

**Appendix A**  
**Master Definition Supplement**

**- Access Charge**

A charge paid by all Utility Distribution Companies, Small Utility Distribution Companies, and MSS Operators with Gross Load in a PTO Service Territory, as set forth in 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.

**- ACE**

Area Control Error

**- ACR**

All Constraints Run

**- Actual Settlement Quality Meter Data**

Settlement Quality Meter Data gathered, edited, validated, and submitted by the Scheduling Coordinators on behalf of Scheduling Coordinator Metered Entities.

**- Adjusted Load Metric**

A Load Serving Entity's Load Metric minus the megawatts of Load served using Existing Transmission Contracts, Converted Rights, and Transmission Ownership Rights.

**- Adjusted RMR Invoice**

The monthly invoice issued by the RMR Owner to the CAISO for adjustments made to the Revised Estimated RMR Invoice pursuant to the RMR Contract reflecting actual data for the billing month.

**- Adjusted Verified CRR Source Quantity**

The MW amount eligible for nomination by an LSE or Qualified OBAALSE in a verified tier of the CRR Allocation process, determined by reducing a Verified CRR Source Quantity to account for circumstances where the ownership or contract right to a generating resource is effective only for a portion of a particular season or month for which CRRs are being nominated.

**- Administrative Price**

The price set by the CAISO in place of a Locational Marginal Price when, by reason of a System Emergency, the CAISO determines that it no longer has the ability to maintain reliable operation of the CAISO Controlled Grid relying solely on the economic Dispatch of Generation. This price will remain in effect until the CAISO considers that the System Emergency has been contained and corrected.

**- ADR**

Alternative Dispute Resolution

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**- ADS**

Automated Dispatch System

**- 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 Controlled Grid that may be affected by the proposed interconnection, including the Participating TOs' electric systems that are not part of the CAISO Controlled Grid.

**- Affected System Operator**

The entity that operates an Affected System.

**- Affiliate**

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

**- AGC**

Automatic Generation Control

**- Aggregate Credit Limit**

The sum of a Market Participant's or CRR Holder's Unsecured Credit Limit and its Financial Security Amount, as provided for in Section 12.

**- Aggregated Participating Load**

An aggregation at one or more Participating Load Locations, created by the CAISO in consultation with the relevant Participating Load, for the purposes of enabling participation of the Participating Load in the CAISO Markets like Generation by submitting Supply Bids when offering Curtailable Demand and as non-Participating Load by submitting Demand Bids to consume in the Day-Ahead Market only.

**- Aggregated Pricing Node (Aggregated Pnode)**

A Load Aggregation Point, Trading Hub or any group of Pricing Nodes as defined by the CAISO.

**- Alert, Warning Or Emergency (AWE) Notice**

A CAISO operations communication issued to Market Participants and the public, under circumstances and in a form specified in CAISO Operating Procedures, when the operating requirements of the CAISO Controlled Grid are marginal because of Demand exceeding forecast, loss of major Generation sources, or loss of transmission capacity that has curtailed imports into the CAISO Balancing Authority Area, or if

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insufficient Bids for the Supply of Energy and Ancillary Services have been submitted in the HASP for the CAISO Balancing Authority Area.

**- All Constraints Run (ACR)**

The second optimization run of the MPM-RRD process through which all Transmission Constraints that are expected to be enforced in the market-clearing processes (IFM, RUC, STUC, RTUC and RTD) are enforced.

**- Ancillary Service Award Or AS Award**

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

**- 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 any applicable No Pay capacity, and the relevant AS Bid price.

**- Ancillary Service Bid Or AS Bid**

The Bid component that indicates the quantity in MW and a price in dollars per MW for a specific Ancillary Service, 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 or System Resource, and only for Non-Spinning Reserve from the Load of a Participating Load or Proxy Demand Resource.

**- Ancillary Service Marginal Price (ASMP)**

The marginal cost of providing an Ancillary Service as further provided in Section 27.1.2.

**- Ancillary Service Obligation Or AS Obligation**

A Scheduling Coordinator's hourly obligation for Regulation Down, Regulation Up, Spinning Reserves, and Non-Spinning Reserves calculated pursuant to Section 11.10.2.1.3, 11.10.2.2.2, 11.10.3.2, and 11.10.4.2, respectively.

**- Ancillary Service Provider**

A Participating Generator, System Resource operator, Participating Load, or Proxy Demand Resource operator or other resource operator that is certified to provide an Ancillary Service.

**- Ancillary Service Region Or AS Region**

The System Region, the Expanded System Region, or any Sub-Region identified by the CAISO for procurement of Ancillary Services.

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**- Ancillary Service Regional Limit**

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

**- Ancillary Services (AS)**

Regulation, Spinning Reserve, Non-Spinning Reserve, Voltage Support and Black Start together with such other interconnected operation services as the 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 CAISO Controlled Grid in accordance with WECC standards and Good Utility Practice.

**- 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.

**- Annual Peak Demand Forecast**

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

**- Applicable Reliability Criteria**

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

**- 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 CAISO through the CAISO Outage Coordination Office.

**- Approved Project Sponsor**

The person or entity designated under the CAISO Tariff to construct, finance and own transmission additions or upgrades.

**- Area Control Error (ACE)**

The sum of the instantaneous difference between the actual net Interchange and the scheduled net Interchange between the CAISO Balancing Authority Area and all interconnected Balancing Authority Areas, taking into account the effects of the CAISO Balancing Authority Area's frequency bias, correction of meter error, and time error correction obligations.

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**- AS**

Ancillary Services

**- ASMP**

Ancillary Service Marginal Price

**- Asynchronous Generating Facility**

An induction, doubly-fed, or electronic power generating unit(s) that produces 60 Hz (nominal) alternating current.

**- ATC**

Available Transfer Capability

**- Automated Dispatch System (ADS)**

The CAISO systems application to communicate Dispatch Instructions to Scheduling Coordinators.

**- Automatic Generation Control (AGC)**

Generation equipment that automatically responds to signals from the CAISO's EMS control in Real-Time to control the Power output of Generating Units 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 the established Interchange with other Balancing Authority Areas within the predetermined limits.

**- Available Import Capability**

The Maximum Import Capability of an Intertie into the CAISO Balancing Authority Area in MW deliverable to the CAISO Balancing Authority Area based on CAISO study criteria minus the sum in MW of all Existing Contracts and Transmission Ownership Rights over that Intertie held by load serving entities that do not serve Load within the CAISO Balancing Authority Area.

**- Available Transfer Capability (ATC)**

The available capacity of a given transmission path, in MW, after subtraction of capacity associated with Existing Contracts and Transmission Ownership Rights from that path's Operating Transfer Capability established consistent with CAISO and WECC transmission capacity rating guidelines, further described in Appendix L.

**- Availability Assessment Hours**

The hours of the month specified in accordance with Section 40.9.3 which the CAISO will utilize for applying the Availability Standards program of Section 40.9.

**- Availability Incentive Payment**

The monthly payment that the CAISO may make to a Resource Adequacy Resource under the Availability Standards program in accordance with Section 40.9.

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**- Availability Incentive Rate**

The monthly dollars per MW rate calculated by dividing the total Non-Availability Charges assessed for a given month by the total Resource Adequacy Capacity that is eligible to receive the Availability Incentive Payment for that month.

**- Availability Standards**

The standard established in accordance with Sections 40.9.4 and 40.9.7 to determine if a Resource Adequacy Resource is subject to Non-Availability Charges or Availability Incentive Payments.

**- AWE Notice**

Alert, Warning or Emergency Notice

**- Backup CAISO Control Center**

The CAISO Control Center located in Alhambra, California.

**- Backup Meter**

A redundant revenue quality meter which is identical to and of equal accuracy to the primary revenue quality meter connected at the same metering point which must be certified in accordance with the CAISO Tariff.

**- BAID**

Business Associate Identification

**- 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.

**- Balancing Authority**

The responsible entity that integrates resource plans ahead of time, maintains load-interchange-generation balance within a Balancing Authority Area, and supports Interconnection frequency in real time.

**- Balancing Authority Area**

The collection of generation, transmission, and loads within the metered boundaries of the Balancing Authority. The Balancing Authority maintains load-resource balance within this area.

**- Balancing Authority Area Gross Load**

For the purpose of calculating and billing Minimum Load Costs, Emission Costs, and Start-Up Costs, Balancing Authority Area Gross Load is all Demand for Energy within the CAISO Balancing Authority Area. Balancing Authority Area Gross Load shall not include Energy consumed by:

- (a) Station Power that is netted pursuant to Section 10.1.3; and

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- (b) Load that is isolated electrically from the CAISO Balancing Authority Area (i.e., Load that is not synchronized with the CAISO Balancing Authority Area).

**- Base Case**

The base case power flow, short circuit, and stability data bases used for the Interconnection Studies.

**- Base Market Model**

A computer based model of the CAISO Controlled Grid that is derived from the Full Network Model as described in Section 27.5.1 and that, as described further in Section 27.5.6, is used as the basis for formulating the market models used in the operation of each of the CAISO Markets.

**- BCR**

Bid Cost Recovery

**- Bid**

Either (1) 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 or (2) a Virtual Bid.

**- Bid Adder**

A dollar amount added to the Bid of a Frequently Mitigated Unit.

**- Bid Cost Recovery (BCR)**

The CAISO settlements process through which Eligible Resources recover their Bid Costs.

**- Bid Cost Recovery (BCR) Eligible Resources**

Those resources eligible to participate in the Bid Cost Recovery as specified in Section 11.8, which include Generating Units, System Units, System Resources, Participating Loads, and Proxy Demand Resources.

**- Bid Costs**

The costs for resources manifested in the Bid components submitted, which include the Start-Up Cost, Minimum Load Cost, Energy Bid Cost, Transition Costs, Pump Shut-Down Cost, Pumping Cost, Ancillary Services Bid Cost and RUC Availability Payment.

**- Black Start**

The procedure by which a Generating Unit self-starts without an external source of electricity thereby restoring a source of power to the CAISO Balancing Authority Area following system or local area blackouts.

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**- Black Start Generator**

A Participating Generator in its capacity as party to an Interim Black Start Agreement with the CAISO 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.

**- BPM**

Business Practice Manual

**- BPM PRR**

Business Practice Manual Proposed Revision Request

**- Bulk Supply Point**

A Utility Distribution Company or Small Utility Distribution Company metering point.

**- Business Associate**

Any entity with whom the CAISO interacts related to the CAISO Markets.

**- Business Associate Identification (BAID)**

Identification characters assigned to each Business Associate by the CAISO.

**- Business Day**

Monday through Friday, excluding federal holidays and the day after Thanksgiving Day.

**- Business Practice Manual Proposed Revision Request (BPM PRR)**

A request to make any change to a BPM, including any attachments thereto, as described in Section 22.11.1.

**- Business Practice Manuals (BPMs)**

A collection of documents made available by the CAISO on the CAISO Website that contain the rules, polices, procedures and guidelines established by the CAISO for operational, planning, accounting and settlement requirements of CAISO Market activities, consistent with the CAISO Tariff.

**- CAISO**

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

**- CAISO Account**

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.



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**- CAISO ADR Procedures**

The procedures for resolution of disputes or differences set out in Section 13.

**- CAISO Alternative Dispute Resolution Coordinator**

The individual designated by the CAISO CEO to perform functions assigned to the CAISO ADR Coordinator in the CAISO ADR Procedures in Section 13.

**- 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) 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 Section 10.

**- CAISO Bank**

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

**- CAISO CEO**

The Chief Executive Officer of the CAISO.

**- 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 Center**

The control center established by the CAISO pursuant to Section 7.1.

**- CAISO Controlled Grid**

The system of transmission lines and associated facilities of the Participating TOs that have been placed under the CAISO's Operational Control.

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**- CAISO Creditor**

A Business Associate to which amounts are payable under the terms of the CAISO Tariff and agreements with the CAISO.

**- CAISO Debtor**

A 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 Balancing Authority 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 Emissions Cost Trust Account**

The CAISO Account established pursuant to Section 11.18.2.

**- CAISO Estimated Settlement Quality Meter Data**

Settlement Quality Meter Data estimated by the CAISO in accordance with Sections 10.3.6.1 and 11.1.5.

**- CAISO Financing Costs**

The CAISO's financing costs that are approved by the CAISO Governing Board, including capital expenditures that may be financed over such period as the CAISO Governing Board shall decide. CAISO Financing Costs shall also include the CAISO Start Up and Development Costs. The amortized amount to be included in the Grid Management Charge shall be equal to the amount necessary to amortize fully all CAISO Start Up and Development Costs over a period of five (5) years, or such longer period as the CAISO Governing Board shall decide. These costs include the requirement to collect an amount in excess of the annual debt service obligations as specified in the rate covenants of the official statements for each CAISO bond offering.

**- CAISO Forecast Of CAISO Demand**

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

**- CAISO Governing Board**

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

**- CAISO IFM Commitment Period**

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

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**- CAISO IFM Curtailed Quantity**

In each Trading Hour for each Scheduling Coordinator (a) the maximum of zero or the submitted Day-Ahead Self-Schedule for Demand minus the Day-Ahead Schedule for Demand in each applicable LAP, or (b) in the event a LAP price equals the maximum price for Energy Bids specified in Section 39.6.1.1, the maximum of zero or the submitted Day-Ahead Self-Schedule for Demand plus the quantity of Demand bid at the maximum price for Energy Bids specified in Section 39.6.1.1 minus the Day-Ahead Schedule for Demand in the relevant LAP.

**- CAISO Invoice**

The invoices issued by the CAISO to the Responsible Utilities or RMR Owners based on the Revised Estimated RMR 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.

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

**- CAISO Metered Entity**

- (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 Station Power that is netted pursuant to Section 10.1.3) and Ancillary Services to the Utility Distribution Company or Small Utility Distribution Company in whose Service Area it is located;
  - ii. an MSS Operator; or
  - iii. a Utility Distribution Company or Small Utility Distribution Company; 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 Balancing Authority Areas;
  - iii. a Participating Load;
  - iv. a Participating Intermittent Resource; or

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- 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 Operating And Capital Reserves Account**

The account in the name of the CAISO with the CAISO Bank to which revenues collected to fund the CAISO financial operating reserves are transferred, in accordance with Section 11.17. Such financial operating reserves shall be utilized to minimize the impact of any variance between forecast and actual costs throughout the year.

**- CAISO Operating And Capital Reserves Costs**

The CAISO's annual budgeted cost of cash funded capital and project expenditures and the amount (positive or negative) sufficient to maintain the CAISO Operating and Capital Reserves Account at the level specified by (1) the rate covenants of the official statements for each CAISO bond offering, (2) the CAISO Governing Board, or (3) the FERC.

**- CAISO Operating Costs**

The CAISO's budgeted annual operating costs, which shall include all staffing costs including remuneration of contractors and consultants, salaries, benefits and any incentive programs for employees, costs of operating, replacing and maintaining CAISO systems, lease payments on facilities and equipment necessary for the CAISO to carry out its business, and annual costs of financing the CAISO's working capital and other operating costs.

**- CAISO Operations Date**

March 31, 1998.

**- CAISO Other Costs And Revenues**

Other costs and revenues that are recovered through, or are offsets to, the CAISO revenue requirement, including special charges, fines, penalties, other interest expenses, reimbursements, and interest earnings.

**- CAISO Outage Coordination Office**

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

**- 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 Penalty Reserve Account**

The account established by the CAISO pursuant to Section 11.29.9.6.4.

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**- CAISO Planning Standards**

Reliability Criteria that: (1) address specifics not covered in the NERC and WECC planning standards; (2) provide interpretations of the NERC and WECC planning standards specific to the CAISO Controlled Grid; and (3) identify whether specific criteria should be adopted that are more stringent than the NERC and WECC planning standards.

**- 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 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.

**- CAISO Register**

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 Start Up And Development Costs**

The CAISO's costs outstanding to the credit of the CAISO Memorandum Account plus any additional start up or development costs incurred after the date of Resolution E 3459 (July 17, 1996), plus any additional capital expenditure incurred by the CAISO in 1998.

**- CAISO Surplus Account**

The account established by the CAISO pursuant to Section 11.29.9.6.3.

**- 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.

**- CAISO Website**

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

**- CAISO-WECC Billing Services Agreement**

The agreement between the CAISO and the WECC entered into by those parties in August 2007, as it may be amended from time to time, regarding the CAISO's performance of certain billing services to facilitate the WECC's collection of NERC/WECC Charges.

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**- Calculated Energy Bid**

The Energy Bid utilized in the IFM and RTM on behalf of a COG calculated by dividing its Minimum Load Cost by the MW quantity of its PMax.

**- Candidate CRR Holder**

An entity that is registered and qualified by the CAISO to participate in the CRR Allocation, the CRR Auction, or the Secondary Registration System to become a CRR Holder and is a party to a fully executed CRR Entity Agreement, and therefore must comply with the requirements for Candidate CRR Holders under the CAISO Tariff.

**- Capacity Benefit Margin (CBM)**

The factor defined in Appendix L.

**- Capacity Procurement Mechanism (ICPM)**

The Capacity Procurement Mechanism, as set forth in Section 43.

**- CBEA**

Convergence Bidding Entity Agreement

**- CBM**

Capacity Benefit Margin

**- CCR**

Competitive Constraints Run

**- CDWR-SWP**

The California Department of Water Resources, State Water Project.

**- CDWR-SWP Participating Generating Units**

The Generating Units operated by the California Department of Water Resources, State Water Project, that are subject to a Participating Generator Agreement with the CAISO.

**- CEC**

The California Energy Commission or its successor.

**- 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.

**- C.F.R**

Code of Federal Regulations.

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**- Charge Code**

A numeric identifier used to specify Settlement calculations in the Business Practice Manual.

**- Clean Bid**

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

**- Cluster Application Window**

The time period for submitting Interconnection Requests as set forth in Section 3.3 of Appendix Y

**- 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.

**- COG**

Constrained Output Generator

**- Commercial Operation**

The status of a Generating Unit or project phase 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 or project phase at a Generating Facility commences Commercial Operation as agreed to by the applicable Participating TO, the CAISO, and the Interconnection Customer pursuant to Appendix E to the Large Generator Interconnection Agreement, and in accordance with the implementation plan agreed to by the Participating TO and the CAISO for multiple individual Generating Units or project phases at a Generating Facility where an Interconnection Customer intends to establish separate Commercial Operation Dates for those Generating Units or project phases.

**- Commitment Interval**

The fifteen minute period of time for which the CAISO commits resources or procures Ancillary Services through the Real-Time Unit Commitment process.

**- 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.

**- Competitive Constraints Run (CCR)**

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

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**- Condition 1 RMR Unit**

A resource operating pursuant to Condition 1 of its RMR Contract.

**- Condition 2 RMR Unit**

A resource operating pursuant to Condition 2 of its RMR Contract.

**- Congestion**

A characteristic of the transmission system produced by a binding Transmission 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 is not equal.

**- Congestion Charge**

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

**- Congestion Data Summary**

A report issued by the CAISO on the schedule set forth in the Business Practice Manual that sets forth historic Congestion on the CAISO Controlled Grid.

**- Congestion Management**

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

**- 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 Generator (COG)**

A Generating Unit with an operating range (PMax - PMin) that is no greater than the higher of three (3) MW or five percent (5%) of its PMax that elects, on an annual basis, to utilize a Calculated Energy Bid in the IFM and RTM as described in Section 27.7.

**- Construction Activities**

Actions by a Participating TO that result in irrevocable financial commitments for the purchase of major electrical equipment or land for Participating TO's Interconnection Facilities or Network Upgrades assigned to the Interconnection Customer that occur after receipt of all appropriate governmental approvals needed for the Participating TO's Interconnection Facilities or Network Upgrades.



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**- Contingency**

A potential Outage that is unplanned, viewed as possible or eventually probable, which is taken into account when considering approval of other requested Outages or while operating the CAISO Balancing Authority Area.

**- Contingency Flag**

The daily Bid component that indicates that the Spinning Reserves and Non-Spinning Reserves being offered in the CAISO Market are Contingency Only reserves.

**- Contingency Only**

A resource providing Operating Reserve capacity that may be Dispatched by the CAISO only in the event of a Contingency or an imminent or actual System Emergency.

**- Contract Reference Number (CRN)**

The Bid component that indicates the specific contract identification number issued by the CAISO to Scheduling Coordinators transactions under Existing Contracts or TORs.

**- Control Area**

Balancing Authority Area

**- Control Area Gross Load**

Balancing Authority Area Gross Load

**- Control Area Operator**

Balancing Authority

**- Convergence Bidding Entity (CBE)**

An entity which has undertaken in writing by execution of a Convergence Bidding Entity Agreement to comply with all applicable provisions of the CAISO Tariff.

**- Convergence Bidding Entity Agreement (CBEA)**

An agreement between the CAISO and a Convergence Bidding Entity, a pro forma version of which is set forth in Appendix B.

**- Converted Rights**

Those transmission service rights as defined in Section 4.3.1.6.

**- Core Reliability Services – Demand Charge**

The 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 Balancing Authority 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.

