

CAISO TARIFF APPENDIX A
Master Definitions Supplement

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Appendix A

Master Definition Supplement

Access Charge

A charge paid by all Utility Distribution Companies, Small Utility Distribution Companies, and Metered Subsystems ~~S~~-Operators with Gross Load in a Participating TO Service Territory, as set forth in ~~Section 2.6.4~~Article II. The Access Charge includes the High Voltage Access Charge, the Transition Charge and the Low Voltage Access Charge. The Access Charge will recover the Participating TO's Transmission Revenue Requirement in accordance with Appendix F, Schedule 3.

Active Zone

~~The Zones so identified in Appendix I to the ISO Tariff.~~

Adjustment Bid

~~A bid in the form of a curve defined by (i) the minimum MW output to which a Scheduling Coordinator will permit a resource (Generating Unit or Dispatchable Load) included in its Schedule or, in the case of an inter-Scheduling Coordinator trade, included in its Schedule or the Schedule of another Scheduling Coordinator, to be redispatched by the ISO; (ii) the maximum MW output to which a Scheduling Coordinator will permit the resource included in its Schedule or, in the case of an inter-Scheduling Coordinator trade, included in its Schedule or the Schedule of another Scheduling Coordinator, to be redispatched by the ISO; (iii) up to a specified number of MW values in between; (iv) a preferred MW operating point; and (v) for the ranges between each of the MW values greater than the preferred operating point, corresponding prices (in \$/MWh) for which the Scheduling Coordinator is willing to increase the output of the resource and sell Energy from that resource to the ISO (or, in the case of a Dispatchable Load, decrease the Demand); and (vi) for the ranges between each of the MW values less than the preferred operating point, corresponding prices (in \$/MWh) for which the Scheduling Coordinator is willing to decrease the output of the resource and purchase Energy from the ISO at the resource's location (or, in the case of a Dispatchable Load, increase the Demand). This data for an Adjustment Bid must result in a monotonically increasing curve.~~

Administrative Price

The price set by the ~~ISO~~CAISO in place of a Market Clearing PriceLocational Marginal Price when, by reason of a System

	Emergency, the CAISO ISO determines that it no longer has the ability to maintain reliable operation of the CAISO ISO -Controlled Grid relying solely on the economic Dispatch of Generation. This price will remain in effect until the CAISO ISO considers that the System Emergency has been contained and corrected.
Adverse System Impact	The negative effects due to technical or operational limits on conductors or equipment being exceeded that may compromise the safety and reliability of the electric system.
Affected System	An electric system other than the CAISO ISO -Controlled Grid that may be affected by the proposed interconnection, including the Participating TOs' electric systems that are not part of the CAISO ISO -Controlled Grid.
Affected System Operator	The entity that operates an Affected System.
Affiliate	An entity, company or person that directly, or indirectly through one or more intermediaries, controls, or is controlled by, or is under common control with the subject entity, company, or person.
<u>Aggregated Pricing Node (Aggregated PNode)</u>	<u>A Load Aggregation Point, Trading Hub or any group of Pricing Nodes as defined by the CAISO.</u>
<u>Alert, Warning and Emergency Notice</u>	A <u>CAISO operations communication issued to Market Participants and the public Notice issued by the ISO</u> -when the operating requirements of the ISO-CAISO Controlled Grid are marginal because of Demand exceeding forecast, loss of major Generation, or loss of transmission capacity that has curtailed imports into the CAISO ISO -Control Area, or if the <u>a shortage of Bids for the Supply of Energy and Ancillary Services have been submitted in the Hour-Ahead Market</u> HASP is short on scheduled Energy and Ancillary Services for the CAISO ISO -Control Area.
<u>All Constraints Run (ACR)</u>	<u>The second optimization run of the MPM-RRD process through which all known transmission constraints are enforced.</u>
Ancillary Services <u>(AS)</u>	Regulation, Spinning Reserve, Non-Spinning Reserve, Replacement Reserve , Voltage Support and Black Start together with such other interconnected operation services as the ISO-CAISO may develop in cooperation with Market Participants to support the transmission of Energy from Generation resources to Loads while maintaining reliable operation of the ISO-CAISO Controlled Grid in accordance with <u>WECC standards and</u> Good Utility Practice.
<u>Ancillary Services Award</u>	<u>The notification by the CAISO indicating that a Bid to supply an</u>

or AS Award

Ancillary Service has been selected to provide such service in the DAM, HASP, or RTM

Ancillary Service Regions or AS Regions

The System Region, the Expanded System Region, and any Sub-Regions identified by the CAISO for procurement of ancillary services.

Ancillary Service Regional Limit(s)

A maximum or a minimum, or both a maximum and a minimum, amount of (or boundary of) Ancillary Services to be obtained within a region. Limits can be expressed as either megawatt amounts or percentages.

Ancillary Service Schedule or AS Schedule

The notification by the CAISO indicating that a Submission to Self-Provide an Ancillary Service has been selected to provide such service in the DAM, HASP, or RTM.

Ancillary Service Bid or AS Bid

The Bid component that indicates the quantity in MWs and a price in dollars per MW for specific Ancillary Services including Regulation-Up, Regulation-Down, Spinning Reserve and Non-Spinning Reserve, that a Scheduling Coordinator is offering to supply in a CAISO Market from a Generating Unit, and System Resources, and only for Non-Spinning Reserve from Participating Loads

Ancillary Service Bid Cost or AS Bid Cost

An amount equal to the product of the AS Award from each accepted AS Bid, reduced by the any applicable No Pay Capacity, with the relevant AS Bid Price.

Ancillary Service Marginal Price (ASMP)

The marginal cost of providing an Ancillary Service in the relevant resource location (\$/MW).

Ancillary Service Obligation or AS Obligation

Scheduling Coordinator's hourly obligations for Regulation Down, Regulation Up, Spinning Reserves, and Non-Spinning Reserves calculated pursuant to Section 11.10.2.1.2, 11.10.2.2.2, 11.10.3.2, 11.10.4.2, respectively.

Ancillary Service Provider

A Participating Generator or Participating Load who is eligible certified to provide an Ancillary Services.

Annual Peak Demand Forecast

A Demand Forecast of the highest Hourly Demand in any hour in a calendar year, in MW.

Applicable Reliability Criteria

The reliability standards established by NERC, WECC, and Local Reliability Criteria as amended from time to time, including any requirements of the NRC.

Applicants

Pacific Gas and Electric Company, San Diego Gas & Electric

~~Company, and Southern California Edison Company and any others as applicable.~~

Approved Credit Rating

With respect to whether security must be posted for payment of the Grid Management Charge:

(a) A short-term taxable commercial paper debt rating of not less than any one of the following: (i) A1 by Standard and Poor's Corporation; (ii) F1 by Fitch Ratings; or (iii) P1 by Moody's Investors Service. This rating shall be an issuer, or counterpart rating, without the benefit of credit enhancement.

(b) A short-term tax exempt commercial paper debt rating of not less than any one of the following: (i) A1 by Standard and Poor's Corporation; (ii) V1 by Fitch Ratings; or (iii) VMIG1 by Moody's Investors Service. This rating shall be an issuer, or counterparty rating, without the benefit of credit enhancement.

With respect to whether security must be posted for payment of all charges other than the Grid Management Charge:

(c) A short-term tax exempt commercial paper debt rating of not less than any one of the following: (i) A2 by Standard and Poor's Corporation; (ii) F2 by Fitch Ratings; or (iii) P2 by Moody's Investors Service. This rating shall be an issuer, or counterparty rating, without the benefit of credit enhancement.

(d) A short-term tax exempt commercial paper debt rating of not less than any one of the following: (i) A2 by Standard and Poor's Corporation; (ii) V2 by Fitch Ratings; or (iii) VMIG2 by Moody's Investors Service. This rating shall be an issuer, or counterparty rating, without the benefit of credit enhancement.

(e) A long-term debt rating of not less than any one of the following: (i) A- by Standard and Poor's Corporation; (ii) A- by Fitch Ratings; or (iii) A3 by Moody's Investors Service. This rating shall be an issuer, or counterparty rating, without the benefit of credit enhancement.

With respect to whether security must be posted for payment of all charges:

(f) A federal agency shall be deemed to have an Approved Credit Rating if its financial obligations under the ~~ISO-CAISO~~ Tariff are backed by the full faith and credit of the United States.

(g) A California state agency shall be deemed to have an

	<p>Approved Credit Rating if its financial obligations under the <u>CAISO</u> ISO-Tariff are backed by the full faith and credit of the State of California.</p> <p>(h) Another credit rating approved by the <u>CAISO</u> ISO-Governing Board.</p>
Approved Load Profile	Local Regulatory Authority approved Load profiles applied to cumulative End-Use Meter Data in order to allocate consumption of Energy to Settlement Periods.
Approved Maintenance Outage	A Maintenance Outage which has been approved by the <u>CAISO</u> ISO through the <u>CAISO</u> ISO -Outage Coordination Office.
“Area Control Error (ACE)”	The sum of the instantaneous difference between the actual net interchange <u>Interchange</u> and the scheduled net interchange <u>Interchange</u> between the CAISO Control Area and all adjacent, <u>taking into account the effects of</u> Control Areas and the ISO-CAISO Control Area's frequency <u>bias, correction of Meter error correction</u> and time error correction obligations.
<u>Authorized Users</u>	A person or an entity identified as an authorized user in a meter service agreement between the ISO and an ISO Metered Entity or a meter service agreement between the ISO and a SG.
AGC (Automatic Generation Control) <u>(AGC)</u>	Generation equipment that automatically responds to signals from the <u>CAISO</u> 's EMS control in real-time <u>Real-Time</u> to control the power <u>Power</u> output of electric generators <u>Generating Units</u> within a prescribed area in response to a change in system frequency, tie-line loading, or the relation of these to each other, so as to maintain the target system frequency and/or the established interchange with other areas within the predetermined limits.
<u>Automatic Mitigation Procedure (AMP)</u>	The market power mitigation procedure described in Attachment A to Appendix P.
Available Transfer Capacity	<u>The available capacity rating of</u> For a given transmission path, the capacity rating in MW <u>after allocation of rights associated with Existing Contracts and Transmission Ownership Rights, to that of the path's Operating Transfer Capabilities path</u> established consistent with <u>ISO-CAISO</u> and WECC transmission capacity rating guidelines, less any reserved uses applicable to the path.
Backup <u>ISO-CAISO</u> Control Center	The <u>ISO-CAISO</u> Control Center located in Alhambra, California.

Balancing Account	An account set up to allow periodic balancing of financial transactions that, in the normal course of business, do not result in a zero balance of cash inflows and outflows.
<u>Base Load</u>	<u>The maximum consumption of a Participating Load as bid in the CAISO Markets by Scheduling Coordinators.</u>
<u>Bid</u>	<u>An offer for the Supply or Demand of Energy or Ancillary Services, including Self-Schedules, submitted by Scheduling Coordinators for specific resources, conveyed through several components that apply differently to the different types of service offered to or demanded from any of the CAISO Markets.</u>
<u>Bid Adder</u>	<u>A dollar amount added to the Bid of a Frequently Mitigated Unit.</u>
<u>Bid Cost Recovery (BCR)</u>	<u>The CAISO settlements process through which eligible resources recover their Bid Costs.</u>
<u>Bid Cost Recovery Eligible Resources (BCR Eligible Resources)</u>	<u>Those resources eligible to participate in the Bid Cost Recovery as specified in Section 11.8, which include Generating Units, System Units, System Resources, and Participating Loads.</u>
<u>Bid Costs</u>	<u>The costs for resources manifested the Bid Components submitted which include the Start-Up Cost, The Minimum Load Cost, Energy Cost, Ancillary Services Cost and RUC Availability Payment.</u>
Black Start	The procedure by which a Generating Unit self-starts without an external source of electricity thereby restoring power to the ISO <u>CAISO</u> Controlled Grid following system or local area blackouts.
Black Start Generator	A Participating Generator in its capacity as party to an Interim Black Start Agreement with the <u>CAISO</u> ISO for the provision of Black Start services, but shall exclude Participating Generators in their capacity as providers of Black Start services under their Reliability Must-Run Contracts.
Bulk Supply Point	A <u>Utility Distribution Company or Small Utility Distribution Company</u> metering point.
<u>Business Associate</u>	<u>Any entity with whom the CAISO interacts related to the CAISO Markets.</u>
Business Day	Monday through Friday, excluding federal holidays and the day after Thanksgiving Day.
<u>Business Practice Manuals</u>	<u>A collection of documents made available by the CAISO on the CAISO Website that contain the rules, policies, procedures and guidelines established by the CAISO for operational, planning, accounting and settlement requirements of CAISO Market activities.</u>

ISO-CAISO Account

consistent with the CAISO Tariff.

The CAISO Clearing Account, the CAISO Reserve Account or such other trust accounts as the CAISO deems necessary or convenient for the purpose of efficiently implementing the funds transfer system under the CAISO Tariff.

CAISO Alternative Dispute Resolution Committee (CAISO ADR Committee)

The Committee appointed by the CAISO ADR Committee pursuant to Article IV, Section 3 of the CAISO bylaws to perform functions assigned to the CAISO ADR Committee in the ADR process in Section 13 of the CAISO Tariff.

ISO-ADR Committee

CAISO ADR Procedures

The procedures for resolution of disputes or differences set out in Section 13 of the CAISO Tariff, as amended from time to time.

CAISO Application File Template

All information (administrative, financial and technical) pertaining to Scheduling Coordinators which must be maintained in a current form by the CAISO and the Scheduling Coordinator.

CAISO Audit Committee

A committee of the CAISO Governing Board appointed pursuant to Article IV, Section 5 of the CAISO bylaws to (1) review the CAISO's annual independent audit (2) report to the CAISO Governing Board on such audit, and (3) to monitor compliance with the CAISO Code of Conduct.

CAISO Authorized Inspector

A person authorized by the CAISO to certify, test, inspect and audit meters and Metering Facilities in accordance with the procedures established by the CAISO pursuant to the Sections of this CAISO Tariff on metering.

CAISO Bank

The bank appointed by the CAISO from time to time for the purposes of operating the Settlement process.

CAISO Clearing Account

The account in the name of the CAISO with the CAISO Bank to which payments are required to be transferred for allocation to CAISO Creditors in accordance with their respective entitlements.

CAISO Code of Conduct

For employees, the code of conduct for officers, employees and substantially full-time consultants and contractors of the CAISO as set out in exhibit A to the CAISO bylaws; for Governors, the code of conduct for governors of the CAISO as set out in exhibit B to the CAISO bylaws.

CAISO Commitment Period

The portion of a Commitment Period that is not a Self-Commitment Period.

CAISO Control Area

The Control Area operated by the CAISO.

CAISO Controlled Grid

The system of transmission lines and associated facilities of the

CAISO Creditor

Participating TOs that have been placed under the CAISO's Operational Control.

A ~~Scheduling Coordinator, Participating TO, or other Market Participant~~Business Associate to which amounts are payable under the terms of the CAISO Tariff and agreement with the CAISO.

CAISO Debtor

A ~~Scheduling Coordinator, Participating TO, or other Market Participant~~Business Associate that is required to make a payment to the CAISO under the CAISO Tariff and agreements with the CAISO.

CAISO Demand

Power delivered to Load internal to CAISO Control Area.

CAISO Documents

The CAISO Tariff, CAISO bylaws, and any agreement entered into between the CAISO and a Scheduling Coordinator, a Participating TO or any other Market Participant pursuant to the CAISO Tariff.

CAISO Forecast of CAISO Demand

The forecast of CAISO Demand made by the CAISO for use in the CAISO Markets.

CAISO Generated Bid

A CAISO post-market Clean Bid generated in accordance with the provisions of the Resource Adequacy Requirements of the CAISO Tariff and is based solely on the Master File data which was submitted by a Scheduling Coordinator for its Generating Unit located within the CAISO Control Area.

CAISO Governing Board

The Board of Governors established to govern the affairs of the CAISO.

ISO Home PageCAISO Website

The CAISO internet home page at <http://www.aiso.com> / or such other internet address as the CAISO shall publish from time to time.

CAISO IFM Commitment Period

The portion of a Commitment Period in the IFM that is not a Self-Commitment Period.

CAISO Invoice

The invoices issued by the CAISO to the Responsible Utilities or Reliability Must Run Owners based on the Revised Estimated Reliability Must Run Invoice and the Revised Adjusted RMR Invoice.

CAISO Markets

Any of the markets administered by the CAISO under the CAISO Tariff, including, without limitation, the DAM, HASP, RTM, Transmission, and Congestion Revenue Rights., ~~Imbalance Energy, Ancillary Services, and FTRs.~~

CAISO Markets Processes

The MPM-RRD, IFM, RUC, STUC, RTUC, and RTD. HASP is an hourly run of the RTUC.

CAISO Memorandum Account

The memorandum account established by each California IOU pursuant to California Public Utilities Commission Order

CAISO Metered Entity

D. 96-08-038 date August 2, 1996 which records all CAISO startup and development costs incurred by that California IOU.

(a) any one of the following entities that is directly connected to the CAISO Controlled Grid:

- i. a Generator other than a Generator that sells all of its Energy (excluding any Energy consumed by auxiliary load equipment electrically connected to that Generator at the same point) and Ancillary Services to the Utility Distribution Company or Small Utility Distribution Company in whose Service Area it is located;
- ii. an Eligible Customer; or
- iii. an End-User other than an End-User that purchases all of its Energy from the Utility Distribution Company or Small Utility Distribution Company in whose Service Area it is located; and

(b) any one of the following entities:

- i. a Participating Generator;
- ii. a Participating TO in relation to its Tie Point Meters with other TOs or Control Areas;
- iii. a Participating Load;
- iv. a Participating Intermittent Resource; or
- v. a utility that requests that Unaccounted for Energy for its Service Area be calculated separately, in relation to its meters at points of connection of its Service Area with the systems of other utilities.

**CAISO Metered Entity
Meter Service Agreements**

~~The meter service agreements~~ An agreement entered into between the CAISO and a CAISO Metered Entity yes consistent with the provisions of Section 10.

CAISO Operations Date

~~The date on which the ISO first assumes Operational Control of the ISO Controlled Grid~~ March 31, 1998.

**CAISO Outage
Coordination Office**

The office established by the CAISO to coordinate Maintenance Outages in accordance with Section 9.3 of the CAISO Tariff.

**CAISO Payments
Calendar**

A calendar published by the CAISO showing the dates on which Settlement Statements will be published by the CAISO and the Payment Dates by which invoices issued under the CAISO Tariff must be paid.

CAISO Protocols

The rules, protocols, procedures and standards promulgated by the CAISO (as amended from time to time) to be complied with by the CAISO Scheduling Coordinators, Participating TOs and all other

CAISO Register

Market Participants in relation to the operation of the CAISO Controlled Grid and the participation in the markets for Energy and Ancillary Services in accordance with the CAISO Tariff.

The register of all the transmission lines, associated facilities and other necessary components that are at the relevant time being subject to the CAISO's Operational Control.

CAISO Reserve Account

The account established for the purpose of holding cash deposits which may be used in or towards clearing the CAISO Clearing Account.

CAISO Security Amount

The level of security provided in accordance with Section 12.1 of the CAISO Tariff by a Scheduling Coordinator Applicant who does not have an Approved Credit Rating. The CAISO Security Amount may be separated into two components: (i) the level of security required to secure payment of the Grid Management Charge; and (ii) the level of security required to secure payment of all charges other than the Grid Management Charge.

CAISO Surplus Account

The account established by the CAISO pursuant to Section ~~11.8.5-311.29.9.6.3.~~

CAISO Tariff

The California Independent System Operator Corporation Operating Agreement and Tariff, dated March 31, 1997, as it may be modified from time to time.

ISO-CAISO

The California Independent System Operator Corporation, a state chartered, nonprofit corporation that operates the transmission facilities of all Participating TOs and dispatches certain Generating Units and Loads.

Calendar Day

~~Any day including Saturday, Sunday or a federal holiday.~~

Candidate CRR Holder

~~An entity that registers with the CAISO to become a CRR Holder through allocation, auction, or the secondary market, and therefore must comply with the requirements for CRR Holders under the CAISO Tariff.~~

C.F.R.

Code of Federal Regulations.

Certificate of Compliance

A certificate issued by the CAISO which states that the Metering Facilities referred to in the certificate satisfy the certification criteria for Metering Facilities contained in the CAISO Tariff.

Check Meter

A redundant revenue quality meter which is identical to and of equal accuracy to the primary revenue quality meter connected at the

Circular Schedule

same metering point which must be certified in accordance with the [CAISO Tariff](#).

