ CAISO Business Practice Manual for Market Operations, Appendix K.1 at 304-308. https://bpmcm.caiso.com/BPM%20Document%20Library/Market%20Operations/Appendices_Market%20Operations_V49_clean.doc.

⁴⁴ Order No. 844 at 100.

⁴⁵ See CAISO Market Performance Metric Catalog for May 2018 at pp. 110-113. <http://www.caiso.com/Documents/MarketPerformanceMetricCatalogforMay2018.pdf>.

used in its market software; (2) the circumstances, if any, under which the transmission constraint penalty factors can set locational marginal prices; and (3) the procedures, if any, for temporarily changing transmission constraint penalty factor values.⁴⁶ In the CAISO's market the transmission constraint penalty factor reflects the price at which the CAISO will relax a binding transmission constraint to be able to achieve a market solution through an optimal economic dispatch. The CAISO Business Practice Manuals contain a number of parameters that are used for making uneconomic adjustments to non-priced MW quantities scheduled in the CAISO's market optimizations. The CAISO Business Practice Manuals explain the purposes of these parameters as well as their value in each of the CAISO's market processes.⁴⁷ However, for purposes of Order No. 844 compliance, the CAISO's transmission constraint penalty factors, and how they can impact prices, are already reflected in the CAISO tariff.⁴⁸

Section 27.4.3.1 of the CAISO tariff includes scheduling parameters for transmission constraint penalty factors. These are the parameters used in the scheduling run of each of the day-ahead and real-time markets. Section 27.4.3.1 reads as follows:

In the IFM, the enforced internal and Intertie Transmission Constraint scheduling parameter is set to \$5,000 per MWh for the purpose of determining when the SCUC and SCED software in the IFM will relax an enforced Transmission Constraint rather than adjust Supply or Demand bids or Non-priced Quantities as specified in Sections 31.3.1.3, 31.4 and 34.12 to relieve Congestion on the constrained facility. This scheduling parameter is set to \$1,500 per MWh for the RTM. The effect of this scheduling parameter value is that if the optimization can re-dispatch resources to relieve Congestion on a Transmission Constraint at a cost of \$5,000 per MWh or less for the IFM (or \$1,500 per MWh or less for the RTM), the Market Clearing software will utilize such re-dispatch, but if the cost exceeds \$5,000 per MWh in the IFM (or \$1,500 per MWh for the RTM) the market software will relax the Transmission Constraint. The corresponding scheduling parameter in RUC is set to \$1,250 per MWh.

⁴⁶ Order No. 844 at P 121.

⁴⁷ See Business Practice Manual for Market Operations, Market Parameter Values, at 188-196: https://bpmcm.caiso.com/BPM%20Document%20Library/Market%20Operations/BPM_for_Market%20Operations_V57_clean.doc.

⁴⁸ *California Indep. Sys. Operator Corp.*, 126 FERC ¶ 61,147 (2009).

Section 27.4.3.2 of the CAISO tariff further specifies the pricing parameters for relaxing transmission constraints. These are the parameters used in the pricing run of each of the day-ahead and real-time markets. Section 27.4.3.2 reads as follows:

For the purpose of determining how the relaxation of a Transmission Constraint will affect the determination of prices in the IFM and RTM, the pricing parameter of the Transmission Constraint being relaxed is set to the maximum Energy Bid price specified in Section 39.6.1.1. In the case of Contingency-related Transmission Constraints, the CAISO will determine the amount of relaxation required to clear the market using the most limiting condition among the applicable Contingencies and the base case. The CAISO will establish prices based on the parameter pricing specified in this Section as it applies to the most limiting Contingency and base case. The corresponding pricing parameter used in the RUC is set at the maximum RUC Availability Bid price specified in Section 39.6.1.2.

