ISO TARIFF APPENDIX A

Master Definitions Supplement

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION FERC ELECTRIC TARIFF Substitute Third Revised Sheet No. 301 FIRST REPLACEMENT VOLUME NO. I Superseding Second Revised Sheet No. 301

Access ChargeA charge paid by all UDCs and MSS Operators with Gross Loadin a PTO Service Territory, as set forth in Section 7.1. TheAccess Charge includes the High Voltage Access Charge, theTransition Charge and the Low Voltage Access Charge. TheAccess Charge will recover the Participating TO's TransmissionRevenue Requirement in accordance with Appendix F,Schedule 3.

Active Zone The Zones so identified in Appendix I to the ISO Tariff. Adjustment Bid A bid in the form of a curve defined by (i) the minimum MW output to which a Scheduling Coordinator will permit a resource (Generating Unit or Dispatchable Load) included in its Schedule or, in the case of an inter-Scheduling Coordinator trade, included in its Schedule or the Schedule of another Scheduling Coordinator, to be redispatched by the ISO; (ii) the maximum MW output to which a Scheduling Coordinator will permit the resource included in its Schedule or, in the case of an inter-Scheduling Coordinator trade, included in its Schedule or the Schedule of another Scheduling Coordinator, to be redispatched by the ISO; (iii) up to a specified number of MW values in between; (iv) a preferred MW operating point; and (v) for the ranges between each of the MW values greater than the preferred operating point, corresponding prices (in \$/MWh) for

Administrative Price

Affiliate

which the Scheduling Coordinator is willing to increase the output of the resource and sell Energy from that resource to the ISO (or, in the case of a Dispatchable Load, decrease the Demand); and (vi) for the ranges between each of the MW values less than the preferred operating point, corresponding prices (in \$/MWh) for which the Scheduling Coordinator is willing to decrease the output of the resource and purchase Energy from the ISO at the resource's location (or, in the case of a Dispatchable Load, increase the Demand). This data for an Adjustment Bid must result in a monotonically increasing curve. The price set by the ISO in place of a Market Clearing Price when, by reason of a System Emergency, the ISO determines that it no longer has the ability to maintain reliable operation of the ISO Controlled Grid relying solely on the economic Dispatch of Generation. This price will remain in effect until the ISO considers that the System Emergency has been contained and corrected.

An entity, company or person that directly, or indirectly through one or more intermediaries, controls, or is controlled by, or is under common control with the subject entity, company, or person.

 AGC (Automatic Generation Control)
 Generation equipment that automatically responds to signals from the ISO's EMS control in real time to control the power output of electric generators within a prescribed area in response to a change in system frequency, tie-line loading, or the relation of these to each other, so as to maintain the target system frequency and/or the established interchange with other areas within the predetermined limits.

| CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION FERC ELECTRIC TARIFF Second Revised Sheet No. 303 FIRST REPLACEMENT VOLUME NO. I Superseding First Revised Sheet No. 303 | | |
|---|---|--|
| Alert Notice | A Notice issued by the ISO when the operating requirements of | |
| | the ISO Controlled Gr | id are marginal because of Demand |
| | exceeding forecast, loss of major Generation, or loss of | |
| | transmission capacity | that has curtailed imports into the ISO |
| | Control Area, or if the | Hour-Ahead Market is short on |
| | scheduled Energy and | d Ancillary Services for the ISO Control |
| | Area. | |
| Ancillary Services | Regulation, Spinning | Reserve, Non-Spinning Reserve, |
| | Replacement Reserve | e, Voltage Support and Black Start |
| | together with such oth | ner interconnected operation services as |
| | the ISO may develop | in cooperation with Market Participants to |
| | support the transmiss | ion of Energy from Generation resources |
| | to Loads while mainta | ining reliable operation of the ISO |
| | Controlled Grid in acc | ordance with Good Utility Practice. |
| Ancillary Service Provider | A Participating Gener | ator or Participating Load who is eligible |

to provide an Ancillary Serviced.

| CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION FERC ELECTRIC TARIFF Second Revised Sheet No. 303A FIRST REPLACEMENT VOLUME NO. I Superseding First Revised Sheet No. 303A | | |
|---|--|--|
| Applicable Reliability | The reliability stand | ards established by NERC, WECC, and |
| <u>Criteria</u> | Local Reliability Criteria as amended from time to time, | |
| | including any requir | rements of the NRC. |
| Applicants | Pacific Gas and Ele | ectric Company, San Diego Gas & Electric |
| | Company, and Sou | thern California Edison Company and any |
| | others as applicable | Э. |

Approved Credit Rating

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

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

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

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

(c) A short-term tax exempt commercial paper debt rating of not less than any one of the following: (i) A2 by Standard and Poor's Corporation; (ii) F2 by Fitch Ratings; or (iii) P2 by Moody's Investors Service. This rating shall be an issuer, or counterparty rating, without the benefit of credit enhancement.
(d) A short-term tax exempt commercial paper debt rating of not less than any one of the following: (i) A2 by Standard and Poor's Corporation; (ii) V2 by Fitch Ratings; or (iii) VMIG2 by Moody's Investors Service. This rating shall be an issuer, or counterparty rating, without the benefit of credit enhancement and Poor's Corporation; (ii) V2 by Fitch Ratings; or (iii) VMIG2 by Moody's Investors Service. This rating shall be an issuer, or counterparty rating, without the benefit of credit

enhancement.

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

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

(f) A federal agency shall be deemed to have an Approved

Credit Rating if its financial obligations under

the ISO Tariff are backed by the full faith and credit of the United States.

(g) A California state agency shall be deemed to have an
 Approved Credit Rating if its financial obligations under the ISO
 Tariff are backed by the full faith and credit of the State of
 California.

(h) Another credit rating approved by the ISO Governing Board.

| 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 ISO |
| | through the ISO Outage Coordination Office. |
| Automatic Mitigation | The market power mitigation procedure described in MMIP |
| Procedure (AMP) | Appendix A. |

| CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION FERC ELECTRIC TARIFF Third Revised Sheet No. FIRST REPLACEMENT VOLUME NO. I Superseding Second Revised Sheet No. | | |
|---|-----------------------|---|
| Available Transfer | For a given transn | mission path, the capacity rating in MW of the |
| <u>Capacity</u> | path established o | consistent with ISO and WECC transmission |
| | capacity rating gui | uidelines, less any reserved uses applicable to |
| | the path. | |
| Balanced Schedule | A Schedule shall b | be deemed balanced when Generation, |
| | adjusted for Trans | smission Losses equals forecast Demand with |
| | respect to all entiti | ties for which a Scheduling Coordinator |
| | schedules. | |
| Balancing Account | An account set up | o to allow periodic balancing of financial |
| | transactions that, | in the normal course of business, do not |
| | result in a zero ba | alance of cash inflows and outflows. |

| CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION FERC ELECTRIC TARIFF Third Revised Sheet No. 3 FIRST REPLACEMENT VOLUME NO. I Superseding Second Revised Sheet No. 3 | | |
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| Black Start | The procedure by which a Generating Unit self-starts without | |
| | an external source of electricity thereby restoring power to the | |
| | ISO Controlled Grid following system or local area blackouts. | |
| Black Start Generator | A Participating Generator in its capacity as party to an Interim | |
| | Black Start Agreement with the ISO for the provision of Black | |
| | Start services, but shall exclude Participating Generators in | |
| | their capacity as providers of Black Start services under their | |
| | Reliability Must-Run Contracts. | |
| Bulk Supply Point | A UDC metering point. | |
| Business Day | A day on which banks are open to conduct general banking | |
| | business in California. | |
| <u>C.F.R.</u> | Code of Federal Regulations. | |
| Circular Schedule | A Schedule or set of Schedules that creates a closed loop of | |
| | Energy Schedules between the ISO Controlled Grid and one or | |
| | more other Control Areas that do not have a source and sink in | |
| | separate Control Areas, which includes Energy scheduled in a | |
| | counter direction over a Congested Inter-Zonal Interface | |
| | through two or more Scheduling Points. A closed loop of | |
| | Energy Schedules that includes a transmission segment on the | |
| | Pacific DC Intertie shall not be a Circular Schedule because | |
| | such a Schedule directly changes power flows on the network | |
| | and can mitigate Congestion between SP15 and NP15. | |

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION FERC ELECTRIC TARIFF Second Revised Sheet No. 307A FIRST REPLACEMENT VOLUME NO. I Superseding First Revised Sheet No. 307A

| Completed Application Date | For purposes of Section 5.7, the date on which a New Facility |
|---|---|
| | Operator submits an Interconnection Application to the ISO that |
| | satisfies the requirements of the ISO Tariff and the TO Tariff of |
| | the Interconnecting PTO. |
| Completed | An Interconnection Application that meets the information |
| Interconnection Application | requirements as specified by the ISO and posted on the ISO |
| | Home Page. |
| Congestion | A condition that occurs when there is insufficient Available |
| | Transfer Capacity to implement all Preferred Schedules |
| | simultaneously or, in real time, to serve all Generation and |
| | Demand. "Congested" shall be construed accordingly. |
| Congestion Management | The alleviation of Congestion in accordance with Applicable |
| | ISO Protocols and Good Utility Practice. |
| <u>Congestion Management</u> <u>Charge</u> | The component of the Grid Management Charge that provides |
| | for the recovery of the ISO's costs of operating the Congestion |
| | Management process including, but not limited to, the |
| | management and operation of Inter-Zonal Congestion markets, |
| | Adjustment Bids, taking Firm Transmission Rights and Existing |
| | Contracts into account, and determining the price for mitigating |
| | Congestion for flows on Congested paths. The formula for |
| | determining the Congestion Management Charge is set forth in |
| | Appendix F, Schedule 1, Part A of this Tariff. |

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION FERC ELECTRIC TARIFF Substitute Fourth Revised Sheet No. 308 FIRST REPLACEMENT VOLUME NO. I Superseding Third Revised Sheet No. 308

| Connected Entity | A Participating TO or any party that owns or operates facilities that |
|-------------------------|---|
| | are electrically interconnected with the ISO Controlled Grid. |
| Constrained Output | Generating resources with only two viable operating states: (a) off- |
| <u>Generation</u> | line or (b) operating at their maximum output level. |
| <u>Constraints</u> | Physical and operational limitations on the transfer of electrical |
| | power through transmission facilities. |
| <u>Contingency</u> | Disconnection or separation, planned or forced, of one or more |
| | components from an electrical system. |
| Control Area | An electric power system (or combination of electric power |
| | systems) to which a common AGC scheme is applied in order to: i) |
| | match, at all times, the power output of the Generating Units within |
| | the electric power system(s), plus the Energy purchased from |
| | entities outside the electric power system(s), minus Energy sold to |
| | entities outside the electric power system, with the Demand within |
| | the electric power system(s); ii) maintain scheduled interchange |
| | with other Control Areas, within the limits of Good Utility Practice; |
| | iii) maintain the frequency of the electric power system(s) within |
| | reasonable limits in accordance with Good Utility Practice; and iv) |
| | provide sufficient generating capacity to maintain operating |
| | reserves in accordance with Good Utility Practice. |
| Control Area Gross Load | For the purpose of calculating and billing Minimum Load Costs, |
| | Emission Costs Charge and Start-Up Fuel Costs Charge, Control |
| | Area Gross Load is all Demand for Energy within the ISO Control |
| | Area. Control Area Gross Load shall not include Energy consumed |
| | by: |

(a) generator auxiliary Load equipment that is dedicated to the production of Energy and is electrically connected at the same point as the Generating Unit (*e.g.*, auxiliary Load equipment that is served via a distribution line

| CALIFORNIA INDEPENDENT SYSTEM OPERATOR FERC ELECTRIC TARIFF FIRST REPLACEMENT VOLUME NO. I | | Second Revised Sheet No. 308A |
|--|---|---|
| | | that is separate from the switchyard to which the |
| | | Generating Unit is connected will not be considered to |
| | | be electrically connected at the same point); and |
| | (b) | Load that is isolated electrically from the ISO Control |
| | | Area (<i>i.e.</i> , Load that is not synchronized with the ISO |
| | | Control Area). |
| Converted Rights | Those transmission service rights as defined in Section | |
| | 2.4.4 | .2.1 of the ISO Tariff. |
| <u>Core Reliability Services</u> <u>Charge</u> | The component of the Grid Management Charge that provides | |
| | for the recovery of the ISO's costs of providing a basic, non- | |
| | scalable level of reliable operation for the ISO Control Area and | |
| | meet | ting regional and national reliability requirements. The |
| | formula for determining the Core Reliability Services C | |
| S | | orth in Appendix F, Schedule 1, Part A of this Tariff. |
| CPUC | The California Public Utilities Commission, or its successor. | |

| CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION FERC ELECTRIC TARIFF Third Revised Sheet No. 309 FIRST REPLACEMENT VOLUME NO. I Superseding Second Revised Sheet No. 309 | | |
|---|--|--|
| Critical Protective System | Facilities and sites with protective relay systems and Remedial | |
| | Action Schemes that the ISO determines may have a direct | |
| | impact on the ability of the ISO to maintain system security and | |
| | over which the ISO exercises Operational Control. | |
| CTC (Competition | A non-bypassable charge that is the mechanism that the | |
| Transition Charge) | California Legislature and the CPUC mandated to permit | |
| | recovery of costs stranded as a result of the shift to the new | |
| | market structure. | |
| Curtailable Demand | Demand from a Participating Load that can be curtailed at the | |
| | direction of the ISO in the real-time Dispatch of the ISO | |
| | Controlled Grid. Scheduling Coordinators with Curtailable | |
| | Demand may offer it to the ISO to meet Non-Spinning Reserve | |
| | or Replacement Reserve requirements. | |
| <u>Data Adequacy</u> Requirement | Any applicable minimum data requirements of the state agency | |
| Requirement | responsible for generation siting or of any Local Regulatory | |
| | Authority. | |
| Day-Ahead | Relating to a Day-Ahead Market or Day-Ahead Schedule. | |
| Day-Ahead Market | The forward market for Energy and Ancillary Services to be | |
| | supplied during the Settlement Periods of a particular Trading | |
| | Day that is conducted by the ISO and other Scheduling | |
| | Coordinators and which closes with the ISO's acceptance of | |
| | the Final Day-Ahead Schedule. | |
| Day-Ahead Schedule | A Schedule prepared by a Scheduling Coordinator or the ISO | |
| | before the beginning of a Trading Day indicating the levels of | |
| | Generation and Demand scheduled for each Settlement Period | |
| | of that Trading Day. | |
| Default GMM | Pre calculated GMM based on historical Load and interchange | |
| | levels. | |