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**- Core Reliability Services – Energy Export Charge**

The 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 Balancing Authority 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.

**- Core Reliability Services/Energy Transmission Services – TOR**

The component of the Grid Management Charge that provides for the recovery of the CAISO's costs of providing reliability services to Transmission Ownership Rights within the CAISO Balancing Authority Area. The formula for determining the Core Reliability Services/Energy Transmission Services – Transmission Ownership Rights Charge is set forth in Appendix F, Schedule 1, Part A.

**-CPM**

Capacity Procurement Mechanism

**- CPM Availability Factor**

A factor as set forth in Appendix F, Schedule 6 that is used in calculating a resource's monthly CPM Capacity Payment.

**- CPM Capacity**

Capacity of Generating Units, System Units, System Resources, or Participating Load that is designated under the CPM in accordance with Section 43 during the term of the designation.

**- CPM Capacity Payment**

The payment provided pursuant to Section 43.6.

**- CPM Significant Event**

A substantial event, or a combination of events, that is determined by the CAISO to either result in a material difference from what was assumed in the resource adequacy program for purposes of determining the Resource Adequacy Capacity requirements, or produce a material change in system conditions or in CAISO Controlled Grid operations, that causes, or threatens to cause, a failure to meet Reliability Criteria absent the recurring use of a non-Resource Adequacy Resource(s) on a prospective basis.

**- CPUC**

The California Public Utilities Commission, or its successor.

**- CPUC Load Serving Entity**

Any entity serving retail Load in the CAISO Balancing Authority Area under the jurisdiction of the CPUC, including an electrical corporation under section 218 of the California Public Utilities Code, an electric

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service provider under section 218.3 of the California Public Utilities Code, and a community choice aggregator under section 331.1 of the California Public Utilities Code.

**- Credit Margin**

The quantity equal to Expected Congestion Revenue minus Fifth Percentile Congestion Revenue.

**- Critical Energy Infrastructure Information (CEII)**

Critical Energy Infrastructure Information shall have the meaning given the term in the regulations of FERC at 18 C.F.R. § 388.12, et seq.

**- 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.

**- CRN**

Contract Reference Number

**- CRR**

Congestion Revenue Rights

**- CRR Allocation**

The process of nominations and awards held monthly and annually through which the CAISO will distribute CRRs to Candidate CRR Holders.

**- CRR Annual Cycle**

Time period covered by all the CRRs released in an annual CRR Allocation and CRR Auction processes.

**- CRR Auction**

The annual and monthly market process that will follow CRR Allocation through which the CAISO makes CRRs available to Candidate CRR Holders that submit offers to purchase CRRs.

**- CRR Auction Price**

The positive or negative price to pay or be paid for a CRR at auction.

**- CRR Balancing Account**

The financial account held by the CAISO for CRRs that is administered in accordance with Section 11.2.4.

**- CRR Charge**

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.

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**- CRR Eligible Quantity**

The Seasonal CRR Eligible Quantity or the Monthly CRR Eligible Quantity.

**- CRR Entity Agreement**

An agreement between the CAISO and a Candidate CRR Holder or CRR Holder that must be fully executed in order for such an entity to participate in the CRR Allocation, CRR Auction, or Secondary Registration System, a pro forma version of which is set forth in Appendix B.11.

**- CRR Holder**

A Candidate CRR Holder that has acquired CRR(s) either through the CRR Allocation, the CRR Auction, or through a transaction registered in the Secondary Registration System.

**- CRR Load Metric**

The Seasonal CRR Load Metric or Monthly CRR Load Metric.

**- CRR Obligation**

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.

**- CRR Option**

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.

**- CRR Payment**

A payment from the CAISO to a CRR Holder as specified in Section 11.2.4.

**- CRR Sink**

A PNode or a Trading Hub specified as the point of withdrawal for a Congestion Revenue Right.

**- CRR Source**

A PNode or a Trading Hub specified as the point of receipt for a Congestion Revenue Right.

**- CRR Term**

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.

**- CRR Year Four**

Second, third and fourth quarters of calendar year 2011 and first quarter of calendar year 2012.

**- CRR Year One**

Second, third and fourth quarters of calendar year 2008 and first quarter of calendar year 2009.

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**- CRR Year Three**

Second, third and fourth quarters of calendar year 2010 and first quarter of calendar year 2011.

**- CRR Year Two**

Second, third and fourth quarters of calendar year 2009 and first quarter of calendar year 2010.

**- Curtailable Demand**

Demand from a Participating Load or Aggregated Participating Load that can be curtailed at the direction of the CAISO in the Real-Time Dispatch of the CAISO Controlled Grid.

**- Customer Baseline**

A value or values determined by the CAISO based on historical Load meter data to measure the delivery of Demand Response Services.

**- Custom Load Aggregation Point (Custom LAP)**

An aggregation of Load PNodes created by the CAISO based on a set of custom LDFs submitted by a Scheduling Coordinator, at which such Scheduling Coordinator may submit a single Bid and settle Demand consistent with the CAISO Tariff rules, and for which the Scheduling Coordinator is required to submit to the CAISO Meter Data for the nodal Load represented in such aggregation.

**- DAM**

Day-Ahead Market

**- 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**

The twenty-four hour time period prior to the Trading Day.

**- Day-Ahead Bid Awarded Energy**

The Day-Ahead Scheduled Energy above the Day-Ahead Total Self-Schedule and below the Day-Ahead Schedule. The Day-Ahead Bid Awarded Energy is also indexed against the relevant Day-Ahead Energy Bid and sliced by the Energy Bid price. The Day-Ahead Energy Bid Awarded Energy slices are settled as described in Section 11.2.1.1, and they are included in BCR as described in Section 11.8.2.1.5.

**- Day-Ahead Inter-SC Trade Period**

The period commencing seven (7) days prior to the applicable Trading Day and ending at noon on the day prior to that Trading Day, during which time the CAISO will accept Inter-SC Trades of Energy for the DAM from Scheduling Coordinators.

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**- Day-Ahead Market (DAM)**

A series of processes conducted in the Day-Ahead that includes the Market Power Mitigation-Reliability Requirement Determination, the Integrated Forward Market and the Residual Unit Commitment.

**- Day-Ahead Metered Energy Adjustment Factor**

Is a factor calculated for the purposes of determining the portions of a Scheduling Coordinator's relevant Day-Ahead Schedule actually delivered based on the meter, taking into consideration the resource's metered energy. The factor is calculated as follows: The factor is bounded by 1 or 0, and is the ratio of the resource's (a) Metered Energy minus the Day-Ahead Self-Scheduled Energy minus the Day-Ahead Minimum Load Energy minus the Standard Ramping, and (b) the Day-Ahead Scheduled Energy *minus* the Day-Ahead Self-Scheduled Energy minus the Day-Ahead Minimum Load Energy). For resources committed in pumping mode in day-ahead, the day-ahead pumping energy is used instead of the Day-Ahead Scheduled Energy.

**- Day-Ahead Minimum Load Energy**

Day-Ahead Scheduled Energy below the registered Minimum Load, which applies to Generating Units with non-zero Minimum Load. Day-Ahead Minimum Load Energy is settled as provided in Section 11.2.1.1, and it is included in Bid Cost Recovery (BCR) at the relevant IFM Minimum Load Cost as described in Section 11.8.2.1.2.

**- Day-Ahead Pumping Energy**

Negative Day-Ahead Scheduled Energy consumed by Participating Load Pumped-Storage Hydro Units and Pumping Load scheduled in pumping mode in the IFM. When Day-Ahead Pumping Energy is present, there are no other Day-Ahead Scheduled Energy subtypes present. Day-Ahead Pumping Energy is settled as provided in Section 11.2.1.3 and it is included in BCR as described in Sections 11.8.2.1.4 and 11.8.2.2.

**- Day-Ahead Schedule**

A Schedule issued by the CAISO one day prior to the target Trading Day indicating the levels of Supply and Demand for Energy cleared through the IFM and scheduled for each Settlement Period, for each PNode or Aggregated Pricing Node, including Scheduling Points of that Trading Day.

**- Day-Ahead Scheduled Energy**

Hourly Energy that corresponds to the flat portions of the hourly Day-Ahead Schedule. It is composed of Day-Ahead Minimum Load Energy, Day-Ahead Self-Scheduled Energy, and Day-Ahead Bid Awarded Energy. It does not include the Day-Ahead Energy that corresponds to the flat schedule when a resource is committed in the Day-Ahead in pumping mode. Expected Energy committed in Day-Ahead pumping mode is accounted for as Day-Ahead Pumping Energy. Day-Ahead Scheduled Energy is settled as specified in Section 11.2.1.1.

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**- Day-Ahead Self-Scheduled Energy**

Day-Ahead Scheduled Energy above the registered Minimum Load and below the lower of the Day-Ahead Total Self-Schedule or the Day-Ahead Schedule. Day-Ahead Self-Scheduled Energy is settled as described in Section 11.2.1.1, and, as indicated in Section 11.8.2.1.5, it is not included in BCR.

**- Day-Ahead Total Self-Schedule**

The sum of all Day-Ahead Self-Schedules (except Pumping Load Self-Schedules) in the relevant Clean Bid.

**- Decline Monthly Charge – Exports**

A charge that applies to the aggregate of a Scheduling Coordinator's HASP Intertie Schedules for Energy exports that are not delivered in a Trading Month, as determined pursuant to Section 11.31.1.

**- Decline Monthly Charge – Imports**

A charge that applies to the aggregate of a Scheduling Coordinator's HASP Intertie Schedules for Energy imports that are not delivered in a Trading Month, as determined pursuant to Section 11.31.1.

**- Decline Potential Charge – Exports**

A potential charge that is calculated for any HASP Intertie Schedule for an Energy export when the HASP Intertie Schedule is not delivered for any reason, which potential charge and its applicability are determined pursuant to Section 11.31.

**- Decline Potential Charge – Imports**

A potential charge that is calculated for any HASP Intertie Schedule for an Energy import when the HASP Intertie Schedule is not delivered for any reason, which potential charge and its applicability are determined pursuant to Section 11.31.

**- Decline Threshold Percentage – Imports/Exports**

The rate at which Scheduling Coordinators may fail to deliver imports or exports in accordance with HASP Intertie Schedules without incurring Decline Monthly Charges – Imports or Decline Monthly Charges – Exports, as measured by the respective percentages of HASP Intertie Schedules for import or export MWh quantities that the Scheduling Coordinator does not deliver during a Trading Month. The Decline Threshold Percentage – Imports/Exports is ten percent (10%).

**- Decline Threshold Quantity – Imports/Exports**

The MWh quantity of HASP Intertie Schedules for imports or exports of Energy that a Scheduling Coordinator may fail to deliver during a Trading Month without incurring Decline Monthly Charges – Imports or Decline Monthly Charges – Exports. The Decline Threshold Quantity – Imports/Exports is 300 MWh.

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**- Default Election**

An election made pursuant to Section 11.29.17.2.4.

**- Default Energy Bid**

The Energy Bid Curve used in Local Market Power Mitigation pursuant to Section 39.

**- Default-Invoiced SCID(s)**

The SCID(s) selected by an entity pursuant to the Default Election procedures set forth in Section 11.29.17.2.4 that are to be allocated a portion of any payment default amount pursuant to Section 11.29.17.2.1.

**- Default LAP**

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.

**- Default Look-Back Period**

The retrospective time period determined pursuant to Section 11.29.17.2.6 for the purpose of allocating payment default amounts.

**- Default Modified Bid**

A Bid that is submitted by a Scheduling Coordinator and is deemed valid and qualifies for modification under the provisions of Section 40.

**- Default Resource Adequacy Path**

The registered sequence of MSG Configurations a Multi-Stage Generating Resource has to Start-Up and transition from off-line to reach the default Resource Adequacy MSG Configuration.

**- Deliverability Assessment**

An evaluation by the Participating TO, CAISO 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 construct these facilities, that would ensure a 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.

**- Delivery Network Upgrades**

Transmission facilities at or beyond the Point of Interconnection, other than Reliability Network Upgrades, identified in the Interconnection Studies to relieve Transmission 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



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the Generation input point, a Demand Take-Out Point, or a transmission bus at some intermediate Location.

**- Demand**

The 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.

**- Demand Response Provider**

An entity that is responsible for delivering Demand Response Services from a Proxy Demand Resource providing Demand Response Services, which has undertaken in writing by execution of the applicable agreement to comply with all applicable provisions of the CAISO Tariff.

**- Demand Response Services**

Demand from a Proxy Demand Resource that can be bid into the Day-Ahead Market and Real-Time Market and dispatched at the direction of the CAISO.

**- Demand Response System**

A collective name for a set of functions of a CAISO application used to collect, approve, and report on information and measurement data for Proxy Demand Resources.

**- Department Of Market Monitoring (DMM)**

The department of the CAISO established under Section 1 of Appendix P.

**- Derate Energy**

Extra-marginal IIE, exclusive of Standard Ramping Energy, Ramping Energy Deviation, Residual Imbalance Energy, MSS Load Following Energy, and Real-Time Minimum Load Energy produced or consumed due to Minimum Load overrates or PMax derates. Derate Energy is produced above the higher of the Day-Ahead Schedule, the registered Minimum Load, or the HASP Intertie Schedule, and below the lower of the overrated Minimum Load and the Dispatch Operating Point, or consumed below the lower of the Day-Ahead Schedule or the HASP Intertie Schedule, and above the higher of the derated PMax or the Dispatch Operating Point. There could be two Derate Energy slices, one for the Minimum

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Load overrate, and one for the PMax derate. Derate Energy does not overlap with Standard Ramping Energy, Ramping Energy Deviation, Residual Imbalance Energy, Real-Time Minimum Load Energy, Exceptional Dispatch Energy, or Optimal Energy, but it may overlap with Day-Ahead Scheduled Energy, HASP Scheduled Energy, and MSS Load Following Energy. Derate Energy is settled as described in Section 11.5.1, and it is not included in BCR as described in Section 11.8.4.

**- Direct Access End-User**

An Eligible Customer located within the Service Area of a Utility Distribution Company who purchases Energy and Ancillary Services through a Scheduling Coordinator.

**- Dispatch**

The activity of controlling 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 Balancing Authority 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 Supply or Demand from the Day-Ahead Schedule, RUC Schedule, and Day-Ahead AS Award to a specified Dispatch Operating Point pertaining to Real-Time operations.

**- Dispatch Interval**

The Time Period, which may range between five (5) and thirty (30) minutes, over which the Real-Time Dispatch measures deviations in Generation and Demand, and selects Ancillary Service and supplemental energy 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 Website, increase or decrease the Dispatch Interval within the range of five (5) to thirty (30) minutes.

**- Dispatch Interval LMP**

The price of Imbalance Energy determined at each Dispatch Interval 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 Day-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 Day-Ahead Schedule.

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**- 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.

**- DMM**

Department of Market Monitoring

**- DSHBAOA**

Dynamic Scheduling Host Balancing Authority Operating Agreement

**- Dynamic Resource- Specific System Resource**

A Dynamic System Resource that is a specific generation resource outside the CAISO Balancing Authority Area.

**- Dynamic Schedule**

A telemetered reading or value which is updated in Real-Time and which is used as an Interchange Schedule in the CAISO Energy Management System calculation of Area Control Error and the integrated value of which is treated as an Interchange Schedule for Interchange accounting purposes.

**- Dynamic Scheduling Agreement For Scheduling Coordinators**

An agreement between the CAISO and a Scheduling Coordinator regarding the terms by which a Scheduling Coordinator may submit Dynamic Schedules, a pro forma version of which is set forth in Appendix B.5.

**- Dynamic Scheduling Host Balancing Authority Operating**

An agreement entered into between the CAISO and a Host Balancing Authority governing the terms of dynamic scheduling between the Host Balancing Authority and the CAISO in accordance with the Dynamic Scheduling Protocol set forth in Appendix X, a pro forma version of which agreement is set forth in Appendix B.9

**- Dynamic System Resource**

A System Resource that has satisfied the CAISO's contractual and operational requirements for submitting a Dynamic Schedule, and for which a Dynamic Schedule has been submitted, including a Dynamic Resource-Specific System Resource.

**- E&P Agreement**

Engineering & Procurement Agreement

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**- Economic Bid**

A Bid that includes quantity (MWh or MW) and price (\$) for specified Trading Hours.

**- Economic Planning Study**

A study performed to provide a preliminary assessment of the potential cost effectiveness of mitigating specifically identified Congestion.

**- EAL**

Estimated Aggregate Liability

**- EEP**

Electrical Emergency Plan

**- Effective Economic Bid**

An Economic Bid that is not an Ineffective Economic Bid.

**- ELC Process**

Extremely Long-Start Commitment Process

**- 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.

**- Electric Facility**

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

**- Eligible Aggregated PNode**

An Aggregated PNode located at an Intertie where virtual bidding is permitted, or an Aggregated PNode where either aggregated physical supply, a Default LAP, or a Trading Hub are located and where virtual bidding is permitted.

**- Eligible Capacity**

Capacity of Generating Units, System Units, System Resources, or Participating Load that is not already under a contract to be a Resource Adequacy Resource, is not under an RMR Contract or is not currently designated as ICPM Capacity that effectively resolves a procurement shortfall or reliability concern and thus is eligible to be designated under the CPM in accordance with Section 43.1.

**- 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

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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 1 MW or larger subject to a Participating Generator Agreement or QF PGA that is powered by wind or solar energy, except for a de minimis amount of Energy from other sources.

**- Eligible PNode**

A PNode located at an Intertie where virtual bidding is permitted, or a PNode where either physical supply or demand is located and where virtual bidding is permitted.

**- ELS Resource**

Extremely Long-Start Resource

**- Emissions Cost Demand**

The level of Demand specified in Section 11.18.3.

**- Emissions Cost Invoice**

The invoice submitted to the CAISO in accordance with Section 11.18.6.

**- Emissions Costs**

The mitigation fees, excluding capital costs, assessed against a Generating Unit by a state or federal agency, including air quality districts, for exceeding applicable NOx emission limitations.

**- Emissions Eligible Generator**

A Generator with a Generating Unit that is a BCR Eligible Resource.

**- EMS**

Energy Management System

**- Encumbrance**

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.

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**- 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**

A Demand Bid or an Energy Supply Bid, or a Virtual 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 Operating Regions, each Forbidden Operating Region must be reflected as a single, separate Energy Bid Curve segment.

**- Energy Export**

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 Balancing Authority Area, whether the Energy is produced by a Generator in the CAISO Balancing Authority Area or a resource located outside the CAISO Balancing Authority Area.

**- Energy Limit**

The Bid component that indicates the maximum and minimum daily Energy limits for the Generating Unit. Energy Limit applies to net pumping Demand and Generation over the Operating Day for a Pumped-Storage Hydro Unit.

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**- 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-Only Deliverability Status**

A condition elected by an Interconnection Customer for a Large Generating Facility interconnected with the CAISO Controlled Grid the result of which is that the Interconnection Customer is responsible only for the costs of Reliability Network Upgrades and is not responsible for the costs of Delivery Network Upgrades, but the Large Generating Facility will be deemed to have a Net Qualifying Capacity of zero, and, therefore, cannot be considered to be a Resource Adequacy Resource.

**- Energy Resource Area (ERA)**

A geographic region certified by the California Public Utilities Commission and the California Energy Commission as an area in which multiple LCRIGs could be located, provided that, for the interim period before those agencies certify such areas and for LCRIFs that are proposed to connect LCRIGs located outside the State of California, an Energy Resource Area shall mean a geographic region that would be connected to the CAISO Controlled Grid by an LCRIF with respect to which the CAISO Governing Board determines that all of the requirements of Section 24.1.3 are satisfied, except for the requirement that the LCRIGs to which the LCRIF would connect are located in an area certified as an ERA by those agencies.

**- 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 Balancing Authority 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.

**- 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 Imbalance Energy. The formula for determining the Energy Transmission Services – Uninstructed Deviations Charge is set forth in Appendix F, Schedule 1, Part A.

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**- 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.

**- ERA**

Energy Resource Area

**- Estimated Aggregate Liability (EAL)**

The sum of a Market Participant's known and reasonably estimated potential liabilities for a specified time period arising from charges described in the CAISO Tariff, as provided for in Section 12.

**- Estimated RMR Invoice**

The monthly invoice issued by the RMR Owner to the CAISO for estimated RMR Payments or RMR Refunds pursuant to the RMR Contract.

**- E-Tag**

An electronic tag associated with an Interchange Schedule in accordance with the requirements of WECC.

**- ETC**

Existing Transmission Contract

**- ETC Self-Schedule**

A Self-Schedule submitted by a Scheduling Coordinator pursuant to Existing Rights as reflected in the TRTC Instructions.

**- Exceptional Dispatch**

A Dispatch Instruction issued for the purposes specified in Section 34.9. Energy from Exceptional Dispatches shall not set any Dispatch Interval LMP.

**- Exceptional Dispatch CPM**

An Exceptional Dispatch CPM under Section 43.1.5 with a term of 30 days.