~~A Schedule or set of Schedules that creates a closed loop of Energy Schedules between the ISO Controlled Grid and one or more other Control Areas that do not have a source and sink in separate Control Areas, which includes Energy scheduled in a counter direction over a Congested Inter-Zonal Interface through two or more Scheduling Points. A closed loop of Energy Schedules that includes a transmission segment on the Pacific DC Intertie shall not be a Circular Schedule because such a Schedule directly changes power flows on the network and can mitigate Congestion between SP15 and NP15. This definition of a Circular Schedule does not apply to the circumstance in which a Scheduling Coordinator submits a Schedule that is an amalgam of different Market Participants' separate but simultaneously submitted Schedules.~~

Clean Bid

A valid Bid submitted by a Scheduling Coordinator that requires no modification, a Default Modified Bid, and a CAISO Constructed Bid deemed to be acceptable for submission to the CAISO Market applications.

Clustering

The process whereby a group of Interconnection Requests is studied together, instead of serially, for the purpose of conducting the Interconnection System Impact Study.

Commercial Operation

The status of a Generating Unit at a Generating Facility that has commenced generating electricity for sale, excluding electricity generated during Trial Operation.

Commercial Operation Date

The date on which a Generating Unit at a Generating Facility commences Commercial Operation as agreed to by the applicable Participating TO and the Interconnection Customer pursuant to Appendix E to the Standard Large Generator Interconnection Agreement.

Commitment Period

The consecutive Time Periods within a Trading Day with an "On" Commitment Status.

Commitment Status

The "On" or "Off" state for each unit in each Time Period.

Compatible Meter Data Server System

A ~~meter~~Meter data-Data acquisition and processing system which is capable of passing Revenue Quality Meter Data and/or Settlement Quality Meter Data to ~~MDAS~~the CAISO via ~~File Transfer Protocol (FTP)~~CAISO approved methods and which has been certified by the

**CTC (Competition
Transition Charge (CTC))**

CAISO or its authorized representative.

A non-bypassable charge that is the mechanism that the California Legislature and the CPUC mandated to permit recovery of costs stranded as a result of the shift to the new market structure.

**Competitive Constraint
Run (CCR)**

The first optimization run of the MPM-RRD process through which all pre-designated competitive constraints are enforced.

Condition 1 RMR Unit

Resources operating pursuant to Condition 1 of its RMR contract.

Condition 2 RMR Unit

Resources operating pursuant to Condition 2 of its RMR contract.

Congestion

A condition that occurs when there is insufficient Available Transfer Capacity to implement all Preferred Schedules simultaneously or, in real time, to serve all Generation and Demand. "Congested" shall be construed accordingly. A characteristic of the transmission system produced by a binding constraint to the optimum economic dispatch to meet demand such that the LMP, exclusive of Marginal Cost of Losses, at different locations of the transmission system not equal.

Congestion Charge

A charge attributable to the Marginal Cost of Congestion at a given pricing PNode.

Congestion Management

The alleviation of Congestion in accordance with Applicable CAISO Protocols procedures, the CAISO Tariff, and Good Utility Practice.

**Congestion Management
Charge**

The component of the Grid Management Charge that provides for the recovery of the CAISO's costs of operating the Congestion Management process including, but not limited to, the management and operation of Inter-Zonal Congestion markets, Adjustment Bids, taking Firm Transmission Rights Congestion Revenue Rights, Transmission Ownership Rights, and Existing Contracts into account, and determining the price for mitigating Congestion for flows on Congested paths. The formula for determining the Congestion Management Charge is set forth in Appendix F, Schedule 1, Part A of this Tariff.

Congestion Zone

A Zone identified as an Active Zone in Appendix I of the ISO Tariff.

**Congestion Revenue
Right (CRR)**

A CRR Obligation or CRR Option.

Connected Entity

A Participating TO or any party that owns or operates facilities that are electrically interconnected with the CAISO Controlled Grid.

**Constrained Output
Generation Generator
(COG)**

Generating resources with only two viable operating states: (a) off-line or (b) operating at their maximum output level. A Generating Unit

	<u>that, due to operational characteristics, can only be dispatched in one of two states: either turned completely Off, or turned On and run at a fixed capacity level.</u>
Constraints	Physical and operational limitations on the transfer of electrical power through transmission facilities.
Contingency	Disconnection or separation, planned or forced, of one or more components from an electrical system. <u>A potential Outage that is unexpected, viewed as possible or eventually probable, which is taken into account when considering approval of other requested Outages or while operating the CAISO Control Area.</u>
<u>Contingency Flag</u>	<u>The daily Bid component that indicates that the Spinning Reserves and Non-Spinning Reserves being offered in the CAISO Market are contingency-only reserves.</u>
<u>Contingency Only</u>	<u>A resource providing Operating Reserve capacity that may be Dispatched by the CAISO only in the event of a Contingency or System Emergency.</u>
<u>Contract Reference Number ("CRN")</u>	<u>The Bid component that indicates the specific contract identification number issued by the CAISO to Scheduling Coordinators transactions under Existing Contracts or TORs.</u>
Control Area	An electric power system (or combination of electric power systems) to which a common AGC scheme is applied in order to: i) match, at all times, the power output of the Generating Units within the electric power system(s), plus the Energy purchased from entities outside the electric power system(s), minus Energy sold to entities outside the electric power system, with the Demand within the electric power system(s); ii) maintain scheduled interchange with other Control Areas, within the limits of Good Utility Practice; iii) maintain the frequency of the electric power system(s) within reasonable limits in accordance with Good Utility Practice; and iv) provide sufficient generating capacity to maintain operating reserves in accordance with Good Utility Practice.
Control Area Gross Load	For the purpose of calculating and billing Minimum Load Costs, Emission Costs Charge and Start-Up Fuel Costs Charge, Control Area Gross Load is all Demand for Energy within the <u>CAISO</u> Control Area. Control Area Gross Load shall <u>not</u> include Energy consumed by: <ul style="list-style-type: none"> (a) generator auxiliary Load equipment that is dedicated to the

	production of Energy and is electrically connected at the same point as the Generating Unit (e.g., auxiliary Load equipment that is served via a distribution line that is separate from the switchyard to which the Generating Unit is connected will not be considered to be electrically connected at the same point); and
	(b) Load that is isolated electrically from the CAISO Control Area (i.e., Load that is not synchronized with the CAISO Control Area).
Control Area Operator	The person responsible for managing the real-time Real-Time operations of a Control Area.
Converted Rights	Those transmission service rights as defined in Section 16.21A.1 4.3.1.6 of the CAISO Tariff.
Core Reliability Services - Demand Charge	A component of the Grid Management Charge that provides for the recovery of the CAISO 's costs of providing a basic, non-scalable level of reliable operation for the CAISO Control Area and meeting regional and national reliability requirements. The formula for determining the Core Reliability Services – Demand Charge is set forth in Appendix F, Schedule 1, Part A of this Tariff.
Core Reliability Services – Energy Export Charge	A component of the Grid Management Charge that provides for the recovery of the CAISO 's costs of providing a basic, non-scalable level of reliable operation for the CAISO Control Area and meeting regional and national reliability requirements. The formula for determining the Core Reliability Services – Energy Exports Charge is set forth in Appendix F, Schedule 1, Part A of this Tariff.
CPUC	The California Public Utilities Commission, or its successor.
<u>CPUC Load Serving Entity</u>	<u>Any entity serving retail Load in the CAISO Control Area under the jurisdiction of the CPUC, including an Electrical corporation under section 218 of the California Public Utilities Code (hereinafter “PUC”), an Electric service provider under section 218.3 of the PUC, and a Community Choice Aggregator under section 331.1 of the PUC.</u>
Critical Protective System	Facilities and sites with protective relay systems and Remedial Action Schemes that the CAISO determines may have a direct impact on the ability of the CAISO to maintain system security and over which the CAISO exercises Operational Control.
<u>CRR Allocation</u>	<u>The process of nominations and awards held monthly and annually through which the CAISO will distribute CRRs according to the</u>

	<u>provisions of Section 36 of the CAISO Tariff.</u>
<u>CRR Annual Cycle</u>	<u>Time period covered by all the CRRs released in an annual CRR Allocation and Auction process.</u>
<u>CRR Auction</u>	<u>The annual and monthly market process that will follow CRR Allocation through which the CAISO makes CRRs available to parties that submit offers to purchase CRRs.</u>
<u>CRR Balancing Account</u>	<u>The financial account held by the CAISO for CRRs that is administered in accordance with Section 11.2.4 of the CAISO Tariff.</u>
<u>CRR Holder</u>	<u>An entity that has registered with the CAISO and otherwise meets the requirements of Sections 12 and 36 of the CAISO Tariff and has acquired Congestion Revenue Right(s) either through the CRR Allocation, CRR Auction, or in the secondary market.</u>
<u>CRR Obligation</u>	<u>A financial instrument that entitles the holder to a CRR Payment when Congestion is in the direction of the CRR Source to CRR Sink specification and imposes on its holder a CRR Charge when Congestion is in the opposite direction of the CRR Source to CRR Sink specification as described in Section 11.2.4.</u>
<u>CRR Charge</u>	<u>The Charge assessed by the CAISO on the holder of a CRR Obligation when congestion is in the opposite direction of the CRR Source to CRR Sink specification as described in Section 11.2.4.</u>
<u>CRR Option</u>	<u>A financial instrument that entitles its holder to a CRR Payment when Congestion is in the direction of the CRR Source to CRR Sink specification.</u>
<u>CRR Payment</u>	<u>A Payment from the CAISO to a CRR Holder based as specified in Section 11.2.4.</u>
<u>CRR Sink</u>	<u>A PNode or a Trading Hub specified as the point of withdrawal for a Congestion Revenue Right.</u>
<u>CRR Source</u>	<u>A PNode or a Trading Hub specified as the point of receipt for a Congestion Revenue Right.</u>
<u>CRR Term</u>	<u>Set of hours for which a given CRR is effective , based on the CRR specifications in Section 36.3, which is either the season multiplied by the time-of-use specifications or the month multiplied by the time-of-use specifications.</u>
<u>CRR Year One</u>	<u>The first period of time for which the CAISO conducts an annual CRR Allocation, as defined in the Business Practice Manuals.</u>
Curtailable Demand	Demand from a Participating Load that can be curtailed at the direction of the <u>CAISO</u> in the real <u>Real-time-Time</u> Dispatch of the

	<u>CAISO Controlled Grid. Scheduling Coordinators with Curtailable Demand may offer it to the CAISO to meet Non-Spinning Reserve or Replacement Reserve requirements.</u> <u>Imbalance Energy.</u>
Day 0	The Trading Day to which the Settlement Statement or Settlement calculation refers. For example “Day 41” shall mean the 41st day after that Trading Day and similar expressions shall be construed accordingly.
Day-Ahead	Relating to a Day-Ahead Market or Day-Ahead Schedule. The twenty-four hour time period prior to the Trading Day.
Day-Ahead Market (DAM)	The forward market for Energy and Ancillary Services to be supplied during the Settlement Periods of a particular Trading Day that is conducted by the ISO and other Scheduling Coordinators and which closes with the ISO's acceptance of the Final Day-Ahead Schedule. A series of processes conducted in the Day-Ahead that includes the Market Power Mitigation-Reliability Requirement Determination, the Integrated Forward Market and the Reliability Unit Commitment.
Day-Ahead Schedule	A Schedule prepared by a Scheduling Coordinator or the <u>CAISO</u> one day prior to the target <u>before the beginning of a</u> Trading Day indicating the levels of Generation Supply and Demand for Energy cleared through the IFM and scheduled for each Settlement Period, <u>for each PNode or Aggregated Pricing Node, including Scheduling Points</u> of that Trading Day.
Default GMM	Pre-calculated GMM based on historical Load and interchange levels.
Default Energy Bid	<u>A price (\$/MWh) used in Locational Market Power Mitigation pursuant to Section 39.</u>
Default LAP	<u>The LAP defined for the TAC Area at which all Bids for Demand shall be submitted and settled, except as provided in Sections 27.2.1 and 30.5.3.2.</u>
Default Modified Bid	<u>A Bid that is submitted by a Scheduling Coordinator and is deemed valid and qualifies for modification under the provisions of Resource Adequacy Requirements of this Tariff.</u>
Deliverability Assessment	An evaluation by the Participating TO, <u>CAISO</u> or a third party consultant for the Interconnection Customer to determine a list of facilities, the cost of those facilities, and the time required to

Delivery Network Upgrades

construct these facilities, that would ensure a Large Generating Facility could provide Energy to the [CAISO](#) Controlled Grid at peak load, under a variety of severely stressed conditions, such that the aggregate of Generation in the local area can be delivered to the aggregate of Load on the [CAISO](#) Controlled Grid, consistent with the [CAISO's](#) reliability criteria and procedures.

Transmission facilities at or beyond the Point of Interconnection, other than Reliability Network Upgrades, identified in the Interconnection Studies to relieve constraints on the [CAISO](#) Controlled Grid.

Delivery Point

The point where a transaction between Scheduling Coordinators is deemed to take place. It can be either the Generation input point, a Demand Take-Out Point, or a transmission bus at some intermediate location.

Demand

The ~~rate at which Energy~~ [instantaneous amount of Power that](#) is delivered to Loads and Scheduling Points by Generation, transmission or distribution facilities. It is the product of voltage and the in-phase component of alternating current measured in units of watts or standard multiples thereof, e.g., 1,000W=1kW, 1,000kW=1MW, etc.

Demand Bid

[The Bid Component in a Bid submitted in the DAM that indicates the MWh of Energy the Scheduling Coordinator is willing to purchase, the price at which it is willing to purchase the specified Energy and the applicable Trading Hours for the next day.](#)

Demand Forecast

An estimate of Demand over a designated period of time.

Load Reduction Initiation

[The Bid component that indicates the Load reduction initiation time and cost for a Participating Load.](#)

Load Reduction Initiation Payment

[Compensation calculated for Scheduling Coordinators for capacity committed by the CAISO through the IFM, RUC, HASP or Real-Time Market procedures associated with Load Reduction Initiation Bid.](#)

Department of Market Analysis-Monitoring (DMA)

The ~~unit~~ [department of the CAISO](#) established under Appendix P.1.

Direct Access Demand

The Demand of Direct Access End-Users.

Direct Access End-User

An Eligible Customer located within the Service Area of a [Utility Distribution Company](#) who purchases Energy and Ancillary Services

Dispatch

through a Scheduling Coordinator.

The ~~operating activity of~~ controlling of an integrated electric system to: i) assign specific Generating Units and other sources of supply to effect the supply to meet the relevant area Demand taken as Load rises or falls; ii) control operations and maintenance of high voltage lines, substations, and equipment, including administration of safety procedures; iii) operate interconnections; iv) manage Energy transactions with other interconnected Control Areas; and v) curtail Demand.

Dispatch Instruction

An instruction by the CAISO for an action with respect to specific equipment, or to a resource for increasing or decreasing its energy Ssupply or Demand from the Hour AheadDay-Ahead Schedule, RUC Schedule, and Day-Ahead AS Award to a specified operating point pertaining to ~~real~~Real-Time operations.

Dispatch Interval

The time period, which may range between five (5) and thirty (30) minutes, over which the ~~ISO's Real-Time Dispatch Software~~ measures deviations in Generation and Demand, and selects Ancillary Service and ~~s~~Supplemental eEnergy resources to provide balancing Energy in response to such deviations. The Dispatch Interval shall be five (5) minutes. Following a decision by the CAISO Governing Board, the CAISO may, by seven (7) days' notice published on the CAISO's Home Page, at http://www.caiso.com (or such other internet address as the ISO may publish from time to time)Website, increase or decrease the Dispatch Interval within the range of five (5) to thirty (30) minutes.

Dispatch Interval Ex-Post PricesLMP

The price of Imbalance Energy determined each Dispatch Interval ~~based on 1) the Imbalance Energy requirements in that Dispatch Interval, and 2) the Energy Bid price of the resource eligible to set the price. The Dispatch Interval Ex-Post Price is used to determine other prices used to settle Imbalance Energy, in accordance with~~ Section 11.5.4.

Dispatch Operating Point

The expected operating point of a resource that has received a Dispatch Instruction. The resource is expected to operate at the Dispatch Operating Point after completing the Dispatch Instruction, taking into account any relevant ramp rate and time delays. Energy expected to be produced or consumed above or below the ~~Final~~ HourDay-Ahead Schedule in response to a Dispatch Instruction

	constitutes Instructed Imbalance Energy. For resources that have not received a Dispatch Instruction, the Dispatch Operating Point defaults to the corresponding Final Hour Day -Ahead Schedule.
Dispatchable Load	Load which is the subject of an Adjustment Bid.
<u>Distribution Curve</u>	<u>The Bid Template component that indicates an integration distribution factor to demonstrate how the Bid is distributed for the resources participating in the Physical Scheduling Plants or System Units, or for Aggregated Load Resources in the case of Participating Loads.</u>
Distribution System	The distribution assets of an IOU or Local Publicly Owned Electric Utility.
Distribution Upgrades	The additions, modifications, and upgrades to the Participating TO's electric systems that are not part of the CAISO Controlled Grid. Distribution Upgrades do not include Interconnection Facilities.
<u>Dynamic Resource-Specific System Resource</u>	<u>A Dynamic System Resource that is physically connected to an actual generation resource outside the CAISO Control Area.</u>
Dynamic Schedule	A telemetered reading or value which is updated in Real-Time real time and which is used as a schedule in the CAISO Energy Management System calculation of Area Control Error and the integrated value of which is treated as a schedule for interchange accounting purposes.
<u>Dynamic System Resource</u>	<u>A System Resource that is capable of submitting a Dynamic Schedule, including a Dynamic Resource-Specific System Resource.</u>
<u>Economic Bids</u>	<u>A Supply and Demand Bid that includes quantity (MWh) and price (\$) for specified Trading Hours, which is not a Self-Schedule</u>
<u>Economic Market Clearing Prices</u>	<u>For the purposes of Section 39, the market prices for a particular resource at the location of that particular resource at the time the resource was either Scheduled or was Dispatched by the CAISO. Economic Market Clearing Prices may originate from the Day-Ahead Market, the HASP or the RTM. The Economic Market Clearing Price for the RTM shall be the LMP, unless the resource cannot change output level within the hour (i.e., the resource is not amenable to intra-hours real-time Dispatch instructions) or it is a</u>

System Resource. Economic Market Clearing Prices for the RTM for resources that cannot change output level within one Dispatch Interval and System Resources shall be the simple average of the relevant Dispatch Interval LMPs for each hour.

Electric Facility

An electric resource, including a Generating Unit, System Unit, or a Participating Load.

EEP (Electrical Emergency Plan (EEP))

A plan to be developed by the CAISO in consultation with Utility Distribution Companies to address situations when Energy reserve margins are forecast to be below established levels.

Electronic Data Interchange (EDI)

The routine exchange of business documented on electronic media such as purchase orders, invoices and remittance. The format of the data is based on an industry-approved format such as those published by the ANSI ASC X12 committee.

Eligible Customer

(i) any utility (including Participating TOs, Market Participants and any power marketer), Federal power marketing agency, or any person generating Energy for sale or resale; Energy sold or produced by such entity may be Energy produced in the United States, Canada or Mexico; however, such entity is not eligible for transmission service that would be prohibited by Section 212(h)(2) of the Federal Power Act; and (ii) any retail customer taking unbundled transmission service pursuant to a state retail access program or pursuant to a voluntary offer of unbundled retail transmission service by the Participating TO.

Eligible Intermittent Resource

A Generating Unit that is powered solely by 1) wind, 2) solar energy, or 3) hydroelectric potential derived from small conduit water distribution facilities that do not have storage capability.

Emissions Cost Charge

The charge determined in accordance with Section 40.1.9.

Emissions Cost Demand

The level of Demand specified in Section 40.1.9.3.

Emissions Cost Invoice

The invoice submitted to the ISO in accordance with Section 40.1.9.6.

Emissions Cost Trust Account

The trust account established in accordance with Section 40.1.9.2.

Emissions Costs

The mitigation fees, excluding capital costs, assessed against a

Encumbrance

~~Generating Unit by a state or federal agency, including air quality districts, for exceeding applicable NOx emissions limitations.~~

A legal restriction or covenant binding on a Participating TO that affects the operation of any transmission lines or associated facilities and which the [CAISO](#) needs to take into account in exercising Operational Control over such transmission lines or associated facilities if the Participating TO is not to risk incurring significant liability. Encumbrances shall include Existing Contracts and may include: (1) other legal restrictions or covenants meeting the definition of Encumbrance and arising under other arrangements entered into before the [CAISO](#) Operations Date, if any; and (2) legal restrictions or covenants meeting the definition of Encumbrance and arising under a contract or other arrangement entered into after the [CAISO](#) Operations Date.

End-Use Customer or End-User

A consumer of electric power who consumes such power to satisfy a Load directly connected to the [CAISO](#) Controlled Grid or to a Distribution System and who does not resell the power.

End-Use Meter

A metering device collecting Meter Data with respect to the Energy consumption of an End-User.

End-Use Meter Data

Meter Data that measures the Energy consumption in respect of End-Users gathered, edited and validated by Scheduling Coordinators and submitted to the [CAISO](#) in Settlement quality form.