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION FERC ELECTRIC TARIFF Second Revised Sheet No. 310 FIRST REPLACEMENT VOLUME NO. I Superseding First Revised Sheet No. 310

| Delivery Point | The point where a transaction between Scheduling |
|------------------|--|
| | Coordinators is deemed to take place. It can be either the |
| | Generation input point, a Demand Take-Out Point, or a |
| | transmission bus at some intermediate location. |
| Delivery Upgrade | The transmission facilities, other than Direct Assignment |
| | Facilities and Reliability Upgrades, necessary to relieve |
| | Constraints on the ISO Controlled Grid and to ensure the |
| | delivery of energy from a New Facility to Load. |
| Demand | The rate at which Energy 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 Forecast | An estimate of Demand over a designated period of time. |

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION FERC ELECTRIC TARIFF FIRST REPLACEMENT VOLUME NO. I Original Sheet No. 310A

| <u>Designated Contact</u> <u>Person</u> | The person designated by each Participating TO to coordinate | |
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| | with the ISO on the processing and completion of all | |
| | Interconnection Applications. | |
| Direct Access Demand | The Demand of Direct Access End-Users. | |
| Direct Access End-User | An Eligible Customer located within the Service Area of a UDC | |
| | who purchases Energy and Ancillary Services through a | |
| | Scheduling Coordinator. | |

| CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION FERC ELECTRIC TARIFF Fifth Revised Sheet No. 311 FIRST REPLACEMENT VOLUME NO. I Superseding Fourth Revised Sheet No. 311 | | |
|---|---|--|
| Direct Assignment Facility | The transmission facilities necessary to physically and | |
| | electrically interconnect a New Facility Operator to the ISO | |
| | Controlled Grid at the point of Interconnection. | |
| <u>Dispatch</u> | The operating control of an integrated electric system to: | |
| | i) assign specific Generating Units and other sources of supply | |
| | to effect the supply to meet the relevant area Demand taken as | |
| | Load rises or falls; ii) control operations and maintenance of | |
| | high voltage lines, substations, and equipment, including | |
| | administration of safety procedures; iii) operate | |
| | interconnections; iv) manage Energy transactions with other | |
| | interconnected Control Areas; and v) curtail Demand. | |
| Dispatch Instruction | An instruction by the ISO to a resource for increasing or | |
| | decreasing its energy supply or demand from the Hour-Ahead | |
| | Schedule to a specified operating point. | |
| Dispatch Interval | The time period, which may range between five (5) and thirty | |
| | (30) minutes, over which the ISO's RTD Software 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 ISO Governing Board, the ISO may, by seven | |
| | (7) days' notice published on the ISO's Home Page, at | |
| | http://www.caiso.com (or such other internet address as the | |
| | ISO may publish from time to time), increase or decrease the | |
| | Dispatch Interval within the range of five (5) to thirty (30) | |
| | minutes. | |

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION FERC ELECTRIC TARIFF First Revised Sheet No. 311.01 FIRST REPLACEMENT VOLUME NO. I Superseding Original Sheet No. 311.01

| <u>Dispatch Interval Ex Post</u> <u>Prices</u> | The price of Imbalance Energy determined each Dispatch |
|---|---|
| | Interval based on 1) the Imbalance Energy requirements in that |
| | Dispatch Interval, and 2) the Energy Bid price of the resource |
| | eligible to set the price. The Dispatch Interval Ex Post Price is |
| | used to determine other prices used to settle Imbalance |
| | Energy. |
| Dispatch Operating Point | The expected operating point of a resource that has received a |
| | Dispatch Instruction. The resource is expected to operate at |
| | the Dispatch Operating Point after completing the Dispatch |
| | Instruction, taking into account any relevant ramp rate and time |
| | delays. Energy expected to be produced or consumed above |
| | or below the Final Hour-Ahead Schedule in response to a |
| | Dispatch Instruction constitutes Instructed Imbalance Energy. |
| | For resources that have not received a Dispatch Instruction, |
| | the Dispatch Operating Point defaults to the corresponding |
| | Final Hour-Ahead Schedule. |
| | |

Dispatchable Load Load which is the subject of an Adjustment Bid.

| CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION FERC ELECTRIC TARIFF Fourth Revised Sheet No. 311A FIRST REPLACEMENT VOLUME NO. I Superseding Third Revised Sheet No. 311A | | | |
|---|--|--------------|--|
| Distribution System | The distribution assets of an IOU or Local Publicly Owned | | |
| | Electric Utility. | | |
| <u>EEP (Electrical</u> Emergency Plan) | A plan to be developed by the ISO in consultation with UDCs to | | |
| | address situations when Energy reserve margins are forecast | | |
| | to be below establi | shed levels. | |

| CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION FERC ELECTRIC TARIFF Third Revised Sheet No. 312 FIRST REPLACEMENT VOLUME NO. I Superseding Sub. Second Revised Sheet No. 312 | | |
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| Eligible Customer | (i) any utility (including Participating TOs, Market Participants and | |
| | any power marketer), Federal power marketing agency, or any | |
| | person generating Energy for sale or resale; Energy sold or | |
| | produced by such entity may be Energy produced in the United | |
| | States, Canada or Mexico; however, such entity is not eligible for | |
| | transmission service that would be prohibited by Section | |
| | 212(h)(2) of the Federal Power Act; and (ii) any retail customer | |
| | taking unbundled transmission service pursuant to a state retail | |
| | access program or pursuant to a voluntary offer of unbundled | |
| | retail transmission service by the Participating TO. | |
| Eligible Intermittent | A Generating Unit that is powered solely by 1) wind, 2) solar | |
| <u>Resource</u> | energy, or 3) hydroelectric potential derived from small conduit | |
| | water distribution facilities that do not have storage capability. | |
| Emissions Cost Charge | The charge determined in accordance with Section 2.5.23.3.6 | |
| Emissions Cost Demand | The level of Demand specified in Section 2.5.23.3.6.3 | |

| CALIFORNIA INDEPENDENT SYSTEM OPERATOR COR FERC ELECTRIC TARIFF FIRST REPLACEMENT VOLUME NO. I | | RPORATION First Revised Sheet No. 312A Superseding Original Sheet No. 312A |
|--|---|--|
| Emissions Cost Invoice | The invoice submitted to the ISO in accordance with Section | |
| | 2.5.23.3.6.6. | |
| Emissions Cost Trust | The trust account established in accordance with Section | |
| <u>Account</u> | 2.5.23.3.6.2. | |
| Emissions Costs | The mitigation fees, exclu | uding capital costs, assessed against a |
| | Generating Unit by a stat | te or federal agency, including air quality |
| | districts, for exceeding a | pplicable NOx emissions limitations. |

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION FERC ELECTRIC TARIFF First Revised Sheet No. 313 FIRST REPLACEMENT VOLUME NO. I Superseding Original Sheet No. 313

| EMS (Energy Management | A computer control system used by electric utility dispatchers |
|------------------------|---|
| <u>System)</u> | to monitor the real-time performance of the various elements of |
| | an electric system and to control Generation and transmission |
| | facilities. |
| 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 ISO 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 ISO 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 ISO Operations Date. |
| End-Use Customer or | A consumer of electric power who consumes such power to |
| End-User | satisfy a Load directly connected to the ISO Controlled Grid or |
| | to a Distribution System and who does not resell the power. |
| 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 ISO in Settlement quality |
| | form. |
| End-Use Meter | A metering device collecting Meter Data with respect to the |
| | Energy consumption of an End-User. |
| | |

| CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION FERC ELECTRIC TARIFF Third Revised Sheet No. 314 FIRST REPLACEMENT VOLUME NO. I Superseding Second Revised Sheet No. 314 | | |
|---|--|--|
| Energy | The electrical energy produced, flowing or supplied by | |
| | generation, transmission or distribution facilities, being the | |
| | integral with respect to time of the instantaneous power, | |
| | measured in units of watt-hours or standard multiples thereof, | |
| | e.g., 1,000 Wh=1kWh, 1,000 kWh=1MWh, etc. | |
| Energy Bid | The price at or above which a Generator has agreed to | |
| | produce the next increment of Energy. | |
| Energy Transmission Services Net Energy | The component of the Grid Management Charge that provides, | |
| Charge | in conjunction with the Energy Transmission Services | |
| | Uninstructed Deviations Charge, for the recovery of the ISO's | |
| | costs of providing reliability on a scalable basis, i.e., a function | |
| | of the intensity of the use of the transmission system within the | |
| | Control Area and the occurrence of system outages and | |
| | disruptions. The formula for determining the Energy | |
| | Transmission Services Net Energy Charge is set forth in | |
| | Appendix F, Schedule 1, Part A of this Tariff. | |
| Energy Transmission | The component of the Grid Management Charge that provides, | |
| Services Uninstructed Deviations Charge | in conjunction with the Energy Transmission Services Net | |
| | Energy Charge, for the recovery of the ISO's costs of providing | |
| | reliability on a scalable basis, in particular for the costs | |
| | associated with balancing transmission flows that result from | |
| | uninstructed deviations. The formula for determining the | |
| | Energy Transmission Services Uninstructed Deviations Charge | |
| | is set forth in Appendix F, Schedule 1, Part A of this Tariff. | |
| | | |

| CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION FERC ELECTRIC TARIFF First Revised Sheet No. 314A FIRST REPLACEMENT VOLUME NO. I Superseding Sheet No. 314A | | |
|--|--|----------------------------------|
| Entitlements | The right of a Participating TO obtained through contract or | |
| | other means to use another entit | y's transmission facilities for |
| | the transmission of Energy. | |
| Environmental Dispatch | Dispatch designed to meet the re | equirements of air quality and |
| | other environmental legislation a | nd environmental agencies |
| | having authority or jurisdiction ov | ver the ISO. |
| Ex Post GMM | GMM that is calculated utilizing the | he real-time Power Flow |
| | Model in accordance with Section | n 7.4.2.1.2. |
| Ex Post Price | The Hourly Ex Post Price, the Dis | spatch Interval Ex Post Price, |
| | the Resource-Specific Settlemen | t Interval Ex Post Price, or the |
| | Zonal Settlement Interval Ex Pos | t Price. |
| <u>Ex Post Transmission</u> Loss | Transmission Loss that is calcula | ated based on Ex Post GMM. |

| CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATIONFERC ELECTRIC TARIFFThird Revised Sheet No. 315FIRST REPLACEMENT VOLUME NO. ISuperseding Second Revised Sheet No. 315Existing ContractsThe contracts which grant transmission service rights in | | | |
|---|---|--|--|
| | existence on the ISO Operations Date (including any contracts | | |
| | entered into pursuant to such contracts) as may be amended in | | |
| | accordance with their terms or by agreement between the | | |
| | parties thereto from time to time. | | |
| <u>Existing High Voltage</u> Facility | A High Voltage Transmission Facility of a Participating TO that | | |
| | was placed in service on or before the Transition Date defined | | |
| | in Section 4.2 of Schedule 3 of Appendix F. | | |
| Existing Rights | Those transmission service rights defined in Section 2.4.4.1.1 | | |
| | of the ISO Tariff. | | |
| Expedited Interconnection Agreement | A contract between a party which has submitted a Request for | | |
| Agreement | Expedited Interconnection Procedures and an Interconnection | | |
| | PTO under which the ISO and an Interconnecting PTO agree | | |
| | to process, on an expedited basis, the Interconnection | | |
| | Application of a New Facility Operator and which sets forth the | | |
| | terms, conditions, and cost responsibilities for such | | |
| | interconnection. | | |
| Facility Owner | An entity owning transmission, Generation, or distribution | | |
| | facilities connected to the ISO Controlled Grid. | | |
| Facility Study | An engineering study conducted by a Participating TO to | | |
| | determine required modifications to the Participating TO's | | |
| | transmission system, including the cost and scheduled | | |
| | completion date for such modifications that will be required to | | |
| | provide needed services. | | |
| Facility Study Agreement | An agreement between a Participating TO and either a Market | | |
| | Participant, Project Sponsor, or identified principal beneficiaries | | |
| | pursuant to which the Market Participants, Project Sponsor, | | |
| | and identified principal beneficiaries agree to reimburse the | | |
| | Participating TO for the cost of a Facility Study. | | |
| | | | |

| CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION FERC ELECTRIC TARIFF Third Revised Sheet No. 31 FIRST REPLACEMENT VOLUME NO. I Superseding Second Revised Sheet No. 31 | | |
|---|--|--|
| FERC | The Federal Energy Regulatory Commission or its successor. | |
| FERC Annual Charges | Those charges assessed against a public utility by the FERC | |
| | pursuant to 18 C.F.R. § 382.201 and any related statutes or | |
| | regulations, as they may be amended from time to time. | |
| FERC Annual Charge | The rate to be paid by Scheduling Coordinators for recovery of | |
| <u>Recovery Rate</u> | FERC Annual Charges assessed against the ISO for | |
| | transactions on the ISO Controlled Grid. | |
| FERC Annual Charge Trust Account | An account to be established by the ISO for the purpose of | |
| | maintaining funds collected from Scheduling Coordinators for | |
| | FERC Annual Charges and disbursing such funds to the | |
| | FERC. | |
| Final Day-Ahead Schedule | The Day-Ahead Schedule which has been approved as | |
| | feasible and consistent with all other Schedules by the ISO | |
| | based upon the ISO's Day-Ahead Congestion Management | |
| | procedures. | |

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION FERC ELECTRIC TARIFF Second Revised Sheet No. 316 FIRST REPLACEMENT VOLUME NO. I Superseding First Revised Sheet No. 316

| FIRST REPLACEMENT VOLUN | IE NO. I Supersealing First Revised Sheet No. 316 |
|--|--|
| <u>Final Hour-Ahead</u> <u>Schedule</u> | The Hour-Ahead Schedule of Generation and Demand that has |
| Schedule | been approved by the ISO as feasible and consistent with all |
| | other Schedules based on the ISO's Hour-Ahead Congestion |
| | Management procedures. |
| Final Invoice | The invoice due from a RMR Owner to the ISO at termination |
| | of the RMR Contract. |
| Final Schedule | A Schedule developed by the ISO following receipt of a |
| | Revised Schedule from a Scheduling Coordinator. |
| Final Settlement | The restatement or recalculation of the Preliminary Settlement |
| <u>Statement</u> | Statement by the ISO following the issue of that Preliminary |
| | Settlement Statement. |
| Forbidden Operating | The operating region of a resource wherein the resource |
| <u>Region</u> | cannot operate in a stable manner and must ramp through at |
| | maximum ramp capacity. |
| Forced Outage | An Outage for which sufficient notice cannot be given to allow |
| | the Outage to be factored into the Day-Ahead Market or Hour- |
| | Ahead Market scheduling processes. |
| Forward Scheduling | The component of the Grid Management Charge that provides |
| <u>Charge</u> | for the recovery of the ISO's costs, including, but not limited to |
| | the costs of providing the ability to Scheduling Coordinators to |
| | forward schedule Energy and Ancillary Services and the cost of |
| | processing accepted Ancillary Service bids. For purposes of |
| | the Forward Scheduling Charge, a schedule is represented by |
| | each Final Hour-Ahead Schedule with a value other than 0 MW |
| | submitted to the scheduling infrastructure/scheduling |

application system (import, export, Load, Generation, inter-Scheduling Coordinator trade, and Ancillary Services, including self-provided Ancillary Services) submitted to the ISO's scheduling infrastructure. The formula for determining the Forward Scheduling Charge is set forth in Appendix F, Schedule 1, Part A of this Tariff.