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**- Exceptional Dispatch Energy**

Extra-marginal IIE, exclusive of Standard Ramping Energy, Ramping Energy Deviation, Residual Imbalance Energy, MSS Load Following Energy, Real-Time Minimum Load Energy, and Derate Energy, produced or consumed due to Exceptional Dispatch Instructions that are binding in the relevant Dispatch Interval. Without MSS Load following, Exceptional Dispatch Energy is produced above the LMP index and below the lower of the Dispatch Operating Point or the Exceptional Dispatch Instruction, or consumed below the LMP index and above the higher of the Dispatch Operating Point or the Exceptional Dispatch Instruction. The LMP index is the capacity in the relevant Energy Bid that corresponds to a Bid price equal to the relevant LMP. Exceptional Dispatch Energy does not overlap with Standard Ramping Energy, Ramping Energy Deviation, Residual Imbalance Energy, Real-Time Minimum Load Energy, Derate Energy, or Optimal Energy, but it may overlap with Day-Ahead Scheduled Energy, HASP Scheduled Energy, and MSS Load Following Energy. Exceptional Dispatch Energy is settled as described in Section 11.5.6, and it is not included in BCR as described in Section 11.8.4.

**- Exceptional Dispatch Instruction**

A Dispatch Instruction issued pursuant to Exceptional Dispatch.

**- Excess Cost Payments**

The payments made by the CAISO for costs associated with Exceptional Dispatches for 1) emergency conditions, to avoid Market Interruption and avoid an imminent System Emergency as provided in Section 11.5.6.1.1; 2) transmission-related modeling limitations as provided in Section 11.5.6.2.3; 3) Condition 2 RMR Units as provided in Section 11.5.6.3.2; and 4) emergency Energy as provided in Section 11.5.8.1.1.

**- Existing Contract Import Capability**

The quantity of Available Import Capability reserved for Existing Contracts and Transmission Ownership Rights held by Load Serving Entities that serve Load within the CAISO Balancing Authority Area under Step 3 of Section 40.4.6.2.

**- Existing High Voltage Facility**

A High Voltage Transmission Facility of a Participating TO that was placed in service on or before the TAC Transition Date described in Section 4.2 of Schedule 3 of Appendix F.

**- Existing QF Contract**

An agreement for the sale of capacity, Energy, and/or Ancillary Services by a Participating Generator to an electric utility from a Qualifying Facility that became effective on or prior to December 20, 1995 or, in the case of a Participating Generator employing landfill gas technology, on or prior to December 31, 1996.

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**- Existing Rights**

The transmission service rights and obligations of non-Participating TOs under Existing Contracts, including all terms, conditions, and rates of the Existing Contracts, as they may change from time to time under the terms of the Existing Contracts.

**- Existing Transmission Contracts (ETC) Or Existing Contracts**

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.

**- Existing Zone**

A region formerly referred to as NP15, SP15, or ZP26 prior to implementation of the CAISO LMP market design.

**- Existing Zone Generation Trading Hub**

Trading Hubs specifically developed to represent the average price paid to generation resources within Existing Zones.

**- Expanded System Region**

The System Region and Intertie Scheduling Points with interconnected Balancing Authority Areas.

**- Expected Congestion Revenue**

The mean value based on the probability distribution of the historic Congestion revenue of a CRR.

**- Expected Energy**

The total Energy that is expected to be generated or consumed by a resource, based on the Dispatch of that resource, as calculated by the Real-Time Market (RTM), and as finally modified by any applicable Dispatch Operating Point corrections. Expected Energy includes the Energy scheduled in the IFM, and it is calculated the applicable Trading Day. Expected Energy is calculated for Generating Units, System Resources, Resource-Specific System Resources, Participating Loads, and Proxy Demand Resources. The calculation is based on the Day-Ahead Schedule and the Dispatch Operating Point trajectory for the three-hour period around the target Trading Hour (including the previous and following hours), the applicable Real-Time LMP for each Dispatch Interval of the target Trading Hour, and any Exceptional Dispatch Instructions. Energy from Non-Dynamic System Resources is converted into HASP Intertie Schedules. Expected Energy is used as the basis for Settlements.

**- Export Bid**

A Demand Bid submitted to a CAISO Market at a Scheduling Point.

**- Exporting Participating Intermittent Resource**

A Participating Intermittent Resource with a PIR Export Percentage greater than zero (0).

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**- Extremely Long-Start Commitment Process (ELC Process)**

The CAISO process for Unit Commitment for Extremely Long-Start Resources, as set forth in Section 31.7.

**- Extremely Long-Start Resource (ELS Resource)**

A Generating Unit that has a Start-Up Time greater than 18 hours or a System Resource that is either: 1) a non-Resource-Specific System Resource with contractual limitations that require the Energy be transacted (i.e., committed) prior to the publishing time of the Day-Ahead Market results (1300 hours on the day before the Trading Day) or 2) a Resource-Specific System Resource that has a Start-Up Time greater than 18 hours.

**- 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.

**- Facility Trust Account**

For each RMR Contract, the account established and operated by the CAISO to and from which all payments under Section 11.13 shall be made. Each Facility Trust Account will have two segregated commercial bank accounts, an RMR Owner Facility Trust Account and a Responsible Utility Facility Trust Account.

**- Fast Start Unit**

A Generating Unit that has a Start-Up Time less than two hours and can be committed in the RTUC and STUC.

**- Feasibility Index**

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.

**- Fed-Wire**

The Federal Reserve Transfer System for electronic funds transfer.

**- FERC**

The Federal Energy Regulatory Commission or its successor.

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**- FERC Annual Charge Recovery Rate**

The rate to be paid by Scheduling Coordinators for recovery of FERC Annual Charges assessed against the CAISO for transactions on the CAISO Controlled Grid.

**- 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 Trust Account**

An account to be established by the CAISO for the purpose of maintaining funds collected from Scheduling Coordinators for FERC Annual Charges and disbursing such funds to the FERC.

**- Fifth Percentile Congestion Revenue**

The fifth percentile value based on the probability distribution of the historic Congestion revenue of a CRR.

**- Final Approval**

A statement of consent by the CAISO Control Center to initiate a scheduled Outage.

**- Final Invoice**

The invoice due from a RMR Owner to the CAISO at termination of the RMR Contract.

**- Final NERC/WECC Charge Invoice**

A final invoice issued by the CAISO that reflects an allocation of NERC/WECC Charges to a Scheduling Coordinator based on the Final NERC/WECC Charge Rate for the NERC/WECC Charge Assessment Year.

**- Final NERC/WECC Charge Rate**

The rate to be paid by Scheduling Coordinators for NERC/WECC Charges based on the WECC invoice to the CAISO for NERC/WECC Charges for a given year and on the NERC/WECC Metered Demand for the NERC/WECC Charge Assessment Year.

**- Financial Security**

Any of the types of financial instruments listed in Section 12 that are posted by a Market Participant, CRR Holder or Candidate CRR Holder.

**- Financial Security Amount**

The level of Financial Security posted in accordance with Section 12 by a Market Participant, Candidate CRR Holder or CRR Holder.

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**- Firm Liquidated Damages Contract**

A contract utilizing or consistent with Service Schedule C of the Western Systems Power Pool Agreement or the Firm Liquidated Damages product of the Edison Electric Institute pro forma agreement, or any other similar firm Energy contract that does not require the seller to source the Energy from a particular unit, and specifies a delivery point internal to the CAISO Balancing Authority Area.

**- Fixed CRRs**

Congestion Revenue Rights that are used in the running of an SFT to represent known encumbrances on the transmission system and which may include some or all of the following: previously allocated or awarded Monthly CRRs, Seasonal CRRs, Long Term CRRs, and Merchant Transmission CRRs, Existing Transmission Contracts, and Converted Rights.

**- Flow Impact**

The combined impact of the CRR Holder's portfolio of Virtual Awards from the IFM on the power flows of a Constraint. The Flow Impact is calculated by multiplying the CRR Holder's Virtual Awards at a Node by the shift factor of that Node relative to the Constraint. This product is computed for each Node for which the Convergence Bidding Entity had Virtual Awards, and the Flow Impact is the sum of those products. In this definition, shift factor means the factor to be applied to a resource's expected change in output to determine the amount of flow contribution that change in output will impose on an identified transmission facility or flowgate. The shift factor used in calculating a Flow Impact will be subject to the effectiveness threshold set forth in Section 27.4.3.6.

**- FNM**

Full Network Model

**- Forbidden Operating Region**

A pair of lower and higher operating levels between which a resource cannot 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 processes.

**- Forecast Fee**

The charge imposed on an Eligible Intermittent Resource pursuant to the terms of Appendix F, Schedule 4.

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**- 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 submit a Bid for Energy and Ancillary Services and the cost of processing accepted Ancillary Services Bids. The formula for determining the Forward Scheduling Charge is set forth in Appendix F, Schedule 1, Part A.

**- FPA**

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 is eligible for a Bid Adder pursuant to Section 39.8.

**- Full Capacity Deliverability Status**

The condition whereby a Large Generating Facility interconnected with the CAISO Controlled Grid, under coincident CAISO Balancing Authority Area peak Demand and a variety of severely stressed system conditions, can deliver the Large Generating Facility's full output to the aggregate of Load on the CAISO Controlled Grid, consistent with the CAISO's Reliability Criteria and procedures and the CAISO On-Peak Deliverability Assessment.

**- Full Network Model (FNM)**

A computer-based model that includes all CAISO Balancing Authority Area transmission network (Load and Generating Unit) busses, Transmission Constraints, and Intertie busses between the CAISO Balancing Authority Area and interconnected Balancing Authority Areas. The FNM models the transmission facilities internal to the CAISO Balancing Authority Area as elements of a looped network and models the CAISO Balancing Authority Area Interties with interconnected Balancing Authority Areas in a radial fashion as specified in Section 27.5.

**- GADS**

Generating Availability Data System

**- GDF**

Generation Distribution Factor

**- Generated Bid**

A post-market Clean Bid generated by the CAISO in accordance with the provisions of Section 40 or other applicable provisions of the CAISO Tariff when a Bid is not submitted by the Scheduling Coordinator and is required for a resource adequacy requirement, an Ancillary Services Award, a RUC Award or a Day-Ahead Schedule.

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**- Generation**

Energy delivered from a Generating Unit.

**- Generation Distribution Factor (GDF)**

The Bid template component that indicates the proportions of how the Bid is distributed for the resources participating in Physical Scheduling Plants or System Units.

**- 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 net capacity of the Generating Facility and the aggregate net capacity of the Generating Facility where it includes multiple energy production devices.

**- Generating Unit**

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:

- (a) located within the CAISO Balancing Authority 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).

**- Generator**

The seller of Energy or Ancillary Services produced by a Generating Unit.

**- Generator Interconnection Agreement (GIA)**

The form of Interconnection Agreement applicable to an Interconnection Request pertaining to a Generating Facility processed under the interconnection procedures set forth in Appendix Y. For a Large Generating Facility, a pro forma version of the Interconnection Agreement is set forth in Appendix CC. For a Small Generating Facility, a pro forma version of the Interconnection Agreement is set forth in Appendix T.

**- Generator Interconnection Procedures (GIP)**

The interconnection procedures applicable to an Interconnection Request pertaining to a Generating Facility processed under Appendix Y.

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**- Generator Interconnection Study Process Agreement**

The agreement between the CAISO and the Interconnection Customer for conducting the Interconnection Studies for a proposed Generating Facility processed under Appendix Y, a pro forma version of which is accepted by FERC, posted on the CAISO Website, and set forth in Appendix Y.

**- GIA**

Generator Interconnection Agreement

**- GIP**

Generator Interconnection Procedures

**- GMC**

Grid Management Charge

**- Good Utility Practice**

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

**- 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 11.22.2 through the service charges described in Section 11.22.2.5 calculated in accordance with the formula rate set forth in Appendix F, Schedule 1, Part A. The 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 Core Reliability Services/Energy Transmission Services – Transmission Ownership Rights Charge, 6) the Forward Scheduling Charge, 7) the Market Usage Charge, and 8) the Settlements, Metering, and Client Relations Charge.

**- 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 MSS Operator located in a PTO Service Territory. Gross Load shall exclude (1) Load with respect to



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which the Wheeling Access Charge is payable; (2) Load that is exempt from the Access Charge pursuant to Section 4.1 of Appendix I; and (3) the portion of the Load of an individual retail customer of a Utility Distribution Company, Small Utility Distribution Company or MSS Operator that is served by a Generating Unit that: (a) is located on the customer's site or provides service to the customer's 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 will be provided by each Participating TO to the CAISO.

**- Group Study**

The process whereby more than one Interconnection Request is studied together, instead of individually, for the purpose of conducting one or more of the Interconnection Studies or analyses therein.

**- HASP**

Hour-Ahead Scheduling Process

**- HASP Advisory Schedule**

The non-binding output of the HASP as it pertains to the Real-Time Market.

**- HASP And RTM Congestion Credit**

A credit provided to Scheduling Coordinators to offset any HASP and RTM Congestions Charges that would otherwise be applied to the valid and balanced portions of any ETC or TOR Self-Schedules in the HASP and the Real-Time Market as provided in Section 11.5.7.

**- HASP AS Award**

An award for an import 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 Inter-SC Trade Period**

The period commencing at midnight (0000 hours) on the applicable Trading Day and ending at forty-five (45) minutes prior to the start of the applicable Operating Hour, during which time the CAISO will accept from Scheduling Coordinators Inter-SC Trades of Energy for the HASP, Inter-SC Trades of Ancillary Services, and Inter-SC Trades of IFM Load Uplift Obligations.

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**- HASP Intertie LMP**

The average of four (4) 15-minute interval LMPs at Intertie Scheduling Points over a Trading Hour.

**- HASP Intertie Schedule**

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

**- HASP Scheduled Energy**

IIE from a Non-Dynamic System Resource, exclusive of Real-Time Pumping Energy and Real-Time Minimum Load Energy, produced or consumed due to hourly scheduling in the HASP. HASP Scheduled Energy is produced above the higher of the Day-Ahead Schedule or the Minimum Load, and below the HASP Intertie Schedule, or consumed below the Day-Ahead Schedule and above the HASP Intertie Schedule. In the latter case, HASP Scheduled Energy overlaps with Day-Ahead Scheduled Energy; HASP Scheduled Energy does not overlap with Real-Time Pumping Energy or Real-Time Minimum Load Energy, but it may overlap with other IIE subtypes. HASP Scheduled Energy is indexed against the relevant Energy Bid and sliced by service type, depending on the Ancillary Services capacity allocation on the Energy Bid, and by Energy Bid price. HASP Scheduled Energy slices are settled as described in Section 11.4, and they are included in BCR as reflected in Section 11.8.4; provided that if any HASP Scheduled Energy slice below or above the Energy Bid has no associated Energy Bid price, it is not included in BCR as described in Section 11.8.4. For Non-Dynamic System Resources that are designated as MSS Load following resources, HASP Scheduled Energy is considered as MSS Load Following Energy.

**- Henry Hub**

The pricing point for natural gas futures contracts.

**- High Priority Economic Planning Study**

An Economic Planning Study performed by the CAISO for inclusion in the Transmission Plan and for which the CAISO assumes cost responsibility.

**- High Voltage Access Charge (HVAC)**

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, provided that the High Voltage Transmission

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Facilities of a Participating TO shall include any Location Constrained Resource Interconnection Facility of that Participating TO that has been turned over to the CAISO's Operational Control.

**- High Voltage Transmission Revenue Requirement (HVTRR)**

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 Utility Specific Rate**

A Participating TO's High Voltage Transmission Revenue Requirement divided by such Participating TO's forecasted Gross Load.

**- 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.

**- Historical Expected Value**

The expected value of a CRR, as calculated by the CAISO, based on monthly historical market operation data for the applicable month. Such values will be established based on at least one (1) year and up to three (3) years of historical market operations data.

**- Host Balancing Authority**

The Balancing Authority for a Host Balancing Authority Area.

**- Host Balancing Authority Area**

The Balancing Authority Area in which a System Resource subject to this CAISO Tariff is connected to the electric grid. The Host Balancing Authority Area may, or may not, be directly interconnected with the CAISO Balancing Authority Area.

**- Hour-Ahead Scheduling Process (HASP)**

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.

**- Hourly Demand**

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

**- Hourly Real-Time LAP Price**

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

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**- HVAC**

High Voltage Access Charge

**- HVTRR**

High Voltage Transmission Revenue Requirement

**- Hydro Spill Generation**

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; 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; or iv) has increased regulated water output to avoid an impending spill.

**- IBAA**

Integrated Balancing Authority Area

**- IBAAOA**

Interconnected Balancing Authority Area Operating Agreement

**- ICAOA**

Interconnected Control Area Operating Agreement

**- Identification Code**

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

**- IFM**

Integrated Forward Market

**- IFM Bid Cost**

The sum of a BCR Eligible Resource's IFM Start-Up Cost, IFM Minimum Load Cost, IFM Pump Shut-Down Cost, IFM Transition Cost, IFM Pumping Cost, IFM Energy Bid Cost, and IFM AS Bid Cost.

**- 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

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according to Section 11.8.6.2 to calculate the Net IFM Bid Cost Uplift before allocation to Scheduling Coordinators.

**- IFM Commitment Period**

A Commitment Period determined by the IFM.

**- IFM Congestion Charge**

The Congestion Charge calculated by the CAISO for each Settlement Period of the IFM as the IFM MCC for Demand minus the IFM MCC for Supply.

**- IFM Congestion Credit**

A credit provided to Scheduling Coordinators to offset any IFM Congestions Charges that would otherwise be applied to the valid and balanced portions of any ETC, TOR or Converted Rights Self-Schedule in the IFM as provided in Section 11.2.1.5.

**- IFM Congestion Fund**

The funds the CAISO shall have available in each Settlement Period from which the CAISO will pay CRR Holders for the CRR(s) they hold in any Settlement Period, which shall determined as provided in Section 11.2.4.1.2.

**- IFM Load Uplift Obligation**

The obligation of a Scheduling Coordinator to pay its share of unrecovered IFM Bid Costs paid to resources through Bid Cost Recovery.

**- IFM MCL Credit For Eligible TOR Self-Schedules**

A credit provided to Scheduling Coordinators pursuant to Section 17.3.3 to offset any IFM Marginal Cost of Losses that would otherwise be applied to the valid and balanced portions of any TOR Self-Schedule in the IFM as provided in Section 11.2.1.5.

**- IFM Marginal Losses Surplus**

For each Settlement Period of the IFM, the IFM Marginal Losses Surplus is the difference between: (1) the Net Hourly Energy Charge; and (2) the total IFM Congestion Charges which do not include IFM Congestion Credits collected by the CAISO as specified in Section 11.2.1.5.

**- IFM Marginal Losses Surplus Credit**

The amount of money distributed to Scheduling Coordinators in the allocation of IFM Marginal Losses Surplus in proportion to Scheduling Coordinator's Measured Demand in accordance with Section 11.2.1.6.

**- IFM Market Revenue**

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.

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**- IFM MSS Price**

Either (1) The IFM LAP price for the MSS when the MSS scheduled internal Demand exceeds the MSS scheduled internal Supply; or (2) the weighted average of the IFM LMPs for all applicable PNodes within the relevant MSS when MSS scheduled internal Supply exceeds MSS scheduled internal Demand where weighting factors for computing the weighted average are based on the scheduled Supply at the corresponding PNodes.

**- IFM Pumping Bid Cost**

For the applicable Settlement Interval, the Pumping Cost submitted to the CAISO in the IFM divided by the number of Settlement Intervals in a Trading Hour as further provided in Section 11.8.2.1.4.

**- 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.

**- IIE**

Instructed Imbalance Energy

**- IIE Settlement Amount**

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.

**- Imbalance Energy**

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.

**- Import Bid**

A Supply Bid submitted to a CAISO Market at a Scheduling Point.

**- Import Capability Load Share**

A Load Serving Entity's proportionate share of the forecasted Resource Adequacy Compliance Year coincident peak Demand for the CAISO Balancing Authority Area relative to the total coincident peak Demand for the CAISO Balancing Authority Area as determined by the California Energy Commission.

**- Import Capability Load Share Ratio**

A Load Serving Entity's Import Capability Load Share divided by the sum of the Import Capability Load Shares of all Load Serving Entities with unfulfilled requests for Available Import Capability on a particular Intertie.

**- Import Capability Transfer Registration Process**

The electronic means by which Load Serving Entities and Market Participants must register with the

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CAISO any bilateral transfers of Existing Contract Import Capability, Pre-RA Import Commitment Capability, or Remaining Import Capability.

**- Incremental Change**

The change in dollar value of a specific Charge Code from the Initial Settlement Statement T+7B to a subsequent Recalculation Settlement Statement including any new Charge Codes or Trading Day charges appearing for the first time on a Settlement Statement.

**- Independent Entity**

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

**- Independent System Operator (ISO)**

See California Independent System Operator Corporation.