Energy

The electrical energy produced, flowing or supplied by generation, transmission or distribution facilities, being the integral with respect to time of the instantaneous power, measured in units of watt-hours or standard multiples thereof, e.g., 1,000 Wh=1kWh, 1,000 kWh=1MWh, etc.

Energy Bid

~~The price at or above which a Generator has agreed to produce the next increment of Energy-A Demand Bid or an Energy Supply Bid.~~

Energy Bid Cost

~~An amount equal to the integral of the Energy Bid for resources that have been selected through the IFM or RTM, above PMin.~~

Energy Bid Curve

~~The Bid component that indicates the prices and related quantity at which a resource offers Energy in a monotonically increasing (decreasing for Participating Load) staircase function, consisting of no more than 10 segments defined by 11 pairs of MW operating points and \$/MWh, which may be different for each Trading Hour of the applicable Bid time period. If the resource has Forbidden~~

Energy Export

Operating Regions, each Forbidden Operating Region must be reflected as a single, separate Energy Bid Curve segment.

For purposes of calculating the Grid Management Charge, Energy included in an interchange Schedule submitted to the CAISO, or dispatched by the CAISO, to serve a Load located outside the CAISO's Control Area, whether the Energy is produced by a Generator in the CAISO Control Area or a resource located outside the CAISO's Control Area.

Energy Limit

The Bid component that indicates the maximum and minimum daily Energy limits for the Generating Unit.

EMS (Energy Management System) (EMS)

A computer control system used by electric utility dispatchers to monitor the real-time performance of the various elements of an electric system and to control Generation and transmission facilities.

Energy Supply Bid

The quantity (MWh) and a price (\$) at or above which a resource has agreed to sell the next increment of Energy for a specified interval of time.

Energy Transmission Services Net Energy Charge

The component of the Grid Management Charge that provides, in conjunction with the Energy Transmission Services Uninstructed Deviations Charge, for the recovery of the CAISO's costs of providing reliability on a scalable basis, i.e., a function of the intensity of the use of the transmission system within the Control Area and the occurrence of system outages and disruptions. The formula for determining the Energy Transmission Services Net Energy Charge is set forth in Appendix F, Schedule 1, Part A of this Tariff.

Energy Transmission Services Uninstructed Deviations Charge

The component of the Grid Management Charge that provides, in conjunction with the Energy Transmission Services Net Energy Charge, for the recovery of the CAISO's costs of providing reliability on a scalable basis, in particular for the costs associated with balancing transmission flows that result from uninstructed deviations. The formula for determining the Energy Transmission Services Uninstructed Deviations Charge is set forth in Appendix F, Schedule 1, Part A of this Tariff.

Engineering & Procurement (E&P) Agreement

An agreement that authorizes the Participating TO to begin engineering and procurement of long lead-time items necessary for the establishment of the interconnection in order to advance the

	implementation of the Interconnection Request.
Entitlements	The right of a Participating TO obtained through contract or other means to use another entity's transmission facilities for the transmission of Energy.
Environmental Dispatch	Dispatch designed to meet the requirements of air quality and other environmental legislation and environmental agencies having authority or jurisdiction over the CAISO .
<u>ETC Self-Schedule</u>	Self-Schedules submitted by Scheduling Coordinators pursuant to Existing Rights as reflected in the TRTC Instructions.
<u>Exceptional Dispatch</u>	A Dispatch Instruction issued to avoid an intervention in market operations for the purposes specified in Section 34.9. Energy from Exceptional Dispatches shall not set any Dispatch Interval LMP.
<u>Excess Cost Payments</u>	The Payments made to Condition 2 RMR Units in order to settle an Exceptional Dispatch.
<u>Ex Post GMM</u>	GMM that is calculated utilizing the real-time Power Flow Model in accordance with Section 27.2.1.2.1.2.
<u>Ex Post Price</u>	The Hourly Ex Post Price, the Dispatch Interval Ex Post Price, the Resource-Specific Settlement Interval Ex Post Price, or the Zonal Settlement Interval Ex Post Price.
<u>Ex Post Transmission Loss</u>	Transmission Loss that is calculated based on Ex Post GMM.
<u>Existing Agreement</u>	An agreement entered into between a Qualifying Facility and a PTO before March 31, 1997 for the supply of Energy to the PTO.
Existing High Voltage Facility	A High Voltage Transmission Facility of a Participating TO that was placed in service on or before the Transition Date defined in Section 4.2 of Schedule 3 of Appendix F.
Existing Rights	Those transmission service rights defined in Section 16. 2.1.4 of the CAISO Tariff.
<u>Existing Transmission Contract (ETC) or Existing Contracts</u>	The contracts which grant transmission service rights in existence on the CAISO Operations Date (including any contracts entered into pursuant to such contracts) as may be amended in accordance with their terms or by agreement between the parties thereto from time to time.
<u>Existing Zone</u>	Regions formally referred to as NP15, SP15, and ZP26 prior to implementation of the CAISO LMP market design.
<u>Existing Zone Generation Trading Hub</u>	Trading Hubs specifically developed to represent the average price paid to generation resources within Existing Zones.

<u>Expanded System Region</u>	<u>The System Region and Inter-Tie scheduling points with adjacent control areas.</u>
<u>Export Bid</u>	<u>A Demand Bid submitted to a CAISO Market at a Scheduling Point.</u>
<u>Extremely Long-Start Resource</u>	<u>A Generating Unit that has a Start-Up Time greater than 18 hours.</u>
Facility Owner	An entity owning transmission, Generation, or distribution facilities connected to the <u>CAISO</u> Controlled Grid.
Facility Study	An engineering study conducted by a Participating TO to determine required modifications to the Participating TO's transmission system, including the cost and scheduled completion date for such modifications that will be required to provide needed services.
Facility Study Agreement	An agreement between a Participating TO and either a Market Participant, Project Sponsor, or identified principal beneficiaries pursuant to which the Market Participants, Project Sponsor, and identified principal beneficiaries agree to reimburse the Participating TO for the cost of a Facility Study.
<u>Fast Start Unit</u>	<u>Generating Units that have a Start Up Time less than two hours and can be committed in the RTUC and STUC.</u>
<u>Feasibility Index</u>	<u>A test used to evaluate whether a supplier or set of suppliers is pivotal in relieving congestion on a transmission path for the purposes of determining if a path is deemed to be competitive.</u>
Fed-Wire	The Federal Reserve Transfer System for electronic funds transfer.
FERC	The Federal Energy Regulatory Commission or its successor.
FERC Annual Charges	Those charges assessed against a public utility by the FERC pursuant to 18 C.F.R. § 382.201 and any related statutes or regulations, as they may be amended from time to time.
FERC Annual Charge Recovery Rate	The rate to be paid by Scheduling Coordinators for recovery of FERC Annual Charges assessed against the <u>CAISO</u> for transactions on the <u>CAISO</u> Controlled Grid.
FERC Annual Charge Trust Account	An account to be established by the <u>CAISO</u> for the purpose of maintaining funds collected from Scheduling Coordinators for FERC Annual Charges and disbursing such funds to the FERC.
Final Approval	A statement of consent by the <u>CAISO</u> Control Center to initiate a scheduled Outage.
Final Day-Ahead Schedule	The Day-Ahead Schedule which has been approved as feasible and consistent with all other Schedules by the ISO based upon the ISO's

Final Hour-Ahead Schedule

~~Day-Ahead Congestion Management procedures.~~

~~The Hour-Ahead Schedule of Generation and Demand that has been approved by the ISO as feasible and consistent with all other Schedules based on the ISO's Hour-Ahead Congestion Management procedures.~~

Final Invoice

The invoice due from a Reliability Must Run Owner to the CAISO at termination of the Reliability Must Run Contract.

Final Schedule

~~A Schedule developed by the ISO following receipt of a Revised Schedule from a Scheduling Coordinator.~~

Final Settlement Statement

The restatement or recalculation of the Preliminary Settlement Statement by the CAISO following the issue of that Preliminary Settlement Statement.

Forbidden Operating Region

~~The operating region of a resource wherein the resource cannot operate in a stable manner and must ramp through at maximum ramp capacity. A pair of lower and higher operating levels between which a resource can not operate stably. The Forbidden Operating Regions lie between a resource's minimum operating limit and maximum operating limit and cannot overlap.~~

Forced Outage

An Outage for which sufficient notice cannot be given to allow the Outage to be factored into the Day-Ahead Market, HASP or RTM bidding ~~or Hour-Ahead Market scheduling~~ processes.

Forecast Fee

The charge imposed on a Participating Intermittent Resource pursuant to the terms of Appendix Q and CAISO Tariff Appendix F, Schedule 4.

Forward Scheduling Charge

The component of the Grid Management Charge that provides for the recovery of the CAISO's costs, including, but not limited to the costs of providing the ability to Scheduling Coordinators to ~~forward schedule~~ submit a Bid for Energy and Ancillary Services and the cost of processing accepted Ancillary Services ~~bids~~ Bids. For purposes of the Forward Scheduling Charge, a schedule is represented by each ~~f~~ Final Hour-Ahead HASP Schedule with a value other than 0 MW submitted to the scheduling infrastructure/scheduling application system (~~l~~ import, ~~E~~ export, Load, Generation, ~~inter-Scheduling Coordinator trade~~, Inter-SC Trades, and Ancillary Services, including self-provided Ancillary Services) submitted to the CAISO's ~~scheduling infrastructure~~ Markets. The formula for determining the Forward Scheduling Charge is set forth in Appendix F, Schedule 1,

FPA

Part A of this Tariff.

Parts II and III of the Federal Power Act, 16 U.S.C. § 824 et seq., as they may be amended from time to time.

Frequently Mitigated Unit

A Generating Unit that agrees to be subject to the Frequently Mitigated Unit Option under Section 39.8.1 and (i) has a Mitigation Frequency that is greater than eighty (80) percent in the previous 12 months; (ii) has run for more than 200 hours in the previous 12 months; and (iii) must not have a Resource Adequacy contract for its entire net dependable capacity or be subject to a capacity tariff construct by way of the unit's PGA.

FTR (Firm Transmission Right)

A contractual right, subject to the terms and conditions of the ISO Tariff, that entitles the FTR Holder to receive, for each hour of the term of the FTR, a portion of the Usage Charges received by the ISO for transportation of energy from a specific originating Zone to a specific receiving Zone and, in the event of an uneconomic curtailment to manage Day Ahead Congestion, to a Day Ahead scheduling priority higher than that of a Schedule using Converted Rights capacity that does not have an FTR.

FTR Bidder

An entity that submits a bid in an FTR auction conducted by the ISO in accordance with Section 36.4 of the ISO Tariff.

FTR Holder

The owner of an FTR, as registered with the ISO.

FTR Market

A transmission path from an originating Zone to a contiguous receiving Zone for which FTRs are auctioned by the ISO in accordance with Section 9.4 of the ISO Tariff.

Full Marginal Loss Rate

A rate calculated by the ISO for each Generation and Scheduling Point location to determine the effect on total system Transmission Losses of injecting an increment of Generation at each such location to serve an equivalent incremental MW of Demand distributed proportionately throughout the ISO Control Area.

Full Network Model (FNM)

A computer-based model that includes all CAISO Control Area transmission network (load and generation) busses, transmission constraints, and interface busses between the CAISO Control Area and adjacent Control Areas. The FNM models the transmission facilities internal to the CAISO Control Areas as elements of a looped network and models the CAISO Control Areas interties with adjacent Control Areas in a radial fashion.

GCC

The single point of contact at the grid control center of Southern

	California Edison Company.
Generating Facility	An Interconnection Customer's Generating Unit(s) used for the production of electricity identified in the Interconnection Request, but shall not include the Interconnection Customer's Interconnection Facilities.
Generating Facility Capacity	The capacity of the Generating Facility and the aggregate capacity of the Generating Facility where it includes multiple energy production devices.
Generating Unit	<p>An individual electric generator and its associated plant and apparatus whose electrical output is capable of being separately identified and metered or a Physical Scheduling Plant that, in either case, is:</p> <ul style="list-style-type: none"> (a) located within the CAISO Control Area; (b) connected to the CAISO Controlled Grid, either directly or via interconnected transmission, or distribution facilities; and (c) that is capable of producing and delivering net Energy (Energy in excess of a generating station's internal power requirements).
Generation	Energy delivered from a Generating Unit.
Generator	The seller of Energy or Ancillary Services produced by a Generating Unit.
GMM (Generation Meter Multiplier)	A number which when multiplied by a Generating Unit's Metered Quantity will give the total Demand to be served from that Generating Unit.
Good Utility Practice	Any of the practices, methods, and acts engaged in or approved by a significant portion of the electric utility industry during the relevant time period, or any of the practices, methods, and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety, and expedition. Good Utility Practice is not intended to be any one of a number of the optimum practices, methods, or acts to the exclusion of all others, but rather to be acceptable practices, methods, or acts generally accepted in the region
Grid Management Charge (GMC)	The CAISO monthly charge on all Scheduling Coordinators that provides for the recovery of the CAISO 's costs listed in Section

~~11.2.2.2~~ through the eight service charges described in Section ~~11.2.2.3~~ ~~11.2.2.5~~ calculated in accordance with the formula rate set forth in Appendix F, Schedule 1, Part A of this Tariff. The eight charges that comprise the Grid Management Charge consist of: 1) the Core Reliability Services - Demand Charge, 2) the Core Reliability Services – Energy Exports Charge, 3) the Energy Transmission Services Net Energy Charge, 4) the Energy Transmission Services Uninstructed Deviations Charge, 5) the Forward Scheduling Charge, 6) the Congestion Management Charge, 7) the Market Usage Charge, and 8) the Settlements, Metering, and Client Relations Charge.

Grid Operations Charge

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

Gross Load

For the purposes of calculating the transmission Access Charge, Gross Load is all Energy (adjusted for distribution losses) delivered for the supply of End-Use Customer Loads directly connected to the transmission facilities or directly connected to the Distribution System of a Utility Distribution Company or Metered Subsystem S Operator located in a Participating TO Service Territory. Gross Load shall exclude Load with respect to which the Wheeling Access Charge is payable and the portion of the Load of an individual retail customer of a UDC-Utility Distribution Company, Small Utility Distribution Company or Metered Subsystem S Operator that is served by a Generating Unit that: (a) is located on the customer's site or provides service to the customers site through arrangements as authorized by Section 218 of the California Public Utilities Code; (b) is a qualifying small power production facility or qualifying cogeneration facility, as those terms are defined in the FERC's regulations implementing Section 201 of the Public Utility Regulatory Policies Act of 1978; and (c) secures Standby Service from a Participating TO under terms approved by a Local Regulatory Authority or FERC, as applicable, or can be curtailed concurrently with an outage of the Generating Unit serving the Load. Gross Load forecasts consistent with filed Transmission Revenue Requirements

HASP AS Award

will be provided by each Participating TO to the [CAISO](#).

[Awards for Imports of Ancillary Services established through the HASP.](#)

HASP Bid

[A Bid received in HASP that can be used in the MPM-RRD conducted in HASP, the RTUC, STUC, or the RTD.](#)

HASP Advisory Schedule

[The non-binding output of the HASP as it pertains to the Real-Time Market.](#)

HASP Intertie Schedule

[The binding output of the HASP including accepted Bids for imported Energy or Ancillary Services and associated LMPs and ASMPs.](#)

High Voltage Access Charge

The Access Charge applicable under Section 26.1 to recover the High Voltage Transmission Revenue Requirements of each Participating TO in a [Transmission Access Charge](#) Area.

High Voltage Transmission Facility

A transmission facility that is owned by a Participating TO or to which a Participating TO has an Entitlement that is represented by a Converted Right, that is under the [CAISO](#) Operational Control, and that operates at a voltage at or above 200 kilovolts, and supporting facilities, and the costs of which are not directly assigned to one or more specific customers.

High Voltage Transmission Revenue Requirement

The portion of a Participating TO's [Transmission Revenue Requirement](#) associated with and allocable to the Participating TO's High Voltage Transmission Facilities and Converted Rights associated with High Voltage Transmission Facilities that are under the [CAISO](#) Operational Control.

High Voltage Wheeling Access Charge

The Wheeling Access Charge associated with the recovery of a Participating TO's High Voltage Transmission Revenue Requirements in accordance with Section 26.1.

Host Control Area

The Control Area in which a System Resource subject to this [CAISO](#) Tariff is connected to the electric grid. The Host Control Area may, or may not, be directly interconnected with the [CAISO](#) Control Area.

Hour-Ahead

~~[Relating to an Hour-Ahead Market or an Hour-Ahead Schedule.](#)~~

Hour-Ahead Forecast

~~[The Energy forecast to be used by the Scheduling Coordinator representing a Participating Intermittent Resource for its Preferred Hour-Ahead Schedule, in accordance with Appendix Q.](#)~~

Hour-Ahead Market

~~[The forward market for Energy and Ancillary Services to be supplied during a particular Settlement Period that is conducted by the ISO and other Scheduling Coordinators which opens after the ISO's](#)~~

Hour-Ahead Schedule

Hour-Ahead Scheduling Process (HASP)

Hourly CAISO Demand

Hourly Demand

Hourly Ex Post Price

Hourly LAP Adjustment Price

HASP Intertie LMP

Hourly Real Time LAP Price

Hourly UIE Adjustment Amount

Hourly Pre-Dispatch

~~acceptance of the Final Day Ahead Schedule for the Trading Day in which the Settlement Period falls and closes with the ISO's acceptance of the Final Hour Ahead Schedule.~~

~~A Schedule prepared by a Scheduling Coordinator or the ISO before the beginning of a Settlement Period indicating the changes to the levels of Generation and Demand scheduled for that Settlement Period from that shown in the Final Day Ahead Schedule.~~

The process conducted by the CAISO beginning at seventy-five minutes prior to the Trading Hour through which the CAISO conducts the following activities: 1) accepts Bids for Supply of Energy, including imports, exports and Ancillary Services imports to be supplied during the next Trading Hour that apply to the MPM-RRD, RTUC, STUC, and RTD; 2) conducts the MPM-RRD on the Bids that apply to the RTUC, STUC, and RTD; and 3) conducts the RTUC for the hourly pre-dispatch of Energy and Ancillary Services.

The average of the instantaneous CAISO Demand integrated over a single clock hour, in MWh.

The average of the instantaneous Demand integrated over a single clock hour, in MWh.

~~The Energy weighted average of the Dispatch Interval Ex Post Prices in each Zone during each Settlement Period. The Hourly Ex Post Price will vary between Zones when Congestion is present. This price is used in the Regulation Energy Payment Adjustment and in RMP settlements.~~

The price used for settlement of UIE as specified in Section 11.5.2.2.

The average Dispatch-Interval LMP over a Trading Hour as determined by the RTUC process.

The load deviation weighted average of the hourly average of the Dispatch Interval LMPs for the LAP in the relevant Trade Hour used for the settlement of UIE.

The adjustment made in the settlement of Tier 2 UIE, as calculated in section 11.5.2.2, to account for Energy quantity cancellations in the denominator of the calculation of the Hourly Real-Time LAP Price.

~~The process in which the ISO Dispatches Energy Bids from System Resources before the start of the next Settlement Period for the~~

Hydro Spill Generation

~~entire duration of that Settlement Period.~~

Hydro-electric Generation in existence prior to the CAISO Operations Date that: i) has no storage capacity and that, if backed down, would spill; ii) has exceeded its storage capacity and is spilling even though the generators are at full output, or iii) has inadequate storage capacity to prevent loss of hydro-electric Energy either immediately or during the forecast period, if hydro-electric Generation is reduced; iv) has increased regulated water output to avoid an impending spill.

Independent Entity

The entity, not affiliated with the CAISO or any Market Participant, that assists the CAISO in the determination of reference prices.

Identification Code

An identification number assigned to each Scheduling Coordinator by the CAISO.

IFM Bid Cost

The sum of a BCR Eligible Resource's IFM Start Up Cost (or the IFM Load Reduction Initiation Cost for Participating Loads), IFM Minimum Load Cost (or the IFM Minimum Curtailable Demand for Participating Loads), IFM Pump and Participating Load Shut-Down Cost, IFM Pump and Participating Load Bid Cost, IFM Energy Bid Cost, and IFM AS Bid Cost.

IFM Commitment Period

A Commitment Period determined by the IFM.

IFM Self-Commitment Period

A Time Period determined by the CAISO pursuant to the rules in Section 11.8.1.1 for the purposes of deriving any Bid Cost Recovery amounts, related to the IFM.

IFM Bid Cost Shortfall

For each Settlement Interval, for any BCR Eligible Resource, the positive amount resulting from the difference between the IFM Bid Cost and the IFM Market Revenue.

IFM Bid Cost Surplus

For each Settlement Interval, for any BCR Eligible Resource, the negative amount resulting from the difference between the IFM Bid Cost and the IFM Market Revenue.