Parts II and III of the Federal Power Act, 16 U.S.C. § 824 et

seq., as they may be amended from time to time.

<u>FPA</u>

FTR (Firm Transmission Right)

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

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION FERC ELECTRIC TARIFF FIRST REPLACEMENT VOLUME NO. I Original Sheet No. 317

| FIRST REPLACEMENT VOLUM | JME NO. I Original Sheet No. | |
|-------------------------|--|--|
| FTR Bidder | An enti | ty that submits a bid in an FTR auction conducted by the |
| | ISO in | accordance with Section 9.4 of the ISO Tariff. |
| FTR Holder | The owner of an FTR, as registered with the ISO. | |
| FTR Market | A trans | mission path from an originating Zone to a contiguous |
| | receivii | ng Zone for which FTRs are auctioned by the ISO in |
| | accord | ance with Section 9.4 of the ISO Tariff. |
| Full Marginal Loss Rate | A rate | calculated by the ISO for each Generation and |
| | Schedu | uling Point location to determine the effect on total |
| | system | Transmission Losses of injecting an increment of |
| | Genera | ation at each such location to serve an equivalent |
| | increm | ental MW of Demand distributed proportionately |
| | through | nout the ISO Control Area. |
| Generating Unit | An indi | vidual electric generator and its associated plant and |
| | appara | tus whose electrical output is capable of being |
| | separa | tely identified and metered or a Physical Scheduling |
| | Plant th | nat, in either case, is: |
| | (a) | located within the ISO Control Area; |
| | (b) | connected to the ISO 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). |
| <u>Generation</u> | Energy | delivered from a Generating Unit. |

| CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION FERC ELECTRIC TARIFF Second Revised Sheet No. 318 FIRST REPLACEMENT VOLUME NO. I Superseding First Revised Sheet No. 318 | | |
|---|--|--|
| Generator | The seller of Energy or Ancillary Services produced by a | |
| | Generating Unit. | |
| <u>GMM (Generation Meter</u> Multiplier) | A number which when multiplied by a Generating Unit's | |
| <u>Munipiter)</u> | Metered Quantity will give the total Demand to be served from | |
| | that Generating Unit. | |
| Good Faith Deposit | The deposit paid to the ISO by a New Facility Operator with | |
| | submission of its Interconnection Application in accordance | |
| | with Section 5.7.3.2, in an amount equal to \$10,000, including | |
| | any interest that accrues on the original amount, less any bank | |
| | fees or other charges assessed on the escrow account. A New | |
| | Facility Operator may satisfy its deposit obligation through any | |
| | commercially available financial instrument determined to be | |
| | satisfactory by the ISO. | |
| 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

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desired result at a reasonable cost consistent with good business practices, reliability, safety, and expedition. Good Utility Practice is not intended to be any one of a number of the optimum practices, methods, or acts to the exclusion of all others, but rather to be acceptable practices, methods, or acts generally accepted in the region CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION FERC ELECTRIC TARIFF Substitute Fourth Revised Sheet No. 319 FIRST REPLACEMENT VOLUME NO. I Superseding Third Revised Sheet No. 319

The ISO monthly charge on all Scheduling Coordinators that provides Grid Management Charge for the recovery of the ISO's costs listed in Section 8.2 through the seven service charges described in Section 8.3 calculated in accordance with the formula rate set forth in Appendix F, Schedule 1, Part A of this Tariff. The seven charges that comprise the Grid Management Charge consist of: 1) the Core Reliability Services Charge, 2) the Energy Transmission Services Net Energy Charge, 3) the Energy Transmission Services Uninstructed Deviations Charge, 4) the Forward Scheduling Charge, 5) the Congestion Management Charge, 6) the Market Usage Charge, and 7) the Settlements, Metering, and Client Relations Charge. **Grid Operations Charge** An ISO charge that recovers Redispatch costs incurred due to Intra-Zonal Congestion in each Zone. These charges will be paid to the ISO by the Scheduling Coordinators, in proportion to their metered Demand within, and metered exports from, the Zone to a neighboring Control Area. Gross Load For the purposes of calculating the transmission Access Charge, Gross Load is all Energy (adjusted for distribution losses) delivered for the supply of End-Use Customer Loads directly connected to the transmission facilities or directly connected to the Distribution System of a UDC or MSS Operator located in a PTO Service Territory. Gross Load shall exclude Load with respect to which the Wheeling Access Charge is payable and the portion of the Load of an individual retail customer of a UDC or MSS Operator that is

Issued by: Charles F. Robinson, Vice President and General Counsel Issued on: May 21, 2004

as authorized by Section 218

served by a Generating Unit that: (a) is located on the customer's

site or provides service to the customers site through arrangements

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

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION FERC ELECTRIC TARIFF Second Revised Sheet No. 320 FIRST REPLACEMENT VOLUME NO. I Superseding First Revised Sheet No. 320

> (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. In the case of a Local Publicly Owned Electric Utility that (a) is a Participating TO, (b) is in compliance with all metering requirements of Section 10 and the Metering Protocols of the ISO Tariff applicable to a utility that is an ISO Metered Entity, and (c) has not received a waiver of such metering requirements, Gross Load shall also exclude the portion of the Local Publicly Owned Electric Utility's Load that is served by a Generating Unit that (a) is directly connected to the Load through the Local Publicly Owned Electric Utility's Distribution System, (b) has certified and polled metering, and (c) is operated at greater than 50% capacity in the current month as measured by such a meter. Gross Load forecasts consistent with filed TRR will be provided by each Participating TO to the ISO.

High Voltage Access Charge

High Voltage Transmission Facility The Access Charge applicable under Section 7.1 to recover the High Voltage Transmission Revenue Requirements of each Participating TO in a TAC Area.

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 ISO 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.

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION FERC ELECTRIC TARIFF FIRST REPLACEMENT VOLUME NO. I Original Sheet No. 320A

High Voltage
Transmission Revenue
RequirementThe portion of a Participating TO's TRR associated with and
allocable to the Participating TO's High Voltage TransmissionFacilities and Converted Rights associated with High Voltage
Transmission Facilities that are under the ISO Operational
Control.

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION FERC ELECTRIC TARIFF First Revised Sheet No. 321 FIRST REPLACEMENT VOLUME NO. I Superseding Original Sheet No. 321

| Access ChargeParticipating TO's High Voltage Transmission Revenue Requirements in accordance with Section 7.1.Hour-AheadRelating to an Hour-Ahead Market or an Hour-Ahead Schedule.Hour-Ahead MarketThe forward market for Energy and Ancillary Services to be supplied during a particular Settlement Period that is conducted by the ISO and other Scheduling Coordinators which opens after the ISO's acceptance of the Final Day-Ahead Schedule for the Trading Day in which the Settlement Period falls and closes with the ISO's acceptance of the Final Hour-Ahead Schedule.Hour-Ahead Schedule before the beginning of a Settlement Period indicating the changes to the levels of Generation and Demand scheduled for | High Voltage Wheeling Access Charge | The Wheeling Access Charge associated with the recovery of a |
|--|--|--|
| Hour-AheadRelating to an Hour-Ahead Market or an Hour-Ahead Schedule.Hour-Ahead MarketThe forward market for Energy and Ancillary Services to be supplied during a particular Settlement Period that is conducted by the ISO and other Scheduling Coordinators which opens | | Participating TO's High Voltage Transmission Revenue |
| Hour-Ahead MarketSchedule.Hour-Ahead MarketThe forward market for Energy and Ancillary Services to be supplied during a particular Settlement Period that is conducted by the ISO and other Scheduling Coordinators which opens after the ISO's acceptance of the Final Day-Ahead Schedule for the Trading Day in which the Settlement Period falls and closes with the ISO's acceptance of the Final Hour-Ahead Schedule.Hour-Ahead ScheduleA Schedule prepared by a Scheduling Coordinator or the ISO before the beginning of a Settlement Period indicating the | | Requirements in accordance with Section 7.1. |
| Hour-Ahead MarketThe forward market for Energy and Ancillary Services to be supplied during a particular Settlement Period that is conducted by the ISO and other Scheduling Coordinators which opens after the ISO's acceptance of the Final Day-Ahead Schedule for the Trading Day in which the Settlement Period falls and closes with the ISO's acceptance of the Final Hour-Ahead Schedule.Hour-Ahead ScheduleA Schedule prepared by a Scheduling Coordinator or the ISO before the beginning of a Settlement Period indicating the | Hour-Ahead | Relating to an Hour-Ahead Market or an Hour-Ahead |
| supplied during a particular Settlement Period that is conducted by the ISO and other Scheduling Coordinators which opens after the ISO's acceptance of the Final Day-Ahead Schedule for the Trading Day in which the Settlement Period falls and closes with the ISO's acceptance of the Final Hour-Ahead Schedule. Hour-Ahead Schedule A Schedule prepared by a Scheduling Coordinator or the ISO before the beginning of a Settlement Period indicating the | | Schedule. |
| by the ISO and other Scheduling Coordinators which opens after the ISO's acceptance of the Final Day-Ahead Schedule for the Trading Day in which the Settlement Period falls and closes with the ISO's acceptance of the Final Hour-Ahead Schedule. Hour-Ahead Schedule A Schedule prepared by a Scheduling Coordinator or the ISO before the beginning of a Settlement Period indicating the | Hour-Ahead Market | The forward market for Energy and Ancillary Services to be |
| after the ISO's acceptance of the Final Day-Ahead Schedule for the Trading Day in which the Settlement Period falls and closes with the ISO's acceptance of the Final Hour-Ahead Schedule. Hour-Ahead Schedule A Schedule prepared by a Scheduling Coordinator or the ISO before the beginning of a Settlement Period indicating the | | supplied during a particular Settlement Period that is conducted |
| for the Trading Day in which the Settlement Period falls and closes with the ISO's acceptance of the Final Hour-Ahead Schedule. Schedule. Hour-Ahead Schedule A Schedule prepared by a Scheduling Coordinator or the ISO before the beginning of a Settlement Period indicating the | | by the ISO and other Scheduling Coordinators which opens |
| closes with the ISO's acceptance of the Final Hour-Ahead Schedule. Hour-Ahead Schedule A Schedule prepared by a Scheduling Coordinator or the ISO before the beginning of a Settlement Period indicating the | | after the ISO's acceptance of the Final Day-Ahead Schedule |
| Hour-Ahead Schedule Schedule prepared by a Scheduling Coordinator or the ISO before the beginning of a Settlement Period indicating the | | for the Trading Day in which the Settlement Period falls and |
| Hour-Ahead ScheduleA Schedule prepared by a Scheduling Coordinator or the ISObefore the beginning of a Settlement Period indicating the | | closes with the ISO's acceptance of the Final Hour-Ahead |
| before the beginning of a Settlement Period indicating the | | Schedule. |
| | <u>Hour-Ahead Schedule</u> | A Schedule prepared by a Scheduling Coordinator or the ISO |
| changes to the levels of Generation and Demand scheduled for | | before the beginning of a Settlement Period indicating the |
| | | changes to the levels of Generation and Demand scheduled for |
| that Settlement Period from that shown in the Final Day-Ahead | | that Settlement Period from that shown in the Final Day-Ahead |

Schedule.

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION FERC ELECTRIC TARIFF Fourth Revised Sheet No. 322 FIRST REPLACEMENT VOLUME NO. I Superseding Third Revised Sheet No. 322

Hourly Ex Post Price The Energy-weighted average of the Dispatch Interval Ex Post Prices in each Zone during each Settlement Period. The Hourly Ex Post Price will vary between Zones when Congestion is present. This price is used in the Regulation Energy Payment Adjustment and in RMR settlements. Hourly Pre-Dispatch The process in which the ISO Dispatches Energy Bids from System Resources before the start of the next Settlement Period for the entire duration of that Settlement Period. **Hydro Spill Generation** Hydro-electric Generation in existence prior to the ISO Operations Date that: i) has no storage capacity and that, if backed down, would spill; ii) has exceeded its storage capacity and is spilling even though the generators are at full output, or iii) has inadequate storage capacity to prevent loss of hydroelectric Energy either immediately or during the forecast period, if hydro-electric Generation is reduced; iv) has increased regulated water output to avoid an impending spill. **Identification Code** An identification number assigned to each Scheduling Coordinator by the ISO. **Imbalance Energy** Imbalance Energy is Energy from Regulation, Spinning and Non-Spinning Reserves, or Replacement Reserve, or Energy from other Generating Units, System Units, System Resources, or Loads that are able to respond to the ISO's request for more or less Energy. Inactive Zone All Zones which the ISO Governing Board has determined do not have a workably competitive Generation market and as set out in Appendix I to the ISO Tariff.