**- Ineffective Economic Bid**

An Economic Bid that is not accepted in a CAISO market because its impact on the value of the CAISO Markets objectives, as specified in Section 31.3 and 34.5, would exceed the impact of adjusting a Non-priced Quantity. The CAISO maintains in the Business Practice Manuals the current values of the scheduling parameters that specify the thresholds, including the provisions of Section 27.4.3.1, whereby the market software determines whether to adjust a Non-priced Quantity rather than accept Economic Bids.

**- Initial Settlement Statement T+7B**

A Settlement Statement generated by the CAISO for the calculation of Settlements for a given Trading Day, which is published on the seventh Business Day from the relevant Trading Day (T+7B) and is prior to the Invoice or Payment Advice published for the relevant bill period.

**- 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.

**- Instructed Imbalance Energy (IIE)**

The portion of Imbalance Energy resulting from Dispatch Instructions and HASP Intertie Schedules.

**- Integrated Balancing Authority Area (IBAA)**

A Balancing Authority Area as provided in Section 27.5.3 that has been determined to have one or more direct interconnections with the CAISO Balancing Authority Area, such that power flows within the IBAA significantly affect power flows within the CAISO Balancing Authority Area, and whose network topology is therefore modeled in further detail in the CAISO's Full Network Model beyond the simple radial modeling of interconnections between the IBAA and the CAISO Balancing Authority Area.

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**- Integrated Forward Market (IFM)**

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 Demand Bids.

**- Interchange**

Imports and exports between the CAISO Balancing Authority Area and other Balancing Authority Areas.

**- Interchange Schedule**

A final agreed-upon schedule of Energy to be transferred between the CAISO Balancing Authority Area and another Balancing Authority Area.

**- Interconnected Balancing Authority Area Operating Agreement**

An agreement entered into between the CAISO and a Balancing Authority of a Balancing Authority Area interconnected to the CAISO Balancing Authority Area to govern operation of their interconnected electric systems.

**- Interconnected Control Area Operating Agreement (ICAOA)**

An agreement entered into between the CAISO and a Balancing Authority of a Balancing Authority Area interconnected to the CAISO Balancing Authority Area to govern operation of their interconnected electric systems, a pro forma version of which has been accepted by FERC as a CAISO rate schedule in 87 FERC ¶ 61,231 (1999).

**- Interconnection**

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 Base Case Data**

Data including, but not limited to, base power flow, short circuit and stability databases, underlying Load, Generation, and transmission facility assumptions, Contingency lists and automated contingency files, including relevant Remedial Action Schemes, Operating Procedures, per unit costs, and transmission



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diagrams used to perform Phase I Interconnection Studies and Phase II Interconnection Studies. Interconnection Base Case Data may include Critical Energy Infrastructure Information (as that term is defined by FERC). The Interconnection Base Case Data shall include transmission facilities approved by the CAISO under Section 24 and Network Upgrades associated with Generation Facilities in (iv) below and Generating Facilities that (i) are directly interconnected to the CAISO Controlled Grid; (ii) are interconnected to Affected Systems and may have an impact on the Interconnection Request; (iii) have a pending request to interconnect to an Affected System; or (iv) are not interconnected to the CAISO Controlled Grid, but are subject to a fully executed LGIA (or its equivalent predecessor agreement) or for which an unexecuted LGIA (or its equivalent predecessor agreement) has been requested to be filed with FERC. To the maximum extent practicable, the Interconnection Base Case Data shall utilize the Unified Planning Assumptions developed pursuant to Section 24.2.4.

**- 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 Appendix A of the 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 Study**

A study conducted by the Participating TO(s), CAISO, or a third 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 Website for conducting the

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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 Website for conducting the Interconnection Feasibility Study.

**- Interconnection Financial Security**

Any of the financial instruments listed in GIP Section 9.1 set forth in Appendix Y that are posted by an Interconnection Customer.

**- Interconnection Handbook**

A handbook, developed by the Participating TO and posted on the Participating TO's website 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 or SGIP and the terms of the Participating TO's Interconnection Handbook, the terms in the LGIP or SGIP shall apply.

**- Interconnection Request**

An Interconnection Customer's request, in the form of Appendix 1 to the Large Generator Interconnection Procedures or Attachment 2 to the Small Generator Interconnection Procedures, in accordance with Section 25.1.

**- 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 the Point of Interconnection, pursuant to the terms of the Large Generator Interconnection Agreement, the Participating TO's TO Tariff, and the CAISO Tariff.

**- Interconnection Study**

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

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Interconnection Procedures set forth in Appendix U and in the Generator Interconnection Procedures set forth in Appendix Y or the Phase I Interconnection Study and the Phase II Interconnection Study described in the GIP set forth in Appendix Y.

**- Interconnection Study Cycle**

All requirements, actions, and respective obligations of the CAISO, Participating TO, and Interconnection Customer under the GIP set forth in Appendix Y applicable to an Interconnection Request submitted in one of the two annual Cluster Application Windows through execution by the parties or submission to FERC by one or more of the parties of a GIA.

**- Interconnection Study Deposit**

The cash deposit provided to the CAISO by Interconnection Customers under LGIP Section 3.5.1 set forth in Appendix Y as a requirement of a valid Interconnection Request to be used to offset the cost of the Interconnection Studies as set forth in GIP Sections 3.5.1.2 and 3.5.1.3 set forth in Appendix Y.

**- 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 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. §35.19a(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 Section 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 Contract) 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).

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**- Intermediary Balancing Authority**

The Balancing Authority that operates an Intermediary Balancing Authority Area.

**- Intermediary Balancing Authority Area**

Any Balancing Authority Area between a Host Balancing Authority Area and the CAISO Balancing Authority Area. An Intermediary Balancing Authority Area may, or may not, be directly interconnected with the CAISO Balancing Authority Area.

**- Interruptible Imports**

Non-firm 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. Interruptible Imports must be submitted through Self-Schedules in the Day-Ahead Market.

**- Inter-SC Trade**

A trade between Scheduling Coordinators of Energy, Ancillary Services, or IFM Load Uplift Obligation in accordance with the CAISO Tariff.

**- Inter-SC Trade Period**

Either the Day-Ahead Inter-SC Trade Period or the HASP Inter-SC Trade Period.

**- Intertie**

A Scheduling Point at a point of interconnection between the CAISO Balancing Authority Area and an interconnected Balancing Authority Area.

**- 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.

**- Invoice**

A document published as a result of an invoicing run pursuant to the CAISO Payments Calendar in which a Business Associate's current net financial obligation is a positive Settlement amount.

**- IOU**

An investor owned electric utility.

**- ISO**

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**- Joint Powers Agreement**

An agreement governing a Joint Powers Authority that is subject to the California Joint Exercise of Powers Act (California Government Code, Section 6500, et seq.).

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**- Joint Powers Authority**

An authority authorized by law through which two or more public entities jointly exercise their powers.

**- LAP**

Load Aggregation Point

**- 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.

**- Large Generator Interconnection Agreement (LGIA)**

The form of interconnection agreement applicable to an Interconnection Request pertaining to a Large Generating Facility processed under the interconnection procedures set forth in Appendix U, a pro forma version of which is set forth in Appendix V.

**- Large Generator Interconnection Procedures (LGIP)**

The interconnection procedures applicable to an Interconnection Request pertaining to a Generating Facility processed under Appendix U.

**- Large Project**

A transmission upgrade or addition that exceeds \$200 million in capital costs and consists of a proposed transmission line or substation facilities capable of operating at voltage levels greater than 200 kV. Location Constrained Resource Interconnection Facilities are not included in this definition, regardless of the capital cost or voltage level of the transmission upgrade or addition. A Large Project may also be a project that does not meet the dollar or voltage level requirement, but that the CAISO determines raises significant policy issues warranting a separate planning process.

**- LCRIF**

Location Constrained Resource Interconnection Facility

**- LCRIG**

Location Constrained Resource Interconnection Generator

**- LDF**

Load Distribution Factor

**- LFDP**

Load Following Deviation Penalty

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**- LGIA**

Standard Large Generator Interconnection Agreement or Large Generator Interconnection Agreement

**- LGIP**

Standard Large Generator Interconnection Procedures or Large Generator Interconnection Procedures

**- LGISPA**

Large Generator Interconnection Study Process Agreement

**- Line Loss Correction Factor**

The line loss correction factor as set forth in the technical specifications contained in the applicable Business Practice Manual.

**- LMP**

Locational Marginal Price

**- LMPM**

Local Market Power Mitigation

**- 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 Following Deviation Penalty (LFDP)**

The penalty assignable to an MSS Operator for deviations from Expected Energy outside the MSS Deviation Band.

**- Load Metric**

A Load Serving Entity's level of Load in megawatts for a defined time period that is exceeded in only 0.5% of the hours of that time period based on historical or forecast Load data.

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**- Load Migration**

The transfer of the responsibility to serve Load from one Load Serving Entity to another.

**- 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, that (a) (i) serves End Users within the CAISO Balancing Authority Area and (ii) 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 Balancing Authority Area; (b) is a federal power marketing authority that serves End Users; or (c) is the State Water Resources Development System commonly known as the State Water Project of the California Department of Water Resources.

**- Load Share Quantity**

The product of Total Import Capability and Import Capability Load Share.

**- Load Shedding**

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

**- Local Capacity Area**

Transmission constrained area as defined in the study referenced in Section 40.3.1.

**- Local Capacity Area Resource Deficiency**

The monthly difference in MW between any applicable Local Capacity Area Resource requirements for an LSE as established pursuant to Section 40.3.2 and the quantity of monthly MW shown in the LSE's Resource Adequacy Plan.

**- Local Capacity Area Resources**

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

**- Local Capacity Technical Study**

The study performed by the CAISO pursuant to Section 40.3.

**- 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).

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**- 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 to Section 39.7.

**- Local Publicly Owned Electric Utility**

A municipality or municipal corporation operating as a public utility furnishing electric services, a municipal utility district furnishing electric services, 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, or the board of directors of an electric cooperative, 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 facilities under the control of the CAISO.

**- Location**

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

**- Location Code**

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.

**- Location Constrained Resource Interconnection Facility**

A High Voltage Transmission Facility that has been determined by the CAISO to satisfy all of the requirements of Section 24.1.3.



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**- Location Constrained Resource Interconnection Generator**

A Generating Unit that (a) uses a primary fuel source or source of energy that is in a fixed location and cannot practicably be transported from that location; and (b) is located in an Energy Resource Area. Generating Units meeting criterion (a) shall include, but not be limited to, wind, solar, geothermal, hydroelectric, digester gas, landfill gas, ocean wave and ocean thermal tidal current Generating Units.

**- Locational Marginal Price (LMP)**

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

**- Long Start Unit**

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

**- Long Term Congestion Revenue Right (Long Term CRR)**

A Congestion Revenue Right differentiated by season and time-of-use period (on-peak and off-peak) with a term of ten years.

**- Low Voltage Access Charge (LVAC)**

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 (LVTRR)**

The portion of a Participating TO's TRR associated with and allocable to the Participating TO's Low Voltage Transmission Facilities and Converted Rights associated with Low Voltage Transmission Facilities that are under the CAISO Operational Control.

**- Low Voltage Wheeling Access Charge**

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

**- LRA**

Local Regulatory Authority

**- LSE**

Load Serving Entity

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**- LVAC**

Low Voltage Access Charge

**- LVTRR**

Low Voltage Transmission Revenue Requirement

**- Maintenance Outage**

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.

**- Manual RMR Dispatch**

An RMR Dispatch Notice issued by the CAISO other than as a result of the MPM-RRD process.

**- 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 Awards 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.

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**- 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 Disruption**

An action or event that causes a failure of a CAISO Market, related to system operation issues or System Emergencies referred to in Sections 7.6 and 7.7, respectively.

**- Market Efficiency Enhancement Agreement (MEEA)**

An agreement between the CAISO and the Balancing Authority of an IBAA, or any entity or group of entities that use the transmission system of an IBAA, which provides for an alternative modeling and pricing arrangement to the default IBAA modeling and pricing provisions provided in Section 27.5.3. The CAISO may enter into such an agreement subject to FERC review and acceptance. Creation and modification of such an agreement will be pursuant to the process set forth in Section 27.5.3 and will be posted on the CAISO Website.

**- Market Interruption**

Actions taken by the CAISO outside of the normal market operation of any of the CAISO Markets in the event of a Market Disruption, to prevent a Market Disruption, or minimize the extent of a Market Disruption as provided in Sections 7.7.15 and 34.9.

**- 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 defined in 18 CFR § 35.28(b)(7).

**- Market Notice**

An electronic notice issued by the CAISO that the CAISO posts on the CAISO Website and provides by e-mail to those registered with the CAISO to receive CAISO e-mail notices.

**- Market Participant**

An entity, including a Scheduling Coordinator, who either: (1) participates in the CAISO Markets through the buying, selling, transmission, or distribution of Energy, capacity, or Ancillary Services into, out of, or through the CAISO Controlled Grid; (2) is a CRR Holder or Candidate CRR Holder, or (3) is a Convergence Bidding Entity.

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**- Market Power Mitigation - RRD**

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 O.

**- 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 Day-Ahead, Hour-Ahead Scheduling Process and Real-Time Bids, maintaining the Open Access Same-Time Information System, monitoring market performance, ensuring generator compliance with market rules as defined in the CAISO Tariff and the Business Practice Manuals, and determining LMPs. The formula for determining the Market Usage Charge is set forth in Appendix F, Schedule 1, Part A.

**- Market Violation**

A CAISO Tariff violation, violation of a Commission-approved order, rule or regulation, market manipulation, or inappropriate dispatch that creates substantial concerns regarding unnecessary market inefficiencies.

**- Master File**

A file containing information regarding Generating Units, Loads and other resources, or its successor.

**- Material Change In Financial Condition**

A change in or potential threat to the financial condition of a Market Participant that increases the risk that the Market Participant will be unlikely to meet some or all of its financial obligations. The types of Material Change in Financial Condition include but are not limited to the following:

- (a) a credit agency downgrade;
- (b) being placed on a credit watch list by a major rating agency;
- (c) a bankruptcy filing;
- (d) insolvency;
- (e) the filing of a material lawsuit that could significantly and adversely affect past, current, or future financial results; or
- (f) any change in the financial condition of the Market Participant which exceeds a five (5) percent reduction in the Market Participant's Tangible Net Worth or Net Assets for the Market Participant's preceding fiscal year, calculated in accordance with generally accepted accounting practices.

**- Material Modification**

A modification that has a material impact on the cost or timing of any Interconnection Request or any

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other valid interconnection request with a later queue priority date.

**- Maximum Daily Start-Ups**

The maximum number of times a Generating Unit can be started up within one day, due to environmental or physical operating constraints.

**- Maximum Import Capability**

A quantity in MW determined by the CAISO for each Intertie into the CAISO Balancing Authority Area to be deliverable to the CAISO Balancing Authority Area based on CAISO study criteria.

**- Maximum Net Dependable Capacity (MNDC)**

A term defined in and used in association with an RMR Contract.

**- Maximum Operating Limit (MOLmax)**

The lower of the maximum allowable output when the resource is operating or the upper bound of the Regulating Range if the resource is providing Regulation service.

**- MCC**

Marginal Cost of Congestion

**- MCL**

Marginal Cost of Losses

**- MDT**

Minimum Down Time

**- Measured Demand**

The metered CAISO Demand plus Real-Time Interchange Export Schedules.

**- Medium Start Unit**

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

**- MEEA**

Market Efficiency Enhancement Agreement

**- Merchant Transmission CRRs**

Incremental CRRs that are created by the addition of a Merchant Transmission Facility. Merchant Transmission CRRs are effective for thirty (30) years or for the pre-specified intended life of the facility, whichever is less.

**- Merchant Transmission Facility**

A transmission facility or upgrade that is part of the CAISO Controlled Grid and whose costs are paid by a Project Sponsor that does not recover the cost of the transmission investment through the CAISO's

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Access Charge or WAC or other regulatory cost recovery mechanism.

**- 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**

A format for submitting Meter Data to the CAISO which will be published by the CAISO on the CAISO Website or available on request.

**- Metered Balancing Authority Area Load**

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

- (a) all metered Demand for Energy of Scheduling Coordinators for the supply of Loads in the CAISO's Balancing Authority Area, plus (b) all Energy for exports by Scheduling Coordinators from the CAISO Balancing Authority 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 Subsystem 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.

**- Metered Control Area Load**

Metered Balancing Authority Area Load.

**- 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.

**- Metered Subsystem (MSS)**

A geographically contiguous system located within a single zone which has been operating as an electric utility for a number of years prior to the CAISO Operations Date as a municipal utility, water district, irrigation district, state agency or federal power marketing authority subsumed within the CAISO Balancing Authority Area and encompassed by CAISO certified revenue quality meters at each interface point with the CAISO Controlled Grid and CAISO certified revenue quality meters on all Generating Units

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or, if aggregated, each individual resource, Participating Load, and Proxy Demand Resource internal to the system, which is operated in accordance with a MSS Agreement described in Section 4.9.1.

**- Metered Subsystem Agreement (MSS Agreement)**

A negotiated agreement between the CAISO and an MSS Operator regarding the operation of an MSS in relation to the CAISO entered into pursuant to Section 4.9, which MSS Agreement will incorporate the provision of Section 4.9, unless otherwise agreed.

**- Metering Facilities**

Revenue quality meters, instrument transformers, secondary circuitry, secondary devices, meter data servers, related communication facilities and other related local equipment.

**- Meter Points**

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

**- Meter Service Agreement For CAISO Metered Entities**

An agreement entered into between the CAISO and a CAISO Metered Entity consistent with the provisions of Section 10, a pro forma version of which is set forth in Appendix B.6.

**- Meter Service Agreement for Scheduling Coordinators (MSA SC)**

An agreement entered into between the CAISO and a Scheduling Coordinator consistent with the provisions of Section 10, a pro forma version of which is set forth in Appendix B.7.

**- Minimum Down Time (MDT)**

The minimum amount of time that a Generating Unit must stay off-line after being Shut-Down, due to physical operating constraints.

**- Minimum Load**

For a Generating Unit, the minimum sustained operating level at which it can operate at a continuous sustained level. For a Participating Load, the Operating Level at reduced consumption pursuant to a Dispatch Instruction. For a Proxy Demand Resource, the smallest discrete load reduction possible for the Proxy Demand Resource.

**- Minimum Load Bid**

The Bid component that indicates the Minimum Load Cost for the Generating Unit, Participating Load, or Proxy Demand Resource specified by a non-negative number in dollars per hour, which applies for the entire Trading Day for which it is submitted.

**- Minimum Load Costs**

The costs a Generating Unit, Participating Load, or Proxy Demand Resource incurs operating at Minimum Load, which in the case of Participating Load or Proxy Demand Resource may not be negative.

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**- Minimum Load Energy**

The product of the relevant Minimum Load and the duration of the Settlement Interval.

**- Minimum Operating Limit (MOLmin)**

The greater of the Minimum Load or the lower bound of the Regulating Range if the resource offers Regulation service.

**- Minimum Run Time**

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.

**- Mitigation Frequency**

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.

**- Mitigation Measures**

The CAISO market power mitigation measures under the CAISO Tariff.

**- MNDC**

Maximum Net Dependable Capacity

**- Modified 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 Modified Reserve Sharing LSE.

**- MOLmax**

Maximum Operating Limit

**- MOLmin**

Minimum Operating Limit

**- Monthly Available CRR Capacity**

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 in accordance with Section 36.4.

**- Monthly CRR**

A Congestion Revenue Right whose term is one calendar month in length and distributed in the monthly CRR Allocation and monthly CRR Auction.

**- Monthly CRR Eligible Quantity**

The MW quantity of CRRs a CRR Holder or Candidate CRR Holder is eligible to nominate for the relevant month in a monthly CRR Allocation.



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**- Monthly CRR Load Metric**

The load metric used for determining eligibility for CRR Allocation as provided in Section 36.8.2.2.

**- Moody's KMV Equivalent Rating**

The rating derived by Moody's KMV from the Moody's KMV Estimated Default Frequency that effectively translates the Moody's Estimated Default Frequency into a comparable credit agency rating. The Moody's KMV Equivalent Rating may correspond to the Moody's KMV Spot Credit Rating (CreditEdge Plus), Bond Default Rate Mapping or Dynamic Rating (RiskCalc), or other rating established by Moody's KMV for this purpose.

**- MPM-RRD**

Market Power Mitigation-Reliability Requirement Determination

**- MSA CAISOME**

Metered Service Agreement for CAISO Metered Entities

**- MSA SC**

Metered Service Agreement for Scheduling Coordinators

**- MSC**

Market Surveillance Committee

**- MSG Configuration**

A qualified and registered operating mode of a Multi-Stage Generating Resource, with a distinct set of operating characteristics. All MSG Configurations for Multi-Stage Generating Resources are operable on-line modes.

**- MSG Transition**

A feasible operation from one MSG Configuration to another as registered in the Transition Matrix associated with a specific Transition Time and Transition Cost.

**- MSS**

Metered Subsystem

**- MSS Aggregation**

Either (1) a Metered Subsystem or (2) a collection of Metered Subsystems represented by a single MSS Aggregator.