IFM Bid Cost Uplift

The system-wide net of the IFM Bid Cost Shortfalls and IFM Bid Cost Surpluses for a Settlement Interval of all BCR Eligible Resources with Unrecovered Bid Cost Uplift Payments. This amount will be netted according to Section 11.8.6.2 to calculate the Net IFM Bid Cost Uplift before allocation to Scheduling Coordinators.

IFM Marginal Losses

The amount of excess marginal losses collected by the CAISO and

<u>Surplus Credit</u>	<u>returned to Scheduling Coordinators in proportion to their Measured Demand in accordance with Section 11.2.1.6.</u>
<u>IFM Market Revenue</u>	<u>The amount received by BCR Eligible Resource from Energy scheduled and Ancillary Services awarded in the IFM for the purposes of Bid Cost Recovery, as calculated pursuant to Section 11.8.2.2.</u>
<u>IFM Load Uplift Obligation</u>	<u>The obligation of a Scheduling Coordinators to pay its share of unrecovered IFM Bid Costs paid to resources through Bid Cost Recovery.</u>
<u>IIE Settlement Amount</u>	<u>The Payment due a Scheduling Coordinator for positive Instructed Imbalance Energy or the Charge assessed on a Scheduling Coordinator for negative Instructed Imbalance Energy, as calculated pursuant to Section 11.5.1.</u>
Imbalance Energy	<u>The deviation of Supply or Demand from Day-Ahead Schedule, positive or negative, as measured by metered Generation, metered Load, or Real-Time Interchange schedules. Imbalance Energy is Energy from Regulation, Spinning and Non-Spinning Reserves, or Replacement Reserve, or Energy from other Generating Units, System Units, System Resources, or Loads that are able to respond to the ISO's request for more or less Energy.</u>
<u>Import Bid</u>	<u>A Supply Bid submitted to a CAISO Market at a Scheduling Point.</u>
<u>Inactive Zone</u>	<u>All Zones which the ISO Governing Board has determined do not have a workably competitive Generation market and as set out in Appendix I to the ISO Tariff.</u>
In-Service Date	The date upon which the Interconnection Customer reasonably expects it will be ready to begin use of the Participating TO Interconnection Facilities to obtain back feed power.
Incremental Change	The change in dollar value of a specific charge type from the Preliminary Settlement Statement to the Final Settlement Statement including any new charge types or Trading Day charges appearing for the first time on the Final Settlement Statement.
<u>Independent System Operator (ISO)</u>	<u>See California Independent System Operator Corporation</u>
<u>Interchange</u>	<u>Imports and exports between the CAISO Control Area and other Control Areas.</u>
Instructed Imbalance Energy <u>(IIE)</u>	<u>The portion of Imbalance Energy resulting from Dispatch Instructions and HASP Intertie Schedules. real time change in</u>

	<p>Generation output or Demand (from dispatchable Generating Units, System Units, System Resources or Loads) which is instructed by the ISO to ensure that reliability of the ISO Control Area is maintained in accordance with Applicable Reliability Criteria.</p> <p>Sources of Imbalance Energy include Spinning and Non-Spinning Reserves, Replacement Reserve, and Energy from other dispatchable Generating Units, System Units, System Resources or Loads that are able to respond to the ISO's request for more or less Energy.</p>
Inter-Scheduling Coordinator Ancillary Service Trades	Ancillary Service transactions between Scheduling Coordinators.
Inter-Scheduling Coordinator Energy Trades	Energy transactions between Scheduling Coordinators.
<u>Inter-SC Trade</u>	<u>A trade between Scheduling Coordinators of Energy or Ancillary Services in accordance with the CAISO Tariff.</u>
Inter-Zonal Congestion	Congestion across an Inter-Zonal Interface.
Inter-Zonal Interface	<p>The (i) group of transmission paths between two adjacent Zones of the ISO Controlled Grid, for which a physical, non-simultaneous transmission capacity rating (the rating of the interface) has been established or will be established prior to the use of the interface for Congestion Management; (ii) the group of transmission paths between an ISO Zone and an adjacent Scheduling Point, for which a physical, non-simultaneous transmission capacity rating (the rating of the interface) has been established or will be established prior to the use of the interface for Congestion Management; or (iii) the group of transmission paths between two adjacent Scheduling Points, where the group of paths has an established transfer capability and established transmission rights.</p>
<u>Integrated Forward Market (IFM)</u>	<u>The pricing run conducted by the CAISO using SCUC in the Day-Ahead Market, after the MPM-RRD process, which includes unit commitment, Ancillary Service procurement, Congestion Management and Energy procurement based on Supply and</u>

Interconnection

Demand Bids.

Transmission facilities, other than additions or replacements to existing facilities that: i) connect one system to another system where the facilities emerge from one and only one substation of the two systems and are functionally separate from the [CAISO](#) Controlled Grid facilities such that the facilities are, or can be, operated and planned as a single facility; or ii) are identified as radial transmission lines pursuant to contract; or iii) produce Generation at a single point on the [CAISO](#) Controlled Grid; provided that such interconnection does not include facilities that, if not owned by the Participating TO, would result in a reduction in the [CAISO's](#) Operational Control of the Participating TO's portion of the [CAISO](#) Controlled Grid.

Interconnection Agreement

A contract between a party requesting interconnection and the Participating TO that owns the transmission facility with which the requesting party wishes to interconnect.

Interconnection Customer

Any entity, including a Participating TO or any of its Affiliates or subsidiaries, that proposes to interconnect its Generating Facility with the [CAISO](#) Controlled Grid.

Interconnection Customer's

Interconnection Facilities

All facilities and equipment, as identified in Part A of the Standard Large Generator Interconnection Agreement, that are located between the Generating Facility and the Point of Change of Ownership, including any modification, addition, or upgrades to such facilities and equipment necessary to physically and electrically interconnect the Generating Facility to the [CAISO](#) Controlled Grid. Interconnection Customer's Interconnection Facilities are sole use facilities.

Interconnection Facilities

The Participating TO's Interconnection Facilities and the Interconnection Customer's Interconnection Facilities. Collectively, Interconnection Facilities include all facilities and equipment between the Generating Facility and the Point of Interconnection, including any modification, additions or upgrades that are necessary to physically and electrically interconnect the Generating Facility to the [CAISO](#) Controlled Grid. Interconnection Facilities are sole use facilities and shall not include Distribution Upgrades, Stand Alone Network Upgrades or Network Upgrades.

Interconnection Facilities

A study conducted by the Participating TO(s), [CAISO](#), or a third

Study	party consultant for the Interconnection Customer to determine a list of facilities (including the Participating TO's Interconnection Facilities, Network Upgrades, and Distribution Upgrades), the cost of those facilities, and the time required to interconnect the Generating Facility with the CAISO Controlled Grid. The scope of the study is defined in Section 8 of the Standard Large Generator Interconnection Procedures.
Interconnection Facilities Study Agreement	The form of agreement accepted by FERC and posted on the CAISO Home Page Website for conducting the Interconnection Facilities Study.
Interconnection Feasibility Study	A preliminary evaluation conducted by the Participating TO(s), CAISO , or a third party consultant for the Interconnection Customer of the system impact and cost of interconnecting the Generating Facility to the CAISO Controlled Grid, the scope of which is described in Section 6 of the Standard Large Generator Interconnection Procedures.
Interconnection Feasibility Study Agreement	The form of agreement accepted by FERC and posted on the CAISO Home Page Website for conducting the Interconnection Feasibility Study.
Interconnection Handbook	A handbook, developed by the Participating TO and posted on the Participating TO's web site or otherwise made available by the Participating TO, describing technical and operational requirements for wholesale generators and loads connected to the Participating TO's portion of the CAISO Controlled Grid, as such handbook may be modified or superseded from time to time. Participating TO's standards contained in the Interconnection Handbook shall be deemed consistent with Good Utility Practice and Applicable Reliability Criteria. In the event of a conflict between the terms of the LGIP and the terms of the Participating TO's Interconnection Handbook, the terms in the LGIP shall apply.
Interconnection Request	An Interconnection Customer's request, in the form of Part 1 to the Standard Large Generator Interconnection Procedures, in accordance with Section 25.1 of the CAISO Tariff.
Interconnection Service	The service provided by the Participating TO and CAISO associated with interconnecting the Interconnection Customer's Generating Facility to the CAISO Controlled Grid and enabling it to receive electric energy and capacity from the Generating Facility at

Interconnection Study

the Point of Interconnection, pursuant to the terms of the Standard Large Generator Interconnection Agreement, the Participating TO's TO Tariff, and the [CAISO](#) Tariff.

Any of the following studies: the Interconnection Feasibility Study, the Interconnection System Impact Study, and the Interconnection Facilities Study described in the Standard Large Generator Interconnection Procedures.

Interconnection System Impact Study

An engineering study conducted by the Participating TO(s), [CAISO](#), or a third party consultant for the Interconnection Customer that evaluates the impact of the proposed interconnection on the safety and reliability of the [CAISO](#) Controlled Grid and, if applicable, an Affected System. The study shall identify and detail the system impacts that would result if the Generating Facility were interconnected without project modifications or system modifications, focusing on the Adverse System Impacts identified in the Interconnection Feasibility Study, or to study potential impacts, including but not limited to those identified in the Scoping Meeting as described in the Standard Large Generator Interconnection Procedures.

Interconnection System Impact Study Agreement

The form of agreement accepted by FERC and posted on the [CAISO Home Page Website](#) for conducting the Interconnection System Impact Study.

Interest

Interest shall be calculated in accordance with the methodology specified for interest on refunds in the regulations of FERC at 18 C.F.R. §35.19(a)(2)(iii) (1996). Interest on delinquent amounts shall be calculated from the due date of the bill to the date of payment, except as provided in [SABP 6.10.5 Section 11.2.1 11.29.13.1](#). When payments are made by mail, bills shall be considered as having been paid on the date of receipt.

"Interim Black Start Agreement"

An agreement entered into between the [CAISO](#) and a Participating Generator (other than a Reliability Must-Run Agreement) for the provision by the Participating Generator of Black Start capability and Black Start Energy on an interim basis until the introduction by the [CAISO](#) of its Black Start auction (or until terminated earlier by either party in accordance with its terms).

Intermediary Control Area

Any Control Area between a Host Control Area and the [CAISO](#) Control Area. An Intermediary Control Area may, or may not, be

Interruptible Imports

directly interconnected with the [CAISO](#) Control Area.
Energy sold by a Generator or resource located outside the [CAISO](#) Controlled Grid which by contract can be interrupted or reduced at the discretion of the seller.

Intertie Block Bid

A Bid from a System Resource in the DAM that offers the same quantity of Energy, RUC Availability, or Ancillary Services across multiple, contiguous hours of the Trading Day.

Intra-Zonal Congestion

~~Congestion within a Zone.~~

IOU

An investor owned electric utility.

ISP (Internet Service Provider)

~~An independent network service organization engaged by the ISO to establish, implement and operate WEnet.~~

LAP Price

The marginal price for a particular LAP, calculated as a weighted average of the nodal LMPs at the associated PNodes pursuant to Section 27.2.2.

Large Generating Facility

A Generating Facility **having a Generating Facility Capacity of more than 20 MW.**

Line Loss Correction Factor

The line loss correction factor as set forth in the Technical Specifications.

LMP Option

A method of calculating Default Energy Bids based on Locational Marginal Prices.

Load

An end-use device of an End-Use Customer that consumes power. Load should not be confused with Demand, which is the measure of power that a Load receives or requires.

Load Aggregation Point (LAP)

A set of Pricing Nodes as specified in Section 27.2 that are used for the submission of Bids and Settlement of Demand.

Load Distribution Factor (LDF)

A number that reflects the relative amount of Load at each PNode within a Load Aggregation Point. Load Distribution Factors determine how the aggregated Load at a given LAP is distributed to the associated power system Nodes. The sum of all Load Distribution Factors for a single Load Aggregation Point equals one.

Load-Serving Entity (LSE)

Any entity (or the duly designated agent of such an entity, including, e.g. a Scheduling Coordinator), including a load aggregator or power marketer; (i) serving End Users within the CAISO Control Area and (ii) that has been granted authority or has an obligation pursuant to California State or local law, regulation, or franchise to sell electric energy to End Users located within the CAISO Control Area or (iii) is

Load Shedding

a Federal Power Marketing Authority that serves retail Load.

The systematic reduction of system Demand by temporarily decreasing the ~~supply~~ Supply of Energy to Loads in response to transmission system or area capacity shortages, system instability, or voltage control considerations.

Load Zone

A standard set of nodes located within the CAISO Control Area that has been designated by the CAISO to simplify the submission of Demand Bids and Settlement.

Local Capacity Area

Transmission constrained area as defined in the study referenced in Section 40.3.1 of this CAISO Tariff.

Local Capacity Area Resources

Resource Adequacy Capacity from a Generating Unit listed in the technical study or Participating Load that is located within a Local Capacity Area capable of contributing toward the amount of capacity required in a particular Local Capacity Area.

Local Furnishing Bond

Tax-exempt bonds utilized to finance facilities for the local furnishing of electric energy, as described in section 142(f) of the Internal Revenue Code, 26 U.S.C. § 142(f).

Local Furnishing Participating TO

Any Tax-Exempt Participating TO that owns facilities financed by Local Furnishing Bonds.

Local Market Power Mitigation (LMPM)

The mitigation of market power that could be exercised by an entity when it is needed for local reliability services due to its location on the grid and a lack of competitive supply at that location pursuant Section 39.7.

Local Publicly Owned Electric Utilities

A municipality or municipal corporation operating as a public utility furnishing electric service, a municipal utility district furnishing electric service, a public utility district furnishing electric services, an irrigation district furnishing electric services, a state agency or subdivision furnishing electric services, a rural cooperative furnishing electric services, or a joint powers authority that includes one or more of these agencies and that owns Generation or transmission facilities, or furnishes electric services over its own or its members' electric Distribution System.

Local Regulatory Authority (LRA)

The state or local governmental authority responsible for the regulation or oversight of a utility.

Local Reliability Criteria

Reliability Criteria unique to the transmission systems of each of the Participating TOs established at the later of: (1) CAISO Operations Date, or (2) the date upon which a New Participating TO places its

Local Reliability Criteria

facilities under the control of the [CAISO](#).

Location

~~Reliability criteria established at the ISO Operations Date, unique to the transmission systems of each of the Participating TOs.~~

Location Code

A reference to either a PNode or an Aggregated Pricing Node.

The code assigned by the [CAISO](#) to Generation input points, and Demand Take-Out Points from the [CAISO](#) Controlled Grid, and transaction points from trades between Scheduling Coordinators. This will be the information used by the [CAISO](#) Controlled Grid, and transaction points for trades between Scheduling Coordinators. This will be the information used by the [CAISO](#) to determine the location of the input, output, and trade points of Energy Schedules. Each Generation input and Demand Take-Out Point will have a designated Location Code identification ~~for use in submitting Energy and Ancillary Service bids and Schedules.~~

Location-Specific Settlement Interval LMP

For a specific Location, the Energy-weighted average of the Dispatch Interval Locational Marginal Prices of the relevant Pricing Node for the Settlement Interval taking into account the resource's IIE excluding Energy for Regulation.

Locational Marginal Price (LMP)

The marginal cost (\$/MWh) of serving the next increment of Demand at that PNode consistent with existing transmission facility constraints and the performance characteristics of resources.

Long Start Unit

A Generating Unit that requires five and 18 hours to Start-Up and synchronize to the grid.

Loop Flow

Energy flow over a transmission system caused by parties external to that system.

Loss Scale Factor

~~The ratio of expected Transmission Losses to the total Transmission Losses which would be collected if Full Marginal Loss Rates were utilized.~~

Low Voltage Access Charge

The Access Charge applicable under Section 26.1 to recover the Low Voltage Transmission Revenue Requirement of a Participating TO.

Low Voltage Transmission Facility

A transmission facility owned by a Participating TO or to which a Participating TO has an Entitlement that is represented by a Converted Right, which is not a High Voltage Transmission Facility, that is under the [CAISO](#) Operational Control.

Low Voltage Transmission Revenue Requirement

The portion of a Participating TO's TRR associated with and allocable to the Participating TO's Low Voltage Transmission

Low Voltage Wheeling Access Charge

Facilities and Converted Rights associated with Low Voltage Transmission Facilities that are under the [CAISO](#) Operational Control.

Maintenance Outage

The Wheeling Access Charge associated with the recovery of a Participating TO's Low Voltage Transmission Revenue Requirement in accordance with Section 26.1.

A period of time during which an Operator (i) takes its transmission facilities out of service for the purposes of carrying out routine planned maintenance, or for the purposes of new construction work or for work on de-energized and live transmission facilities (e.g., relay maintenance or insulator washing) and associated equipment; or (ii) limits the capability of or takes its Generating Unit or System Unit out of service for the purposes of carrying out routine planned maintenance, or for the purposes of new construction work.

Marginal Cost of Congestion (MCC)

The component of LMP at a PNode that accounts for the cost of congestion, as measured between that Node and a Reference Bus.

Marginal Cost of Losses (MCL)

The component of LMP at a PNode that accounts for the marginal real power losses, as measured between that Node and a Reference Bus.

Marginal Losses

The transmission system marginal real power losses that arise from changes in demand at a Node which are served by changes in generation at a Reference Bus.

Market Behavior Rules

Those rules established by FERC under Docket No. EL01-118.

Market Clearing

The act of conducting any of the process used by the CAISO to determine LMPs, Day-Ahead Schedules, RUC or AS Awards, HASP Intertie Schedules and Dispatch Instructions based on Supply Bids and Demand Bids or CAISO Demand Forecast.

Market Clearing Price

The price in a market at which supply equals Demand. All Demand prepared to pay at least this price has been satisfied and all supply prepared to operate at or below this price has been purchased.

Market Close

The time after which the CAISO is no longer accepting Bids for its CAISO Markets which: 1) for the DAM is 10:00 A.M. Pacific Time of the Day-Ahead; and 2) for the HASP and the RTM is approximately seventy-five minutes prior to the Operating Hour.

Market Manipulation	Has the meaning set forth in Section 37.7.
Market Monitoring Unit	The component of the CAISO organization (currently the “Department of Market Monitoring”) that is assigned responsibility in the first instance for the functions of a Market Monitoring Unit, as that term is used in Docket No. EL01-118.
Market Participant	An entity, including a Scheduling Coordinator, who: 1) participates in the Energy marketplace CAISO Markets through the buying, selling, transmission, or distribution of Energy, Capacity , or Ancillary Services into, out of, or through the CAISO Controlled Grid ; or 2) participates in the allocation of or auctions for CRRs or hold CRRs.
<u>Market Power Mitigation - Reliability Requirement Determination (MPM-RRD)</u>	The two-optimization run process conducted in both the Day-Ahead Market and the HASP that determines the need for the CAISO to employ market power mitigation measures or Dispatch RMR Units.
Market Surveillance Committee (MSC)	The committee established under Appendix P.2.
Market Usage Charge	The component of the Grid Management Charge that provides for the recovery of the CAISO ’s costs, including, but not limited to the costs for processing Supplemental Energy and Ancillary Service b Bids , maintaining the Open Access Same-Time Information System, monitoring market performance, ensuring generator compliance with market protocols rules as defined in the CAISO Tariff and the Business Practice Manuals , and determining Market Clearing Prices LMPs . The formula for determining the Market Usage Charge is set forth in Appendix F, Schedule 1, Part A of this Tariff.
Master File	A file containing information regarding Generating Units, Loads and other resources, or its successor .
Material Modification	Those modifications that have a material impact on the cost or timing of any Interconnection Request or any other valid interconnection request with a later queue priority date.
<u>Maximum Daily Start-Ups</u>	The maximum number of times a Generating Unit can be started up within one day, due to environmental or physical operating constraints.

**Maximum Demand
Response Capacity**

Difference between the Base Load and the RTM Self-Schedule or DAM Self-Schedule.

**Maximum Operating Limit
(MOL_{max})**

The lower of the maximum allowable output when the resource is operating or the upper bound of the regulation range if the resource is providing regulation service.

MDAS

The ISO's revenue meter data acquisition and processing system.

Medium Start Unit

A Generating Unit that requires between two and five hours to Start-Up and synchronize to the grid.

Meter Data

Energy usage data collected by a metering device or as may be otherwise derived by the use of Approved Load Profiles.

**Meter Data Exchange
Format**

The format~~s~~ for submitting Meter Data to the CAISO which will be published by the CAISO on the CAISO Home Page Website or available on request, ~~to the Meter and Data Acquisition Manager, ISO Client Service Department.~~

**Meter Data Request
Format**

The format for requesting ~~Settlement Quality~~ Meter Data from the CAISO which will be published by the CAISO on the CAISO Home Page Website or available on request, ~~to the Meter and Data Acquisition Manager, ISO Client Service Department.~~

Meter Points

Locations on the CAISO Controlled Grid at which the CAISO requires the collection of Meter Data by a metering device.