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION FERC ELECTRIC TARIFF First Revised Sheet No. 323 FIRST REPLACEMENT VOLUME NO. I Superseding Original Sheet No. 323

| Incremental Change | The change in dollar value of a specific charge type from the |
|----------------------|---|
| | Preliminary Settlement Statement to the Final Settlement |
| | Statement including any new charge types or Trading Day |
| | charges appearing for the first time on the Final Settlement |
| | Statement. |
| Instructed Imbalance | The real-time change in Generation output or Demand (from |
| <u>Energy</u> | dispatchable Generating Units, System Units, System |
| | Resources or Loads) which is instructed by the ISO to ensure |
| | that reliability of the ISO Control Area is maintained in |
| | accordance with Applicable Reliability Criteria. Sources of |

Imbalance Energy include Spinning and Non-Spinning Reserves, Replacement Reserve, and Energy from other dispatchable Generating Units, System Units, System Resources or Loads that are able to respond to the ISO's request for more or less Energy.

Ancillary Service transactions between Scheduling Coordinators.

Energy transactions between Scheduling Coordinators.

Inter-Zonal Congestion

Inter-Scheduling

Inter-Scheduling

Trades

Coordinator Energy

Coordinator Ancillary Service Trades

Congestion across an Inter-Zonal Interface.

Inter-Zonal InterfaceThe (i) group of transmission paths between two adjacent
Zones of the ISO Controlled Grid, for which a physical, non-
simultaneous transmission capacity rating (the rating of the
interface) has been established or will be established prior to
the use of the interface for Congestion Management; (ii) the
group of transmission paths between an ISO Zone and an
adjacent Scheduling Point, for which a physical, non-
simultaneous transmission capacity rating (the rating of the
interface) has been established or will be established prior to
the use of the interface for Congestion Management; (ii) the
group of transmission capacity rating (the rating of the
interface) has been established or will be established prior to
the use of the interface for Congestion Management; or (iii) the
group of transmission paths between two adjacent Scheduling
Points, where the group of paths has an established transfer
capability and established transmission rights.

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 ISO 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 ISO 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 ISO's Operational Control of the Participating TO's portion of the ISO Controlled Grid.

| CALIFORNIA INDEPENDE FERC ELECTRIC TARIFF FIRST REPLACEMENT VO | | CORPORATION Second Revised Sheet No. 325 Superseding First Revised Sheet No. 325 |
|--|--------------------------------|--|
| Interconnecting PTO | For purposes of Section | 5.7, the Participating TO that will supply the |
| | connection to the New Fa | acility. |
| Interconnection | A contract between a par | rty requesting interconnection and the |
| Agreement | Participating TO that owr | ns the transmission facility with which the |
| | requesting party wishes t | o interconnect. |
| Interconnection | An application that reque | ests interconnection of a New Facility to the |
| Application | ISO Controlled Grid and | that meets the information requirements as |
| | specified by the ISO and | posted on the ISO Home Page. |
| Interest | Interest shall be calculate | ed in accordance with the methodology |
| | specified for interest on r | efunds in the regulations of FERC at 18 |
| | C.F.R. §35.19(a)(2)(iii) (1 | 996). Interest on delinquent amounts shall |
| | be calculated from the du | ue date of the bill to the date of payment, |
| | except as provided in SA | BP 6.10.5. When payments are made by |
| | mail, bills shall be consid | ered as having been paid on the date of |
| | receipt. | |
| Interruptible Imports | Energy sold by a Genera | tor or resource located outside the ISO |
| | Controlled Grid which by | contract can be interrupted or reduced at |
| | the discretion of the selle | r. |
| Intra-Zonal Congestion | Congestion within a Zone | Э. |
| <u>IOU</u> | An investor owned electr | ic utility. |
| ISO (Independent | The California Independe | ent System Operator Corporation, a state |
| System Operator) | chartered, nonprofit corp | oration that controls the transmission |
| | facilities of all Participatir | ng TOs and dispatches certain Generating |
| | Units and Loads. | |
| ISO Account | The ISO Clearing Accourt | nt, the ISO Reserve Account or such other |
| | trust accounts as the ISC | deems necessary or convenient for the |
| | purpose of efficiently imp | lementing the funds transfer system under |
| | the ISO Tariff. | |

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION FERC ELECTRIC TARIFF FIRST REPLACEMENT VOLUME NO. I Original Sheet No. 325A

 ISO ADR Committee
 The Committee appointed by the ISO ADR Committee

 pursuant to Article IV, Section 3 of the ISO bylaws to perform
 functions assigned to the ISO ADR Committee in the ADR

 process in Section 13 of the ISO Tariff.
 process in Section 13 of the ISO Tariff.

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION FERC ELECTRIC TARIFF First Revised Sheet No. 326 FIRST REPLACEMENT VOLUME NO. I Superseding Original Sheet No. 326

ISO ADR ProceduresThe procedures for resolution of disputes or differences set out
in Section 13 of the ISO Tariff, as amended from time to time.ISO Audit CommitteeA Committee of the ISO Governing Board appointed pursuant
to Article IV, Section 5 of the ISO bylaws to (1) review the
ISO's annual independent audit (2) report to the ISO Governing
Board on such audit, and (3) to monitor compliance with the
ISO Code of Conduct.

ISO Authorized Inspector A person authorized by the ISO to certify, test, inspect and audit meters and Metering Facilities (as that term is defined in the ISO Metering Protocol) in accordance with the procedures established by the ISO pursuant to the ISO Protocols on metering.

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

ISO Clearing AccountThe account in the name of the ISO with the ISO Bank to which
payments are required to be transferred for allocation to ISO
Creditors in accordance with their respective entitlements.ISO Code of ConductFor employees, the code of conduct for officers, employees
and substantially full-time consultants and contractors of the
ISO as set out in exhibit A to the ISO bylaws; for Governors,
the code of conduct for governors of the ISO as set out in
exhibit B to the ISO bylaws.

 ISO Control Area Balancing Function
 The real-time Dispatch of Generation (and Curtailable Demand), directed by the ISO, to balance with actual Demand during the current operating hour to meet operating Reliability Criteria.

 ISO Control Center
 The Control Center established, pursuant to Section 2.3.1.1 of the ISO Tariff.

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION FERC ELECTRIC TARIFF Substitute First Revised Sheet No. 327 FIRST REPLACEMENT VOLUME NO. I Superseding Original Sheet No. 327 The system of transmission lines and associated facilities of **ISO Controlled Grid** the Participating TOs that have been placed under the ISO's Operational Control. **ISO Creditor** A Scheduling Coordinator, Participating TO, or other Market Participant to which amounts are payable under the terms of the ISO Tariff. **ISO Debtor** A Scheduling Coordinator, Participating TO, or other Market Participant that is required to make a payment to the ISO under the ISO Tariff. **ISO Documents** The ISO Tariff, the ISO Protocols, ISO bylaws, and any agreement entered into between the ISO and a Scheduling Coordinator, a Participating TO or any other Market Participant pursuant to the ISO Tariff. **ISO Governing Board** The Board of Governors established to govern the affairs of the

ISO.
ISO Home Page The ISO internet home page at http://www.caiso.com/ or such other internet address as the ISO shall publish from time to time.

 ISO Invoice
 The invoices issued by the ISO to the Responsible Utilities or

 RMR Owners based on the Revised Estimated RMR Invoice
 and the Revised Adjusted RMR Invoice.

| CALIFORNIA INDEPENDENT S FERC ELECTRIC TARIFF | | Third Revised Sheet No. 328 |
|--|-----------|--|
| FIRST REPLACEMENT VOLUN | | Superseding Sub. Second Revised Sheet No. 328 markets administered by the ISO under the ISO |
| | | uding, without limitation, Imbalance Energy, Ancillary |
| | Services, | |
| ISO Memorandum | | brandum account established by each California IOU |
| Account | | o California Public Utilities Commission Order |
| | • | 138 date August 2, 1996 which records all ISO |
| | | d development costs incurred by that California IOU. |
| ISO Metered Entity | | y one of the following entities that is directly |
| | , | to the ISO Controlled Grid: |
| | | erator other than a Generator that sells all of its |
| | | y (excluding any Energy consumed by auxiliary load |
| | - | nent electrically connected to that Generator at the |
| | | point) and Ancillary Services to the UDC in whose |
| | | e Area it is located; |
| | | gible Customer; or |
| | | d-User other than an End-User that purchases all of |
| | | ergy from the UDC in whose Service Area it is |
| | | d; and |
| | | y one of the following entities: |
| | | icipating Generator; |
| | | icipating TO in relation to its Tie Point Meters with |
| | | TOs or Control Areas; |
| | | icipating Load; |
| | | |
| | | icipating Intermittent Resource; or |
| | | y that requests that UFE for its Service Area be |
| | | ated separately, in relation to its meters at points of |
| | conne | ction of its Service Area with the systems of other |

| CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION FERC ELECTRIC TARIFF FIRST REPLACEMENT VOLUME NO. I Substitute Original Sheet No. 328A | | |
|---|---|-------------------------------------|
| | utilities. | |
| ISO Operations Date | The date on which the ISO f | irst assumes Operational Control of |
| | the ISO Controlled Grid. | |
| ISO Outage Coordination Office | The office established by the ISO to coordinate Maintenance | |
| | Outages in accordance with | Section 2.3.3 of the ISO Tariff. |

Original Sheet No. 329

- ISO Payments Calendar
 A calendar published by the ISO showing the dates on which

 Settlement Statements will be published by the ISO and the
 Payment Dates by which invoices issued under the ISO Tariff

 must be paid.
 Restance
- ISO ProtocolsThe rules, protocols, procedures and standards attached to the
ISO Tariff as Appendix L, promulgated by the ISO (as
amended from time to time) to be complied with by the ISO
Scheduling Coordinators, Participating TOs and all other
Market Participants in relation to the operation of the ISO
Controlled Grid and the participation in the markets for Energy
and Ancillary Services in accordance with the ISO Tariff.ISO RegisterThe register of all the transmission lines, associated facilities
and other necessary components that are at the relevant time
being subject to the ISO's Operational Control.
- ISO Reserve Account
 The account established for the purpose of holding cash

 deposits which may be used in or towards clearing the ISO
 Clearing Account.
- ISO Security AmountThe level of security provided in accordance with Section2.2.3.2 of the ISO Tariff by an SC Applicant who does not have
an Approved Credit Rating. The ISO Security Amount may be
separated into two components: (i) the level of security
required to secure payment of the Grid Management Charge;
and (ii) the level of security required to secure payment of all
charges other than the Grid Management Charge.ISO TariffThe California Independent System Operator Corporation
Operating Agreement and Tariff, dated March 31, 1997, as it
may be modified from time to time.

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION FERC ELECTRIC TARIFF Second Revised Sheet No. 330 FIRST REPLACEMENT VOLUME NO. I Superseding First Revised Sheet No. 330

| FIRST REPLACEMENT VOLUM | Superseding First Revised Sheet No. 550 |
|--|---|
| <u>ISP (Internet Service</u> <u>Provider)</u> | An independent network service organization engaged by the |
| <u>i Toviderj</u> | ISO to establish, implement and operate WEnet. |
| 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 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 Furnishing Bond | Tax-exempt bonds utilized to finance facilities for the local |
| | furnishing of electric energy, as described in section 142(f) of |
| | the Internal Revenue Code, 26 U.S.C. § 142(f). |
| Local Furnishing | Any Tax-Exempt Participating TO that owns facilities financed |
| Participating TO | by Local Furnishing Bonds. |
| Local Publicly Owned | A municipality or municipal corporation operating as a public |
| Electric Utilities | utility furnishing electric service, a municipal utility district |
| | furnishing electric service, a public utility district furnishing |
| | electric services, an irrigation district furnishing electric |
| | services, a state agency or subdivision furnishing electric |
| | services, a rural cooperative furnishing electric services, or a |
| | joint powers authority that includes one or more of these |
| | agencies and that owns Generation or transmission facilities, or |
| | furnishes electric services over its own or its members' electric |
| | Distribution System. |

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION FERC ELECTRIC TARIFF Second Revised Sheet No. 331 FIRST REPLACEMENT VOLUME NO. I Superseding First Revised Sheet No. 331

Local Regulatory
AuthorityThe state or local governmental authority responsible for the
regulation or oversight of a utility.Local Reliability CriteriaReliability Criteria established at the ISO Operations Date,
unique to the transmission systems of each of the Participating
TOs.Location CodeThe code assigned by the ISO to Generation input points, and

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

- Loop Flow
 Energy flow over a transmission system caused by parties

 external to that system.
- Loss Scale Factor
 The ratio of expected Transmission Losses to the total

 Transmission Losses which would be collected if Full Marginal

 Loss Rates were utilized.