**- MSS Aggregation Net Measured Demand**

The sum of the net metered CAISO Demand from all the Net-Load MSSs in the MSS Aggregation plus any exports out of the CAISO Balancing Authority Area from the MSS Aggregation. Net metered CAISO Demand of a MSS is defined as the algebraic difference between the gross CAISO Demand and

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Generation internal to the MSS.

**- MSS Aggregation Net Non-ETC/TOR Measured Demand**

The sum of the net metered non-ETC/TOR CAISO Demand from all of the non-ETC/TOR Net-Load MSSs in the MSS Aggregation plus any non-ETC/TOR exports out of the CAISO Balancing Authority Area from the MSS Aggregation. Net metered non-ETC/TOR CAISO Demand of an MSS is defined as the algebraic difference between the non-ETC/TOR CAISO Demand and the non-ETC/TOR Generation within the MSS.

**- MSS Aggregator**

An entity that has executed an agreement with the CAISO that enables it to represent individual MSS Operators in the CAISO Markets on an aggregated basis, which agreement has been accepted by FERC.

**- MSS Aggregator CRR Entity Agent Agreement**

An agreement between the CAISO and an MSS Aggregator by which the MSS Aggregator commits to act as agent for aggregation of MSS Operators in the CRR Allocation, CRR Auction, and Secondary Registration System process, a pro forma version of which is set forth in Appendix B.12.

**- MSS Demand**

CAISO Demand specified in an MSS Agreement as being within the MSS.

**- MSS Deviation Band**

The amount by which a Load following MSS Operator can deviate from Expected Energy without incurring a Load Following Deviation Penalty, equal to three percent (3%) of an MSS Operator's gross metered Demand in the MSS and exports from the MSS, adjusted for Forced Outages and any CAISO directed firm Load Shedding for the MSS's portfolio as a whole.

**- MSS Load Following Energy**

IIE, exclusive of Standard Ramping Energy, Ramping Energy Deviation, and Residual Imbalance Energy, produced or consumed due to Load following by an MSS. MSS Load Following Energy is the IIE that corresponds to the algebraic Qualified Load Following Instruction, relative to the Day-Ahead Schedule. MSS Load Following Energy does not coexist with HASP Scheduled Energy, and it does not overlap with Standard Ramping Energy, Ramping Energy Deviation, or Residual Imbalance Energy, but it may overlap with Day-Ahead Scheduled Energy, Derate Energy, Exceptional Dispatch Energy, Real-Time Self-Scheduled Energy, and Optimal Energy. MSS Load Following Energy is settled as provided in Section 11.5.1, and it is not included in BCR as described in Section 11.8.4.

**- MSS Net Negative Uninstructed Deviation**

Net Negative Uninstructed Deviation for an MSS, with MSS Load Following Energy included in the netting.

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**- MSS Operator**

An entity that owns an MSS and has executed a MSS Agreement.

**- MSS Supply**

Supply specified in an MSS Agreement as supplying an MSS.

**- Multi-Point CRR**

The CAISO does not support Multi-Point CRRs. A CRR Obligation specified according to one or more CRR 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.

**- Multi-Stage Generating Resources**

A Generating Unit or Dynamic Resource-Specific System Resource that for reasons related to its technical characteristics can be operated in various MSG Configurations such that only one such MSG Configuration can be operated in any given Dispatch Interval. In addition, subject to the requirements in Section 27.8, the following technical characteristics qualify a Generating Unit or Dynamic Resource-Specific System Resource as a Multi-Stage Generating Resource if the resource; (1) is a combined cycle gas turbine resource; (2) is a Generating Unit or Dynamic Resource-Specific System Resources with multiple operating or regulating ranges but which can operate in only one of these ranges at any given time; or (3) has one or more Forbidden Operating Regions. Metered Subsystems, Pumped-Storage Hydro Units, and Pumping Loads, and System Resources that are not Dynamic Resource-Specific System Resources do not qualify as Multi-Stage Generating Resources.

**- Municipal Tax Exempt Debt**

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.

**- Nationally Recognized Statistical Rating Organizations**

National credit rating agencies as designated by the U.S. Securities & Exchange Commission.

**- Native Load**

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

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**- Negative Operating Reserve Obligation Adjustment Factor**

The adjustment factor specified in Section 11.10.5.

**- 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 Corporation or its successor.

**- NERC Generating Availability Data System (GADS)**

The NERC standard for determination of generation resource net dependable capacity.

**- NERC Reliability Standards For Modeling, Data And Analysis**

A set of NERC Reliability Standards applicable to the transmission planning process.

**- NERC/WECC Charge Assessment Year**

A given year for which NERC/WECC Charges will be assessed by the WECC based on data from the calendar year two years prior to the year of the NERC/WECC Charge assessment.

**- NERC/WECC Charges**

The charges approved by FERC, pursuant to Section 215 of the FPA and FERC issuances related thereto, that provide funding for the statutory-related functions performed by NERC, the WECC, and regional advisory bodies that serve the WECC, or their successors or assignees.

**- NERC/WECC Charge Trust Account**

An account to be established by the CAISO for the purpose of maintaining funds collected from Scheduling Coordinators and disbursing such funds to the WECC.

**- NERC/WECC Metered Demand**

For purposes of calculating NERC/WECC Charges, a Scheduling Coordinator's net metered CAISO Demand plus Unaccounted for Energy for net metered CAISO Demand and Transmission Losses for metered CAISO Demand. A Scheduling Coordinator's net metered CAISO Demand equals the Scheduling Coordinator's metered CAISO Demand (which adds Energy associated with imports from and subtracts Energy associated with exports to other Balancing Authority Areas), less metered CAISO Demand for Station Power and for Energy required for storage at electric energy storage facilities, such as pumped storage. For purposes of calculating NERC/WECC Metered Demand, Unaccounted for Energy and Transmission Losses allocable to net metered CAISO Demand will be allocated pro rata to each Scheduling Coordinator based on the Scheduling Coordinator's net metered CAISO Demand.

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**- Net Assets**

For governmental and not-for-profit entities, as defined in Step 4(b) of Section 12.1.1.1.2.

**- Net Hourly Energy Charge**

Total charges to all Demand and Virtual Demand Awards minus total payments to all Supply and Virtual Supply Awards both based on the product of MWh amounts specified in all Day-Ahead Schedules and Virtual Awards and the relevant Day-Ahead LMPs at the applicable PNodes or Aggregated Pricing Node. This also includes any amounts associated with price corrections for Virtual Awards in accordance with Section 11.21.2.

**- 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-Load MSS**

An MSS with positive net metered CAISO Demand of the MSS within the MSS Aggregation.

**- Net Negative CAISO Demand Deviation**

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 Demand (i.e., Demand that appears unscheduled in Real-Time) and overscheduled Generation (i.e., Generation that is scheduled in the DAM and does not appear in Real-Time), which are netted for each Settlement Interval, apply to a Scheduling Coordinator's entire portfolio, and include Demand, Generation, imports and exports.

**- Net Output**

The gross Energy output from a Generating Unit less the Station Power requirements for such Generating Unit during the Netting Period, or the Energy available to provide Remote Self-Supply from a generating facility in another Balancing Authority Area during the Netting Period.

**- Net Procurement**

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

**- 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

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

**- Net Scheduled QF**

A Qualifying Facility identified in a QF PGA operated as a single unit such that the Energy bid or self-scheduled with the CAISO is the net value of the aggregate electrical net output of the Qualifying Facility and the Self-provided Load.

**- Netting Period**

A calendar month, representing the interval over which the Net Output of one or more generating resources in a Station Power Portfolio is available to be attributed to the self-supply of Station Power in that Station Power Portfolio.

**- Network Upgrades**

The additions, modifications, and upgrades to the CAISO Controlled Grid required at or beyond the Point of Interconnection to accommodate the interconnection of the Generating Facility to the CAISO Controlled Grid. Network Upgrades shall consist of Delivery Network Upgrades and Reliability Network Upgrades. Network Upgrades do not include Distribution Upgrades.

**- New High Voltage Facility**

A High Voltage Transmission Facility of a Participating TO that is placed in service after the beginning of the TAC 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 TAC 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 Responsible 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 Balancing Authority Area or the CAISO Controlled Grid, which includes the Load and Generating Unit busses in the CAISO

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Balancing Authority Area and at the Intertie busses between the CAISO Balancing Authority Area and interconnected Balancing Authority 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 reliability standards, including any requirements of the NRC.

**- Non-Availability Charge**

The monthly charge that the CAISO may assess to a Resource Adequacy Resource under the Availability Standards program in accordance with Section 40.9.

**- Non-CPUC Load Serving Entity**

Any entity serving retail Demand in the CAISO Balancing Authority Area not within the jurisdiction of the CPUC, including (i) a local publicly owned electric utility under section 9604 of the California Public Utilities Code 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 Balancing Authority Area to Supply or consume Energy, such as certain Qualifying Facilities.

**- Non-Dynamic Resource-Specific System Resource**

A Non-Dynamic System Resource that is a specific generation resource outside the CAISO Balancing Authority Area.

**- Non-Dynamic System Resource**

A System Resource that is not capable of submitting a Dynamic Schedule, or for which a Dynamic Schedule has not been submitted, which may be a Non-Dynamic Resource-Specific System Resource.

**- Non-Load-Serving Participating TO**

A Participating TO that (1) is not a UDC, MSS Operator or Scheduling Coordinator serving End-Use Customers and (2) does not have Gross Load in accordance with Section 9 of Schedule 3 of Appendix F.

**- Non-Overlapping Optimal Energy**

The portions of Optimal Energy that are not Overlapping Optimal Energy, which are indexed against the relevant Energy Bid and sliced by Energy Bid price.

**- Non-Participating TO**

A TO that is not a party to the Transmission Control Agreement or, for the purposes of Section 16.1, the holder of transmission service rights under an Existing Contract that is not a Participating TO.

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**- Non-priced Quantity**

As set forth in Section 27.4.3, a quantitative value in a CAISO Market that may be adjusted by the SCUC or SCED in the CAISO market optimizations but that does not have an associated bid price submitted by a Scheduling Coordinator. The Non-priced Quantities that may be so adjusted are: Energy Self-Schedules, Transmission Constraints, market energy balance constraints, Ancillary Service requirements, conditionally qualified and conditionally unqualified Ancillary Service self-provision, limits in RUC on minimum load energy, quick start capacity and minimum generation, Day-Ahead Energy Schedules resulting from the IFM, and estimated HASP Energy Self-Schedules used in RUC.

**- Non-Spinning Reserve**

The portion of resource capacity that is capable of being synchronized and Ramping to a specified load in ten minutes (or that is capable of being interrupted in ten (10) minutes) and that is capable of running (or being interrupted) for at least thirty (30) minutes from the time it reaches its award capacity.

**- 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.

**- 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.

**- No Pay**

The rescission of a payment made for provision of Spinning Reserve and/or Non-Spinning Reserve when, subsequent to the AS Award for such Ancillary Service and payment, the Ancillary Service becomes Undispatchable Capacity, Unavailable Capacity, Undelivered Capacity, or, in certain circumstances, unsynchronized capacity.

**- NOROCAP**

Negative Operating Reserve Obligation Credit Adjustment Factor

**- NRC**

The Nuclear Regulatory Commission or its successor.

**- NRC Standards**

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

**- OASIS**

Open Access Same-Time Information System



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**- OBAALSE**

Out-of-Balancing Authority Area Load Serving Entity

**- Off**

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

**- Off-Peak Deliverability Assessment**

The technical study performed under GIP Section 6.3.2.2 set forth in Appendix Y.

**- Offsetting CRR**

One of the pair of new equal and opposite CRRs created and allocated by the CAISO to reflect Load Migration between two LSEs pursuant to the provisions in Section 36.8.5, which is allocated to the Load losing LSE and is opposite in direction to the corresponding CRR previously allocated to that LSE and is denominated in a MW quantity that reflects the net amount of Load Migration between the two LSEs.

**- On**

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

**- On-Peak Deliverability Assessment**

The technical study performed under GIP Section 6.3.2.1 set forth in Appendix Y.

**- On-Site Self-Supply**

Energy from a Generating Unit that self-supplies all or a portion of its contemporaneous Station Power Load that is netted pursuant to Section 10.1.3 or is deemed to have self-supplied all or a portion of its associated non-contemporaneous Station Power Load without use of the CAISO Controlled Grid during the Netting Period pursuant to Section 3.1 of the Station Power Protocol in Appendix I.

**- Open Access Same-Time Information System (OASIS)**

The electronic posting system for transmission access data that the CAISO maintains on the CAISO Website that allows all Market Participants to view the data simultaneously.

**- Operating Day**

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

**- 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.

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**- Operating Reserve**

The combination of Spinning and Non-Spinning Reserve required to meet NERC and WECC reliability standards, including any requirements of the NRC for reliable operation of the CAISO Balancing Authority Area.

**- Operating Reserve Obligation**

The obligation of a Scheduling Coordinator to pay its share of costs incurred by the CAISO in procuring Operating Reserves.

**- Operating Reserve Ramp Rate**

A single number included in Ancillary Service Bids and Submissions to Self-Provide Ancillary Services for Spinning Reserve and Non-Spinning Reserve that represents the Ramp Rate of a resource used in the procurement of Operating Reserve capacity.

**- Operating Transfer Capability (OTC)**

The maximum capability of a transmission path to transmit real power, expressed in MW, at a given point in time, as further defined in Appendix L.

**- Operational Adjustment**

The difference between the Energy scheduled in the Balancing Authority Area check-out process for Non-Dynamic System Resources and the sum of Dispatch Interval IIE.

**- 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.

**- Operational Flexibility**

The latitude allowed the CAISO necessary to provide reasonable assurance that the transmission network is designed in such a way that it will be secure considering the inherent uncertainty in system conditions or unforeseen circumstances, based on the current system configuration and available generation.

**- Operational Ramp Rates**

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.

**- Operator**

The operator of facilities that comprise the CAISO Controlled Grid or a Participating Generator.

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**- Optimal Energy**

Any remaining IIE after accounting for all other IIE subtypes. Optimal Energy does not overlap with Standard Ramping Energy, Ramping Energy Deviation, Residual Imbalance Energy, Real-Time Minimum Load Energy, Derate Energy, and Exceptional Dispatch Energy, but it may overlap with Day-Ahead Scheduled Energy, HASP Scheduled Energy, and MSS Load Following Energy. Optimal Energy is indexed against the relevant Energy Bid and sliced by service type, depending on the AS capacity allocation on the Energy Bid. Optimal Energy is also divided into Overlapping Optimal Energy and Non-Overlapping Optimal Energy. Any Optimal Energy slice below or above the Energy Bid has no associated Energy Bid price, and it is not included in BCR as described in Section 11.5.1.1.

**- Optional Interconnection Study**

A sensitivity analysis based on assumptions specified by the Interconnection Customer in the Optional Interconnection Study Agreement.

**- Optional Interconnection Study Agreement**

The form of agreement accepted by FERC and posted on the CAISO 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.

**- OTC**

Operating Transfer Capability

**- Outage**

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

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**- Out-Of-Balancing Authority Area Load Serving Entity**

An entity serving end-users located outside the CAISO Balancing Authority Area and that has been granted authority or has an obligation pursuant to federal, state or local law, or under contracts to provide electric service to such end-users located outside the CAISO Balancing Authority Area.

**- Overgeneration**

A condition that occurs when total Supply exceeds total Demand in the CAISO Balancing Authority Area.

**- Overlapping Optimal Energy**

The portion of Optimal Energy that overlaps with MSS Load Following Energy.

**- Partial Resource Adequacy 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 Balancing Authority Area.

**- Participating Generator**

A Generator or other seller of Energy or Ancillary Services through a Scheduling Coordinator over the CAISO Controlled Grid (1) from a Generating Unit with a rated capacity of 1 MW or greater, (2) from a Generating Unit with a rated capacity of from 500 kW up to 1 MW for which the Generator elects to be a Participating Generator, or (3) from a Generating Unit providing Ancillary Services or submitting Energy 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 or QF PGA.

**- Participating Generator Agreement (PGA)**

An agreement between the CAISO and a Participating Generator, a pro forma version of which is set forth in Appendix B.2.

**- 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 set forth in a Business Practice Manual.

**- Participating Intermittent Resource Export Fee**

Fee based on Schedule 4 of Appendix F and Section 5.3 of Appendix Q.

**- Participating Intermittent Resource Fees**

Fees set forth in Section 11.12.3.

**- Participating Load**

An entity, including an entity with Pumping Load or Aggregated Participating Load, providing Curtailable

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Demand, which has undertaken in writing by execution of a Participating Load Agreement to comply with all applicable provisions of the CAISO Tariff.

**- Participating Load Agreement (PLA)**

An agreement between the CAISO and a Participating Load, a pro forma version of which is set forth in Appendix B.4.

**- Participating TO or Participating Transmission Owner (PTO)**

A party to the Transmission Control Agreement whose application under Section 2.2 of the Transmission Control Agreement 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. A Participating TO may be an Original Participating TO or a New Participating TO.

**- Participating TO (PTO) Service Territory**

The area in which an IOU, a Local Public Owned Electric Utility, or federal power marketing authority that has turned over its transmission facilities and/or Entitlements to CAISO Operational Control is obligated to provide electric service to Load. A PTO Service Territory may be comprised of the Service Areas of more than one Local Publicly Owned Electric Utility, if they are operating under an agreement with the CAISO for aggregation of their MSS and their MSS Operator is designated as the Participating TO.

**- Participating TO's Interconnection Facilities**

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 Appendix A to the 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.

**- Path 15 Upgrade**

The upgraded transmission facilities on Path 15 that have been turned over to CAISO Operational Control.

**- Payment Advice**

A document published as a result of an invoicing run pursuant to the CAISO Payments Calendar in which a Business Associate's current net financial obligation is a negative Settlement Amount.

**- Payment Date**

The date by which invoiced amounts are to be paid under the terms of the CAISO Tariff.

**- PDR**

Proxy Demand Resource

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**- PDRA**

Proxy Demand Resource Agreement

**- PDR Energy Measurement**

The Energy quantity calculated by comparing the Customer Baseline of a Proxy Demand Resource against its actual underlying Load for a Demand response event.

**- PGA**

Participating Generator Agreement

**- Phase I Interconnection Study**

The engineering study conducted or caused to be performed by the CAISO, in coordination with the applicable Participating TO(s), 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 (ies) were interconnected without identified project modifications or system modifications, as provided in the On-Peak Deliverability Assessment or Off-Peak Deliverability Assessment, and other potential impacts, including but not limited to those identified in the Scoping Meeting as described in the Generator Interconnection Procedures set forth in Appendix Y. The study will also identify the approximate total costs, based on per unit costs, of mitigating these impacts, along with an equitable allocation of those costs to Interconnection Customers for their individual Generating Facilities.

**- Phase II Interconnection Study**

An engineering and operational study conducted or caused to be performed by the CAISO, in coordination with the applicable Participating TO(s), to determine the Point of Interconnection and a list of facilities (including the Participating TO's Interconnection Facilities, Network Upgrades, Distribution Upgrades, and Stand Alone Network Upgrades), the cost of those facilities, and the time required to interconnect the Generating Facility(ies) with the CAISO Controlled Grid.

**- Physical Scheduling Plant**

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 components would cause the CAISO to incur scheduling costs far in excess of the benefits of having scheduled such individual components

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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.

**- Physical Trade**

An Inter-SC Trade of Energy at an individual Generating Unit's PNode or at the unique Aggregated Pricing Node of a Physical Scheduling Plant that is submitted to the CAISO for Settlement through the CAISO Market and is subject to physical validation.

**- PIR Export Percentage**

The PIR Export Percentage will be calculated for each Participating Intermittent Resource as the ratio of the Participating Intermittent Resource's PMax in the CAISO Master File minus the MW subject to an exemption under Section 5.3.2 of the EIRP in Appendix Q on a MW basis to the Participating Intermittent Resource's PMax in the CAISO Master File.

**- PLA**

Participating Load Agreement

**- Planning Standards Committee**

The committee appointed under Section 24.2.1.

**- PMax**

The maximum normal capability of the Generating Unit. PMax should not be confused as an emergency rating of the Generating Unit.

**- PMin**

The minimum normal capability of the Generating Unit.

**- PMS**

Power Management System

**- PNode**

Pricing Node

**- PNP**

Priority Nomination Process

**- PNP Eligible Quantity**

The maximum MW quantity of CRRs an LSE is eligible to nominate in the Priority Nomination Process of the CRR Allocation.

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**- POD**

Point(s) of Delivery

**- Point Of Change Of Ownership**

The point, as set forth in Appendix A to the Large Generator Interconnection Agreement, where the Interconnection Customer's Interconnection Facilities connect to the Participating TO's Interconnection Facilities.

**- Point Of Demarcation**

For a Net Scheduled QF, the point (1) where the electrical conductors from the Net Scheduled QF contact an electric utility system or the CAISO Controlled Grid; or (2) if dedicated utility distribution facilities are employed, where the dedicated facilities contact the electric utility system or the CAISO Controlled Grid.