**Metered Control Area
Load**

For purposes of calculating and billing the Grid Management Charge, Metered Control Area Load is:

(a) all metered Demand for Energy of Scheduling Coordinators for the supply of Loads in the CAISO's Control Area, plus (b) all Energy for exports by Scheduling Coordinators from the CAISO Control Area; less (c) Energy associated with the Load of a retail customer of a Scheduling Coordinator, Utility Distribution Company, Small Utility Distribution Company or Metered SubsystemS that is served by a Generating Unit that: (i) is located on the same site as the customer's Load or provides service to the customer's Load through arrangements as authorized by Section 218 of the California Public Utilities Code; (ii) is a qualifying small power production facility or qualifying cogeneration facility, as those terms are defined in FERC's regulations implementing Section 201 of the Public Utility Regulatory Policies Act of 1978; and (iii) the customer secures

	Standby Service from a Participating TO under terms approved by a Local Regulatory Authority or FERC, as applicable, or the customer's Load can be curtailed concurrently with an outage of the Generating Unit.
<u>Measured Demand</u>	<u>The metered CAISO Demand plus Real-Time Interchange export schedules.</u>
Metered Quantities	For each Direct Access End-User, the actual metered amount of MWh and MW; for each Participating Generator the actual metered amounts of MWh, MW, MVar and MVarh.
<u>MSS (Metered Subsystem (MSS))</u>	A geographically contiguous system located within a single <u>Zone-zone</u> which has been operating as an electric utility for a number of years prior to the <u>CAISO</u> Operations Date as a municipal utility, water district, irrigation district, State agency or Federal power administration subsumed within the <u>CAISO</u> Control Area and encompassed by <u>CAISO</u> certified revenue quality meters at each interface point with the <u>CAISO</u> Controlled Grid and <u>CAISO</u> certified revenue quality meters on all Generating Units or, if aggregated, each individual resource and Participating Load internal to the system, which is operated in accordance with a MSS Agreement described in Section 4.9.1.
Metering Facilities	Revenue quality meters, instrument transformers, secondary circuitry, secondary devices, meter data servers, related communication facilities and other related local equipment.
<u>Minimum Curtailable Demand Bid</u>	<u>The dollar per MWh representing the minimum payment per hour of curtailment at the highest MW level stated in a Participating Load's Energy Bid Curve.</u>
<u>Minimum Down Time (MDT)</u>	<u>The minimum amount of time that a Generating Unit must stay off-line after being shut down, due to physical operating constraints.</u>
<u>Minimum Load</u>	<u>The minimum sustained Operating Level of a resource at which it can operate at a continuous sustained level.</u>
<u>Minimum Load Bid</u>	<u>The Bid component that indicates the Minimum Load Cost for the Generating Unit or Participating Load, specified by a non-negative number in dollars per hour, which applies for the entire Trading Day for which it is submitted.</u>
Minimum Load Costs	The costs a Generating Unit <u>or a Participating Load</u> incurs operating at minimum load.

<u>Minimum Load Energy</u>	<u>The product of the relevant Minimum Load and the duration of the Settlement Interval.</u>
<u>Minimum Load Energy Revenue</u>	<u>The product of Integrated Forward Market Locational Marginal Price or Real-Time Locational Marginal Price and Minimum Load MW quantity committed by the CAISO.</u>
<u>Minimum Operating Limit (MOL_{min})</u>	<u>The greater of the minimum load or the lower bound of the regulation range if the resource offers regulation service.</u>
<u>Minimum Run Time</u>	<u>The minimum amount of time that a Generating Unit must stay on-line after being started-up prior to being shut down, due to physical operating constraints.</u>
<u>Mitigation Frequency</u>	<u>The percent of the Generating Unit's run hours where the unit had one or more Bid segments mitigated under the CAISO Local Market Power Mitigation.</u>
<u>Mitigation Measures</u>	<u>The CAISO market power mitigation measures under the CAISO Tariff.</u>
<u>Modified Reserve Sharing LSE</u>	<u>A Load Serving Entity whose Scheduling Coordinator has informed the CAISO in accordance with Section 40.1 of its election to be a Modified Reserve Sharing LSE.</u>
<u>Monthly CRR</u>	<u>A Congestion Revenue Right whose term is one calendar month in length and distributed in the monthly CRR Allocation and monthly CRR Auction.</u>
<u>Monthly Available CRR Capacity</u>	<u>The upper limit of network capacity that will be used in the monthly CRR Allocation and monthly CRR Auctions calculated by using OTC adjusted for outages, derates, and Transmission Ownership Rights for the relevant month.</u>
<u>Monthly CRR Eligible Quantity</u>	<u>The MW quantity of CRRs an LSE is eligible to nominate for the relevant month in a monthly CRR Allocation. .</u>
<u>Monthly CRR Load Metric</u>	<u>The MW level of Load on an Load Serving Entity's load duration curve that is exceeded only 0.5% of the time in the relevant month based on Load forecast data.</u>
Monthly Peak Load	The maximum hourly Demand on a Participating TO's transmission system for a calendar month, multiplied by the Operating Reserve Multiplier.
MSS Operator	An entity that owns an MSS and has executed a MSS Agreement.
<u>Multi-Point CRR</u>	<u>A CRR Obligation specified according to one or more CRR</u>

Municipal Tax Exempt Debt

Sources and one or more CRR Sinks and a flow from the CRR Source(s) to the CRR Sink(s), provided that at least the CRR Sink or the CRR Source identifies more than one point.

An obligation the interest on which is excluded from gross income for federal tax purposes pursuant to Section 103(a) of the Internal Revenue Code of 1986 or the corresponding provisions of prior law without regard to the identity of the holder thereof. Municipal Tax Exempt Debt does not include Local Furnishing Bonds.

Must-Take/Must-Run Generation

The Bid component that identifies Generating Units that are Regulatory Must-Take Generation or Regulatory Must-Run Generation.

Must-Offer Generator Native Load

All entities defined in Section 40.1.1 of the ISO Tariff

Load required to be served by a utility within its Service Area pursuant to applicable law, franchise, or statute.

Negotiated Rate

The rate for a Default Energy Bid arrived at under the Negotiated Rate Option.

Negotiated Rate Option

A method of calculating Default Energy Bids based on a negotiation with the CAISO or the Independent Entity.

NERC

The North American Electric Reliability Council or its successor.

Net FTR Revenue

The sum of: 1) the revenue received by the New Participating TO from the sale, auction, or other transfer of the FTRs provided to it pursuant to Section 36.4.3 FTR, or any substantively identical successor provision of the ISO Tariff; and 2) for each hour: a) the Usage Charge revenue received by the New Participating To associated with its Section 36.4.3 FTRs; minus b) Usage Charges that are: i) incurred by the Scheduling Coordinator for the New Participating TO under ISO Tariff Section 27.1.2.1.4 ii) associated with the New Participating TO's Section 36.4.3 FTRs, and iii) incurred by the New Participating TO for its energy transactions but not incurred as a result of the use of the transmission by a third party and minus c) the charges paid by the New Participating TO pursuant to Section 27.1.2.1.7, to the extent such charges are incurred by the Scheduling Coordinator of the New Participating TO on Congested Inter-Zonal Interfaces that are associated with the

~~Section 36.4.3 FTRs provided to the New Participating TO. The component of New FTR Revenue represented by item 2) immediately above shall not be less than zero for any hour.~~

Net Hourly Energy Charge

Total Charges to all Demand minus total Payments to all Supply both based on the product of MWh amounts specified in all Day-Ahead Schedules and the relevant LMPs at the applicable PNodes or Aggregated Pricing Node.

Net IFM Bid Cost Uplift

The amount of IFM-related Bid Costs resulting from the sequential netting in Section 11.8.6.2 and allocated to Scheduling Coordinators in accordance with Section 11.8.6.4.

Net Negative Deviation CAISO Demand

The difference between metered CAISO Demand and the total CAISO Demand scheduled in the Day-Ahead Schedule, if positive.

Net Negative Uninstructed Deviation

The real-time change in Generation or Demand associated with underscheduled ~~Load-Demand~~ (i.e., ~~Load-Demand~~ that appears unscheduled in ~~real-Real-timeTime~~) and overscheduled Generation (i.e., Generation that is scheduled in ~~forward markets~~the DAM and does not appear in ~~real-Real-timeTime~~), ~~which~~. ~~Deviations~~ are netted for each Settlement Interval, apply to a Scheduling Coordinator's entire portfolio, and include ~~LoadDemand~~, Generation, imports and exports.

Net Procurement

The awarded amount (MWs) of a given Ancillary Service in the Day-Ahead, HASP, and Real-Time Markets, minus, (ii) the amount of that Ancillary Service associated with payments rescinded pursuant to any of the provisions of Section 8.10.2 of the CAISO Tariff.

Net Qualifying Capacity

Qualifying Capacity reduced, as applicable, based on: (1) testing and verification; (2) application of performance criteria; and (3) deliverability restrictions. The Net Qualifying Capacity determination shall be made by the CAISO pursuant to the provisions of this CAISO Tariff and the applicable Business Practice Manual.

Net RTM Bid Cost Uplift

The amount of RTM-related Bid Costs resulting from the sequential netting in Section 11.8.6.2 and allocated to Scheduling Coordinators in accordance with Section 11.8.6.6.

Net RUC Bid Cost Uplift

The amount of RUC-related Bid Costs resulting from the

Network Upgrades

sequential netting in Section 11.8.6.2 and allocated to Scheduling Coordinators in accordance with Section 11.8.6.5

The additions, modifications, and upgrades to the CAISO Controlled Grid required at or beyond the Point of Interconnection to accommodate the interconnection of the Large Generating Facility to the CAISO Controlled Grid. Network Upgrades shall consist of Delivery Network Upgrades and Reliability Network Upgrades.

New High Voltage Facility

A High Voltage Transmission Facility of a Participating TO that is placed in service after the beginning of the transition period described in Section 4 of Schedule 3 of Appendix F, or a capital addition made and placed in service after the beginning of the transition period described in Section 4.2 of Schedule 3 of Appendix F to an Existing High Voltage Facility.

New Participating TO

A Participating TO that is not an Original Participating TO.

New Responsibility Utility

A Responsible Utility that executes a TCA after April 1, 1998.

Node

A point in the Full Network Model representing a physical location within the CAISO Control Area, which includes the Load and Generation busses in the CAISO Control Area and at the Interface busses between the CAISO Control Area and adjacent Control Areas.

Nomogram

A set of operating or scheduling rules which are used to ensure that simultaneous operating limits are respected, in order to meet NERC and WECC operating criteria.

Non-CPUC Load Serving Entity

Any entity serving retail Demand in the CAISO Control Area not within the jurisdiction of the CPUC, including (i) a local publicly owned electric utility under section 9604 of the PUC and (ii) any Federal entities, including but not limited to Federal Power Marketing Authorities, that serve retail Load.

Non-Dispatchable Use Limited Resource

A Use Limited Resource that cannot be increased or curtailed at the direction of the CAISO in the Real-time Dispatch of the CAISO Control Area to Supply or consume Energy, such as certain Qualifying Facilities.

Non-Dynamic Resource-Specific System Resource

A Non-Dynamic System Resource that is physically connected to an actual generation resource outside the CAISO Control Area.

Non-Dynamic System

A System Resource that is not capable of submitting a Dynamic

Resource

Schedule, which may be a Non-Dynamic Resource-Specific System Resource.

Non-Participating Generator

A Generator that is not a Participating Generator.

Non-Participating TO

A TO that is not a party to the Transmission Control Agreement or for the purposes of Sections 16.1 ~~and 16.2~~ of the CAISO Tariff the holder of transmission service rights under an Existing Contract that is not a Participating TO.

Non-Spinning Reserve

The portion of off-line generating capacity that is capable of being synchronized and Ramping to a specified load in ten minutes (or load that is capable of being interrupted in ten minutes) and that is capable of running (or being interrupted) for at least two hours.

Non-Spinning Reserve Cost

The revenues paid to the suppliers of the total awarded Non-Spinning Reserve capacity in the Day-Ahead Market, HASP, and Real-Time Market, minus, (ii) the payments rescinded due to either the failure to conform to CAISO Dispatch Instructions or the unavailability of the Non-Spinning Reserves under Section 8.10.8 of the Tariff.

Non-Spinning Reserve Obligation

The obligation of a Scheduling Coordinator to pay its share of costs incurred by the CAISO in procuring Non-Spinning Reserve.

NRC

The Nuclear Regulatory Commission or its successor.

NRC (Standards)

The reliability standards published by the NRC from time to time.

Off

A unit is Off when it is offline or in the process of starting up or shutting down.

On

A unit is On when it is online, synchronized with the grid, and available for Dispatch.

Operating Hour

The hour during the day when the Real-Time Market runs and Energy is supplied to Load.

Operating Procedures

Procedures governing the operation of the CAISO Controlled Grid as the CAISO may from time to time develop, and/or procedures that Participating TOs currently employ which the CAISO adopts for use.

Operating Reserve

The combination of Spinning and Non-Spinning Reserve

	required to meet WECC and NERC requirements for reliable operation of the CAISO Control Area.
<u>Operating Reserve Obligation</u>	<u>The obligation of a Scheduling Coordinator to pay its share of costs incurred by the CAISO in procuring Operating Reserves.</u>
<u>Operating Reserve Ramp Rate</u>	<u>A single number included in Ancillary Service Bids and Submissions to Self Provide Ancillary Services for Spinning Reserves and Non-Spinning Reserves that represent the ramp rate of a resource used in the procurement of Operating Reserve capacity.</u>
Operating Transfer Capability	The maximum capability of a transmission path to transmit real power, expressed in MW, at a given point in time.
Operational Control	The rights of the CAISO under the Transmission Control Agreement and the CAISO Tariff to direct Participating TOs how to operate their transmission lines and facilities and other electric plant affecting the reliability of those lines and facilities for the purpose of affording comparable non-discriminatory transmission access and meeting Applicable Reliability Criteria.
<u>Operational Ramp Rates</u>	<u>A staircase function of up to 4 segments (in addition to ramp rate segments needed for modeling Forbidden Operating Regions). Operational Ramp Rates are submitted with Energy Bid data.</u>
Operator	The operator of facilities that comprise the CAISO Controlled Grid or a Participating Generator.
OPF (Optimal Power Flow)	A computer optimization program which uses a set of control variables (which may include active power and/or reactive power controls) to determine a steady-state operating condition for the transmission grid for which a set of system operating Constraints (which may include active power and/or reactive power constraints) are satisfied and an objective function (e.g. total cost or shift of schedules) is minimized.
Optional Interconnection Study	A sensitivity analysis based on assumptions specified by the Interconnection Customer in the Optional Interconnection Study Agreement.
Optional Interconnection	The form of agreement accepted by FERC and posted on the

Study Agreement

[CAISO Home Page Website](#) for conducting the Optional Interconnection Study.

Order No. 888

The final rule issued by FERC entitled "Promoting Wholesale Competition through Open Access Non-discriminatory Transmission Services by Public Utilities; Recovery of Stranded Costs by Public Utilities and Transmitting Utilities," 61 Fed. Reg. 21,540 (May 10, 1996), FERC Stats. & Regs., Regulations Preambles [1991-1996] ¶ 31,036 (1996), Order on Rehearing, Order No. 888-A, 78 FERC ¶ 61,220 (1997), as it may be amended from time to time

Order No. 889

The final rule issued by FERC entitled "Open Access Same-Time Information System (formerly Real Time Information Networks) and Standards of Conduct," 61 Fed. Reg. 21,737 (May 10, 1996), FERC Stats. & Regs., Regulations Preambles [1991-1996] ¶ 31,035 (1996), Order on Rehearing, Order No. 889-A, 78 FERC ¶ 61,221 (1997), as it may be amended from time to time.

Original Participating TO

A Participating TO that was a Participating TO as of January 1, 2000.

Outage

Disconnection, separation or reduction in capacity, planned or forced, of one or more elements of an electric system.

Overgeneration

A condition that occurs when total Generation exceeds total Demand in the [CAISO](#) Control Area.

Participant

~~(a) — Scheduling Coordinators (SCs);~~

~~(b) — Utility Distribution Companies (UDCs);~~

~~(c) — Participating Transmission Owners (PTOs);~~

~~(d) — Participating Generators;~~

~~(e) — Control Area Operators, to the extent the agreement between the Control Area Operator and the ISO so provides; and~~

~~(f) — Metered Subsystem (MSS) Operators.~~

Partial Resource Adequacy Resource or Partial RA Resource

A Resource Adequacy Resource that has capacity that is designated by its Scheduling Coordinator as Resource Adequacy Capacity in its monthly or annual Resource Adequacy Plan and has a related availability obligation to the CAISO, but also has capacity that is not committed to meet a Resource Adequacy obligation in the CAISO Control Area.

Participating Buyer

A Direct Access End-User or a wholesale buyer of Energy or Ancillary Services through Scheduling Coordinators.

Participating Intermittent Resource

One or more Eligible Intermittent Resources that meets the requirements of the technical standards for Participating Intermittent Resources adopted by the [CAISO](#) and published on the [CAISO Home Page Website](#).

Participating Load

An entity providing Curtailable Demand, which has undertaken in writing to comply with all applicable provisions of the [CAISO](#) Tariff, as they may be amended from time to time.

Participating Seller or Participating Generator

A Generator or other seller of Energy or Ancillary Services through a Scheduling Coordinator over the [CAISO](#) Controlled Grid from a Generating Unit with a rated capacity of 1 MW or greater, or from a Generating Unit providing Ancillary Services and/or submitting ~~Supplemental~~ Energy ~~bids~~ Bids through an aggregation arrangement approved by the [CAISO](#), which has undertaken to be bound by the terms of the [CAISO](#) Tariff, in the case of a Generator through a Participating Generator Agreement.

Participating TO

A party to the ~~TCA~~ Transmission Control Agreement whose application under Section 2.2 of the Transmission Control Agreement ~~TCA~~ has been accepted and who has placed its transmission assets and Entitlements under the [CAISO's](#) Operational Control in accordance with the Transmission Control Agreement ~~TCA~~. A Participating TO may be an Original Participating TO or a New Participating TO.

Participating TO Service Territory

The area in which an IOU, a Local Public Owned Electric Utility, or federal power marketing administration that has turned over

	<p><u>its transmission facilities and/or Entitlements to CAISO</u></p> <p><u>Operational Control is obligated to provide electric service to</u></p> <p><u>Load. A PTO Service Territory may be comprised of the Service</u></p> <p><u>Areas of more than one Local Public Owned Electric Utility, if</u></p> <p><u>they are operating under an agreement with the CAISO for</u></p> <p><u>aggregation of their MSS and their MSS Operator is designated</u></p> <p><u>as the Participating TO.</u></p>
<p>Participating TO's</p> <p>Interconnection Facilities</p>	<p>All facilities and equipment owned, controlled, or operated by the Participating TO from the Point of Change of Ownership to the Point of Interconnection as identified in Part A to the Standard Large Generator Interconnection Agreement, including any modifications, additions or upgrades to such facilities and equipment. Participating TO's Interconnection Facilities are sole use facilities and shall not include Distribution Upgrades, Stand Alone Network Upgrades or Network Upgrades.</p>
<p>Path 15 Upgrade</p>	<p>The upgraded transmission facilities across-on the Path 15 Inter-Zonal Interface that have been turned over to <u>CAISO</u> Operational Control.</p>
<p><u>Payment</u></p>	<p><u>A sum of money paid by the CAISO.</u></p>
<p>Payment Date</p>	<p>The date by which invoiced amounts are to be paid under the terms of the <u>CAISO</u> Tariff.</p>
<p>PBR (Performance-Based Ratemaking (PBR))</p>	<p>Regulated rates based in whole or in part on the achievement of specified performance objectives.</p>
<p>Physical Scheduling Plant</p>	<p>A group of two or more related Generating Units, each of which is individually capable of producing Energy, but which either by physical necessity or operational design must be operated as if they were a single Generating Unit and any Generating Unit or Units containing related multiple generating components which meet one or more of the following criteria: i) multiple generating components are related by a common flow of fuel which cannot be interrupted without a substantial loss of efficiency of the combined output of all components; ii) the Energy production from one component necessarily causes Energy production from other components; iii) the operational arrangement of related multiple generating components determines the overall physical efficiency of the combined output of all components; iv) the level of coordination required to schedule individual generating</p>

	<p>components would cause the CAISO to incur scheduling costs far in excess of the benefits of having scheduled such individual components separately; or v) metered output is available only for the combined output of related multiple generating components and separate generating component metering is either impractical or economically inefficient.</p>
<u>Physical Trade</u>	An Inter-SC Trade of Energy at an individual PNode of Generating Units that is submitted to the CAISO for Settlement through the CAISO Market and is subject to physical validation.
<u>PMax</u>	The maximum normal capability of the Generating Unit. PMax should not be confused as an emergency rating of the Generating Unit.
<u>PNP Eligible Quantity</u>	The maximum MW quantity of CRRs an LSE is eligible to nominate in the Priority Nomination Process of the CRR Allocation.
Point of Change of Ownership	The point, as set forth in Part A to the Standard Large Generator Interconnection Agreement, where the Interconnection Customer's Interconnection Facilities connect to the Participating TO's Interconnection Facilities.
Point of Interconnection	The point, as set forth in Part A to the Standard Large Generator Interconnection Agreement, where the Interconnection Facilities connect to the CAISO Controlled Grid.
<u>Point(s) of Delivery or Withdrawal (POD or Point(s) of Withdrawal)</u>	Point(s) within the CAISO Control Area where Energy and Ancillary Services are made available to a receiving party under this Tariff.
<u>Point(s) of Receipt or Injection (POR or Point(s) or Injection)</u>	Point(s) within the CAISO Control Area where Energy and Ancillary Services are made available by a delivering party under this Tariff.
<u>Point-to-Point CRR</u>	A CRR Option or CRR Obligation with a single CRR Source to a single CRR Sink.
<u>Power</u>	The electrical work produced by a Generating Unit that is absorbed by the resistive components of Load or other network components, measured in units of watts or standard multiples thereof, e.g., 1,000 Watt = 1 kW; 1,000 kW = 1 MW, etc.
Power Flow Model	The computer software A network model used by the CAISO to model the voltages, power injections and power flows on the CAISO Controlled Grid and determine the expected

PMS (Power Management System (PMS))

~~Transmission Losses and Generation Meter Multipliers and adjacent Control Areas.~~

The CAISO computer control system used to monitor the real-time performance of the various elements of the CAISO Controlled Grid, control Generation, and perform operational power flow studies.