 Low Voltage Access
 The Access Charge applicable under Section 7.1 to recover the Low Voltage Transmission Revenue Requirement of a Participating TO.

| <u>Low Voltage</u> 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 ISO Operational Control. |

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION FERC ELECTRIC TARIFF Sixth Revised Sheet No. 332 FIRST REPLACEMENT VOLUME NO. I Superseding Fifth Revised Sheet No. 332

The portion of a Participating TO's TRR associated with and Low Voltage Transmission Revenue Requirement allocable to the Participating TO's Low Voltage Transmission Facilities and Converted Rights associated with Low Voltage Transmission Facilities that are under the ISO Operational Control. Low Voltage Wheeling The Wheeling Access Charge associated with the recovery of a Access Charge Participating TO's Low Voltage Transmission Revenue Requirement in accordance with Section 7.1. 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.

| CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION | |
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| FERC ELECTRIC TARIFF | |
| FIRST REPLACEMENT VOLUME NO. I | Original Sheet No. 332A |

 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.

| CALIFORNIA INDEPENDENT FERC ELECTRIC TARIFF FIRST REPLACEMENT VOLU | SYSTEM OPERATOR CORPORATION Third Revised Sheet No. 333 JME NO. I Superseding Second Revised Sheet No. 333 |
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| | |
| Market Participant | An entity, including a Scheduling Coordinator, who participates |
| | in the Energy marketplace through the buying, selling, |
| | transmission, or distribution of Energy or Ancillary Services |
| | into, out of, or through the ISO Controlled Grid. |
| Market Usage Charge | The component of the Grid Management Charge that provides |
| | for the recovery of the ISO's costs, including, but not limited to |
| | the costs for processing Supplemental Energy and Ancillary |
| | Service bids, maintaining the Open Access Same-Time |
| | Information System, monitoring market performance, ensuring |
| | generator compliance with market protocols, and determining |
| | Market Clearing Prices. The formula for determining the Market |
| | Usage Charge is set forth in Appendix F, Schedule 1, Part A of |
| | this Tariff. |

| CALIFORNIA INDEPENDENT S FERC ELECTRIC TARIFF FIRST REPLACEMENT VOLUM | SYSTEM OPERATOR CORPORATION Third Revised Sheet No. 333A IE NO. I Superseding Sub. Second Rev. Sheet No. 333A |
|---|---|
| Master File | A file containing information regarding Generating Units, Loads |
| | and other resources. |
| Meter Data | Energy usage data collected by a metering device or as may |
| | be otherwise derived by the use of Approved Load Profiles. |
| Meter Points | Locations on the ISO Controlled Grid at which the ISO requires |
| | the collection of Meter Data by a metering device. |
| Metered Control Area | For purposes of calculating and billing the Energy |
| Load | Transmission Services Net Energy Charge component of the |
| | Grid Management Charge, Metered Control Area Load is: |
| | (a) all metered Demand for Energy of Scheduling Coordinators |
| | for the supply of Loads in the ISO's Control Area, plus (b) all |
| | Energy for exports by Scheduling Coordinators from the ISO |
| | Control Area; less (c) Energy associated with the Load of a |
| | retail customer of a Scheduling Coordinator, UDC, or MSS 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. |

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION FERC ELECTRIC TARIFF First Revised Sheet No. 333B FIRST REPLACEMENT VOLUME NO. I Superseding Original Sheet No. 333B

Metered QuantitiesFor 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.Minimum Load CostsThe costs a Generating Unit incurs operating at minimum load.Monthly Peak LoadThe maximum hourly Demand on a Participating TO's
transmission system for a calendar month, multiplied by the
Operating Reserve Multiplier.

| MSS (Metered Subsystem) | 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 ISO Operations Date as a |
| | municipal utility, water district, irrigation district, State agency or |
| | Federal power administration subsumed within the ISO Control |
| | Area and encompassed by ISO certified revenue quality meters |
| | at each interface point with the ISO Controlled Grid and ISO |
| | certified revenue quality meters on all Generating Units or, if |
| | aggregated, each individual resource and Participating Load |
| | internal to the system, which is operated in accordance with a |
| | MSS Agreement described in Section 23.1. |
| MSS Operator | An entity that owns an MSS and has executed a MSS |
| | Agreement. |

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION FERC ELECTRIC TARIFF Sixth Revised Sheet No. 334 FIRST REPLACEMENT VOLUME NO. I Superseding Fifth Revised Sheet No. 334

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|-------------------------------------|--|
| <u>Municipal Tax Exempt</u> Debt | An obligation the interest on which is excluded from gross |
| Debt | 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-Offer Generator | All entities defined in Section 5.11.1 of the ISO Tariff |
| Native Load | Load required to be served by a utility within its Service Area |
| | pursuant to applicable law, franchise, or statute. |
| NERC | The North American Electric Reliability Council or its |
| | successor. |
| Net FTR Revenue | The sum of: 1) the revenue received by the New Participating |
| | TO from the sale, auction, or other transfer of the FTRs |
| | provided to it pursuant to Section 9.4.3 FTR, or any |
| | substantively identical successor provision of the ISO Tariff; |
| | and 2) for each hour: a) the Usage Charge revenue received |
| | by the New Participating To associated with its Section 9.4.3 |
| | FTRs; minus b) Usage Charges that are: i) incurred by the |
| | Scheduling Coordinator for the New Participating TO under |
| | ISO Tariff Section 7.3.1.4, ii) associated with the New |
| | Participating TO's Section 9.4.3 FTRs, and iii) incurred by the |
| | New Participating TO for its energy transactions but not |
| | |

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION FERC ELECTRIC TARIFF Second Revised Sheet No. 334.01 FIRST REPLACEMENT VOLUME NO. I Superseding First Revised Sheet No. 334.01

incurred as a result of the use of the transmission by a thirdparty and minus c) the charges paid by the New Participating TO pursuant to Section 7.3.1.7, to the extent such charges are incurred by the Scheduling Coordinator of the New Participating TO on Congested Inter-Zonal Interfaces that are associated with the Section 9.4.3 FTRs provided to the New Participating TO. The component of New FTR Revenue represented by item 2) immediately above shall not be less than zero for any hour.

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

| CALIFORNIA INDEPENDENT FERC ELECTRIC TARIFF FIRST REPLACEMENT VOLUI | SYSTEM OPERATOR CORPORATION Seventh Revised Sheet No. 334A ME NO. I Superseding Sixth Revised Sheet No. 334A |
|---|--|
| New Facility | A planned or Existing Generating Unit that requests, pursuant |
| | to Section 5.7 of the ISO Tariff, to interconnect or modify its |
| | interconnection to the ISO Controlled Grid. |
| New Facility License | A license issued by a federal, state or Local Regulatory |
| | Authority that enables an entity to build and operate a |
| | Generating Unit. |
| New Facility Operator | The owner of a planned New Facility, or its designee. |
| New High Voltage Facility | A High Voltage Transmission Facility of a Participating TO that |
| | is placed in service after the beginning of the transition period |
| | described in Section 4 of Schedule 3 of Appendix F, or a |
| | capital addition made and placed in service after the beginning |
| | of the transition period described in Section 4.2 of Schedule 3 |
| | of Appendix F to an Existing High Voltage Facility. |
| New Participating TO | A Participating TO that is not an Original Participating TO. |
| <u>Nomogram</u> | A set of operating or scheduling rules which are used to ensure |
| | that simultaneous operating limits are respected, in order to |
| | meet NERC and WECC operating criteria. |

| | | PORATION First Revised Sheet No. 335 Superseding Original Sheet No. 335 |
|--------------------------------|-------------------------------|---|
| Non-Participating Generator | A Generator that is not a P | articipating Generator. |
| Non-Participating TO | A TO that is not a party to t | the TCA or for the purposes of |
| | Sections 2.4.3 and 2.4.4 of | the ISO Tariff the holder of |
| | transmission service rights | under an Existing Contract that is |
| | not a Participating TO. | |
| Non-Spinning Reserve | The portion of off-line gene | erating capacity that is capable of |
| | being synchronized and Ra | amping to a specified load in ten |
| | minutes (or load that is cap | bable of being interrupted in ten |
| | minutes) and that is capabl | le of running (or being interrupted) |
| | for at least two hours. | |
| NRC | The Nuclear Regulatory Co | ommission or its successor. |
| Operating Procedures | Procedures governing the | operation of the ISO Controlled Grid |
| | as the ISO may from time t | o time develop, and/or procedures |
| | that Participating TOs curre | ently employ which the ISO adopts |
| | for use. | |

| CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION FERC ELECTRIC TARIFF Third Revised Sheet No. 336 FIRST REPLACEMENT VOLUME NO. I Superseding First Revised Sheet No. 336 | | |
|--|---|--|
| Operating Reserve | The combination of Spinning and Non-Spinning Reserve | |
| | required to meet WECC and NERC requirements for reliable | |
| | operation of the ISO Control Area. | |
| Operational Control | The rights of the ISO under the Transmission Control | |
| | Agreement and the ISO Tariff to direct Participating TOs how to | |
| | operate their transmission lines and facilities and other electric | |
| | plant affecting the reliability of those lines and facilities for the | |
| | purpose of affording comparable non-discriminatory | |
| | transmission access and meeting Applicable Reliability Criteria. | |
| <u>Operator</u> | The operator of facilities that comprise the ISO Controlled Grid | |
| | or a Participating Generator. | |
| OPF (Optimal Power Flow) | A computer optimization program which uses a set of control | |
| | variables (which may include active power and/or reactive | |
| | power controls) to determine a steady-state operating condition | |
| | for the transmission grid for which a set of system operating | |
| | Constraints (which may include active power and/or reactive | |
| | power constraints) are satisfied and an objective function (e.g. | |
| | total cost or shift of schedules) is minimized. | |
| <u>Order No. 888</u> | 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. | |

| CALIFORNIA INDEPENDENT FERC ELECTRIC TARIFF FIRST REPLACEMENT VOLU | SYSTEM OPERATOR CORPORATION Fifth Revised Sheet No. 337 ME NO. I Superseding Fourth Revised Sheet No. 337 | |
|--|---|--|
| 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 | | |
| | FERC Stats. & Regs., Regulations Preambles [1991-1996] ¶ | |
| | 31,035 (1996), Order on Rehearing, Order No. 889-A, 78 FERC ¶ | |
| | 61,221 (1997), as it may be amended from time to time. | |
| Original Participating TO | A Participating TO that was a Participating TO as of January 1, 2000. | |
| Outage | Disconnection, separation or reduction in capacity, planned or | |
| | forced, of one or more elements of an electric system. | |
| Overgeneration | A condition that occurs when total Generation exceeds total | |
| | Demand in the ISO Control Area. | |

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION FERC ELECTRIC TARIFF FIRST REPLACEMENT VOLUME NO. I Original Sheet No. 337A

 Participating Buyer
 A Direct Access End-User or a wholesale buyer of Energy or

 Ancillary Services through Scheduling Coordinators.

 Participating Intermittent
 One or more Eligible Intermittent Resources that meets the requirements of the technical standards for Participating

 Intermittent Resources adopted by the ISO and published on the ISO Home Page.

Participating Load An entity providing Curtailable Demand, which has undertaken in writing to comply with all applicable provisions of the ISO Tariff, as they may be amended from time to time.

 Participating Seller or Participating Generator
 A Generator or other seller of Energy or Ancillary Services

 through a Scheduling Coordinator over the ISO Controlled Grid
 from a Generating Unit with a rated capacity of 1 MW or greater,

 or from a Generating Unit providing Ancillary Services and/or
 submitting Supplemental Energy bids through an aggregation

 arrangement approved by the ISO, which has undertaken to be
 bound by the terms of the ISO Tariff, in the case of a Generator

 through a Participating Generator Agreement.
 Controlled Grid

 CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION FERC ELECTRIC TARIFF FIRST REPLACEMENT VOLUME NO. I

Original Sheet No. 338

| Participating TO | A party to the TCA whose application under Section 2.2 of the |
|------------------|--|
| | TCA has been accepted and who has placed its transmission |
| | assets and Entitlements under the ISO's Operational Control in |
| | accordance with the TCA. A Participating TO may be an |
| | Original Participating TO or a New Participating TO. |
| Payment Date | The date by which invoiced amounts are to be paid under the |
| | terms of the ISO Tariff. |
| | |

PBR (Performance-Based Regulated rates based in whole or in part on the achievement Ratemaking) of specified performance objectives.

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 ISO to incur scheduling costs far in excess of the benefits of having scheduled such individual components separately; or

| CALIFORNIA INDEPENDENT S FERC ELECTRIC TARIFF FIRST REPLACEMENT VOLUM | SYSTEM OPERATOR CORPORATION Second Revised Sheet No. 339 ME NO. I Superseding First Revised Sheet No. 339 |
|---|---|
| | 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. |
| Planning Procedures | Procedures governing the planning, expansion and reliable |
| | interconnection to the ISO Controlled Grid that the ISO may, |
| | from time to time, develop. |
| PMS (Power Management | The ISO computer control system used to monitor the real-time |
| <u>System)</u> | performance of the various elements of the ISO Controlled |
| | Grid, control Generation, and perform operational power flow |
| | studies. |
| Power Flow Model | The computer software used by the ISO to model the voltages, |
| | power injections and power flows on the ISO Controlled Grid |
| | and determine the expected Transmission Losses and |
| | Generation Meter Multipliers. |
| Preferred Day-Ahead | A Scheduling Coordinator's Preferred Schedule for the ISO |
| <u>Schedule</u> | Day-Ahead scheduling process. |
| Preferred Hour-Ahead | A Scheduling Coordinator's Preferred Schedule for the ISO |
| <u>Schedule</u> | Hour-Ahead scheduling process. |
| Preferred Schedule | The initial Schedule produced by a Scheduling Coordinator that |
| | represents its preferred mix of Generation to meet its Demand. |
| | For each Generator, the Schedule will include the quantity of |
| | output, details of any Adjustment Bids, and the location of the |
| | Generator. For each Load, the Schedule will include the |
| | quantity of consumption, details of any Adjustment Bids, and |
| | the location of the Load. The Schedule will also specify |
| | quantities and location of trades between the Scheduling |
| | Coordinator and all other Scheduling Coordinators. The |

Preferred Schedule will be balanced with respect to

Generation, Transmission Losses, Load and trades between

Scheduling Coordinators.