**- Point Of Interconnection**

The point, as set forth in Appendix A to the Large Generator Interconnection Agreement or Attachment 3 to the Small Generator Interconnection Agreement, where the Interconnection Facilities connect to the CAISO Controlled Grid.

**- Point(s) Of Delivery (POD) Or Withdrawal**

Point(s) within the CAISO Balancing Authority Area where Energy and Ancillary Services are made available to a receiving party under this CAISO Tariff.

**- Point(s) Of Receipt (POR) Or Injection**

Point(s) within the CAISO Balancing Authority Area where Energy and Ancillary Services are made available by a delivering party under this CAISO Tariff.

**- Point-To-Point CRR**

A CRR Option or CRR Obligation with a single CRR Source to a single CRR Sink.

**- POR**

Point(s) of Receipt

**- Power**

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**

A network model used by the CAISO to model the voltages, power injections and power flows on the CAISO Controlled Grid and adjacent Balancing Authority Areas.



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**- Power Management System (PMS)**

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.

**- Power Transfer Distribution Factor (PTDF)**

The percentage of a power transfer that flows on a transmission facility as a result of the injection of power at a specific bus and the withdrawal of power at another bus or a Reference Bus.

**- Pre-Construction Activities**

Actions by a Participating TO, other than those required by an Engineering and Procurement Agreement under GIP Section 10 in Appendix Y, undertaken prior to Construction Activities in order to prepare for the construction of Participating TO's Interconnection Facilities or Network Upgrades assigned to the Interconnection Customer, including, but not limited to, preliminary engineering, permitting activities, environmental analysis, or other activities specifically needed to obtain governmental approvals for the Participating TO's Interconnection Facilities or Network Upgrades.

**- Preliminary NERC/WECC Charge Invoice**

An initial invoice issued by the CAISO that reflects an allocation of NERC/WECC Charges to a Scheduling Coordinator for a NERC/WECC Charge Assessment Year based on (i) the Scheduling Coordinator's NERC/WECC Metered Demand for the NERC/WECC Charge Assessment Year as described in Section 11.20.4, multiplied by (ii) the Preliminary NERC/WECC Charge Rate for the NERC/WECC Charge Assessment Year.

**- Preliminary NERC/WECC Charge Rate**

The preliminary rate to be paid by Scheduling Coordinators for NERC/WECC Charges for a NERC/WECC Charge Assessment Year based on (i) the portions of the proposed budgets of NERC, WECC, and regional advisory bodies that serve the WECC that the WECC notifies the CAISO in writing are allocable to the CAISO for the NERC/WECC Charge Assessment Year or, alternatively, if the WECC does not provide such written notification to the CAISO in accordance with the CAISO-WECC Billing Services Agreement, the portions of the budgets of NERC, WECC, and regional advisory bodies that serve that WECC that the WECC informed the CAISO were allocable to the CAISO for the immediately preceding NERC/WECC Charge Assessment Year divided by (ii) the total of all Scheduling Coordinators' NERC/WECC Metered Demand for the NERC/WECC Charge Assessment Year as described in Section 11.20.4, including any adjustments to the calculation of NERC/WECC Metered Demand, as reported to the WECC pursuant to Section 11.20.4(b), and including any additional adjustments to the calculation of

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NERC/WECC Metered Demand, based on decisions by the WECC to permit such adjustments, that the WECC provides to the CAISO in a written statement in accordance with the CAISO-WECC Billing Services Agreement.

**- Pre-RA Import Commitment**

Any power purchase agreement, ownership interest, or other commercial arrangement entered into on or before March 10, 2006, by a Load Serving Entity serving Load in the CAISO Balancing Authority Area for the procurement of Energy or capacity from a resource or resources located outside the CAISO Balancing Authority Area. The Pre-RA Import Commitment shall be deemed to terminate upon the expiration of the initial term of the Pre-RA Import Commitment, notwithstanding any "evergreen" or other renewal provision exercisable at the option of the Load Serving Entity.

**- Pre-RA Import Commitment Capability**

The quantity in MW assigned to a particular Intertie into the CAISO Balancing Authority Area based on a Pre-RA Import Commitment.

**- Previously-Released CRRs**

CRRs that were released based on a CRR FNM that did not include a particular IBAA change and that will continue to be in effect, either as active financial instruments or as allocated CRRs eligible for renewal nomination in the Priority Nomination Process, when the particular IBAA change is implemented in the CAISO Markets.

**- Price Correction Derived LMP**

The applicable resource specific settlement LMP calculated pursuant to Section 11.21 for resources impacted by price corrections in the upward direction consistent with Section 35.

**- Price Taker**

A quantity only Energy Bid with no associated price.

**- Pricing Node (PNode)**

A single network Node or subset of network Nodes where a physical injection or withdrawal is modeled and for which a Locational Marginal Price is calculated and used for financial settlements.

**- Primary CAISO Control Center**

The CAISO Control Center located in Folsom, California.

**- Priority Nomination Process (PNP)**

The step in an annual CRR Allocation in years beyond CRR Year One through which CRR Holders re-nominate (1) Seasonal CRRs they were allocated in the prior year (less any Long Term CRRs awarded in the Allocation of the immediately preceding year), (2) Long Term CRRs that are expiring, and(3) Existing Transmission Contracts and Converted Rights that are expiring.

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**- Priority Type**

The Bid component that indicates if applicable the scheduling priority for the Settlement Period for Reliability Must-Run Generation, if applicable.

**- Prior Period Change**

Any correction, surcharge, credit, refund or other adjustment pertaining to a billing month pursuant to an RMR Contract which is discovered after the Revised Adjusted RMR Invoice for such billing month has been issued.

**- Prior Period Change Worksheet**

A worksheet prepared by the RMR Owner and submitted to the CAISO following discovery of a necessary change to an RMR Invoice after the Revised Adjusted RMR Invoice for the billing month has been issued.

**- Projected Proxy Cost**

A calculation of a resource's Start-Up Costs and Minimum Load Costs for a prospective period used to determine the maximum Registered Cost for the resource {as set forth in Section 39.6.1.6.1 for a 30-day period as set forth in Section 30.4.}

**- Project Sponsor**

A Market Participant, group of Market Participants, a Participating TO or a project developer who is not a Market Participant or Participating TO that proposes the construction of a transmission addition or upgrade in accordance with Section 24.

**- Proposal For Installation**

A written proposal submitted by a CAISO Metered Entity to the CAISO describing a proposal for the installation of additional Metering Facilities.

**- Proxy Cost**

The cost basis of a generating resource for which the operating cost is calculated as an approximation of the actual operating cost pursuant to Section 30.4(1).

**- Proxy Demand Resource (PDR)**

A Load or aggregation of Loads capable of measurably and verifiably providing Demand Response Services pursuant to a Proxy Demand Resource Agreement.

**- Proxy Demand Resource Agreement (PDRA)**

An agreement between the CAISO and a Demand Response Provider, a pro forma version of which is set forth in Appendix B.14.

**- PSS**

Power System Stabilizers

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**- PTFD**

Power Transfer Distribution Factor

**- PTO**

Participating TO or Participating Transmission Owner

**- PTO Service Territory**

Participating TO Service Territory

**- Public Utility Regulatory Policies Act (PURPA)**

The Public Utility Regulatory Policies Act of 1978, incorporated in relevant part into the Federal Power Act.

**- Pumped-Storage Hydro Unit**

A hydroelectric dam with the capability to produce electricity and the ability to pump water between reservoirs at different elevations to store such water for the production of electricity.

**- Pumping Cost**

The hourly cost of pumping, expressed in \$/hour, submitted by a Participating Load.

**- Pumping Level**

Level of MW that the Pumping Load resources would consume as submitted in their Bid.

**- Pumping Load**

A hydro pumping resource that is capable of responding to Dispatch Instructions by ceasing to pump.

**- 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 the 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 Participating Load that indicates the \$/MWh that the Scheduling Coordinator is willing to be paid to not pump.

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**- PURPA**

Public Utility Regulatory Policies Act

**- QF**

Qualifying Facility

**- QF PGA**

Qualifying Facility Participating Generator Agreement

**- Qualified Load Following Instruction**

The MSS Load following instruction that is limited by the qualified Load following up or down capacity.

The qualified Load following up and down capacity is the Load following capacity that is qualified and limited by whether the resource is derated or is limited by the Regulation Limits if the resource is providing Regulation.

**- Qualified OBAALSE**

An OBAALSE which the CAISO has certified has met all the requirements for eligibility for CRR Allocation in accordance with Section 39.

**- 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 (QF)**

A qualifying cogeneration facility or qualifying small power production facility, as defined in the Code of Federal Regulations, Title 18, Part 292 (18 C.F.R. § 292).

**- Qualifying Facility Participating Generator Agreement**

An agreement between the CAISO and a Generator with a QF Generating Unit, a pro forma version of which is set forth in Appendix B.3.

**- 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.

**- Queue Cluster**

A set of Interconnection Requests processed pursuant to Appendix Y other than pursuant to the Fast Track Process or the Independent Study Process set forth in Appendix Y.

**- Ramping**

Changing the loading level of a Generating Unit in a constant manner over a fixed time (e.g., Ramping up

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or Ramping down). Such changes may be directed by a computer or manual control.

**- Ramping Energy Deviation**

The portion of Imbalance Energy produced or consumed due to deviation from the Standard Ramp because of ramp constraints, Start-Up, or Shut-Down. Ramping Energy Deviation may overlap with Standard Ramping Energy, and both Standard Ramping Energy and Ramping Energy Deviation may overlap with Day-Ahead Scheduled Energy, but with no other IIE subtype. Ramping Energy Deviation may be composed of two parts: a) the part that overlaps with Standard Ramping Energy whenever the DOP crosses the Standard Ramping Energy region; and b) the part that does not overlap with Standard Ramping Energy. The latter part of Ramping Energy Deviation consists only of extra-marginal IIE contained within the hourly schedule change band and not attributed to Exceptional Dispatch or derates. Ramping Energy Deviation does not apply to Non-Dynamic System Resources (including Resource-Specific System Resources). Ramping Energy Deviation is settled as described in Section 11.5.1, and it is included in BCR only for market revenue calculations as provided in Section 11.8.1.4.5.

**- Ramp Rate**

The Bid component that indicates the Operational Ramp Rate, Regulation Ramp Rate, and Operating Reserve Ramp Rate for a Generating Unit, and the Load drop rate and Load pick-up rate for Participating Loads and Proxy Demand Resources, for which the Scheduling Coordinator is submitting Energy Bids or Ancillary Services Bids.

**- RAS**

Remedial Action Schemes

**- Rated Governmental Entity**

A municipal utility or state or federal agency that holds an issuer, counterparty, or underlying credit rating by a Nationally Recognized Statistical Rating Organization.

**- Rated Public/Private Corporation**

An investor-owned or privately held entity that holds an issuer, counterparty, or underlying credit rating by a Nationally Recognized Statistical Rating Organization.

**- Real-Time**

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

**- Real-Time Congestion Fund**

For each Settlement Period of the HASP and RTM, the CAISO shall calculate the Real-Time Congestion Fund as the difference of 1) the sum of the products of the RTM or HASP MCC for Demand and the Demand Imbalance Energy at the relevant Location; and 2) the sum of the products of RTM or HASP MCC for Supply and the Supply Imbalance Energy at the relevant Location; including also the sum of

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RTM and HASP Congestion Charges for Intertie Ancillary Services Awards.

**- Real-Time Congestion Offset**

For each Settlement Period of the HASP and RTM, the CAISO shall calculate the Real-Time Congestion Offset as the difference of 1) the sum of the products of the total of the Demand Imbalance Energy and Virtual Supply liquidated as demand in the RTM or HASP, and the RTM or HASP MCC at the relevant Location; and 2) the sum of the products of the total of the Supply Imbalance Energy and Virtual Demand liquidated as supply in the RTM or HASP, and the RTM or HASP MCC at the relevant Location; including also the sum of RTM and HASP Congestion Charges for Intertie Ancillary Services Awards, and excluding the HASP and RTM Congestion Credit for ETCs and TORs calculated as provided in Section 11.5.7.1. The Real-Time Congestion Offset is allocated as provided in Section 11.5.4.2.

**- 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)**

The SCED and SCUC software used by the CAISO to determine which Ancillary Service and Imbalance Energy resources to Dispatch and to calculate 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 Interchange Export Schedule**

A final agreed-upon schedule of Energy to be transferred from the CAISO Balancing Authority Area to another Balancing Authority Area based on agreed-upon size (megawatts), start and end time, beginning and ending ramp times and rate, and type required for delivery and receipt of power and Energy between the source and sink Balancing Authority Areas involved in the transaction.

**- Real-Time Interchange Import Schedule**

A final agreed-upon schedule of Energy to be transferred to the CAISO Balancing Authority Area from another Balancing Authority Area based on agreed-upon size (megawatts), start and end time, beginning and ending ramp times and rate, and type required for delivery and receipt of power and Energy between the source and sink Balancing Authority Areas involved in the transaction.

**- Real-Time Manual Dispatch (RTMD)**

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.

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**- Real-Time Marginal Cost of Losses Offset**

A component of the neutrality adjustments as provided in Section 11.5.4.2 to account for the distribution of excess Real-Time Marginal Cost of Losses and the non-assessment of Marginal Cost of Losses charges to Measured Demand for TOR Self-Schedules eligible for the RTM Marginal Cost of Losses Credit for Eligible TOR Self-Schedules as provided in Section 11.5.7.2.

**- Real-Time Market (RTM)**

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

**- Real-Time Market Pumping Bid Cost**

For the applicable Settlement Interval, the Pumping Cost submitted to the CAISO in the HASP or RTM divided by the number of Settlement Intervals in a Trading Hour, as further provided in Section 11.8.4.1.4.

**- Real-Time Metered Energy Adjustment Factor**

Is a factor calculated for the purposes of determining the portions of a Scheduling Coordinator's relevant Dispatch Instruction actually delivered based on the meter, taking into consideration the resource's metered energy. The factor is calculated as follows: The factor is bounded by 1 or 0, and is the ratio of the resource's (a) Metered Energy minus Day-Ahead Scheduled Energy minus Standard Ramping minus Real-Time Self-Scheduled Energy, and (b) total Expected Energy minus Day-Ahead Scheduled Energy minus Standard Ramping minus Real-Time Self-Scheduled Energy. For resources committed in pumping mode in real-time, the calculation in b) will effectively lead to the equivalent of real-time pumping energy.

**- Real-Time Minimum Load Energy**

IIE, exclusive of Standard Ramping Energy, Ramping Energy Deviation, and Residual Imbalance Energy, produced due to the Minimum Load of a Generating Unit that is committed in the RUC or the RTM and does not have a Day-Ahead Schedule or of a Constrained Output Generator (COG) that is committed in the IFM with a Day-Ahead Schedule below the registered Minimum Load. If the resource is committed in RTM for Load following by an MSS Operator, the Real-Time Minimum Load Energy is accounted as MSS Load Following Energy instead. Real-Time Minimum Load Energy is IIE above the Day-Ahead Schedule (or zero if there is no Day-Ahead Schedule of Energy) and below the registered Minimum Load. Real-Time Minimum Load Energy does not overlap with any other Expected Energy type. Real-Time Minimum Load Energy is settled as described in Section 11.5.1, and it is included in BCR as described in Section 11.8.4.1.2. IIE that is consumed when a resource that is scheduled in the DAM is shut down in the RTM is accounted as HASP Scheduled Energy or Optimal Energy and not as Real-Time Minimum Load Energy.



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**- Real-Time Pumping Energy**

IIE from a Participating Load Pumped-Storage Hydro Unit or Pumping Load, exclusive of Standard Ramping Energy and Ramping Energy Deviation, consumed below the Day-Ahead Schedule when dispatched in pumping mode, or produced from pumping operation due to pumping level reduction in Real-Time, including pump shut-down. Real-Time Pumping Energy does not overlap with any other Expected Energy type. Real-Time Pumping Energy is settled as described in Section 11.5.1, and it is included in BCR as described in Section 11.8.4.1.4.

**- Real-Time Self-Scheduled Energy**

The slice of Non-Overlapping Optimal Energy that corresponds to the Real-Time total Self-Schedule.

**- Real-Time Settlement Interval MSS Price**

1 ) The Real-Time LAP price for the MSS when the MSS internal metered Demand exceeds the MSS internal measured Generation; or 2) the weighted average of the Real-Time LMPs for all applicable PNodes within the relevant MSS when MSS internal measured Generation exceeds MSS internal Measured Demand where weighting factors for computing the weighted average are based on the measured Energy of all Generation at the corresponding PNodes.

**- Real-Time Unit Commitment (RTUC)**

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

**- Recalculation Settlement Statement**

The recalculation of a Settlement Statement in accordance with the provisions of the CAISO Tariff, which includes the Recalculation Settlement Statement T+38B, the Recalculation Settlement Statement T+76B, the Recalculation Settlement Statement T+18M, the Recalculation Settlement Statement T+35M, the Recalculation Settlement Statement T+36M or any other Recalculation Settlement Statement authorized by the CAISO Governing Board.

**- Recalculation Settlement Statement T+38B**

The reissue of an Initial Settlement Statement T+7B by the CAISO on the thirty-eighth (38th) Business Day from the relevant Trading Day.

**- Recalculation Settlement Statement T+76B**

The reissue of an Initial Settlement Statement T+7B or a Recalculation Settlement Statement T+38B by the CAISO on the seventy-sixth (76th) Business Day from the relevant Trading Day (T+76B).

**- Recalculation Settlement Statement T+18M**

The reissue of an Initial Settlement Statement T+7B, a Recalculation Settlement Statement T+38B, or a Recalculation Settlement Statement T+76B on the Business Day eighteen (18) calendar months from the relevant Trading Day (T+18M).

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**- Recalculation Settlement Statement T+35M**

The reissue of an Initial Settlement Statement T+7B, a Recalculation Settlement Statement T+38B, a Recalculation Settlement Statement T+76B, or a Recalculation Settlement Statement T+18M, on the Business Day thirty-five (35) calendar months from the relevant Trading Day (T+35M).

**- Recalculation Settlement Statement T+36M**

The reissue of an Initial Settlement Statement T+7B, a Recalculation Settlement Statement T+38B, a Recalculation Settlement Statement T+18M or a Recalculation Settlement Statement T+35M on the Business Day thirty-six (36) calendar months from the relevant Trading Day (T+36M).

**- 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 Cost**

The cost basis of a generating resource for which the operating cost is determined from registered values pursuant to Section 30.4(2).

**- 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.

**- Regulating Range**

The operating level range within which a resource may provide Regulation.

**- Regulation**

The service provided either by resources 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 Balancing Authority Area, in an upward and downward direction to match, on a Real-Time basis, Demand and resources, consistent with established NERC and WECC reliability standards, including any requirements of the NRC. Regulation is used to control the operating level of a resource 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 Balancing Authority Areas within the

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predetermined Regulation Limits. Regulation includes both an increase in Energy production by a resource or decrease in Energy consumption by a resource (Regulation Up) and a decrease in Energy production by a resource or increase in Energy consumption by a resource (Regulation Down). Regulation Up and Regulation Down are distinct capacity products, with separately stated requirements and ASMPs in each Settlement Period.

**- Regulation Down Or Regulation Down Reserve**

Regulation reserve provided by a resource under CAISO EMS control that can decrease its Energy production or increase its Energy consumption in response to a direct electronic signal from the CAISO to maintain standard frequency in accordance with established Reliability Criteria.

**- Regulation Down Reserve Cost**

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.

**- Regulation Limits**

The MW limits, up and down, set by a resource's operation under CAISO EMS control.

**- Regulation Ramp Rate**

A single number included in Ancillary Service Bids and Submissions to Self-Provide Ancillary Services for Regulation that represents the Ramp Rate of a resource used in the procurement of Regulation capacity.

**- Regulation Up Or Regulation Up Reserve**

Regulation provided by a resource under CAISO EMS control that can increase its Energy production or decrease its Energy consumption in response to a direct electronic signal from the CAISO to maintain standard frequency in accordance with established Reliability Criteria.

**- Regulation Up Reserve Obligation**

The obligation of a Scheduling Coordinator to pay its share of costs incurred by the CAISO in procuring Regulation Up Reserves.

**- 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.

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**- 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 generation from Qualifying Facility Generating Units subject to a mandatory purchase obligation as defined by federal law, nuclear units and pre-existing power purchase contracts with minimum Energy take requirements.

**- Reliability Coordinator**

The entity designated by WECC as responsible for reliability coordination in Real-Time for the area defined by WECC.

**- Reliability Criteria**

Pre-established criteria that are to be followed in order to maintain desired performance of the CAISO Controlled Grid under Contingency or steady state conditions.

**- Reliability Must-Run Charge (RMR Charge)**

The sum payable by a Responsible Utility to the CAISO pursuant to Section 41 for the costs, net of all applicable credits, incurred under the Reliability Must-Run Contract.

**- Reliability Must-Run Contract (RMR Contract)**

A Must-Run Service Agreement between the owner of a 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.