Power System Stabilizers (PSS)

An electronic control system applied on a Generating Unit that helps to damp out dynamic oscillations on a power system. The Power System Stabilizers senses Generator variables, such as voltage, current and shaft speed, processes this information and sends control signals to the Generator voltage regulator.

Preferred Day-Ahead Schedule

~~A Scheduling Coordinator's Preferred Schedule for the ISO Day-Ahead scheduling process.~~

Preferred Hour-Ahead Schedule

~~A Scheduling Coordinator's Preferred Schedule for the ISO Hour-Ahead scheduling process.~~

Preferred Schedule

~~The initial Schedule produced by a Scheduling Coordinator that represents its preferred mix of Generation to meet its Demand. For each Generator, the Schedule will include the quantity of output, details of any Adjustment Bids, and the location of the Generator. For each Load, the Schedule will include the quantity of consumption, details of any Adjustment Bids, and the location of the Load. The Schedule will also specify quantities and location of trades between the Scheduling Coordinator and all other Scheduling Coordinators. The Preferred Schedule will be balanced with respect to Generation, Transmission Losses, Load and trades between Scheduling Coordinators.~~

Preliminary Settlement Statement

The initial statement issued by the CAISO of the calculation of the Settlements and allocation of the charges in respect of all Settlement Periods covered by the period to which it relates.

Price Overlap

~~The price range of bids for Supplemental Energy or Energy associated with Ancillary Services bids for any Dispatch Interval that includes decremental and incremental Energy Bids where the price of the decremental Energy Bids exceeds the price of the incremental Energy Bids.~~

Price Taker

A quantity only Energy Bid with no associated price.

<u>Pricing Node (PNode)</u>	<u>A single network Node or subset of network Nodes where a physical injection or withdrawal is modeled and for which a Locational Market Pricing is calculated and used for financial settlements.</u>
Primary <u>CAISO</u> Control Center	The <u>CAISO</u> Control Center located in Folsom, California.
<u>Priority Nomination Process (PNP)</u>	<u>The step in a CRR Allocation in years beyond CRR Year One through which CRR Holders re-nominate the same Seasonal CRRs they held in the prior year and the CAISO allocates CRRs to the extent that the nominations were deemed simultaneously feasible, as governed by Section 36 of the CAISO Tariff.</u>
<u>Priority Type</u>	<u>The Bid component that indicates if applicable the scheduling priority for the Settlement Period for Reliability Must-Run Generation, if applicable.</u>
Project Sponsor	A Market Participant or group of Market Participants or a Participating TO that proposes the construction of a transmission addition or upgrade in accordance with Section 24 of the <u>CAISO</u> Tariff.
Proposal for Installation	A written proposal submitted by an a <u>CAISO</u> Metered Entity to the <u>CAISO</u> describing a proposal for the installation of additional Metering Facilities.
<u>Proxy Price</u>	The value determined for each gas-fired Generating Unit owned or controlled by a Must Offer Generator in accordance with Section 40.1.8.
PTO Service Territory	The area in which an IOU, a Local Public Owned Electric Utility, or federal power marketing administration that has turned over its transmission facilities and/or Entitlements to <u>CAISO</u> Operational Control is obligated to provided electric service to Load. A PTO Service Territory may be comprised of the Service Areas of more than one Local Public Owned Electric Utility, if they are operating under an agreement with the <u>CAISO</u> for aggregation of their MSS and their MSS Operator is designated as the Participating TO.
<u>Pumping Cost</u>	<u>The Bid component that indicates the price at which the Pumping Load is offering to cease to pump.</u>
<u>Pumping Load</u>	<u>A hydro pumping resource that is capable of responding to Dispatch Instructions by ceasing to pump.</u>

Pumped-Storage Hydro Units

Hydroelectric dam with capability to produce electricity by pumping water between reservoirs at different elevations

Pump Ramping Conversion Factor

A Master File entry submitted by Scheduling Coordinators that allows the Scheduling Coordinator to indicate the ratio of Energy expended to pump water into storage that can be used to produce Energy. A zero percent Pump Ramping Conversion Factor implies that no amount of Energy production capability is produced as a result of pumping water and the CAISO shall not use such unavailable Energy in its CAISO Markets optimization. A hundred percent Pump Ramping Conversion Factor indicates all the Energy expended to pump water is available for Generation and the CAISO shall use only that available portions in its CAISO Markets optimization. The Pump Ramping Conversion Factor submitted in the Master File need not be based on physical characteristics of the resource and is adjustable by the Scheduling Coordinator.

Pump Shut-Down Costs

A Bid Component submitted by Scheduling Coordinators for resources that are registered as a Pumped Storage Hydro Unit that indicates the \$/MWh that the Scheduling Coordinator is willing to be paid to not pump.

Qualifying Capacity

The maximum capacity of a Resource Adequacy Resource. The criteria for calculating Qualifying Capacity from Resource Adequacy Resources may be established by the CPUC or other applicable Local Regulatory Authority and provided to the CAISO.

Qualifying Facility

A qualifying co-generation or small power production facility recognized by FERC.

Queue Position

The order of a valid Interconnection Request, relative to all other pending valid Interconnection Requests, that is established based upon the date and time of receipt of the valid Interconnection Request by the CAISO.

RA-PIRP

A Participating Intermittent Resource whose output is being used to satisfy a Resource Adequacy Requirement.

Ramp Rate

The Bid component that indicates the operational ramp rate, Regulating ramp rate, and Operating Reserve ramp rate for a Generating Unit, and the Load drop rate and Load pick-up rate for Participating Loads, for which the Scheduling Coordinator is

Ramping

submitting Energy Bids or Ancillary Services Bids.

Changing the loading level of a Generating Unit in a constant manner over a fixed time (e.g., ramping up or ramping down). Such changes may be directed by a computer or manual control.

Ramping Energy Deviation

The portion of Imbalance Energy delivered or consumed as the difference between the Standard Ramp trajectory and the Dispatch Operating Point that is contained between the Day-Ahead Schedules across consecutive hours and spreads across the hourly boundary.

Reactive Power Control

Generation or other equipment needed to maintain acceptable voltage levels on the CAISO Controlled Grid and to meet reactive capacity requirements at points of interconnection on the CAISO Controlled Grid.

Real-Time

The period of time during the Operating Hour. Any time period during the twenty-four Operating Hours of any given day. The period of time during the Operating Hour.

Real-Time Contingency Dispatch (RTCD)

The mode of the Real-Time Dispatch that will be invoked when a transmission or generation contingency occurs and will include all Contingency Only Operating Reserves in the optimization.

Real-Time Dispatch (RTD) Software

The ~~security constrained optimal dispatch and ex post pricing~~ SCED and SCUC software used by the CAISO to determine which Ancillary Service and Supplementary Imbalance Energy resources to Dispatch and to calculate ~~the Ex Post Prices~~ LMPs.

Real-Time Economic Dispatch (RTED)

The mode of the Real-Time Dispatch that will optimally dispatch resources based on their Energy bids, excluding Contingency Only Operating Reserves except when needed to avoid an imminent system emergency.

Real-Time Export

Energy at Scheduling Points deemed deliverable outside of the CAISO Control Area.

Real-Time Market (RTM)

~~The competitive generation market controlled and coordinated by the ISO for arranging real-time Imbalance Energy. The spot market conducted by the CAISO using SCUC and SCED in the Real-Time, after the HASP is completed, which includes the~~ RTUC, STUC and the RTD for the purpose of unit commitment, Ancillary Service procurement, Congestion Management and

Real-Time Manual Dispatch (RTMD)

Energy procurement based on Supply Bids and CAISO Forecast of CAISO Demand.

The mode of the Real-Time Dispatch that will be invoked as a fall-back mechanism only when the RTED or RTCD fails to provide a feasible dispatch.

Real-Time Unit Commitment (RTUC)

An application of the RTM that runs every 15 minutes and commits Fast and Medium-Start Units using the SCUC to adjust Day-Ahead Schedules and HASP Intertie Schedules.

Redispatch

The readjustment of scheduled Generation or Demand side management measures, to relieve Congestion or manage Energy imbalances.

Reference Bus

The Location(s) on the CAISO Controlled Grid relative to which mathematical quantities relating to powerflow solution will be calculated.

Registered Data

Those items of technical data and operating characteristics relating to Generation, transmission or distribution facilities which are identified to the owners of such facilities as being information, supplied in accordance with the CAISO Tariff, to assist the CAISO to maintain reliability of the CAISO Controlled Grid and to carry out its functions.

Regulation

The service provided either by Generating Units certified by the CAISO as equipped and capable of responding to the CAISO's direct digital control signals, or by System Resources that have been certified by the CAISO as capable of delivering such service to the CAISO Control Area, in an upward and downward direction to match, on a real-time basis, Demand and resources, consistent with established NERC and WECC operating criteria. Regulation is used to control the power output of electric generators within a prescribed area in response to a change in system frequency, tieline loading, or the relation of these to each other so as to maintain the target system frequency and/or the established interchange with other areas within the predetermined limits. Regulation includes both the increase of output by a Generating Unit or System Resource ("Regulation Up") and the decrease in output by a Generating Unit or System Resource ("Regulation Down"). Regulation Up and Regulation Down are distinct capacity products, with separately stated

	requirements and Market-Clearing-Prices ASMPs in each Settlement Period.
<u>Regulation Down or Regulation Down Reserve</u>	<u>Regulation reserve provided by a resource that can decrease its actual operating level in response to a direct electronic signal from the CAISO to maintain standard frequency in accordance with established reliability criteria.</u>
<u>Regulation Down Reserve Cost</u>	<u>The revenues paid to the suppliers of the total awarded Regulation Down Reserve capacity in the Day-Ahead, HASP, and Real-Time Markets for the Settlement Period, minus the payments rescinded in the Settlement Period due to the unavailability of the Regulation Down under any of the provisions of Section 8.10.8 of the Tariff.</u>
Regulation Energy Payment Adjustment	The additional value of regulating Energy.
<u>Regulation Up or Regulation Up Reserve</u>	<u>Regulation provided by a resource that can increase its actual operating level in response to a direct electronic signal from the CAISO to maintain standard frequency in accordance with established reliability criteria.</u>
<u>Regulation Up Reserve Obligation</u>	<u>The obligation of a Scheduling Coordinator to pay its share of costs incurred by the CAISO in procuring Regulation Up Reserves.</u>
Regulatory Must-Run Generation	Hydro Spill Generation and Generation which is required to run by applicable Federal or California laws, regulations, or other governing jurisdictional authority. Such requirements include but are not limited to hydrological flow requirements, environmental requirements, such as minimum fish releases, fish pulse releases and water quality requirements, irrigation and water supply requirements of solid waste Generation, or other Generation contracts specified or designated by the jurisdictional regulatory authority as it existed on December 20, 1995, or as revised by Federal or California law or Local Regulatory Authority.
Regulatory Must-Take Generation	Those Generation resources identified by CPUC, or a Local Regulatory Authority, the operation of which is not subject to competition. These resources will be scheduled by the relevant Scheduling Coordinator directly with the CAISO on a must-take basis. Regulatory Must-Take Generation includes qualifying

	<p>facility Generating Units as defined by federal law, nuclear units and pre-existing power purchase contracts with minimum energy take requirements.</p>
Reliability Coordinator	<p>The entityperson responsible for Security Monitoring in real <u>Real-time Time</u> for the California Area.</p>
Reliability Criteria	<p>Pre-established criteria that are to be followed in order to maintain desired performance of the <u>CAISO</u> Controlled Grid under contingency or steady state conditions.</p>
Reliability Network Upgrades	<p>The transmission facilities at or beyond the Point of Interconnection necessary to interconnect a Large Generating Facility safely and reliably to the <u>CAISO</u> Controlled Grid, which would not have been necessary but for the interconnection of the Large Generating Facility, including Network Upgrades necessary to remedy short circuit or stability problems resulting from the interconnection of the Large Generating Facility to the <u>CAISO</u> Controlled Grid. Reliability Network Upgrades also include, consistent with WECC practice, the facilities necessary to mitigate any adverse impact the Large Generating Facility's interconnection may have on a path's WECC rating.</p>
<u>Reliability Requirement Determination (RRD)</u>	<p><u>The reliability process conducted by the CAISO during the DAM, prior to the IFM, and in the HASP, prior to the RTUC, to determine whether unit(s) subject to a contract with the CAISO to provide local reliability services, which includes Reliability Must-Run and any successor instrument determined are necessary to meet local reliability needs for the CAISO Control Area.</u></p>
Reliability Services Costs	<p>The costs associated with services provided by the <u>CAISO</u>: 1) that are deemed by the <u>CAISO</u> as necessary to maintain reliable electric service in the <u>CAISO</u> Control Area; and 2) whose costs are billed by the <u>CAISO</u> to the Participating TO pursuant to the <u>CAISO</u> Tariff. Reliability Services Costs include costs charged by the <u>CAISO</u> to a Participating TO associated with service provided under an <u>Reliability Must Run</u> Contract (Section 30.6.1.2), local out-of-market dispatch calls<u>Exceptional Dispatches (Section 11.2.4.2.1)</u> and Minimum Load Costs associated with units committed under the must-offer obligation for local reliability requirements (Section 40.1.6.1.4)</p>

RAS (Remedial Action Schemes) (RAS)

Protective systems that typically utilize a combination of conventional protective relays, computer-based processors, and telecommunications to accomplish rapid, automated response to unplanned power system events. Also, details of RAS logic and any special requirements for arming of RAS schemes, or changes in RAS programming, that may be required.

REMnet

~~The Wide Area Network through which the ISO acquires Meter Data.~~

Replacement Reserve

~~Generating capacity that is dedicated to the ISO, capable of starting up if not already operating, being synchronized to the ISO Controlled Grid, and Ramping to a specified operating level within a sixty (60) minute period, the output of which can be continuously maintained for a two hour period. Also, Curtailable Demand that is capable of being curtailed within sixty minutes and that can remain curtailed for two hours.~~

Resource-Specific Settlement Interval Ex Post Price

~~The Resource Specific Settlement Interval Ex Post Price will equal the Energy-weighted average of the applicable Dispatch Interval Ex Post Prices for each Settlement Interval taking into account each resource's Instructed Imbalance Energy, except Regulation Energy. The Resource Specific Settlement Interval Ex Post Price shall apply to those resources that are capable of responding to ISO Dispatch Instructions.~~

ReRate Energy

Decremental IIE subsequent to a derate of a Generating Unit's PMax.

Reserve Margin

The amount of Resource Adequacy Capacity that a Scheduling Coordinator is required to maintain in accordance with Sections 40.

Reserve Sharing LSE

A Load Serving Entity whose Scheduling Coordinator has informed the CAISO in accordance with Section 40.1 of its election to be a Reserve Sharing LSE.

Residual Imbalance Energy

The Instructed Imbalance Energy at the start or end of a Trading Hour and outside the schedule-change band for that Trading Hour that is due to: 1) a Dispatch Instruction that is in the opposite direction of a previously issued Dispatch Instruction in the previous Trading Hour, or 2) a Dispatch Instruction in the next Trading Hour. Residual Imbalance Energy may cross hourly boundaries, in which case the portion that lies between hourly transactions is classified and settled as Ramping Energy.

**Residual Unit
Commitment (RUC)**

The process conducted by the CAISO in the Day-Ahead Market after the IFM has been executed to ensure sufficient Generating Units, System Units, System Resources and **Participating Loads** are committed to meet the CAISO Forecast of CAISO Demand.

**Resource Adequacy
Capacity or RA Capacity**

The generation capacity of a Resource Adequacy Resource listed on a Resource Adequacy Plan and a Supply Plan.

Resource Adequacy Plan

A submission by a Scheduling Coordinator for a Load Serving Entity in the form required by the Business Practice Manual to satisfy the requirements of Section 40 of this CAISO Tariff.

Resource Location

The Resource ID for a Generating Unit, Participating Load or System Resource.

**Resource-Specific
Settlement Interval LMP**

The LMP at a PNode used for settlement of IIE, calculated as the IIE-weighted average, excluding the IIE weight for Residual Imbalance Energy, Energy from HASP Intertie Schedules, and Energy from Black Start and Voltage Support, of the individual LMPs for Dispatch Intervals within the given Settlement Interval for a resource, and if there is no Instructed Imbalance Energy, then it is calculated as the simple average of the individual LMPs for the Dispatch Intervals within the given Settlement Interval for a resource.

**Resource-Specific Tier 1
UIE Settlement Interval
Price**

The price used to settle Tier 1 UIE as calculated pursuant to section 11.5.2.1.

**Resource Adequacy
Resource**

A resource that is required to offer Resource Adequacy Capacity. The criteria for determining the types of resources that are eligible to provide Qualifying Capacity may be established by the CPUC or other applicable Local Regulatory Authority and provided to the CAISO.

Resource-Specific ASMP

The Ancillary Services Marginal Price as determined pursuant to Section 11.10.

Responsible Utility

The utility which is a party to the Transmission Control Agreement in whose Participating TO Service Territory the Reliability Must-Run Unit is located or whose Participating TO Service Territory is contiguous to the Participating TO Service Territory in which a Reliability Must-Run Unit owned by an entity outside of the CAISO Controlled Grid is located.

**Revenue Meter Data
Acquisition and
Processing System**

A collective name for the set of CAISO systems used to collect, validate, edit and report on Revenue Quality Meter Data.

(RMDAPS)

Revenue Quality Meter Data

Meter data meeting the standards and requirements established and maintained by the CAISO.

Revenue Requirement

The revenue level required by a utility to cover expenses made on an investment, while earning a specified rate of return on the investment.

Revised Adjusted RMR Invoice

The monthly invoice issued by the Reliability Must Run Owner to the CAISO pursuant to the Reliability Must RunRMR Contract reflecting any appropriate revisions to the Adjusted Reliability Must RunRMR Invoice based on the CAISO's validation and actual data for the billing month.

Revised Estimated RMR Invoice

The monthly invoice issued by the Reliability Must RunRMR Owner to the CAISO pursuant to the Reliability Must RunRMR Contract reflecting appropriate revisions to the Estimated Reliability Must RunRMR Invoice based on the CAISO's validation of the Estimated Reliability Must RunRMR Invoice.

Revised Schedule

A Schedule submitted by a Scheduling Coordinator to the ISO following receipt of the ISO's Suggested Adjusted Schedule.

Reliability Must-Run Charge (RMR Charge)

The sum payable by a Responsible Utility to the CAISO pursuant to Section 30.6.1.141 of the CAISO Tariff for the costs, net of all applicable credits, incurred under the Reliability Must Run Contract.

Reliability Must-Run Unit (RMR Unit)

A Participating Generator which is the subject of a Reliability Must-Run Contract.

Reliability Must-Run Contract (RMR Contract)

A Must-Run Service Agreement between the owner of an Reliability Must Run Unit and the CAISO.

Reliability Must-Run Generation (RMR Generation)

Generation that the CAISO determines is required to be on line to meet Applicable Reliability Criteria requirements. This includes i) Generation constrained on line to meet NERC and WECC reliability criteria for interconnected systems operation; ii) Generation needed to meet Load demand in constrained areas; and iii) Generation needed to be operated to provide voltage or security support of the CAISO or a local area.

RMR Owner

The provider of services under a Reliability Must-Run Contract.