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION FERC ELECTRIC TARIFF Substitute Sixth Revised Sheet No. 340 FIRST REPLACEMENT VOLUME NO. I Superseding Fifth Revised Sheet No. 340

| Preliminary Settlement Statement | The initial statement issued by the ISO of the calculation of the |
|-------------------------------------|--|
| | Settlements and allocation of the charges in respect of all |
| | Settlement Periods covered by the period to which it relates. |
| Price Overlap | The price range of bids for Supplemental Energy or Energy |
| | associated with Ancillary Services bids for any Dispatch |
| | Interval that includes decremental and incremental Energy Bids |
| | where the price of the decremental Energy Bids exceeds the |
| | price of the incremental Energy Bids. |
| Project Sponsor | A Market Participant or group of Market Participants or a |
| | Participating TO that proposes the construction of a |
| | transmission addition or upgrade in accordance with |
| | Section 3.2 of the ISO Tariff. |
| Proxy Price | The value determined for each gas-fired Generating Unit |
| | owned or controlled by a Must-Offer Generator in accordance |
| | with Section 2.5.23.3.4. |
| PTO Service Territory | The area in which an IOU, a Local Public Owned Electric |
| | Utility, or federal power marketing administration that has |
| | turned over its transmission facilities and/or Entitlements to ISO |
| | Operational Control is obligated to provided electric service to |
| | Load. A PTO Service Territory may be comprised of the |
| | Service Areas of more than one Local Public Owned Electric |
| | Utility, if they are operating under an agreement with the ISO |
| | for aggregation of their MSS and their MSS Operator is |
| | designated as the Participating TO. |
| | |

| CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION FERC ELECTRIC TARIFF First Revised Sheet No. FIRST REPLACEMENT VOLUME NO. I Superseding Original Sheet No. | | |
|---|---|--|
| Ramping | Changing the loading level of a Generating Unit in a constant | |
| | manner over a fixed time (e.g., ramping up or ramping down). | |
| | Such changes may be directed by a computer or manual | |
| | control. | |
| RAS (Remedial Action | Protective systems that typically utilize a combination of | |
| <u>Schemes)</u> | 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. | |
| Reactive Power Control | Generation or other equipment needed to maintain acceptable | |
| | voltage levels on the ISO Controlled Grid and to meet reactive | |
| | capacity requirements at points of interconnection on the ISO | |
| | Controlled Grid. | |
| Real Time Market | The competitive generation market controlled and coordinated | |
| | by the ISO for arranging real-time Imbalance Energy. | |
| <u>Redispatch</u> | The readjustment of scheduled Generation or Demand side | |
| | management measures, to relieve Congestion or manage | |
| | Energy imbalances. | |
| 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 ISO Protocols, to | |
| | assist the ISO to maintain reliability of the ISO Controlled Grid | |
| | and to carry out its functions. | |

Regulation

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

Regulation Energy Payment Adjustment

The additional value of regulating Energy.

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION FERC ELECTRIC TARIFF First Revised Sheet No. 343 FIRST REPLACEMENT VOLUME NO. I Superseding Original Sheet No. 343

| FIRST REFLACEIVIENT VOLUIV | Superseuling Original Sheet No. 345 |
|---|---|
| <u>Regulatory Must-Run</u> <u>Generation</u> | Hydro Spill Generation and Generation which is required to run |
| | by applicable Federal or California laws, regulations, or other |
| | governing jurisdictional authority. Such requirements include |
| | but are not limited to hydrological flow requirements, |
| | environmental requirements, such as minimum fish releases, |
| | fish pulse releases and water quality requirements, irrigation |
| | and water supply requirements of solid waste Generation, or |
| | other Generation contracts specified or designated by the |
| | jurisdictional regulatory authority as it existed on December 20, |
| | 1995, or as revised by Federal or California law or Local |
| | Regulatory Authority. |
| Regulatory Must-Take | Those Generation resources identified by CPUC, or a Local |
| <u>Generation</u> | Regulatory Authority, the operation of which is not subject to |
| | competition. These resources will be scheduled by the |
| | relevant Scheduling Coordinator directly with the ISO on a |
| | must-take basis. Regulatory Must-Take Generation includes |
| | qualifying facility Generating Units as defined by federal law, |
| | nuclear units and pre-existing power purchase contracts with |
| | minimum energy take requirements. |
| Reliability Criteria | Pre-established criteria that are to be followed in order to |
| | maintain desired performance of the ISO Controlled Grid under |
| | contingency or steady state conditions. |
| Reliability Must-Run | The sum payable by a Responsible Utility to the ISO pursuant |
| Charge (RMR Charge) | |

to Section 5.2.7 of the ISO Tariff for the costs, net of all

applicable credits, incurred under the RMR Contract.

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION FERC ELECTRIC TARIFF Third Revised Sheet No. 344 FIRST REPLACEMENT VOLUME NO. I Superseding Second Revised Sheet No. 344 **Reliability Must-Run** A Must-Run Service Agreement between the owner of an RMR Contract (RMR Contract) Unit and the ISO. **Reliability Must-Run** Generation that the ISO determines is required to be on line to **Generation (RMR** Generation) 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 ISO or a local area. **Reliability Must-Run Unit** A Generating Unit which is the subject of a Reliability Must-Run (RMR Unit) Contract. **Reliability Services Costs** The costs associated with services provided by the ISO: 1) that are deemed by the ISO as necessary to maintain reliable electric service in the ISO Control Area; and 2) whose costs are billed by the ISO to the Participating TO pursuant to the ISO Tariff. Reliability Services Costs include costs charged by the ISO to a Participating TO associated with service provided under an RMR Contract (Section 5.2.8), local out-of-market dispatch calls (Section 11.2.4.2.1) and Minimum Load Costs associated with units committed under the must-offer obligation for local reliability requirements (Section 5.11.6.1.4) The transmission facilities, other than Direct Assignment **Reliability Upgrade** Facilities, beyond the first point of interconnection necessary to interconnect a New Facility safely and reliably to the ISO Controlled Grid, which would not have been necessary but for the interconnection of a New Facility, including network upgrades necessary to remedy short circuit or stability problems resulting from the interconnection of a New Facility to

| CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION FERC ELECTRIC TARIFF FIRST REPLACEMENT VOLUME NO. I Original Sheet No. 344.01 | | |
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| | | |
| | the ISO Controlled Grid. Reliability I | Jpgrades also include, |
| | consistent with WECC practice, the | facilities necessary to |
| | mitigate any adverse impact a New I | Facility's interconnection |
| | may have on a path's WECC path ra | ating. |
| <u>REMnet</u> | The Wide Area Network through whi | ch the ISO acquires Meter |
| | Data. | |

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION FERC ELECTRIC TARIFF Second Revised Sheet No. 344A FIRST REPLACEMENT VOLUME NO. I Superseding First Revised Sheet No. 344A

Generating capacity that is dedicated to the ISO, capable of **Replacement Reserve** starting up if not already operating, being synchronized to the ISO Controlled Grid, and Ramping to a specified operating level within a sixty (60) minute period, the output of which can be continuously maintained for a two hour period. Also, Curtailable Demand that is capable of being curtailed within sixty minutes and that can remain curtailed for two hours. **Request for Expedited** A written request, submitted pursuant to Section 5.7.3.1.1 of Interconnection Procedures the ISO Tariff, by which a New Facility Operator can request expedited processing of its Interconnection Application. **Resource-Specific** The Resource-Specific Settlement Interval Ex Post Price will Settlement Interval Ex Post Price equal the Energy-weighted average of the applicable Dispatch Interval Ex Post Prices for each Settlement Interval taking into account each resource's Instructed Imbalance Energy, except Regulation Energy. The Resource-Specific Settlement Interval Ex Post Price shall apply to those resources that are capable of

responding to ISO Dispatch Instructions.

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION FERC ELECTRIC TARIFF Substitute Third Revised Sheet No. 345 FIRST REPLACEMENT VOLUME NO. I Superseding Second Revised Sheet No. 345 The utility which is a party to the TCA in whose PTO Service **Responsible Utility** 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 ISO Controlled Grid is located. **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** The monthly invoice issued by the RMR Owner to the ISO pursuant Invoice to the RMR Contract reflecting any appropriate revisions to the Adjusted RMR Invoice based on the ISO's validation and actual data for the billing month. **Revised Estimated RMR** The monthly invoice issued by the RMR Owner to the ISO pursuant Invoice to the RMR Contract reflecting appropriate revisions to the Estimated RMR Invoice based on the ISO's validation of the Estimated RMR Invoice. **Revised Schedule** A Schedule submitted by a Scheduling Coordinator to the ISO following receipt of the ISO's Suggested Adjusted Schedule. **RMR Owner** The provider of services under a Reliability Must-Run Contract. The security constrained optimal dispatch and ex post pricing **Real-Time Dispatch (RTD)** Software software used by the ISO to determine which Ancillary Service and Supplementary Energy resources to Dispatch and to calculate the Ex Post Prices.

| SCADA (Supervisory | A computer system that allows an electric system operator to |
|--------------------|--|
| Control and Data | |
| Acquisition) | remotely monitor and control elements of an electric system. |

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| FIRST REPLACEMENT VOLUME NO. I | Original Sheet No. 345A |

| SC Agreement | An agreement between a Scheduling Coordinator and the ISO |
|--------------|--|
| | whereby the Scheduling Coordinator agrees to comply with all |
| | ISO rules, protocols and instructions, as those rules, protocols |
| | and instructions may be amended from time to time. |
| SC Applicant | An applicant for certification by the ISO as a Scheduling Coordinator. |

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION FERC ELECTRIC TARIFF First Revised Sheet No. 346 FIRST REPLACEMENT VOLUME NO. I Superseding Original Sheet No. 346 The form specified by the ISO from time to time in which an SC SC Application Form Applicant must apply to the ISO for certification as a Scheduling Coordinator. Scaled Marginal Loss A factor calculated by the ISO for a given Generator location Rate for each hour by multiplying the Full Marginal Loss Rate for such Generator location by the Loss Scale Factor for the relevant hour. Schedule A statement of (i) Demand, including quantity, duration and Take-Out Points and (ii) Generation, including quantity, duration, location of Generating Unit, and Transmission Losses; and (iii) Ancillary Services which will be self-provided, (if any) submitted by a Scheduling Coordinator to the ISO. "Schedule" includes Preferred Schedules, Suggested Adjusted Schedules, Final Schedules and Revised Schedules. **Scheduled Maintenance** Maintenance on Participating Generators, TOs and UDC facilities scheduled more than twenty-four hours in advance. **Scheduling Coordinator** An entity certified by the ISO for the purposes of undertaking

the functions specified in Section 2.2.6 of the ISO Tariff.

A Generator, Eligible Customer or End-User that is not an ISO

Scheduling Coordinator Metered Entity or SC Metered Entity

Metered Entity.

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION FERC ELECTRIC TARIFF Substitute Third Revised Sheet No. 347 FIRST REPLACEMENT VOLUME NO. I Superseding Second Revised Sheet No. 347

| Scheduling Point | A location at which the ISO Controlled Grid is connected, by a |
|---------------------|--|
| | group of transmission paths for which a physical, non- |
| | simultaneous transmission capacity rating has been |
| | established for Congestion Management, to transmission |
| | facilities that are outside the ISO's Operational Control. A |
| | Scheduling Point typically is physically located at an "outside" |
| | boundary of the ISO Controlled Grid (e.g., at the point of |
| | interconnection between a Control Area utility and the ISO |
| | Controlled Grid). For most practical purposes, a Scheduling |
| | Point can be considered to be a Zone that is outside the ISO's |
| | Controlled Grid. |
| Security Monitoring | The real-time assessment of the ISO Controlled Grid that is |
| | conducted to ensure that the system is operating in a secure |
| | state, and in compliance with all Applicable Reliability Criteria. |
| 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. |
| <u>Set Point</u> | Scheduled operating level for each Generating Unit or other |

resource scheduled to run in the Hour-Ahead Schedule.

| CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION FERC ELECTRIC TARIFF First Revised Sheet No. 348 FIRST REPLACEMENT VOLUME NO. I Superseding Original Sheet No. 348 | | |
|---|--|--|
| <u>Settlement</u> | Process of financial settlement for products and services | |
| | purchased and sold undertaken by the ISO under Section 11 of | |
| | the ISO Tariff. Each Settlement will involve a price and a | |
| | quantity. | |
| Settlement Account | An Account held at a bank situated in California, designated by | |
| | a Scheduling Coordinator or a Participating TO pursuant to the | |
| | Scheduling Coordinator's SC Agreement or in the case of a | |
| | Participating TO, Section 2.2.1 of the TCA, to which the ISO | |
| | shall pay amounts owing to the Scheduling Coordinator or the | |
| | Participating TO under the ISO Tariff. | |
| Settlement Interval | The time period, which is equal to or a multiple of the Dispatch | |
| | Interval, over which the ISO settles deviations in Generation | |
| | and Demand from Final Hour-Ahead Schedules. | |
| Settlement Period | For all ISO 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 | Meter Data gathered, edited, validated, and stored in a | |
| Data | settlement-ready format, for Settlement and auditing purposes. | |
| Settlement Statement | Either or both of a Preliminary Settlement Statement or Final | |
| | Settlement Statement. | |
| Settlement Statement Re- | The re-calculation of a Settlement Statement in accordance | |
| run | with the provisions of the ISO Tariff including any protocol of | |
| | the ISO. | |
| Settlements, Metering, | The component of the Grid Management Charge that provides | |
| <u>and Client Relations</u> Charge | for the recovery of the ISO's costs, including, but not limited to | |
| | the costs of maintaining customer account data, providing | |

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account information to customers, responding to customer inquiries, calculating market charges, resolving customer disputes, and the costs associated with the ISO's Settlement, billing, and metering activities. Because this is a fixed charge per Scheduling Coordinator ID, costs associated with activities listed above also are allocated to other charges under the Grid Management Charge according to formula set forth in Appendix F, Schedule 1, Part A of this Tariff.

| CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION FERC ELECTRIC TARIFF Third Revised Sheet No. 349 FIRST REPLACEMENT VOLUME NO. I Superseding Second Revised Sheet No. 349 | | |
|---|------------------------|--|
| Severance Fee | The charge or perio | odic charge assessed to customers to |
| | recover the reason | able uneconomic portion of costs associated |
| | with Generation-rel | ated assets and obligations, nuclear |
| | decommissioning, | and capitalized Energy efficiency investment |
| | programs approved | d prior to August 15, 1996 and as defined in |
| | the California Asse | mbly Bill No. 1890 approved by the |
| | Governor on Septe | mber 23, 1996. |
| Scheduling and Logging | A logging application | on that allows Market Participants to notify |
| <u>system for the ISO of</u> California (SLIC) | the ISO when a un | it's properties change due to physical |
| | problems. Users c | an modify the maximum and minimum |
| | output of a unit, as | well as the ramping capability of the unit. |
| Spinning Reserve | The portion of unlo | aded synchronized generating capacity that |
| | is immediately resp | oonsive to system frequency and that is |
| | capable of being lo | aded in ten minutes, and that is capable of |
| | running for at least | two hours. |
| Standard Ramp (-ing) | A ramp calculated | from two consecutive Final Hour Ahead |
| | Schedules that res | ults in a straight trajectory between 10 |
| | minutes before the | start of an operating hour to 10 minutes |
| | after the start of the | e operating hour |
| Standby Rate | A rate assessed a | Standby Service Customer by the |
| | Participating TO the | at also provides retail electric service, as |
| | approved by the Lo | ocal Regulatory Authority, or FERC, as |
| | applicable, for Star | dby Service which compensates the |
| | Participating TO, a | mong other things, for costs of High Voltage |
| | Transmission Facil | ities. |

| CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION FERC ELECTRIC TARIFF First Revised Sheet No. 349.01 FIRST REPLACEMENT VOLUME NO. I Superseding Original Sheet No. 349.01 | | |
|---|--|--|
| 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 | A retail End-Use Customer of a Participating TO that also | |
| <u>Customer</u> | provides retail electric service that receives Standby Service | |
| | and pays a Standby Rate. | |
| <u>Standby Transmission</u> <u>Revenue</u> | 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.