**- Reliability Must-Run Unit (RMR Unit)**

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

**- Reliability Network Upgrades**

The transmission facilities at or beyond the Point of Interconnection identified in the Interconnection Studies as necessary to interconnect one or more Large Generating Facility(ies) safely and reliably to the CAISO Controlled Grid, which would not have been necessary but for the interconnection of one or more Large Generating Facility(ies), including Network Upgrades necessary to remedy short circuit or stability problems, or thermal overloads. Reliability Network Upgrades shall only be deemed necessary for thermal overloads, occurring under any system condition, where such thermal overloads cannot be adequately mitigated through Congestion Management, Operating Procedures, or Special Protection

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Systems based on the characteristics of the Large Generating Facilities included in the Interconnection Studies, limitations on market models, systems, or information, or other factors specifically identified in the Interconnection Studies. 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.

**- Reliability Requirement Determination (RRD)**

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 a Reliability Must-Run Contract and any successor instrument, are necessary to meet local reliability needs for the CAISO Balancing Authority Area.

**- Reliability Services Costs**

The costs associated with services provided by the CAISO: 1) that are deemed by the CAISO as necessary to maintain reliable electric service in the CAISO Balancing Authority Area; and 2) whose costs are billed by the CAISO to the Participating TO pursuant to the CAISO Tariff. Reliability Services Costs include costs charged by the CAISO to a Participating TO associated with service provided under a Reliability Must-Run Contract, Exceptional Dispatches and Minimum Load Costs associated with units committed for local reliability requirements.

**- Reliability Standard**

A requirement approved by FERC under Section 215 of the Federal Power Act to provide for reliable operation of the bulk power system. The term includes requirements for the operation of existing bulk power system facilities, including cyber security protection, and the design of planned additions or modifications to such facilities to the extent necessary for reliable operation of the bulk power system; but the term does not include any requirement to enlarge such facilities or to construct new transmission capacity or generation capacity.

**- Remaining Import Capability**

The quantity in MW of Total Import Capability assigned to a Load Serving Entity up to its Load Share Quantity after the assignment of Existing Contract Import Capability and Pre-RA Import Commitment. Capability.

**- 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. Remedial Action Schemes are also referred to as Special Protection Systems.

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**- Remote Self-Supply**

Positive Net Output from generating resources in the Station Power Portfolio that is deemed to have self-supplied Station Power Load of other Generating Units in the Station Power Portfolio during the Netting Period, where such self-supply requires use of the CAISO Controlled Grid.

**- Request Window**

The period of time as set forth in the Business Practice Manual during which transmission additions or upgrades, requests for Economic Planning Studies, and other transmission related information is submitted to the CAISO in accordance with Section 24.2.2.

**- Reserve Margin**

The amount of Resource Adequacy Capacity that a Scheduling Coordinator is required to maintain in accordance with Section 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**

Extra-marginal IIE produced or consumed at the start or end of a Trading Hour outside the hourly schedule-change band and not attributed to Exceptional Dispatch. Residual Imbalance Energy is due to a Dispatch Instruction in the previous Trading Hour or a Dispatch Instruction in the next Trading Hour. Residual Imbalance Energy may overlap only with Day-Ahead Scheduled Energy. Residual Imbalance Energy does not apply to Non-Dynamic System Resources (including Resource-Specific System Resources). Residual Imbalance Energy is settled as bid, based on the Real-Time Energy Bid of the reference hour, as described in Section 11.5.5 and it is not included in BCR as described in Section 11.8.4. The reference hour is the previous Trading Hour, if Residual Imbalance Energy occurs at the start of a Trading Hour, or the next Trading Hour, if Residual Imbalance Energy occurs at the end of a Trading Hour.

**- 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, Participating Loads, and Proxy Demand Resources are committed to meet the CAISO Forecast of CAISO Demand.

**- Resource Adequacy Capacity or RA Capacity**

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

**- Resource Adequacy Compliance Year**

A calendar year from January 1 through December 31.

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**- 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.

**- Resource Adequacy Resource**

A resource that is designated in a Supply Plan to provide 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 ID**

Identification characters assigned by the CAISO to Generating Units, Loads, Participating Loads, Proxy Demand Resources, System Units, System Resources, and Physical Scheduling Plants.

**- Resource Location**

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

**- Resource-Specific ASMP**

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

**- 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 System Resource**

A Dynamic or Non-Dynamic Resource-Specific System 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.

**- Responsible Participating Transmission Owner**

The party providing transmission service under an Existing Contract listed in Appendix A of a Responsible Participating Transmission Owner Agreement and that is the Scheduling Coordinator for each Existing Right holder listed in Appendix A of that RPTOA, unless that Scheduling Coordinator responsibility is transferred pursuant to the provisions of the RPTOA.

**- Responsible Participating Transmission Owner Agreement**

An agreement between the CAISO and a Responsible Participating Transmission Owner, a pro forma

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version of which has been accepted by FERC as a CAISO rate schedule in 88 FERC ¶ 61,077.

**- Responsible Utility**

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

**- Responsible Utility Facility Trust Account**

A segregated commercial bank account under the Facility Trust Account containing funds held in trust for the Responsible Utility under an RMR Contract.

**- Results Meeting**

The meeting among the CAISO, the applicable Participating TO(s), the Interconnection Customer, and, if applicable, other Affected System Operators to discuss the results of the Phase I Interconnection Study as set forth in GIP Section 6 set forth in Appendix Y.

**- 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.

**- 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-Run Contract reflecting any appropriate revisions to the Adjusted Reliability Must-Run 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-Run Owner to the CAISO pursuant to the Reliability Must-Run Contract reflecting appropriate revisions to the Estimated Reliability Must-Run Invoice based on the CAISO's validation of the Estimated Reliability Must-Run Invoice.

**- RMDAPS**

Revenue Meter Data Acquisition and Processing System



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**- RMR**

Reliability Must-Run

**- RMR Charge**

Reliability Must-Run Charge

**- RMR Contract**

Reliability Must-Run Contract

**- RMR Default Amount**

Any amount due to be remitted to the relevant Facility Trust Account by the RMR Owner or the Responsible Utility in accordance with an RMR Contract.

**- RMR Dispatch**

The quantity of Energy or Ancillary Services that is mandated by the CAISO to be delivered in a given market for a resource by an RMR Unit under an RMR Contract.

**- RMR Dispatch Notice**

Notice received by an RMR Unit from the CAISO containing an RMR Dispatch.

**- RMR Energy**

Total Expected Energy under RMR Dispatch. RMR Energy is calculated independent of other Expected Energy types and it may overlap with any other Expected Energy type. It is used for RMR Contract based settlement as provided in Section 11.13.

**- RMR Generation**

Reliability Must-Run Generation

**- RMR Invoice**

Any Estimated RMR Invoice, Revised Estimated RMR Invoice, Adjusted RMR Invoice, or Revised Adjusted RMR Invoice under an RMR Contract.

**- RMR Owner**

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

**- RMR Owner Facility Trust Account**

The commercial bank account held in trust by the CAISO for the benefit of the owner of an RMR Unit subject to an RMR Contract as required and specified in Section 9.2 of the pro forma RMR Contract.

**- RMR Payment**

Any amounts which the CAISO is obligated to pay to RMR Owners under the RMR Contracts, net of any applicable credits under the RMR Contracts.

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**- RMR Payments Calendar**

The payment calendar issued by the CAISO pursuant to Section 11.13.

**- RMR Proxy Bid**

For Condition 1 RMR Units, for Energy, 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. For Condition 2 RMR Units, for Energy, the Energy Bid defined in Schedule M of the RMR Contract. For Condition 1 and 2 RMR Units, for Start-Up costs, the amount set forth in Schedule D of the applicable RMR Contract; and for Minimum Load costs, an amount calculated based on unit specific performance parameters as set for the applicable RMR Contract and the gas price calculated in accordance with Schedule C of the applicable RMR Contract.

**- RMR Refund**

Any amounts which RMR Owners are obligated to pay to the CAISO and the CAISO is obligated to pay to the Responsible Utilities under the RMR Contracts, or resulting from any order by the FERC, for deposit into the Responsible Utility Facility Trust Account.

**- RMR Security**

The form of security provided by a Responsible Utility to cover its liability under Section 11.13.

**- RMR Unit**

Reliability Must-Run Unit

**- RPTOA**

Responsible Participating Transmission Owner Agreement

**- RRD**

Reliability Requirement Determination

**- RTCD**

Real-Time Contingency Dispatch

**- RTD**

Real-Time Dispatch

**- RTED**

Real-Time Economic Dispatch

**- RTM**

Real-Time Market

**- RTM AS Bid Cost**

The Bid Cost of a BCR Eligible Resource for Ancillary Service capacity in the RTM.

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**- RTM Bid Cost**

The total of a resource's RTM Start-Up Cost, RTM Minimum Load Cost, RTM Pump Shut-Down Cost, RTM Transition Cost, RTM Pumping Cost, RTM Energy Bid Cost, and RTM AS Bid Cost.

**- RTM Bid Cost Shortfall**

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.

**- RTM Bid Cost Surplus**

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.

**- RTM Bid Cost Uplift**

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.

**- RTM Commitment Period**

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 Commitment Period and RUC Commitment Period.

**- RTMD**

Real-Time Manual Dispatch

**- RTM MCL Credit For Eligible TOR Self-Schedules**

A credit provided to Scheduling Coordinators pursuant to Section 17.3.3 to offset any HASP and RTM Marginal Cost of Losses that would otherwise be applied to the valid and balanced portions of any TOR Self-Schedule in the IFM as provided in Section 11.5.7.2.

**- RTM Market Revenue**

The amount received by BCR Eligible Resource from Energy scheduled and Ancillary Services awarded in the RTM for the purposes of Bid Cost Recovery.

**- RTM Pumping Bid Cost**

Real-Time Market Pumping Bid Cost

**- RTM Self-Commitment Period**

A time period determined by the CAISO for the purposes of deriving any Bid Cost Recovery amounts, related to the RTM.

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**- RTUC**

Real-Time Unit Commitment

**- RUC**

Residual Unit Commitment

**- RUC Availability Bid**

The quantity (MW) and price (\$/MW per hour) at or above which a Generating Unit, System Resource, System Unit, Participating Load, or Proxy Demand Resource has agreed to sell capacity for a specified interval of time to the CAISO to meet the Residual Unit Commitment requirement.

**- RUC Availability Bid Cost**

As provided in Section 11.8.3.1.3, the product of the RUC Award and the relevant RUC Availability Bid price, divided by the number of Settlement Intervals in a Trading Hour.

**- RUC Availability Payment**

The payment made for the RUC Availability Quantity as specified in Section 11.2.2.1.

**- RUC Availability Quantity**

A RUC Award (MW) excluding any RUC Capacity that is actually unavailable due to a unit derate or Outage.

**- RUC Award**

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.

**- RUC Bid Cost**

The total Bid Costs associated with commitment by the CAISO through the RUC process used for determination of Unrecovered Bid Cost Uplift Payments and RUC Bid Cost Uplift allocation.

**- RUC Bid Cost Shortfall**

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.

**- RUC Bid Cost Surplus**

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.

**- RUC Bid Cost Uplift**

The system-wide net of the RUC Bid Cost Shortfalls and RUC Bid Cost Surpluses for a Settlement Interval for all BCR Eligible Resources with Unrecovered Bid Cost Uplift Payments. This amount will be

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netted according to Section 11.8.6.2 to calculate the Net RUC Bid Cost Uplift before allocation to Scheduling Coordinators.

**- RUC Capacity**

The positive difference between the RUC Schedule and the greater of the Day-Ahead Schedule and the Minimum Load level of a resource.

**- RUC Commitment Period**

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 Instruction and/or later Shut-Down Instruction than the IFM, respectively.

**- RUC Compensation**

The payment to Scheduling Coordinators with RUC Awards, calculated as the sum of RUC Availability Payment and RUC Unrecovered Bid Costs.

**- RUC Compensation Cost**

As provided in Section 11.8.6.5, for each Trading Hour of the RUC, the sum of the RUC Availability Payment and the hourly Net RUC Bid Cost Uplift, which is allocated as provided in Section 11.8.6.5.3.

**- RUC Market Revenues**

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 the purposes of calculating Bid Cost Recovery for RUC.

**- RUC Price**

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.

**- RUC Zone**

A forecast region representing a UDC or MSS Service Area, Local Capacity Area, or other collection of Nodes for which the CAISO has developed sufficient historical CAISO Demand and relevant weather data to perform a Demand Forecast for such area, for which as further provided in Section 31.5.3.7 the CAISO may adjust the CAISO Forecast of CAISO Demand to ensure that the RUC process produces adequate

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local capacity procurement.

**- Rules Of Conduct**

The rules set forth in Sections 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.

**- SC**

Scheduling Coordinator

**- SCA**

Scheduling Coordinator Agreement

**- SCADA**

Supervisory Control and Data Acquisition

**- Scarcity Reserve Demand Curve**

A demand curve used to clear the Ancillary Services markets when supply is insufficient in an Ancillary Service Region or Sub-Region to meet Ancillary Services minimum procurement requirements.

**- Scarcity Reserve Demand Curve Values**

Fixed percentages of the maximum Energy Bid price permitted under Section 39.6.1.1 reflected in the Scarcity Reserve Demand Curve that the CAISO uses to calculate Ancillary Service Shadow Prices for Regulation Up, Spinning Reserve, Non-Spinning Reserve and Regulation Down from which the CAISO determines Ancillary Service Marginal Prices when there is insufficient supply in an Ancillary Service Region or Sub-Region to meet an Ancillary Services minimum procurement requirement.

**- SCED**

Security Constrained Economic Dispatch

**- Schedule**

A Day-Ahead Schedule, a HASP Advisory Schedule, or a 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.

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**- Scheduled Generation**

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

**- Scheduling and Logging system for the CAISO (SLIC)**

A logging application that allows Market Participants to notify the CAISO when a 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.

**- Scheduling Coordinator Agreement (SCA)**

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, a pro forma version of which is set forth in Appendix B.1.

**- 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.

**- SC Estimated Settlement Quality Meter Data**

Settlement Quality Meter Data estimated and submitted by the Scheduling Coordinators on behalf of Scheduling Coordinator Metered Entities.

**- Scheduling Coordinator ID Code (SCID)**

The individual Identification Code provided by the CAISO to the Scheduling Coordinator.

**- Scheduling Coordinator Metered Entity**

A Generator, Eligible Customer, End-User, or Proxy Demand Resource that is not a CAISO Metered Entity.

**- Scheduling Point**

A location at which the CAISO Controlled Grid or a transmission facility owned by a Transmission Ownership Right holder is connected, by a group of transmission paths for which a physical, non-

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simultaneous transmission capacity rating has been established for Congestion Management, to transmission facilities that are outside the CAISO's Operational Control.

**- SCID**

Scheduling Coordinator ID Code

**- 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.

**- SCUC**

Security Constrained Unit Commitment

**- 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 in accordance with Section 36.4.

**- Seasonal CRR**

A Congestion Revenue Right that is valid for one season and one time-of-use period in a given year.

**- Seasonal CRR Eligible Quantity**

The MW quantity of CRRs a CRR Holder or Candidate CRR Holder is eligible to nominate for a specific season and time of use period in the annual CRR Allocation.

**- Seasonal CRR Load Metric**

The MW level of Load that is exceeded only in 0.5 percent of the hours for each season and time of use period based on the LSE's historical Load.

**- Secondary Registration System**

The system and process through which CRR Holders and Candidate CRR Holders register any bilateral CRR transactions with the CAISO.

**- Security Constrained Economic Dispatch (SCED)**

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

**- Security Constrained Unit Commitment (SCUC)**

An algorithm performed by a computer program over multiple hours that determines the Commitment



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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 Service, except for Non-Spinning Reserve self-provision by a Fast Start Unit. 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 Run Time, Minimum Down Time, or Maximum Daily Start-Up constraints.

**- Self-Provided Ancillary Services**

A Submission to Self-Provide Ancillary Services in the Day-Ahead Market, 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-Provided Load**

The portion of Load that is served by a Net Scheduled QF listed in a QF PGA, consistent with Section 218(b) of the California Public Utilities Code.

**- 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 HASP

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Schedule and HASP Awards.

**- Settlement**

Process of financial settlement for products and services purchased and sold undertaken by the CAISO under Section 11. 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, a CRR Holder or a Participating TO pursuant to the Scheduling Coordinator's Scheduling Coordinator Agreement, the CRR Holder's CRR Entity 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, the CRR Holder or the Participating TO under the CAISO Tariff.

**- Settlement Interval**

The time period equal to or a multiple of the Dispatch Interval, over which the CAISO settles cost compensation amounts or deviations in Generation and Demand in CAISO Markets.

**- Settlement Interval Penalty Location Real-Time LMP**

The optimal Instructed Imbalance Energy weighted average of the individual Dispatch Interval Real-Time LMPs for the resources in a UDP Aggregation established pursuant to Appendix R.

**- 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.

**- Settlement Quality Meter Data Systems (SQMDS)**

A collective name for the set of CAISO systems used to accept, analyze and report on Settlement Quality Meter Data.

**- 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 Code, costs associated with activities listed above also are allocated to other charges under the Grid Management Charge according to formula set

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forth in Appendix F, Schedule 1, Part A.

**- Settlement Statement**

Any one of the following: Initial Settlement Statement T+7B, Recalculation Settlement Statement T+38B, Recalculation Settlement Statement T+76B, Recalculation Settlement Statement T+18M, Recalculation Settlement Statement T+35M, Recalculation Settlement Statement T+36M, or any other Recalculation Settlement Statement authorized by the CAISO Governing Board.

**- SFT**

Simultaneous Feasibility Test

**- Shadow Price**

The marginal value of relieving a particular constraint.

**- Short Start Unit**

A Generating Unit that has a cycle time less than five hours (Start-Up Time plus Minimum Run Time is less than five hours), has a Start-Up Time less than two hours, and can be fully optimized with respect to this cycle time.

**- Short-Term Unit Commitment (STUC)**

The Unit Commitment procedure run at approximately 52.5 minutes prior to the applicable Trading Hour to determine whether certain Medium Start Units need to be started early to meet the Demand within the STUC forward-looking time period as described in Section 34.4 using the CAISO Forecast of CAISO Demand. The STUC produces a Unit Commitment solution for every 15-minute interval within the STUC forward-looking time periods and issues binding Start-Up Instructions only as necessary.

**- Shut-Down**

A Commitment Status transition from On to Off.

**- Shut-Down Cost**

The Bid Component submitted by the Scheduling Coordinator indicating a single price at which the resource is willing to Shut-Down.

**- Shut-Down Instruction**

An instruction issued by the CAISO to a resource to Shut-Down.

**- Simultaneous Feasibility Test (SFT)**

The process that the CAISO will conduct to ensure that allocated and auction CRRs do not exceed relevant Transmission Constraints as described in Section 36.4.2 and further described in the Business Practice Manuals.

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**- Site Control**

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.

**- Site Exclusivity**

Documentation reasonably demonstrating:

(1) For private land:

- (a) Ownership of, a leasehold interest in, or a right to develop property upon which the Generating Facility will be located consisting of a minimum of 50% of the acreage reasonably necessary to accommodate the Generating Facility; or
- (b) an option to purchase or acquire a leasehold interest in property upon which the Generating Facility will be located consisting of a minimum of 50% of the acreage reasonably necessary to accommodate the Generating Facility.

(2) For public land, including that controlled or managed by any federal, state or local agency, a final, non-appealable permit, license, or other right to use the property for the purpose of generating electric power and in acreage reasonably necessary to accommodate the Generating Facility, which exclusive right to use public land under the management of the federal Bureau of Land Management shall be in a form specified by the Bureau of Land Management.

**- Site Exclusivity Deposit**

The cash deposit provided to the CAISO by Interconnection Customers under GIP Section 3.5.1 set forth in Appendix Y as an option in lieu of demonstrating Site Exclusivity for a valid Interconnection Request and treated in accordance with GIP Section 3.5.1.4 set forth in Appendix Y.

**- SLIC**

Scheduling and Logging system for the CAISO

**- Small Generating Facility**

A Generating Facility that has a Generating Facility Capacity of no more than 20 MW.

**- Small Utility Distribution Company (SUDC)**

An entity that owns a Distribution System that is capable of transmitting or delivery of Energy to and/or from the CAISO Controlled Grid that provides retail electric service to End-Use Customers, and has the following characteristics:

Annual peak Demand is 25 MW or less;

The Distribution System is not in a local reliability area defined by the CAISO; and

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Good Utility Practice was used in designing all substation facilities that are owned or operated by the entity and interconnected to the CAISO Controlled Grid, and none of those substations have transmission circuit breakers.

**- Small Utility Distribution Company Operating Agreement**

An agreement between the CAISO and an SUDC, a pro forma version of which is set forth in Appendix B.10.

**- SMEC**

System Marginal Energy Cost

**- Special Protection System (SPS)**

An automatic protection system designed to detect abnormal or predetermined system conditions, and take corrective actions other than and/or in addition to the isolation of faulted components to maintain System Reliability. Such action may include changes in Demand, Generation (MW and MVar), or system configuration to maintain system stability, acceptable voltage, or power flows. An SPS does not include (a) Underfrequency Load Shedding or undervoltage Load Shedding or (b) fault conditions that must be isolated or (c) out-of-step relaying (not designed as an integral part of an SPS). An SPS is also sometimes called a Remedial Action Scheme.