These tariff sections satisfy the directive in Order No. 844 that the CAISO include in its tariff: the transmission constraint penalty factor values used in its market software; and the circumstances, if any, under which the transmission constraint penalty factors can set locational marginal prices. Section 27.4.3.1 specifies the penalty price per MWh at which the CAISO's market software will not enforce a transmission constraint in various market processes. If the optimization can re-dispatch resources to relieve congestion on a transmission constraint at or below the price identified for the relevant market clearing process, the CAISO's software will utilize such re-dispatch, but if the cost exceeds \$5,000 per MWh in the CAISO's integrated forward market or \$1,500 per MWh for the real-time market, the market software will relax the transmission constraint, which in turn will set the energy price at the maximum energy bid price set in the CAISO tariff.⁴⁹ For the CAISO's residual unit commitment process, the CAISO will set the price at the maximum residual unit commitment availability bid price when it does not enforce a transmission constraint.⁵⁰

Section 27.4.3.2 then specifies the circumstances under which the transmission constraint penalty factors can set locational marginal prices. Specifically, it specifies that when the transmission constraint is relaxed, the locational marginal price will be set to the maximum energy bid price, which is

⁴⁹ See CAISO tariff section 27.4.3.2.

⁵⁰ *Id.*

\$1,000 per MWh, as specified in section 39.6.1.1. Section 27.4.3.2 also explains that when transmission constraints are contingency-related, the CAISO will determine the amount of relaxation required to clear the market using the most limiting condition among the applicable contingencies and the base case and that the CAISO will establish prices based on the parameter pricing that applies to the most limiting contingency and the base case. The corresponding pricing parameter also explains that the residual unit commitment price will be set at the maximum residual unit commitment availability bid price, which is \$250 MWh, as specified in section 39.6.1.2.

The CAISO does not have separate procedures for temporarily changing its transmission constraint penalty factors. Any changes to these penalty factors would require the CAISO to modify its tariff.

IV. Effective Date and Request for Order

Order No. 844 went into effect on July 9, 2018, and each RTO/ISO must submit tariff changes in a compliance filing by September 7, 2018. Pursuant to Order No. 844, these tariff changes must take effect no more than 120 days after the date compliance filings are due.⁵¹ The CAISO, therefore requests an effective date of January 1, 2019, for its tariff revisions. Based on this effective date, the CAISO will begin posting zonal uplift, resource specific uplift, and operator-initiated commitment reports for the month January 2019 forward. Under this schedule, the CAISO's first Order 844 compliance report will be issued as follows:

Report for January 2019 Operations	Date Posted
Zonal Uplift Report	On or before February 20, 2019
Resource Specific Uplift Report	On or before May 1, 2019
Operator Initiated Commitment Report	On or before March 4, 2019

The CAISO also respectfully requests that the Commission issue an order by no later than December 20, 2018. Obtaining an order by this date will provide sufficient time for the CAISO to undertake final steps to promote any software changes to implement its compliance with Order No. 844.

⁵¹ Order No. 844 at P 141.

V. Communications

Pursuant to Commission Rule 203(b)(3),⁵² the CAISO requests that all correspondence, pleadings, and other communications concerning this filing be served upon the following:

Anthony J. Ivancovich
Deputy General Counsel
Andrew Ulmer
Director, Federal Regulatory Affairs
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Operator Corporation
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VI. Service

The CAISO has served copies of this transmittal letter, and all attachments, on the California Public Utilities Commission, the California Energy Commission, and all parties with effective scheduling coordinator service agreements under the CAISO tariff. In addition, the CAISO is posting this transmittal letter and all attachments on its public website.

VII. Attachments

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

- Attachment A: Revised CAISO tariff language that incorporate the proposed changes above; and
- Attachment B: Proposed changes to the CAISO tariff shown in red-line format.

⁵² 18 C.F.R. § 385.203(b)(3).

VIII. Conclusion

The CAISO supports measures to make information about uplift payments and reasons for uplift payments transparent to market participants and other stakeholders. The CAISO respectfully requests that the Commission issue an order by December 20, 2018, accepting the tariff revisions in this filing in full compliance with Order No. 844, effective as of January 1, 2019.