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION FERC ELECTRIC TARIFF Fourth Revised Sheet No. 349A FIRST REPLACEMENT VOLUME NO. I Superseding Third Revised Sheet No. 349A

| | 1 0 |
|--|--|
| Start-Up Cost Charge | The charge determined in accordance with Section 2.5.23.3.7. |
| Start-Up Cost Demand | The level of Demand specified in Section 2.5.23.3.7.3. |
| Start-Up Cost Invoice | The invoice submitted to the ISO in accordance with Section |
| | 2.5.23.3.7.6. |
| <u>Start-Up Cost Trust</u> <u>Account</u> | The trust account established in accordance with Section |

2.5.23.3.7.2.

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

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION FERC ELECTRIC TARIFF First Revised Sheet No. 350 FIRST REPLACEMENT VOLUME NO. I Superseding Original Sheet No. 350

| Suggested Adjusted | The output of the ISO's initial Congestion Management for |
|---------------------|--|
| <u>Schedule</u> | each Scheduling Coordinator for the Day-Ahead Market |
| | ("Suggested Adjusted Day-Ahead Schedule") or for the Hour- |
| | Ahead Market ("Suggested Adjusted Hour-Ahead Schedule"). |
| | These Schedules will reflect ISO suggested adjustments to |
| | each Scheduling Coordinator's Preferred Schedule to resolve |
| | Inter-Zonal Congestion on the ISO Controlled Grid, based on |
| | the Adjustment Bids submitted. These Schedules will be |
| | balanced with respect to Generation, Transmission Losses, |
| | Load, and trades between Scheduling Coordinators to resolve |
| | Inter-Zonal Congestion. |
| Supplemental Energy | Energy from Generating Units bound by a Participating |
| | Generator Agreement, Loads bound by a Participating Load |
| | Agreement, System Units, and System Resources which have |
| | uncommitted capacity following finalization of the Hour-Ahead |
| | Schedules and for which Scheduling Coordinators have |
| | submitted bids to the ISO at least half an hour before the |
| | commencement of the Settlement Period. |
| <u>Supply</u> | The rate at which Energy is delivered to the ISO Controlled |
| | Grid measured in units of watts or standard multiples thereof, |
| | e.g., 1,000W=1 KW; 1,000 KW = 1MW, etc. |

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION FERC ELECTRIC TARIFF Third Revised Sheet No. 351 FIRST REPLACEMENT VOLUME NO. I Superseding Second Revised Sheet No. 351

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

 System Impact Study
 An engineering study conducted to determine whether a New Facility

 Operator's request for interconnection to the ISO Controlled Grid would

 require new transmission additions, upgrades or other mitigation

 measures.

System Planning StudiesReports summarizing studies performed to assess the adequacy of the
ISO Controlled Grid as regards conformance to Reliability Criteria.System ReliabilityA 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 ISO Control Area, or an allocated portion of a Control Area's portfolio of generating resources that are directly responsive to that Control Area's Automatic Generation Control (AGC) capable of providing Energy and/or Ancillary Services to the ISO Controlled Grid.

 System Unit
 One or more individual Generating Units and/or Loads within a Metered Subsystem controlled so as to simulate a single resource with specified performance characteristics, as mutually determined and agreed to by the MSS Operator and the ISO. 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 ISO Controlled Grid.

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TAC AreaA portion of the ISO Controlled Grid with respect to whichParticipating TOs' High Voltage Transmission RevenueRequirements are recovered through a High Voltage AccessCharge. TAC Areas are listed in Schedule 3 of Appendix F.

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION FERC ELECTRIC TARIFF Second Revised Sheet No. 352 FIRST REPLACEMENT VOLUME NO. I Superseding Second Revised Sheet No. 352

| FIRST REPLACEMENT VOLU | ME NO. I Superseding Second Revised Sheet No. 352 |
|--------------------------|--|
| Take-Out Point | The metering points at which a Scheduling Coordinator |
| | Metered Entity or ISO Metered Entity takes delivery of Energy. |
| Tax Exempt Debt | Municipal Tax Exempt Debt or Local Furnishing Bonds. |
| Tax Exempt Participating | A Participating TO that is the beneficiary of outstanding Tax |
| <u>TO</u> | 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 ISO pursuant to the TCA. |
| TCA (Transmission | The agreement between the ISO and Participating TOs |
| Control Agreement) | establishing the terms and conditions under which TOs will |
| | become Participating TOs and how the ISO and each |
| | Participating TO will discharge their respective duties and |
| | responsibilities, as may be modified from time to time. |
| Tie Point Meter | A revenue meter, which is capable of providing Settlement |
| | Quality Meter Data, at a Scheduling Point or at a boundary |
| | between UDCs within the ISO Controlled Grid. |
| TO (Transmission Owner) | An entity owning transmission facilities or having firm |
| | contractual rights to use transmission facilities. |
| <u>TO Tariff</u> | A tariff setting out a Participating TO's rates and charges for |
| | transmission access to the ISO 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. |
| Tolerance Band | The tolerance band expressed in terms of Energy (MWh) for |
| | the performance requirement for Generating Units, System |
| | Units and imports from dynamically scheduled System |
| | Resources for each Settlement Interval will equal the greater of |
| | |

the absolute value of: 1) 5 MW divided by number of Settlement Intervals per Settlement Period or 2) three percent (3%) of the relevant Generating Unit's, dynamically scheduled System Resource's or System Unit's maximum output (Pmax), as registered in the Master File, divided by number of Settlement Intervals per Settlement Period. The maximum output (Pmax) of a dynamically scheduled System Resource will be established by agreement between the ISO and the Scheduling Coordinator representing the System Resource on an individual case basis, taking into account the number and size of the generating resources, or allocated portions of generating resources, that comprise the System Resource. The tolerance band expressed in terms of Energy (MWh) for the performance requirement for Participating Loads for each Settlement Interval will equal the greater of the absolute value of: 1) 5 MW divided by number of Settlement Intervals per Settlement Period or 2) three percent (3%) of the applicable Final Hour-Ahead Schedule or ISO Dispatch amount divided by number of Settlement Intervals per Settlement Period. The Tolerance Band shall not be applied to non-dynamically scheduled System Resources.

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

| | | OR CORPORATION Third Revised Sheet No. 353 Superseding Second Revised Sheet No. 353 |
|---------------------------------------|---------------------|---|
| Transition Charge | | of the Access Charge collected by the ISO with |
| | the High Voltage | Access Charge in accordance with Section |
| | 5.7 of Appendix F | F, Schedule 3. |
| Transition Period | The period of time | e established by the California Legislature and |
| | CPUC to allow IC | OUs and Local Publicly Owned Electric Utilities |
| | an opportunity to | recover Transition Costs or Severance Fees. |
| Transmission Losses | Energy that is los | t as a natural part of the process of |
| | transmitting Ener | gy from Generation to Load delivered at the |
| | ISO/UDC bounda | ary or Control Area boundary. |
| <u>Transmission Revenue</u> Credit | For an Original P | articipating TO, the proceeds received from |
| Credit | the ISO for Whee | ling service, FTR auction revenue and Usage |
| | Charges, plus the | e shortfall or surplus resulting from any cost |
| | differences betwe | een Transmission Losses and Ancillary |
| | Service requirem | ents associated with Existing Rights and the |
| | ISO's rules and p | rotocols. For a New Participating TO during |
| | the 10-year trans | ition period described in Section 4 of |
| | Schedule 3 of Ap | pendix F, the proceeds received from the ISO |
| | for Wheeling serv | vice and Net FTR Revenue, plus the shortfall |
| | or surplus resultir | ng from any cost differences between |
| | Transmission Los | sses and Ancillary Service requirements |
| | associated with E | existing Rights and the ISO's rules and |
| | protocols. After t | he 10-year transition period, the New |
| | Participating TO | Transmission |

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION FERC ELECTRIC TARIFF FIRST REPLACEMENT VOLUME NO. I Original Sheet No. 353A

Revenue Credit shall be calculated the same as the

Transmission Revenue Credit for the Original Participating TO.

TRBA (Transmission Revenue Balancing Account) A mechanism to be established by each Participating TO which

will ensure that all Transmission Revenue Credits and other

credits specified in Sections 6 and 8 of Appendix F, Schedule

3, flow through to transmission customers.

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION FERC ELECTRIC TARIFF Substitute Third Revised Sheet No. 354 FIRST REPLACEMENT VOLUME NO. I Superseding Second Revised Sheet No. 354

| <u>TRR (Transmission</u> <u>Revenue Requirement)</u> | The TRR is the total annual authorized revenue requirements |
|---|--|
| | associated with transmission facilities and Entitlements turned |
| | over to the Operational Control of the ISO by a Participating |
| | TO. The costs of any transmission facility turned over to the |
| | Operational Control of the ISO shall be fully included in the |
| | Participating TO's TRR. The TRR includes the costs of |
| | transmission facilities and Entitlements and deducts |
| | Transmission Revenue Credits and credits for Standby |
| | Transmission Revenue and the transmission revenue expected |
| | to be actually received by the Participating TO for Existing |
| | Rights and Converted Rights. |
| <u>Trustee</u> | 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. |
| UDC (Utility Distribution | An entity that owns a Distribution System for the delivery of |
| <u>Company)</u> | Energy to and from the ISO 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. |
| | |

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION FERC ELECTRIC TARIFF Fourth Revised Sheet No. 355

FIRST REPLACEMENT VOLUME NO. I Superseding Substitute Third Revised Sheet No. 355 Unaccounted for Energy UFE is the difference in Energy, for each utility Service Area (UFE) and Settlement Period, between the net Energy delivered into the utility Service Area, adjusted for utility Service Area Transmission Losses (calculated in accordance with Section 7.4.2), and the total metered Demand within the utility Service Area adjusted for distribution losses using Distribution System loss factors approved by the Local Regulatory Authority. This difference is attributable to meter measurement errors, power flow modeling errors, energy theft, statistical Load profile errors, and distribution loss deviations. **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 ISO or Market Participant which could not be avoided through the exercise of Good Utility Practice. Uninstructed Deviation The penalty as set forth in Section 11.2.4.1.2 of this ISO Tariff. Penaltv **Uninstructed Imbalance** The real-time change in Generation or Demand other than that Energy instructed by the ISO or which the ISO Tariff provides will be paid at the price for Uninstructed Imbalance Energy. The process of determining which Generating Units will be **Unit Commitment** committed (started) to meet Demand and provide Ancillary Services in the near future (e.g., the next Trading Day). Usage Charge The amount of money, per 1 kW of scheduled flow, that the ISO charges a Scheduling Coordinator for use of a specific Congested Inter-Zonal Interface during a given hour.