**- Spinning Reserve**

The portion of unloaded synchronized resource capacity that is immediately responsive to system frequency and that is capable of being loaded in ten (10) minutes, and that is capable of running for at least thirty (30) minutes from the time it reaches its award capacity.

**- Spinning Reserve Cost**

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 Reserve under any of the provisions of Section 8.10.2.

**- Spinning Reserve Obligation**

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

**- SPS**

Special Protection System

**- SQMDS**

Settlement Quality Meter Data Systems

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**- 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 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, a pro forma version of which is set forth in Appendix V.

**- Standard Large Generator Interconnection Procedures (LGIP)**

The interconnection procedures applicable to an Interconnection Request pertaining to a Large Generating Facility that is set forth in Appendix U.

**- Standard Ramp (-ing)**

A ramp calculated from two consecutive Day-Ahead Schedules that results in a straight trajectory between 10 minutes before the start of a Trading Hour to 10 minutes after the start of the Trading Hour.

**- Standard Ramping Energy**

Imbalance Energy produced or consumed in the first two and the last two Dispatch Intervals due to hourly schedule changes. Standard Ramping Energy is a schedule deviation along a linear symmetric twenty (20)-minute ramp (Standard Ramp) across hourly boundaries. Standard Ramping Energy is always present when there is an hourly schedule change, including resource Start-Ups and Shut-Downs. Standard Ramping Energy does not apply to Non-Dynamic System Resources (including Resource-Specific System Resources) and is not subject to Settlement as described in Section 11.5.1.

**- 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.

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**- 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**

A Commitment Status transition from Off to On.

**- Start-Up Bid**

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 Cost**

The cost incurred by a particular Generating Unit during Start-Up from the time of first fire, the time of receipt of a 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 Instruction**

An instruction issued by the CAISO to a resource to Start-Up.

**- Start-Up Time**

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

**- State Commission**

The regulatory body of a State having jurisdiction to regulate rates and charges for the sale of electric energy to consumers within the State.

**- State Estimator**

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

**- Station Power**

Energy for operating electric equipment, or portions thereof, located on the Generating Unit site owned by the same entity that owns the Generating Unit, which electrical equipment is used exclusively for the production of Energy and any useful thermal energy associated with the production of Energy by the Generating Unit; and for the incidental heating, lighting, air conditioning and office equipment needs of buildings, or portions thereof, that are owned by the same entity that owns the Generating Unit; located on the Generating Unit site; and used exclusively in connection with the production of Energy and any

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useful thermal energy associated with the production of Energy by the Generating Unit. Station Power includes the Energy associated with motoring a hydroelectric Generating Unit to keep the unit synchronized at zero real power output to provide Regulation or Spinning Reserve. Station Power does not include any Energy used to power synchronous condensers; used for pumping at a pumped storage facility; or provided during a Black Start procedure. Station Power does not include Energy to serve loads outside the CAISO Balancing Authority Area.

**- Station Power Portfolio**

One or more generating resources eligible to self-supply Station Power, including Generating Units in the CAISO Balancing Authority Area, and generating facilities outside the CAISO Balancing Authority Area, all of which are owned by the same entity.

**- STUC**

Short-Term Unit Commitment

**- Study Plan**

The plan to be developed pursuant to Section 24.2.1, which sets forth the technical studies to be performed during the annual Transmission Planning Process.

**- Sub-LAP**

A CAISO defined subset of PNodes within a Default LAP.

**- 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.

**- SUDC**

Small Utility Distribution Company.

**- SUDC Operating Agreement**

Small Utility Distribution Company Operating Agreement

**- 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.



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**- Supply**

The Energy delivered from a Generating Unit, System Unit, Physical Scheduling Plant, System Resource, the Curtailable Demand provided by a Participating Load, or the Demand Response Services provided by a Proxy Demand Resource.

**- Supply Plan**

A submission by a Scheduling Coordinator for a Resource Adequacy Resource in order to satisfy the requirements of Section 40.

**- System Emergency**

Conditions beyond the normal control of the CAISO that affect the ability of the CAISO Balancing Authority 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 Applicable Reliability Criteria.

**- System Marginal Energy Cost (SMEC)**

The component of the LMP that 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 Balancing Authority 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 Balancing Authority Area, or an allocated portion of a Balancing Authority Area's portfolio of generating resources that are either a static Interchange Schedule or directly responsive to that Balancing Authority Area's Automatic Generation Control (AGC) capable of providing Energy and/or Ancillary Services to the CAISO Balancing Authority 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

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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.

**- TAC**

Transmission Access Charge

**- TAC Area**

Transmission Access Charge Area

**- TAC Benefit**

The amount, if any, for each year by which the cost of Existing High Voltage Transmission Facilities associated with deliveries of Energy to Gross Loads in the PTO Service Territory is reduced by the implementation of the High Voltage Access Charge described in Schedule 3 to Appendix F. The TAC Benefit of a New Participating TO shall not be less than zero.

**- TAC Transition Date**

January 1, 2001, the date described in Section 4.2 of Appendix F, Schedule 3, when the first New Participating TO's execution of the Transmission Control Agreement took effect, which established the start of the TAC Transition Period for the calculation of the Access Charge.

**- TAC Transition Period**

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.

**- Tangible Net Worth**

For Rated or Unrated Public/Private Corporations, as defined in Step 4(a) of Section 12.1.1.1.2.

**- 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.

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**- TCA**

Transmission Control Agreement

**- TEA**

Transmission Exchange Agreement

**- Third Party Supply**

Energy that is deemed to have been purchased from third parties to supply Station Power Load during the Netting Period.

**- 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.

**- Tier 1 UIE**

The quantity of Uninstructed Deviation from the resource's Instructed Imbalance Energy.

**- Tier 2 UIE**

The quantity of Uninstructed Deviation from the resource's Day-Ahead Schedule.

**- Tier LT**

The tier of the annual CRR Allocation process through which the CAISO allocates Long Term CRRs.

**- 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.

**- TO**

Transmission Owner

**- Tolerance Band**

The permitted area of variation for performance requirements of resources used for various purposes as further provided in the CAISO Tariff. The Tolerance Band is expressed in terms of Energy (MWh) for Generating Units, System Units and imports from Dynamic System Resources for each Settlement Interval and equals the greater of the absolute value of: (1) five (5) MW divided by the number of Settlement Intervals per Settlement Period or (2) three (3) percent of the relevant Generating Unit's, Dynamic System Resource's or System Unit's maximum output (PMax), as registered in the Master File, divided by the number of Settlement Intervals per Settlement Period. The maximum output (PMax) of a Dynamic System Resource will be established by agreement between the CAISO and the Scheduling Coordinator representing the Dynamic 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 Dynamic System Resource.

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The Tolerance Band is expressed in terms of Energy (MWh) for Participating Loadthes for each Settlement Interval and equals the greater of the absolute value of: (1) five (5) MW divided by the number of Settlement Intervals per Settlement Period or (2) three (3) percent of the applicable HASP Intertie Schedule or CAISO Dispatch amount divided by the number of Settlement Intervals per Settlement Period.

The Tolerance Band shall not be applied to Non-Dynamic System Resources.

**- TOR**

Transmission Ownership Right

**- TOR Self-Schedule**

A Self-Schedule submitted by a Scheduling Coordinator pursuant to Transmission Ownership Rights as reflected in the TRTC Instructions.

**- 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 Import Capability**

The aggregate Maximum Import Capability of all Interties into the CAISO Balancing Authority Area in MW deliverable to the CAISO Balancing Authority Area based on CAISO study criteria minus the aggregate sum in MW of all Existing Contracts and Transmission Ownership Rights held by load serving entities that do not serve Load within the CAISO Balancing Authority Area.

**- 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 for which any given DAM or RTM is executed and settled, 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. For any given DAM, the Trading Day will be the next Operating Day following the Operating Day during which that DAM is executed. For any given RTM, the Trading Day will be the same Operating Day during which that RTM is executed.

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**- Trading Hour**

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

**- Trading Hub**

An aggregation of network Pricing Nodes, such as Existing Zone Generation Trading Hubs, maintained and calculated by the CAISO for settlement and trading purposes posted by the CAISO on its CAISO Website.

**- Trading Interval**

A Settlement Period.

**- Trading Month**

The period beginning at the start of the hour ending 0100 and ending at the end of the hour ending 2400 for each calendar month, except where there is a change to and from daylight savings time on the first or last day of a month.

**- Transformer And Line Loss Correction Factor**

The transformer and line loss correction factor as set forth in the applicable Business Practice Manual or 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 Cost**

For a Multi-Stage Generating Resources, the dollar cost per feasible transition associated with a given MSG Configuration as registered in the Transition Matrix.

**- Transition Instructions**

A binding instruction issued by the CAISO to Multi-Stage Generating Resources in the Real-Time that directs the Multi-Stage Generating Resource to move from between MSG Configurations and indicates: (1) "from" and "to" MSG Configurations; and (2) the start time and end time of the MSG Transition.

**- Transition Matrix**

A matrix that, for Multi-State Generating Resources defines the possible MSG Transitions between all online MSG Configurations including the Transition Times and Transition Costs.

**- Transition Time**

For a Multi-Stage Generating Resources, the time to complete a MSG Transition, as registered in the Transition Matrix.

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**- Transmission Access Charge (TAC)**

Access Charge

**- Transmission Access Charge Area (TAC Area)**

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 Section 3 of Schedule 3 of Appendix F.

**- Transmission Constraints**

Physical and operational limits on the transfer of electric power through transmission facilities.

**- Transmission Constraints Enforcement Lists**

The post-Day-Ahead Market Transmission Constraints list and the pre-Day-Ahead Market Transmission Constraints list made available by the CAISO pursuant to Section 6.5.3.3. The post-Day-Ahead Market Transmission Constraints list consists of the Transmission Constraints enforced or not enforced in the Day-Ahead Market conducted on any given day. The pre-Day-Ahead Market Transmission Constraints list consists of the Transmission Constraints the CAISO plans to enforce or not enforce in the next day's Day-Ahead Market. These lists will identify and include definitions for all Transmission Constraints, including contingencies and nomograms. The definition of the Constraint includes the individual elements that constitute the Transmission Constraint. Both lists will each contain the same data elements and will provide: the flowgate constraints; transmission corridor constraints; the Nomogram constraints; and the list of Transmission Contingencies.

**- Transmission Control Agreement (TCA)**

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

**- Transmission Exchange Agreement (TEA)**

The agreement among the CAISO, Western Area Power Administration and Pacific Gas and Electric Company establishing the terms and conditions of the treatment of Western Area Power Administration's interests in the Pacific AC Intertie, which agreement was originally accepted by FERC in Docket No. ER04-688.

**- Transmission Interface**

A CAISO-defined set of transmission facilities that comprise an important transmission corridor for Energy or capacity.

**- Transmission Losses**

Energy that is lost as a natural part of the process of transmitting Energy from Generation to Load

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delivered at the CAISO/Utility Distribution Company boundary or Balancing Authority Area boundary.

**- Transmission Losses Charge**

The charge for Transmission Losses based on the Marginal Cost of Losses at the Pricing Node.

**- Transmission Owner (TO)**

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

**- Transmission Ownership Right (TOR)**

The ownership or joint ownership right to transmission facilities within the CAISO Balancing Authority Area of a Non-Participating TO that has not executed the Transmission Control Agreement, which transmission facilities are not incorporated into the CAISO Controlled Grid.

**- Transmission Owner Tariff (TO Tariff)**

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.

**- Transmission Plan**

The report prepared by the CAISO on annual basis pursuant to Section 24, which documents the outcome of the Transmission Planning Process as defined in the Study Plan.

**- Transmission Planner**

A designation by NERC regarding responsibility to perform specified transmission planning functions in accordance with the NERC Reliability Standards.

**- Transmission Planning Process**

The process by which the CAISO assesses the CAISO Controlled Grid as set forth in Section 24.

**- Transmission Reliability Margin (TRM)**

A factor described in Appendix L.

**- Transmission Revenue Balancing Account (TRBA)**

A mechanism to be established by each Participating TO which will ensure that all Transmission Revenue Credits and other credits specified in Sections 6, 8, and 13 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, plus (a) the revenues received from any LCRIG with respect to an LCRIF, unless FERC has approved an alternative mechanism to credit such revenues against the Original Participating TO's TRR, and (b) the shortfall or surplus resulting from any cost differences between Transmission Losses and Ancillary Service

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requirements associated with Existing Rights and the CAISO's rules and protocols, minus any Low Voltage Access Charge amounts paid for the use of the Low Voltage Transmission Facilities of a Non-Load-Serving Participating TO pursuant to Section 26.1 and Appendix F, Schedule 3, Section 13. For a New Participating TO during the 10-year TAC Transition Period described in Section 4 of Schedule 3 of Appendix F, the revenues received from the CAISO for Wheeling service and IFM Congestion Credit pursuant to Section 4.3.1.2, plus (a) the revenues received from any LCRIG with respect to an LCRIF, unless FERC has approved an alternative mechanism to credit such revenues against the New Participating TO's TRR, and (b) 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, minus any Low Voltage Access Charge amounts paid for the use of the Low Voltage Transmission Facilities of a Non-Load-Serving Participating TO pursuant to Section 26.1 and Appendix F, Schedule 3, Section 13. After the 10-year TAC Transition Period, the New Participating TO Transmission Revenue Credit shall be calculated the same as the Transmission Revenue Credit for the Original Participating TO.

**- 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 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.

**- TRTC (Transmission Rights And Curtailment) Instructions**

Operational directives developed (i) between Existing Rights holders and holders of Converted Rights and the Participating TO, submitted to the CAISO by the Participating TO, unless otherwise agreed to by the Participating TO and the Existing Rights or Converted Rights holder, and (ii) by TOR holders, to facilitate the accommodation of Existing Rights, Converted Rights, and TORs in the CAISO Markets.

**- TRBA**

Transmission Revenue Balancing Account

**- 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.

**- TRM**

Transmission Reliability Margin



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**- TRR**

Transmission Revenue Requirement

**- TRTC Instructions**

Transmission Rights and Transmission Curtailment Instructions

**- Trustee**

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

**- TTC**

Total Transfer Capability

**- UDC**

Utility Distribution Company

**- UDCOA**

Utility Distribution Company Operating Agreement

**- UDP**

Uninstructed Deviation Penalty

**- UDP Aggregation**

Two or more units scheduled by the same Scheduling Coordinator with the same Resource ID that are to be considered interchangeable for calculating the Uninstructed Deviation Penalty.

**- UFE**

Unaccounted for Energy

**- UIE**

Uninstructed Imbalance Energy

**- 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)**

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, and the total Measured Demand within the utility Service Area adjusted for distribution losses using Distribution

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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**

Ancillary Services capacity that receives an AS Award 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 to provide Energy 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**

Ancillary Services capacity that receives an AS Award and Self-Provided Ancillary Services capacity, or capacity committed in RUC that was dispatched by the CAISO to provide Energy but where a certain percentage or more of the Expected Energy was not provided in Real-Time, which percentage is determined as specified in the applicable Business Practice Manual.

**- Underfrequency Load Shedding (UFLS)**

Automatic Load Shedding, accomplished by the use of such devices as underfrequency relays, intended to arrest frequency decline and assure continued operation within anticipated islands.

**- Undispatchable Capacity**

Ancillary Services capacity that receives an AS Award and Self-Provided Ancillary Services capacity, or capacity committed in RUC, that is not available for use due to a derate or Outage of the resource. Undispatchable Capacity includes AS Awards for Spinning Reserve and Non-Spinning Reserve capacity that are not available for use due to Ramp Rate constraints (e.g., operational Ramping ability is lower than Operating Reserve Ramp Rate).

**- Unified Planning Assumptions**

The assumptions to be developed pursuant to Section 24.2.1 and used, to the maximum extent possible, in performing technical studies identified in the Study Plan as part of the annual Transmission Planning Process.

**- Uninstructed Deviation**

A deviation from the resources' Dispatch Operating Point.

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**- Uninstructed Deviation Penalty (UDP)**

The penalty as set forth in Section 11.23.

**- Uninstructed Imbalance Energy (UIE)**

The portion of Imbalance Energy that is not Instructed 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).

**- Unrated Governmental Entity**

A municipal utility or state or federal agency that does not hold an issuer, counterparty, or underlying credit rating by a Nationally Recognized Statistical Rating Organization.

**- Unrated Public/Private Corporation**

An investor-owned or privately held entity that does not hold an issuer, counterparty, or underlying credit rating by a Nationally Recognized Statistical Rating Organization.

**- Unrecovered Bid Cost Uplift Payment**

A payment made to Scheduling Coordinators for any Bid Costs in the IFM, RUC, and RTM not recovered by IFM, RUC, or RTM Market Revenues as provided in Section 11.8.5.

**- Unsecured Credit Limit**

The level of credit established for a Market Participant that is not secured by any form of Financial Security, as provided for in Section 12.

**- Upgrade**

The required additions and modifications to the CAISO Controlled Grid and the Distribution System at or beyond the Point of Interconnection. Upgrades may be Network Upgrades or Distribution Upgrades. Upgrades do not include Interconnection Facilities.

**- Use-Limited Resource**

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.

**- 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.

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**- Utility Distribution Company Operating Agreement (UDCOA)**

An agreement between the CAISO and a Utility Distribution Company, a pro forma version of which is set forth in Appendix B.8.

**- Validation, Estimation and Editing (VEE)**

The procedures set forth in Section 10 that the CAISO applies to Revenue Quality Meter Data in order to develop Settlement Quality Meter Data.

**- Variable Cost**

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

**- Variable Cost Option**

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

**- VEE**

Validation, Estimation and Editing

**- Verified CRR Source Quantity**

The MW amount corresponding to a verified CRR Source and the LSE or OBAALSE that submitted that verified CRR Source to the CAISO, as described in Section 36.8.3.4.

**- Virtual Award**

A Virtual Supply Award or a Virtual Demand Award.

**- Virtual Award Charge**

The component of the Grid Management Charge that provides for the recovery of the CAISO's costs related to Virtual Awards. The methodology for determining the Virtual Award Charge is set forth in Appendix F, Schedule 1, Part A.

**- Virtual Bid**

A Virtual Supply Bid or a Virtual Demand Bid.

**- Virtual Bid Curve**

The Virtual Bid component that indicates the prices and related quantities at which a Virtual Supply Bid or a Virtual Demand Bid is submitted. For a Virtual Supply Bid, the Virtual Bid Curve is a monotonically increasing staircase function, consisting of no more than ten (10) segments defined by eleven (11) pairs of MW operating points and \$/MWh, which may be different for each Trading Hour of the applicable Virtual Bid time period. For a Virtual Demand Bid, the Virtual Bid Curve is a monotonically decreasing staircase function, consisting of no more than ten (10) segments defined by eleven (11) pairs of MW operating points and \$/MWh, which may be different for each Trading Hour of the applicable Virtual Bid time period.

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**- Virtual Bid Reference Price**

The price set forth in Section 12.8.2.

**- Virtual Bid Submission Charge**

A charge assessed to a Scheduling Coordinator for each submitted Virtual Bid segment that is passed to the IFM.

**- Virtual Demand Award**

The cleared Virtual Demand Bids in the IFM for a given hour.

**- Virtual Demand Bid**

A Bid submitted in the DAM that, if cleared in the IFM, represents a commitment to pay for Energy at the LMP in the DAM and to receive revenues as specified in Section 11.3.

**- Virtual Supply Award**

The cleared Virtual Supply Bids in the IFM for a given hour.

**- Virtual Supply Bid**

A Bid submitted in the DAM that, if cleared in the IFM, represents a commitment to receive revenues for Energy at the LMP in the DAM and to make payments as specified in Section 11.3.

**- 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.

**- WAC**

Wheeling Access Charge

**- WECC**

Western Electricity Coordinating Council

**- Weekly Peak Demand Forecast**

Demand Forecast of the highest Hourly Demand 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.

**- Western Electricity Coordinating Council (WECC)**

The Western Electricity Coordinating Council or its successor.

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**- Western Interconnection**

The network of transmission lines embodied within the WECC region.

**- Western Systems Coordinating Council (WSCC)**

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

**- Western Systems Power Pool**

An organization of participants in the electricity markets that have developed and maintain the Western Systems Power Pool Agreement.

**- Western Systems Power Pool Agreement**

A standardized power sales agreement developed and maintained as a FERC rate schedule by the Western Systems Power Pool.

**- 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 Upgrade.

**- Wheeling**

Wheeling Out or Wheeling Through.

**- Wheeling Access Charge (WAC)**

The charge assessed by the CAISO that is paid by a Scheduling Coordinator for Wheeling in accordance with Section 26.1. 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 Section 16.1, 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 Section 16.1, 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.

California Independent System Operator Corporation  
Fifth Replacement Tariff

**- 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**

Western Systems Coordinating Council