Respectfully submitted,

By: /s/ Andrew Ulmer

Roger E. Collanton
General Counsel
Anthony J. Ivancovich
Deputy General Counsel
Andrew Ulmer
Director, Regulatory Federal Affairs

Counsel for the California Independent
System Operator Corporation

Attachment A – Clean Tariff

Order No. 844 Compliance

California Independent System Operator Corporation

6.5.14 Order No. 844 Zonal Uplift Report

Within 20 days of the end of each calendar month, the CAISO will post on OASIS a monthly report reflecting daily payments to resources by transmission zone within the CAISO or EIM Entity Balancing Authority Area for each of the following categories of costs:

- (a) IFM Bid Cost Uplift;
- (b) RTM Bid Cost Uplift;
- (c) Exceptional Dispatch uplift;
- (d) Excess Cost Payments; and
- (e) monthly Exceptional Dispatch CPM payments.

For purposes this report, a transmission zone within the CAISO shall reflect the Transmission Access Charge Area of each Participating Transmission Owner. For purposes this report, a transmission zone within an EIM Entity shall reflect the EIM Entity Balancing Authority Area.

6.5.15 Order No. 844 Resource-Specific Uplift Report

Within 90 days of the end of each calendar month, the CAISO will post on OASIS a monthly report reflecting monthly payments to resources for each of the following categories of costs:

- (a) IFM Bid Cost Uplift;
- (b) RTM Bid Cost Uplift;
- (c) Exceptional Dispatch uplift;
- (d) Excess Cost Payments; and
- (e) monthly Exceptional Dispatch CPM payments.

6.5.16 Order No. 844 Operator-Initiated Commitment Report

Within 30 days of the end of each calendar month, the CAISO will post on OASIS a monthly report reflecting operator commitments by transmission zone that will include the following information:

- (a) size of the commitment reflecting the MW value dispatched;
- (b) commitment reason; and
- (c) commitment start time.

For purposes this report, a transmission zone within the CAISO Balancing Authority Area shall reflect the Transmission Access Charge Area of each Participating Transmission Owner. For purposes of this

report, commitment reasons shall reflect, among other reasons, the following: (i) system-wide capacity; (ii) constraint management; or (iii) voltage support as further specified in the CAISO's Business Practice Manual.

Attachment B – Marked Tariff

Order No. 844 Compliance

California Independent System Operator Corporation

6.5.14 Order No. 844 Zonal Uplift Report

Within 20 days of the end of each calendar month, the CAISO will post on OASIS a monthly report reflecting daily payments to resources by transmission zone within the CAISO or EIM Entity Balancing Authority Area for each of the following categories of costs:

- _____ (a) IFM Bid Cost Uplift;
- _____ (b) RTM Bid Cost Uplift;
- _____ (c) Exceptional Dispatch uplift;
- _____ (d) Excess Cost Payments; and
- _____ (e) monthly Exceptional Dispatch CPM payments.

For purposes this report, a transmission zone within the CAISO shall reflect the Transmission Access Charge Area of each Participating Transmission Owner. For purposes this report, a transmission zone within an EIM Entity shall reflect the EIM Entity Balancing Authority Area.

6.5.15 Order No. 844 Resource-Specific Uplift Report

Within 90 days of the end of each calendar month, the CAISO will post on OASIS a monthly report reflecting monthly payments to resources for each of the following categories of costs:

- _____ (a) IFM Bid Cost Uplift;
- _____ (b) RTM Bid Cost Uplift'
- _____ (c) Exceptional Dispatch uplift;
- _____ (d) Excess Cost Payments; and
- _____ (e) monthly Exceptional Dispatch CPM payments.

6.5.16 Order No. 844 Operator-Initiated Commitment Report

Within 30 days of the end of each calendar month, the CAISO will post on OASIS a monthly report reflecting operator commitments by transmission zone that will include the following information:

- _____ (a) size of the commitment reflecting the MW value dispatched;
- _____ (b) commitment reason; and
- _____ (c) commitment start time.

For purposes this report, a transmission zone within the CAISO Balancing Authority Area shall reflect the Transmission Access Charge Area of each Participating Transmission Owner. For purposes of this

report, commitment reasons shall reflect, among other reasons, the following: (i) system-wide capacity; (ii) constraint management; or (iii) voltage support as further specified in the CAISO's Business Practice Manual.