RMR Proxy Bid

For RMR Condition 1 Units, an amount calculated based on the hourly variable costs as defined in Schedule C of the applicable RMR Contract in the form of a monotonically increasing function consistent with the bidding rules in Section 30, which is used in the MPM-RRD process described in Section 31.2. For RMR Condition 2 Units, the

	<u>Energy Bid defined in Schedule M of the RMR Contract, which is used in the MPM-RRD process described in Section 31.2.</u>
<u>RMR Dispatch</u>	<u>The megawatt amount that is mandated by the CAISO to be scheduled in a given market for a resource under the RMR Contract.</u>
<u>RMR Dispatch Notice</u>	<u>Notice received by and RMR Unit from the CAISO containing an RMR Dispatch.</u>
<u>RTM Commitment Period</u>	<u>A Commitment Period determined by the RTM; provided that if the RTM changes the Commitment Status of units scheduled in the IFM or committed in the RUC, an RTM Commitment Period may or may not partially overlap with IFM and RUC Commitment Periods.</u>
<u>RTM Self-Commitment Period</u>	<u>A time period determined by the CAISO for the purposes of deriving any Bid Cost Recovery amounts, related to the RTM.</u>
<u>RTM Bid Cost Shortfall</u>	<u>For each Settlement Interval, for any BCR Eligible Resource, the negative amount resulting from the difference between its RTM Bid Cost and its RTM Market Revenue.</u>
<u>RTM Bid Cost Surplus</u>	<u>For each Settlement Interval, for any BCR Eligible Resource, the positive amount, if any, resulting from the difference between its RTM Bid Cost and its RTM Market Revenue.</u>
<u>RTM Bid Cost Uplift</u>	<u>The system-wide net of the RTM Bid Cost Shortfalls and RTM Bid Cost Surpluses for a Settlement Interval of all BCR Eligible Resources with Unrecovered Bid Cost Uplift Payments. This amount will be netted according to Section 11.8.6.2 to calculate the Net RTM Bid Cost Uplift before allocation to Scheduling Coordinators.</u>
<u>RTM AS Bid Cost</u>	<u>The Bid Cost of a BCR Eligible Resource for Ancillary Service capacity in the RTM.</u>
<u>RTM Bid Cost</u>	<u>The total of a resource's RTM Start Up Cost (or the RTM Load Reduction Initiation Cost for Participating Loads), RTM Minimum Load Cost (or the RTM Minimum Curtailable Demand for Participating Loads), RTM Pump and Participating Load Shut-Down Cost, RTM Energy Bid Cost, and RTM AS Bid Cost.</u>
<u>RTM Market Revenue</u>	<u>The amount received by BCR Eligible Resource from Energy scheduled and Ancillary Services awarded in the RTM for the purposes of Bid Cost Recovery.</u>
<u>RUC Availability Bid</u>	<u>The quantity (MW) and price (\$/MW per hour) at or above which a Generating Unit, System Resource, System Unit or Participating Load has agreed to sell capacity for a specified interval of time to the</u>

	<u>CAISO to meet the Residual Unit Commitment requirement.</u>
<u>RUC Availability Payment</u>	<u>The payment made for the RUC Availability Quantity as specified in Section 11.</u>
<u>RUC Availability Quantity</u>	<u>A RUC Award (MW) excluding any Capacity that is actually unavailable due to a unit derate or outage.</u>
<u>RUC Award</u>	<u>The portion of the RUC Capacity from resources eligible to receive RUC Availability Payments, exclusive of Minimum Load, Capacity designated as RMR, and Capacity under Resource Adequacy requirements as specified in Section 40.</u>
<u>RUC Bid Cost</u>	<u>An amount equal to the product of the RUC Award, reduced by any applicable No Pay Capacity, with the relevant RUC Bid Price.</u>
<u>RUC Bid Cost Shortfall</u>	<u>For each Settlement Interval, for any BCR Eligible Resource, the negative amount, if any, resulting from the difference between its RUC Bid Cost and its RUC Market Revenue.</u>
<u>RUC Bid Cost Surplus</u>	<u>For each Settlement Interval, for any BCR Eligible Resource, the positive amount, if any, resulting from the difference between its RUC Bid Cost and its RUC Market Revenue.</u>
<u>RUC Bid Cost Uplift</u>	<u>The system-wide net of the RUC Bid Cost Shortfalls and RUC Bid Cost Surpluses for a Settlement Interval of all BCR Eligible Resources with Unrecovered Bid Cost Uplift Payments. This amount will be netted according to Section 11.8.6.2 to calculate the Net RUC Bid Cost Uplift before allocation to Scheduling Coordinators.</u>
<u>RUC Capacity</u>	<u>The positive difference between the RUC Schedule and the greater of the Day-Ahead Schedule and the Minimum Load level of a resource.</u>
<u>RUC Commitment Period</u>	<u>A Commitment Period determined by the RUC; provided that because the RUC may not decommit units scheduled in the IFM, if the unit is scheduled by the IFM within that Time Period an IFM Commitment Period is always within a RUC Commitment Period; and a RUC Commitment Period may start earlier and/or may end later than an IFM Commitment Period if RUC issues an earlier Start-Up and/or later Shut-Down than the IFM, respectively.</u>
<u>RUC Compensation</u>	<u>The Payment to Scheduling Coordinators with RUC Awards, calculated as the sum of RUC Availability Payment and RUC Unrecovered Bid Costs</u>
<u>RUC Market Revenues</u>	<u>The sum of a resource's RUC Availability Payment for a Trading Hour divided by the number of Settlement Intervals in a Trading Hour or</u>

RUC Price

the purposes of calculating Bid Cost Recovery for RUC.

The price calculated by the RUC optimization for each Trading Hour of the next Trading Day which reflects the price \$/MW per hour for the next increment of RUC Capacity at a specified PNode for each Trading Hour.

RUC Schedule

The total MW per hour amount of Capacity committed by RUC including the MW per hour amounts committed in the Day-Ahead Schedule.

Rules of Conduct

The rules set forth in 37.2 through 37.7.

Sanction

A consequence specified in Section 37 for the violation of a Rule of Conduct, which may include a) a warning letter notifying the Market Participant of the violation and future consequences specified under Section 37 if the behavior is not corrected, or b) financial penalties. Neither referral to FERC nor rescission of payment for service not provided shall constitute a Sanction.

Scheduling Coordinator Agreement

An agreement between a Scheduling Coordinator and the [CAISO](#) whereby the Scheduling Coordinator agrees to comply with all [CAISO](#) rules, protocols and instructions, as those rules, protocols and instructions may be amended from time to time.

Scheduling Coordinator Applicant

An applicant for certification by the [CAISO](#) as a Scheduling Coordinator.

Scheduling Coordinator Application Form

The form specified by the [CAISO](#) from time to time in which a Scheduling Coordinator Applicant must apply to the [CAISO](#) for certification as a Scheduling Coordinator.

Scheduling Coordinator Customer

A customer of the Scheduling Coordinator Applicant or a Scheduling Coordinator for whom the Scheduling Coordinator provides services relevant to the [CAISO](#) Controlled Grid.

Scheduling Coordinator ID Code

The Bid component that indicates the individual identification code provided by the CAISO to the Schedule Coordinator.

Scheduling Coordinator Meter Service Agreement

An agreement entered into between the CAISO and a Scheduling Coordinator consistent with the provisions of Section 10 of the CAISO Tariff.

Scheduling Coordinator Metered Entity

A Generator, Eligible Customer or End-User that is not an [CA-ISO](#) Metered Entity.

Scheduling Coordinator (SC)

An entity certified by the ISO for the purposes of undertaking the functions specified in Section 4.5.3 of the ISO Tariff.

Scaled Marginal Loss Rate

A factor calculated by the ISO for a given Generator location for each hour by multiplying the Full Marginal Loss Rate for such Generator location by the Loss Scale Factor for the relevant hour.

Schedule

A statement of (i) Demand, including quantity, duration and Take Out Points and (ii) Generation, including quantity, duration, location of Generating Unit, and Transmission Losses; and (iii) Ancillary Services which will be self-provided, (if any) submitted by a Scheduling Coordinator to the ISO. "Schedule" includes Preferred Schedules, Suggested Adjusted Schedules, Final Schedules and Revised Schedules. A Day-Ahead Schedule a HASP Advisory Schedule or HASP Intertie Schedule.

Scheduled Demand

The MW of Energy of Demand cleared through the IFM and set in the Day-Ahead Schedule for the next Trading Day.

Scheduled Generation

The MW of Energy of Generation cleared through the IFM and set in the Day-Ahead Schedule for the next Trading Day.

Scheduled Maintenance

Maintenance on Participating Generators, TOs, Small Utility Distribution Company or and-Utility Distribution Company facilities scheduled more than twenty-four hours in advance.

Scheduling and Logging system for the CAISO of California (SLIC)

A logging application that allows Market Participants to notify the CAISO when a unit's-Generating Unit's properties change due to physical problems. Users can modify the maximum and minimum output of a unit, as well as the ramping capability of the unit.

Scheduling Coordinator (SC)

An entity certified by the CAISO for the purposes of undertaking the functions specified in Section 4.5.3 of the CAISO Tariff.

Scheduling Point

A location at which the CAISO Controlled Grid is connected, by a group of transmission paths for which a physical, non-simultaneous transmission capacity rating has been established for Congestion Management, to transmission facilities that are outside the CAISO's Operational Control. A Scheduling Point typically is physically located at an "outside" boundary of the CAISO Controlled Grid (e.g., at the point of interconnection between a Control Area utility and the CAISO Controlled Grid). For most practical purposes, a Scheduling Point can be considered to be a Zone-zone that is outside the CAISO's Controlled Grid.

Scoping Meeting

The meeting among representatives of the Interconnection Customer, the applicable Participating TO, and the CAISO conducted for the purpose of discussing alternative interconnection options, to exchange

information including any transmission data and earlier study evaluations that would be reasonably expected to impact such interconnection options, to analyze such information, and to determine the potential feasible Points of Interconnection.

Seasonal Available CRR Capacity

The upper limit of network capacity that will be used in the annual CRR Allocation and annual CRR Auction calculated by effectively reducing OTC for Transmission Ownership Rights as if all lines will be in service for the relevant year.

Seasonal CRR

A Congestion Revenue Right distributed in the annual CRR Allocation and CRR Auction whose term is one season in length as defined by Section 36.

Seasonal CRR Eligible Quantity

The MW quantity of CRRs an LSE is eligible to nominate for the relevant season in the annual CRR Allocation.

Seasonal CRR Load Metric

The lowest value among the Monthly CRR Load Metrics for a Load Serving Entity calculated across the relevant season.

Secondary Registration System

The computer interface through which CRR Holders and Candidate CRR Holders register any bilateral CRR transactions with the CAISO.

Security

The form of security provided by a Scheduling Coordinator pursuant to Section 12.1 of the CAISO Tariff (i.e., letter of credit, guarantee or cash deposit) to secure its trading obligations.

Security Constrained Economic Dispatch (SCED)

An algorithm performed by a computer program that simultaneously clears Energy Supply Bids, including Self-Schedules, against CAISO Demand Forecast to determine Dispatch Instructions.

Security Constrained Unit Commitment (SCUC)

An algorithm performed by a computer program over a multi-hour Time Horizon that determines the commitment status and Day-Ahead Schedules, AS Awards, RUC Awards, HASP Intertie Schedules and Dispatch Instructions for selected resources and minimizes production costs (Start-Up, Minimum Load and Energy Bid costs in IFM, HASP and RTM; Start-Up, Minimum Load and RUC Availability Bid Costs) while respecting the physical operating characteristics of selected resources and transmission constraints.

Security Monitoring

The real-time assessment of the CAISO Controlled Grid that is conducted to ensure that the system is operating in a secure state, and in compliance with all Applicable Reliability Criteria.

Self-Commitment Period

The portion of a Commitment Period of a unit with an Energy Self-Schedule or a Submission to Self-Provide an Ancillary Services, except for Non-Spinning Reserve Self-Provision by a Fast-Start Unit

Self-Provided Ancillary Services

(FSU). The Self-Commitment Period may include Time Periods without Energy Self-Schedules or AS Self-Provision if it is determined by inference that the unit must be on due to Minimum Up Time (MUT), Minimum Down Time (MDT), or Maximum Daily Start-Up (MDS) constraints.

A Submission to Self-Provide Ancillary Services in the Day Ahead, HASP, or Real Time market that has been accepted by the CAISO. Acceptance will occur prior to Ancillary Service Bid evaluation in the relevant market and indicates that the CAISO has determined the submission is feasible with regard to resource operating characteristics and regional constraints and is qualified to provide the Ancillary Service in the market for which it was submitted. Self Provided Ancillary Services consist of Self Provided Regulation Up reserves, Self Provided Regulation Down reserves, Self Provided Spinning Reserves, and Self Provided Non-Spinning Reserves.

Self-Schedule

The Bid component that indicates the quantities in MWhs with no specification of a price that the Scheduling Coordinator is submitting to the CAISO, which indicates that the Scheduling Coordinator is a Price Taker, Regulatory Must-Run Generation or Regulatory Must-Take Generation, which includes ETC and TOR Self-Schedules and Self-Schedules for Converted Rights.

Service Area

An area in which an IOU or a Local Publicly Owned Electric Utility is obligated to provide electric service to End-Use Customers.

Set Point

Scheduled operating level for each Generating Unit or other resource scheduled to run in the Hour-AheadHASP Schedule and Awards.

Settlement

Process of financial settlement for products and services purchased and sold undertaken by the CAISO under Section 11 of the CAISO Tariff. Each Settlement will involve a price and a quantity.

Settlement Account

An Account held at a bank situated in California, designated by a Scheduling Coordinator or a Participating TO pursuant to the Scheduling Coordinator's Scheduling Coordinator Agreement or in the case of a Participating TO, Section 2.2.1 of the Transmission Control Agreement, to which the CAISO shall pay amounts owing to the Scheduling Coordinator or the Participating TO under the CAISO Tariff.

Settlement Interval	The time period, which is equal to or a multiple of the Dispatch Interval, over which the CAISO settles <u>Cost Compensation amounts or deviations in Generation and Demand from Final Hour Ahead Schedules in CAISO Markets.</u>
Settlement Period	For all CAISO transactions the period beginning at the start of the hour, and ending at the end of the hour. There are twenty-four Settlement Periods in each Trading Day, with the exception of a Trading Day in which there is a change to or from daylight savings time.
Settlement Quality Meter Data	Meter Data gathered, edited, validated, and stored in a settlement-ready format, for Settlement and auditing purposes.
<u>Settlement Quality Meter Data Systems</u>	<u>A collective name for the set of CAISO systems used to accept, analyze and report on Settlement Quality Meter Data.</u>
Settlement Statement	Either or both of a Preliminary Settlement Statement or Final Settlement Statement.
Settlement Statement Re-run	The re-calculation of a Settlement Statement in accordance with the provisions of the CAISO Tariff.
Settlements, Metering, and Client Relations Charge	The component of the Grid Management Charge that provides for the recovery of the CAISO's costs, including, but not limited to the costs of maintaining customer account data, providing account information to customers, responding to customer inquiries, calculating market charges, resolving customer disputes, and the costs associated with the CAISO's Settlement, billing, and metering activities. Because this is a fixed charge per Scheduling Coordinator ID, costs associated with activities listed above also are allocated to other charges under the Grid Management Charge according to formula set forth in Appendix F, Schedule 1, Part A of this Tariff.
Severance Fee	The charge or periodic charge assessed to customers to recover the reasonable uneconomic portion of costs associated with Generation-related assets and obligations, nuclear decommissioning, and capitalized Energy efficiency investment programs approved prior to August 15, 1996 and as defined in the California Assembly Bill No. 1890 approved by the Governor on September 23, 1996.
<u>Shadow Price</u>	<u>The marginal value of relieving a particular constraint.</u>
<u>Short-Term Unit Commitment (STUC)</u>	<u>The unit commitment procedure run at approximately T-52.5 minutes for a time horizon of approximately five (5) hours. The STUC determines whether some Medium Start Units need to be started early</u>

	<p>enough to meet the demand within the STUC time horizon using the CAISO Demand Forecast. The STUC produces a unit commitment solution for every 15-minute interval within the STUC time horizon and issues binding start-up instructions only as necessary.</p> <p>Generating Units that that have a cycle time less than five hours (Start-Up Time plus Minimum Run Time is less than five hours) have a Start Up Time less than two hours, and that can be fully optimized with respect to this cycle time.</p>
Short Start Unit	
Shut-Down	A Commitment Status transition form On to Off.
Shut Down Cost	<p>The Bid Component submitted by the Scheduling Coordinator indicating a single price at which the resource is willing to Shut-Down.</p> <p>The process that the CAISO will conduct to ensure that allocated and auction CRRs do not exceed relevant transmission system constraints as described in Section 36.4.2 and further described in the Business Practices Manuals.</p>
Simultaneous Feasibility Study (SFT)	
Site Control	<p>Documentation reasonably demonstrating: (1) ownership of, a leasehold interest in, or a right to develop a site for the purpose of constructing the Generating Facility; (2) an option to purchase or acquire a leasehold site for such purpose; or (3) an exclusivity or other business relationship between Interconnection Customer and the entity having the right to sell, lease or grant Interconnection Customer the right to possess or occupy a site for such purpose.</p>
Small Generating Facility	A Generating Facility that has a Generating Facility Capacity of no more than 20 MW.
Spinning Reserve	The portion of unloaded synchronized generating capacity that is immediately responsive to system frequency and that is capable of being loaded in ten minutes, and that is capable of running for at least two hours.
Spinning Reserve Cost	<p>The revenues paid to the suppliers of the total awarded Spinning Reserve capacity in the Day-Ahead Market, HASP, and Real-Time Market for the Settlement Period, minus the payments rescinded in the Settlement Period due to the unavailability of the Spinning under any of the provisions of Section 8.10.2 of the Tariff.</p> <p>The obligation of a Scheduling Coordinator to pay its share of costs incurred by the CAISO in procuring Spinning Reserve.</p>
Spinning Reserve Obligations	
Stand Alone Network Upgrades	Network Upgrades that an Interconnection Customer may construct without affecting day-to-day operations of the CAISO Controlled Grid

	or Affected Systems during their construction. The Participating TO, the CAISO , and the Interconnection Customer must agree as to what constitutes Stand Alone Network Upgrades and identify them in Appendix A to the Standard Large Generator Interconnection Agreement.
Standard Large Generator Interconnection Agreement (LGIA)	The form of interconnection agreement applicable to an Interconnection Request pertaining to a Large Generating Facility.
Standard Large Generator Interconnection Procedures (LGIP)	The CAISO Protocol that sets forth the interconnection procedures applicable to an Interconnection Request pertaining to a Large Generating Facility that is included in the CAISO Tariff.
Standard Ramp (-ing)	A ramp calculated from two consecutive Final Hour Ahead Day-Ahead Schedules that results in a straight trajectory between 10 minutes before the start of an operating Trading hour Hour to 10 minutes after the start of the operating Trading hour Hour .
<u>Standard Ramping Energy</u>	Imbalance Energy delivered or consumed as the difference between the Day-Ahead Schedules across consecutive hours and the Standard Ramp.
Standby Rate	A rate assessed a Standby Service Customer by the Participating TO that also provides retail electric service, as approved by the Local Regulatory Authority, or FERC, as applicable, for Standby Service which compensates the Participating TO, among other things, for costs of High Voltage Transmission Facilities.
Standby Service	Service provided by a Participating TO that also provides retail electric service, which allows a Standby Service Customer, among other things, access to High Voltage Transmission Facilities for the delivery of backup power on an instantaneous basis to ensure that Energy may be reliably delivered to the Standby Service Customer in the event of an outage of a Generating Unit serving the customer's Load.
Standby Service Customer	A retail End-Use Customer of a Participating TO that also provides retail electric service that receives Standby Service and pays a Standby Rate.
Standby Transmission Revenue	The transmission revenues, with respect to cost of both High Voltage Transmission Facilities and Low Voltage Transmission Facilities, collected directly from Standby Service Customers through charges for Standby Service.

Start-Up

Start-Up Bid

A Commitment Status transition from Off to On.

The Bid component that indicates the Start-Up time and Start-Up Cost curves for the Generating Unit, which applies for the entire Trading Day for which it is submitted. Start-Up Cost curves are strictly monotonically increasing non-negative staircase curves, up to three segments, which represent a function of Start-Up Cost versus down time.

Start-Up Time

The time period required for a resource to go from Off to its Minimum Load.

Start-Up Cost Charge

The charge determined in accordance with Section 40.1.10.

Start-Up Cost Demand

The level of Demand specified in Section 40.1.10.3.

Start-Up Cost Invoice

The invoice submitted to the ISO in accordance with Section 40.1.10.6.

Start-Up Cost Trust Account

The trust account established in accordance with Section 40.1.10.2.

Start-Up Costs

The cost incurred by a particular Generating Unit during Start-Up from the time of first fire, the time of receipt of an CAISO Dispatch instruction, or the time the unit was last synchronized to the grid, whichever is later, until the time the generating unit reaches its minimum operating level. ~~Start-Up Costs are determined as the sum of (1) the cost of auxiliary power used during the start-up and (2) the number that is determined multiplying the actual amount of fuel consumed by the proxy gas price as determined by Equation C1-8 (Gas) of the Schedules to the Reliability Must-Run Contract for the relevant Service Area (San Diego Gas & Electric Company, Southern California Gas Company, or Pacific Gas and Electric Company), or, if the Must-Offer Generator is not served from one of those three Service Areas, from the nearest of those three Service Areas.~~

State Estimator

A computer software program that provides the CAISO with a near Real-Time assessment of system conditions within the CAISO Control Area, including portions of the CAISO Control Area where Real-Time information is unavailable.

Submission to Self Provide an Ancillary Service

A submission to the CAISO containing all of the bidding requirements for an Ancillary Service with the exception of price information.

Sub-Region

A region identified by the CAISO for procurement of Ancillary Services within the System Region.

Suggested Adjusted Schedule

The output of the ISO's initial Congestion Management for each Scheduling Coordinator for the Day Ahead Market ("Suggested Adjusted Day Ahead Schedule") or for the Hour Ahead Market ("Suggested Adjusted Hour Ahead Schedule"). These Schedules will reflect ISO suggested adjustments to each Scheduling Coordinator's Preferred Schedule to resolve Inter Zonal Congestion on the ISO Controlled Grid, based on the Adjustment Bids submitted. These Schedules will be balanced with respect to Generation, Transmission Losses, Load, and trades between Scheduling Coordinators to resolve Inter Zonal Congestion.

SCADA (Supervisory Control and Data Acquisition (SCADA))

A computer system that allows an electric system operator to remotely monitor and control elements of an electric system.

Supplemental Energy

Energy from Generating Units bound by a Participating Generator Agreement, Loads bound by a Participating Load Agreement, System Units, and System Resources which have uncommitted capacity following finalization of the Hour Ahead Schedules and for which Scheduling Coordinators have submitted bids to the ISO at least half an hour before the commencement of the Settlement Period.

Supply

The Energy delivered from a Generating Unit, System Unit, Physical Scheduling Plant, System Resource. The rate at which Energy is delivered to the ISO Controlled Grid measured in units of watts or standard multiples thereof, e.g., 1,000W=1 KW; 1,000 KW = 1MW, etc.

System Emergency

Conditions beyond the normal control of the CAISO that affect the ability of the CAISO Control Area to function normally including any abnormal system condition which requires immediate manual or automatic action to prevent loss of Load, equipment damage, or tripping of system elements which might result in cascading Outages or to restore system operation to meet the minimum operating reliability criteria.

System Marginal Energy Cost (SMEC)

The component of the LMP reflects the marginal cost of providing Energy from a designated reference location.

System Planning Studies

Reports summarizing studies performed to assess the adequacy of the CAISO Controlled Grid as regards conformance to Reliability Criteria.

System Region

The CAISO Control Area.

System Reliability	A measure of an electric system's ability to deliver uninterrupted service at the proper voltage and frequency.
System Resource	A group of resources, single resource, or a portion of a resource located outside of the CAISO Control Area, or an allocated portion of a Control Area's portfolio of generating resources that are either a static interchange schedule or directly responsive to that Control Area's Automatic Generation Control (AGC) capable of providing Energy and/or Ancillary Services to the CAISO Control led Grid Area , provided that if the System Resource is providing Regulation to the CAISO it is directly responsive to AGC.
System Unit	One or more individual Generating Units and/or Loads within a Metered Subsystem controlled so as to simulate a single resource with specified performance characteristics, as mutually determined and agreed to by the MSS Operator and the CAISO . The Generating Units and/or Loads making up a System Unit must be in close physical proximity to each other such that the operation of the resources comprising the System Unit does not result in significant differences in flows on the CAISO Controlled Grid.
<u>TAC Transition Period</u>	The 10-year transition period for the CAISO's Access Charge methodology commencing January 1, 2001 through December 31, 2010.
Take-Out Point	The metering points at which a Scheduling Coordinator Metered Entity or CAISO Metered Entity takes delivery of Energy.
Tax Exempt Debt	Municipal Tax Exempt Debt or Local Furnishing Bonds.
Tax Exempt Participating TO	A Participating TO that is the beneficiary of outstanding Tax Exempt Debt issued to finance any electric facilities, or rights associated therewith, which are part of an integrated system including transmission facilities the Operational Control of which is transferred to the CAISO pursuant to the Transmission Control Agreement .
Technical Specifications	Parts B to G (inclusive) of Appendix O.
Tie Point Meter	A revenue meter, which is capable of providing Settlement Quality Meter Data, at a Scheduling Point or at a boundary between Utility Distribution Companies within the CAISO Controlled Grid.
<u>Tier 1 UIE</u>	The quantity of uninstructed energy deviation from the resource's Instructed Imbalance Energy.
<u>Tier 2 UIE</u>	The quantity of uninstructed energy deviation from the resource's Day-Ahead Schedule.

Time Horizon

The time period to which a given CAISO Market optimization process applies. For the IFM and RUC the Time Horizon consists of each Trading Hour of the next Trading Day. For the HASP, the Time Horizon is 1.75 Trading Hours in fifteen-minute increments. For STUC the Time Horizon is 4.25 Trading Hours in fifteen-minute increments. For RTUC the Time Horizon is a variable number of fifteen-minute intervals that runs every fifteen minutes and covers 4 to 7 intervals. For the RTD, the Time Horizon is seven five-minute intervals span over thirty-five minutes.

Time Period

The period of time for Scheduling or Dispatch activities, which is a Trading Hour in the DAM and a Dispatch Interval in the RTM.

TOC

The single point of contact at the transmission operations center of Pacific Gas & Electric Company.

Tolerance Band

The tolerance band expressed in terms of Energy (MWh) for the performance requirement for Generating Units, System Units and imports from dynamically scheduled System Resources for each Settlement Interval will equal the greater of the absolute value of: 1) 5 MW divided by number of Settlement Intervals per Settlement Period or 2) three percent (3%) of the relevant Generating Unit's, dynamically scheduled System Resource's or System Unit's maximum output (Pmax), as registered in the Master File, divided by number of Settlement Intervals per Settlement Period. The maximum output (Pmax) of a dynamically scheduled System Resource will be established by agreement between the CAISO and the Scheduling Coordinator representing the System Resource on an individual case basis, taking into account the number and size of the generating resources, or allocated portions of generating resources, that comprise the System Resource.

The tolerance band expressed in terms of Energy (MWh) for the performance requirement for Participating Loads for each Settlement Interval will equal the greater of the absolute value of: 1) 5 MW divided by number of Settlement Intervals per Settlement Period or 2) three percent (3%) of the applicable Final ~~Hour Ahead~~HASP Schedule or CAISO Dispatch amount divided by number of Settlement Intervals per Settlement Period.

The Tolerance Band shall not be applied to non-dynamically scheduled System Resources.

Total CAISO Markets Uplift

The sum of the Net IFM Bid Cost Uplift, the Net RUC Bid Cost Uplift, and the Net RTM Bid Cost Uplift, for all Settlement Intervals in the IFM, RUC and RTM.

Total Positive CAISO Markets Uplift

The sum of the positive IFM Bid Cost Uplift, positive RUC Bid Cost Uplift and positive RTM Bid Cost Uplift, for all Settlement Intervals in the IFM, RUC and RTM

Total Transfer Capability (TTC)

The amount of power that can be transferred over an interconnected transmission network in a reliable manner while meeting all of a specific set of defined pre-contingency and post-contingency system conditions.

Trading Day

The twenty-four hour period beginning at the start of the hour ending 0100 and ending at the end of the hour ending 2400 daily, except where there is a change to and from daylight savings time.

Trading Hour

Any hour during which trades are conducted in a CAISO Market.

Trading Hub

An aggregation of network Pricing Nodes maintained and calculated by the CAISO for settlement and trading purposes posted by the CAISO on its CAISO Website.

Trading Interval

A Settlement Period as defined in the Master Definitions Supplement of the CAISO Tariff.

Transfer

An import and export from the CAISO Controlled Grid within the CAISO Control Area.

Transformer Loss Correction Factor

The transformer loss correction factor as set forth in the Technical Specifications to be applied to revenue quality meters of CAISO Metered Entities which are installed on the low voltage side of step-up transformers.

Transition Charge

The component of the Access Charge collected by the CAISO with the High Voltage Access Charge in accordance with Section 5.7 of Appendix F, Schedule 3.

Transition Period

The period of time established by the California Legislature and CPUC to allow IOUs and Local Publicly Owned Electric Utilities an opportunity to recover Transition Costs or Severance Fees.

Transmission Access Charge TAC Area (TAC)

A portion of the CAISO Controlled Grid with respect to which Participating TOs' High Voltage Transmission Revenue Requirements are recovered through a High Voltage Access Charge. TAC Areas are listed in Schedule 3 of Appendix F C.3.

TCA (Transmission Control Agreement (TCA))

The agreement between the CAISO and Participating TOs establishing the terms and conditions under which TOs will become

Transmission Losses

Transmission Losses Charge

Transmission Operations Center (TOC)

TO (Transmission Owner (TO))

Transmission Owner Tariff (TO Tariff)

Transmission Ownership Right (TOR)

TRBA (Transmission Revenue Balancing Account (TRBA))

Participating TOs and how the [CAISO](#) and each Participating TO will discharge their respective duties and responsibilities, as may be modified from time to time.

Energy that is lost as a natural part of the process of transmitting

Energy from Generation to Load delivered at the [CAISO/Utility](#)

[Distribution Company](#) boundary or Control Area boundary.

[The charge for Transmission Losses based on the Marginal Cost of Losses at the Pricing Node.](#)

[The single point of contact at the transmission operations center of Pacific Gas & Electric Company.](#)

An entity owning transmission facilities or having firm contractual rights to use transmission facilities.

A tariff setting out a Participating TO's rates and charges for transmission access to the [CAISO](#) Controlled Grid and whose other terms and conditions are the same as those contained in the document referred to as the Transmission Owners Tariff approved by FERC as it may be amended from time to time.

[A non-Participating TO ownership or joint ownership right to transmission facilities within the CAISO Control Area that has not executed the Transmission Control Agreement and the transmission facilities are not incorporated into the CAISO Controlled Grid.](#)

A mechanism to be established by each Participating TO which will ensure that all Transmission Revenue Credits and other credits specified in Sections 6 and 8 of Appendix F, Schedule 3, flow through to transmission customers.

Transmission Revenue Credit

For an Original Participating TO, the proceeds received from the ~~CAISO~~ for Wheeling service, ~~FTR auction~~CRR Auction revenue and Usage Congestion Charges, plus the shortfall or surplus resulting from any cost differences between Transmission Losses and Ancillary Service requirements associated with Existing Rights and the ~~CAISO~~'s rules and protocols. For a New Participating TO during the 10-year transition period described in Section 4 of Schedule 3 of Appendix F, the proceeds received from the ~~CAISO~~ for Wheeling service and Net ~~FTR-CRR~~ Revenue, plus the shortfall or surplus resulting from any cost differences between Transmission Losses and Ancillary Service requirements associated with Existing Rights and the ~~CAISO~~'s rules and protocols. After the 10-year transition period, the New Participating TO Transmission Revenue Credit shall be calculated the same as the Transmission Revenue Credit for the Original Participating TO.

~~RR~~ (Transmission Revenue Requirement (TRR))

The Transmission Revenue Requirement is the total annual authorized revenue requirements associated with transmission facilities and Entitlements turned over to the Operational Control of the ~~CAISO~~ by a Participating TO. The costs of any transmission facility turned over to the Operational Control of the ~~CAISO~~ shall be fully included in the Participating TO's Transmission Revenue Requirement. The Transmission Revenue Requirement~~TRR~~ includes the costs of transmission facilities and Entitlements and deducts Transmission Revenue Credits and credits for Standby Transmission Revenue and the transmission revenue expected to be actually received by the Participating TO for Existing Rights and Converted Rights.

Transmission Rights and Transmission Curtailment Instructions ("TRTC")

Operational directives developed between Existing Rights Holders and the Participating TO, submitted to the CAISO by the Participating TO, unless otherwise agreed to by the Participating TO and the Existing Rights Holder to facilitate the accommodation of Existing Rights in the CAISO Markets.

Trial Operation

The period during which Interconnection Customer is engaged in on-site test operations and commissioning of a Generating Unit prior to Commercial Operation.

Trustee

The trustee of the California Independent System Operator trust established by order of the California Public Utilities Commission on

UDP Aggregation

August 2, 1996 Decision No. 96-08-038 relating to the Ex Parte Interim Approval of a Loan Guarantee and Trust Mechanism to Fund the Development of an Independent System Operator (ISO) and a Power Exchange (PX) pursuant to Decision 95-12-063 as modified. Two or more units scheduled by the same Scheduling Coordinator with the same resource identification that are to be considered interchangeable for calculating the Uninstructed Deviation Penalty.

UIE Settlement Amount

The payment due a Scheduling Coordinator for positive Uninstructed Imbalance Energy or the charge assessed on a Scheduling Coordinator for negative Uninstructed Imbalance Energy, calculated pursuant to Section 11.5.2.

Unaccounted for Energy (UFE)

~~UFE is the~~The difference in Energy, for each utility Service Area and Settlement Period, between the net Energy delivered into the utility Service Area, adjusted for utility Service Area Transmission Losses ~~(calculated in accordance with Section 27.2.1.2)~~, and the total ~~metered~~ Metered Demand within the utility Service Area adjusted for distribution losses using Distribution System loss factors approved by the Local Regulatory Authority. This difference is attributable to meter measurement errors, power flow modeling errors, energy theft, statistical Load profile errors, and distribution loss deviations.

Unavailable Capacity

Awarded Ancillary Services capacity and Self-Provided Ancillary Services capacity that was not dispatched by the CAISO but where all or a portion of the capacity was not available for dispatch in Real-Time.

Uncontrollable Force

Any act of God, labor disturbance, act of the public enemy, war, insurrection, riot, fire, storm, flood, earthquake, explosion, any curtailment, order, regulation or restriction imposed by governmental, military or lawfully established civilian authorities or any other cause beyond the reasonable control of the CAISO or Market Participant which could not be avoided through the exercise of Good Utility Practice.

Undelivered Capacity

Awarded Ancillary Services capacity and Self-Provided Ancillary Services capacity that was dispatched by the CAISO but where a certain percentage or more of the expected Energy was not provided in Real-Time.

Undispatchable Capacity

Awarded Ancillary Services capacity, Self Provided Ancillary Services

	<p><u>capacity and capacity committed in RUC that is not available for use due to a derate or outage of the generating resource. Undispatchable Capacity includes Awards for Spinning Reserve and Non-Spinning Reserve capacity that are not available for use due to ramp rate constraints.</u></p>
Uninstructed Deviation	A deviation from the resources' Dispatch Operating Point.
Uninstructed Deviation Penalty (UDP)	The penalty as set forth in Section 11.2.4.1.2 11.23 of this CAISO Tariff.
Uninstructed Imbalance Energy (UIE)	The portion of Imbalance Energy that is not Instructed Imbalance Energy. The real-time change in Generation or Demand other than that instructed by the ISO or which the ISO Tariff provides will be paid at the price for Uninstructed Imbalance Energy.
Unit Commitment	The process of determining which Generating Units will be committed (started) to meet Demand and provide Ancillary Services in the near future (e.g., the next Trading Day).
Usage Charge	The amount of money, per 1 kW of scheduled flow, that the ISO charges a Scheduling Coordinator for use of a specific Congested Inter-Zonal Interface during a given hour.
<u>Use-Limited Resource</u>	<u>A resource that, due to design considerations, environmental restrictions on operations, cyclical requirements, such as the need to recharge or refill, or other non-economic reasons, is unable to operate continuously on a daily basis, but is able to operate for a minimum set of consecutive Trading Hours each Trading Day.</u>
UDC (Utility Distribution Company (UDC))	An entity that owns a Distribution System for the delivery of Energy to and from the CAISO Controlled Grid, and that provides regulated retail electric service to Eligible Customers, as well as regulated procurement service to those End-Use Customers who are not yet eligible for direct access, or who choose not to arrange services through another retailer.
Validation, Estimation and Editing (VEE)	<p><u>The procedures set forth in Section 10 of this Tariff that the CAISO Applies-applies to Revenue Quality Meter Data directly-acquired by the ISO in order to develop Settlement Quality Meter Data. Validation is the process of checking the data to ensure that it is contiguous, within pre-defined limits and has not been flagged by the meter. Estimation and Editing is the process of replacing or making complete Meter Data by using data from redundant meters, schedules, PMS or,</u></p>

Value Added Network (VAN)

~~if necessary, statistical estimation.~~

A data communications service provider that provides, stores and forwards electronic data delivery services within its network and to subscribers on other VANs. The data is mostly EDI type messages.

Variable Costs

The cost associated with fuel cost and variable operations and maintenance costs.

Variable Cost Option

A method of calculating Default Energy Bids based on fuel costs and variable operations and maintenance costs.

Voltage Limits

For all substation busses, the normal and post-contingency Voltage Limits (kV). The bandwidth for normal Voltage Limits must fall within the bandwidth of the post-contingency Voltage Limits. Special voltage limitations for abnormal operating conditions such as heavy or light Demand may be specified.

Voltage Support

Services provided by Generating Units or other equipment such as shunt capacitors, static var compensators, or synchronous condensers that are required to maintain established grid voltage criteria. This service is required under normal or System Emergency conditions.

Waiver Denial Period

~~The period determined in accordance with Section 40.1.6.~~

Warning Notice

~~A Notice issued by the ISO when the operating requirements for the ISO Controlled Grid are not met in the Hour Ahead Market, or the quantity of Regulation, Spinning Reserve, Non-Spinning Reserve, Replacement Reserve and Supplemental Energy available to the ISO does not satisfy the Applicable Reliability Criteria.~~

Weekly Peak Demand Forecast

Demand Forecast of the highest Hourly Demand in any hour in a period beginning at the start of the hour ending 0100 on Sunday and ending at the end of the hour ending 2400 the following Saturday, in MW.

WEnet (Western Energy Network)

~~An electronic network that facilitates communications and data exchange among the ISO, Market Participants and the public in relation to the status and operation of the ISO Controlled Grid.~~

Western Interconnection

A network of transmission lines embodied within the WECC region.

WECC (Western Electricity Oversight Coordinating Council (WECC))

The Western Electricity Coordinating Council or its successor.

Western Path 15

The Western Area Power Administration, Sierra Nevada Region (or its successor) with respect solely to its rights and interests in the Path 15

WSCC (Western System Coordinating Council (WSCC))

Upgrade.

The Western Systems Coordinating Council or its successor, the WECC.

Wheeling

Wheeling Out or Wheeling Through.

Wheeling Access Charge

The charge assessed by the [CAISO](#) that is paid by a Scheduling Coordinator for Wheeling in accordance with Section [7.126.1](#).

Wheeling Access Charges shall not apply for Wheeling under a bundled non-economy Energy coordination agreement of a Participating TO executed prior to July 9, 1996. The Wheeling Access Charge may consist of a High Voltage Wheeling Access Charge and a Low Voltage Wheeling Access Charge.

Wheeling Out

Except for Existing Rights exercised under an Existing Contract in accordance with Sections ~~16.1 and 16.2~~, the use of the [CAISO](#) Controlled Grid for the transmission of Energy from a Generating Unit located within the [CAISO](#) Controlled Grid to serve a Load located outside the transmission and Distribution System of a Participating TO.

Wheeling Through

Except for Existing Rights exercised under an Existing Contract in accordance with Sections ~~16.1 and 16.2~~, the use of the [CAISO](#) Controlled Grid for the transmission of Energy from a resource located outside the [CAISO](#) Controlled Grid to serve a Load located outside the transmission and Distribution System of a Participating TO.

Wholesale Customer

A person wishing to purchase Energy and Ancillary Services at a Bulk Supply Point or a Scheduling Point for resale.

Wholesale Sales

The sale of Energy and Ancillary Services at a Bulk Supply Point or a Scheduling Point for resale.

WSCC Reliability Criteria Agreement

The Western Systems Coordinating Council Reliability Criteria Agreement dated June 18, 1999 among the WSCC and certain of its Member transmission operators, as such may be amended from time to time.

Zone

~~A portion of the ISO Controlled Grid within which Congestion is expected to be small in magnitude or to occur infrequently. "Zonal" shall be construed accordingly.~~

Zonal Settlement Interval Ex Post Price

~~The Zonal Settlement Interval Ex Post Price in a Settlement Interval in each Zone will equal the absolute value Energy weighted average of the Dispatch Interval Ex Post Prices in each Zone, where the weights~~

are the system total Instructed Imbalance Energy, except Regulation Energy, for the Dispatch Interval.