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATIONFERC ELECTRIC TARIFFSecond Revised Sheet No. 356FIRST REPLACEMENT VOLUME NO. ISuperseding First Sheet No. 356

| FIRST REFLACEIVIENT VOLUM | Superseuling First Sheet No. 550 |
|---------------------------|---|
| Voltage Limits | For all substation busses, the normal and post-contingency |
| | Voltage Limits (kV). The bandwidth for normal Voltage Limits |
| | must fall within the bandwidth of the post-contingency Voltage |
| | Limits. Special voltage limitations for abnormal operating |
| | conditions such as heavy or light Demand may be specified. |
| Voltage Support | Services provided by Generating Units or other equipment |
| | such as shunt capacitors, static var compensators, or |
| | synchronous condensers that are required to maintain |
| | established grid voltage criteria. This service is required under |
| | normal or System Emergency conditions. |
| Waiver Denial Period | The period determined in accordance with Section 5.11.6. |
| Warning Notice | A Notice issued by the ISO when the operating requirements |
| | for the ISO Controlled Grid are not met in the Hour-Ahead |
| | Market, or the quantity of Regulation, Spinning Reserve, Non- |
| | Spinning Reserve, Replacement Reserve and Supplemental |
| | Energy available to the ISO does not satisfy the Applicable |
| | Reliability Criteria. |
| WEnet (Western Energy | An electronic network that facilitates communications and data |
| <u>Network)</u> | exchange among the ISO, Market Participants and the public in |
| | relation to the status and operation of the ISO Controlled Grid. |
| Wheeling | Wheeling Out or Wheeling Through. |
| Wheeling Access Charge | The charge assessed by the ISO that is paid by a Scheduling |
| | Coordinator for Wheeling in accordance with Section 7.1. |
| | 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. |

| CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION FERC ELECTRIC TARIFF Fifth Revised Sheet No. 357 FIRST REPLACEMENT VOLUME NO. I Superseding Fourth Revised Sheet No. 357 | | |
|---|---|--|
| Wheeling Out | Except for Existing Rights exercised under an Existing Contract | |
| | in accordance with Sections 2.4.3 and 2.4.4, the use of the ISO | |
| | Controlled Grid for the transmission of Energy from a | |
| | Generating Unit located within the ISO Controlled Grid to serve | |
| | a Load located outside the transmission and Distribution | |
| | System of a Participating TO. | |
| Wheeling Through | Except for Existing Rights exercised under an Existing Contract | |
| | in accordance with Sections 2.4.3 and 2.4.4, the use of the ISO | |
| | Controlled Grid for the transmission of Energy from a resource | |
| | located outside the ISO Controlled Grid to serve a Load located | |
| | outside the transmission and Distribution System of a | |
| | Participating TO. | |
| Wholesale Customer | A person wishing to purchase Energy and Ancillary Services at | |
| | a Bulk Supply Point or a Scheduling Point for resale. | |
| Wholesale Sales | The sale of Energy and Ancillary Services at a Bulk Supply | |
| | Point or a Scheduling Point for resale. | |
| WSCC (Western System Coordinating Council) | The Western Systems Coordinating Council or its successor, | |
| <u>coordinating councily</u> | the WECC. | |
| WECC (Western Electricity Oversight | The Western Electricity Coordinating Council or its successor. | |
| <u>Council)</u> <u>WSCC Reliability Criteria</u> <u>Agreement</u> | The Western Systems Coordinating Council Reliability Criteria | |
| | Agreement dated June 18, 1999 among the WSCC and certain | |
| | of its Member transmission operators, as such may be | |
| | amended from time to time. | |
| <u>Zone</u> | A portion of the ISO Controlled Grid within which Congestion is | |
| | expected to be small in magnitude or to occur infrequently. | |
| | "Zonal" shall be construed accordingly. | |

| CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION | |
|--|-------------------------|
| FERC ELECTRIC TARIFF | |
| FIRST REPLACEMENT VOLUME NO. I | Original Sheet No. 357A |

Zonal Settlement Interval
Ex Post PriceThe Zonal Settlement Interval Ex Post Price in a Settlement
Interval in each Zone will equal the absolute-value Energy-
weighted average of the Dispatch Interval Ex Post Prices in
each Zone, where the weights are the system total Instructed
Imbalance Energy, except Regulation Energy, for the Dispatch
Interval.

ISO TARIFF APPENDIX B

Scheduling Coordinator Agreement

Scheduling Coordinator Agreement

THIS AGREEMENT is made this ____ day of _____, ____, and is entered into, by and between:

(1) [Full legal name] having a registered or principal executive office at [address] (the "Scheduling Coordinator")

and

(2) CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION, a California nonprofit public benefit Corporation having a principal executive office located at such place in the State of California as the ISO Governing Board may from time to time designate (the "ISO").

Whereas:

- A. The Scheduling Coordinator has applied for certification by the ISO under the certification procedure referred to in Section 2.2.3 of the ISO Tariff.
- B. The Scheduling Coordinator wishes to schedule Energy and Ancillary Services on the ISO Controlled Grid under the terms and conditions set forth in the ISO Tariff.

NOW IT IS HEREBY AGREED as follows:

1. Definitions

- A. Terms and expressions used in this Agreement shall have the same meanings as those contained in the Master Definitions Supplement to the ISO Tariff.
- B. The "ISO Tariff" shall mean the ISO Operating Agreement and Tariff as amended from time to time, together with any Appendices or attachments thereto.

2. Covenant of the Scheduling Coordinator

The Scheduling Coordinator agrees that:

- A. the ISO Tariff governs all aspects of scheduling of Energy and Ancillary Services on the ISO Controlled Grid, including (without limitation), the financial and technical criteria for Scheduling Coordinators, bidding, settlement, information reporting requirements and confidentiality restrictions;
- B. it will abide by, and will perform all of the obligations under the ISO Tariff placed on Scheduling Coordinators in respect of all matters set forth therein including, without limitation, all matters relating to the scheduling of Energy and Ancillary Services on the ISO Controlled Grid, ongoing obligations in respect of scheduling, Settlement, system security policy and procedures to be developed by the ISO from time to time, billing and payments, confidentiality and dispute resolution;

- C. it shall ensure that each UDC, over whose Distribution System Energy or Ancillary Services are to be transmitted in accordance with Schedules, Adjustment Bids or bids for Ancillary Services submitted to the ISO by the Scheduling Coordinator, enters into a UDC operating agreement in accordance with Section 4 of the ISO Tariff;
- D. it shall ensure that each Generator for which it schedules Energy or on whose behalf it submits to the ISO Adjustment Bids or bids for Ancillary Services enters into a Generator agreement in accordance with Section 5 of the ISO Tariff;
- E. it shall have the primary responsibility to the ISO, as principal, for all Scheduling Coordinator payment obligations under the ISO Tariff;
- F. its status as a Scheduling Coordinator is at all times subject to the ISO Tariff.

3. Term and Termination

3.1 This Agreement shall commence on the later of (a) ______ or (b) the date the Scheduling Coordinator is certified by the ISO as a Scheduling Coordinator.

3.2 This Agreement shall terminate upon acceptance by FERC of a notice of termination. The ISO Shall timely file any notice of termination with FERC.

4. Assignment

Either party may assign its obligations under this Agreement with the other party's consent, such consent shall not to be unreasonably withheld.

5. Partial Invalidity

If any provision of this Agreement, or the application of such provision to any persons, circumstance or transaction, shall be held invalid, the remainder of this Agreement, or the application of such provision to other persons or circumstances or transactions, shall not be affected thereby.

6. Settlement Account

The Scheduling Coordinator shall maintain at all times an account with a bank capable of Fed-Wire transfer to which credits or debits shall be made in accordance with the billing and Settlement provisions of Section 11 of the ISO Tariff. Such account shall be the account referred to in Clause 7 hereof or as notified by the Scheduling Coordinator to the ISO from time to time by giving at least 7 days written notice before the new account becomes operational.

7. Notices

Any notice, demand or request made to or by either party regarding this Agreement shall be made in accordance with the ISO Tariff and unless otherwise stated or agreed shall be made to the representative of the other party indicated below.

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| ISO: | |
|--|------------------|
| Name of Primary Represent | ative: |
| Name of Alternative Repres | entative: |
| Address: | |
| | |
| | State: Zip Code: |
| E-Mail Addr | ess: |
| Phone No:_ | |
| Fax No: | |
| Scheduling Coordinator: Name of Primary Re Name of Alternative Address: | |
| State: | Zip Code: |
| E-Mail Addr | ess: |
| Phone No:_ | |
| | |
| | |
| | |
| | |

8. Agreement to be bound by ISO Tariff.

The ISO Tariff is incorporated herein and made a part hereof. In the event of a conflict between the terms and conditions of this Agreement and any other terms and conditions set forth in the ISO Tariff, the terms and conditions of the ISO Tariff shall prevail.

9. Electronic Contracting.

All submitted applications, schedules, bids, confirmations, changes to information on file with the ISO and other communications conducted via electronic transfer (e.g. direct computer link, FTP file transfer, bulletin board, e-mail, facsimile or any other means established by the ISO) shall have the same legal rights, responsibilities, obligations and other implications as set forth in the terms and conditions of the ISO Tariff and Protocols as if executed in written format.

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed by their respective authorized officials.

ISO:

| By: | | | |
|-------|--------------------|-------|------|
| - | Name | Title | Date |
| | | | |
| | | | |
| Sched | uling Coordinator: | | |
| Dv/ | | | |
| By: | Name | Title | Date |
| | Name | | Dale |
| | | | |

ISO TARIFF APPENDIX C

ISO Scheduling Process

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION FERC ELECTRIC TARIFF FIRST REPLACEMENT VOLUME NO. I

| - | | Dest | | | ay-Anea | d Schedule Timeline |
|-----------------|---------------------------|------|-----|---|---------|---|
| L | Responsible Parties | | | | | |
| Line | Time (Before or on) | ISO | SCs | Must-Take and Reliability generation | UDC | Actions |
| | Two days ah | ead | | | | |
| 0 | 6:00 PM | x | | | | Publish forecasted transmission conditions (Generator Meter Multipliers, system load forecast (by Zones), estimated Ancillary Service requirements, scheduled transmission Outages, Loop Flows, congestion, ATC, etc.) |
| | One day ahe | ad | | | | |
| 1 | 5:00 AM | Х | | | | Notify Scheduling Coordinators of unit-specific Reliability Must Run requirements |
| 2 | 6:00 AM | х | | | | Update system load forecast and Ancillary Service requirements. |
| 3 | | | Х | | | Notify ISO of price option for Reliability Must-Run Units for which notification was provided at 5:00 a.m. |
| 4 | | | х | | | Provide direct access load forecasts to the ISO. |
| 5 | 6:30 AM | х | | | | Provide net direct access load forecasts to UDCs. |
| 6[not used] | | | | | | |
| 7 [not used] | | | | | | |
| 8 [not used] | | | | | | |
| 9 [not used] | | | | | | |
| 10 | | | Х | | | Submit initial preferred energy schedules to the ISO. |
| 11 | | | х | | | Submit Ancillary Service bids and/or self-provided Ancillary Service schedules to the ISO. |
| 12 | 10:00 AM | x | | | | Validate all SC energy schedules, including RMR requirements, and bids; notify and resolve incorrect schedules and bids, if any. |

Dav-Ahead Schedule Timeline

| 13 | | х | | Validate all SC Ancillary Service schedules and bids; notify and resolve incorrect Ancillary Service schedules and bids, If any. |
|------|----------|---|---|--|
| 15 | | ^ | | |
| 4.4 | | | | Start the Inter-Zonal Congestion Management evaluation process |
| 14 | | Х | | and Ancillary Services bid evaluation. |
| 15 | 11:00 AM | Х | | If no Inter-Zonal Congestion exists, go to line 27. |
| | | | | Complete advisory dispatch schedules and transmission prices if |
| 16 | | х | | Inter-Zonal Congestion exists. |
| | | | | Complete the advisory schedules and prices of each Ancillary |
| 17 | | х | | Service. |
| | | | | Notify all SC if Inter-Zonal Congestion exists. Publish advisory |
| 18 | | х | | transmission prices. |
| - 10 | | ~ | | Inform all SCs their advisory dispatch schedules if Inter-Zonal |
| 19 | | v | | Congestion exists. |
| 19 | | Х | | |
| | | | | Inform all SCs advisory AS schedules and prices if Inter-Zonal |
| 20 | | Х | | Congestion exists. |
| | | | | Start the process of developing revised schedules and price bids. |
| 21 | 11:05 PM | | Х | |
| | | | | Start the process of developing revised AS schedules and price |
| 22 | | | x | bids. |
| 23 | 12:00 PM | | X | Submit revised Preferred Schedules and price bids to the ISO. |
| 24 | | | х | Submit revised preferred AS schedules and price bids to the ISO. |
| | | | | Validate all SC schedules and bids; notify and resolve incorrect |
| 25 | 12:00 PM | х | | schedules and bids, if any. |
| | | | | Validate all SC AS schedules and bids; notify and resolve incorrect |
| 26 | | х | | schedules and bids, if any. |
| | | ~ | | Start the Inter-Zonal Congestion Management evaluation process |
| 27 | | v | | |
| 21 | | Х | | and Ancillary Services bid evaluation. |

| | | 1 | |
|-------|---------|---|--|
| 28 | 1:00 PM | х | Complete final dispatch schedules and transmission prices. |
| 29 | | х | Complete Final Schedules and prices of each Ancillary Service. |
| 30 | 1:00 PM | Х | Complete Final Schedules. |
| 31 | 1:00 PM | х | Inform all SCs their final dispatch schedules. |
| 32 | | х | Inform all SCs their final AS schedules and prices. |
| 33 | | х | Publish transmission prices if Inter-Zonal Congestion exists. |
| | | | Calculate and communicate with SC the specific SCs Zonal |
| 34 | | х | prices if asked. |
| 35 | | | |
| [not | | | |
| used] | | | |
| | | | |
| 36 | | | |
| [not | | | |
| used] | | | |
| | | | |
| 37 | | | |
| [not | | | |
| used] | | | |
| | | | Develop net schedules for each of the Control Area interfaces. |
| | | | These interfaces include SC net schedules, Control Area net |
| 38 | | Х | schedules and/or individual transactions. |
| | | | Call each adjacent Control Area and check that net schedules |
| | | | at each interface point match. Search for discrepancies and |
| | | | identify transactions that do not match. Resolve discrepancies |
| 39 | | х | with the involved SCs or eliminate the transactions with |
| | | | discrepancies. |

ISO TARIFF APPENDIX D

Black Start Units

Black Start Units

The following requirements must be met by Generating Units providing Black Start ("Black Start Units"):

- (a) Black Start Units must be capable of starting and paralleling with the ISO Controlled Grid without aid from the ISO Controlled Grid;
- (b) Black Start Units must be capable of making a minimum number of starts per event (to be without aid from the ISO Controlled Grid as determined by the ISO);
- (c) Black Start Units must be equipped with governors capable of operating in the stand alone (asynchronous) and parallel (synchronous) modes.
- (d) Black Start Units must have startup load pickup capabilities at a level to be determined by the ISO, including total startup load (MW) and largest startup load (MW) for such power output levels as the ISO may specify.
- (e) All Black Start Units must be capable of producing Reactive Power (boost) and absorbing Reactive Power (buck) as required by the ISO to control system voltages. This requirement may be met by the operation of more than one Black Start Unit in parallel providing that:
 - (i) the Black Start generation supplier demonstrates that the proposed Generation resource shares reactive burden equitably;
 - (ii) all Participating Generators associated with the proposed Black Start source are located in the same general area.

Buck/boost capability requirement shall be dependent on the location of the proposed resource in relation to Black Start load.

- (f) All Black Start Units must have the following communication/control requirements:
 - (i) dial-up telephone;
 - (ii) backup radio;
 - (iii) manning levels which accord with Good Utility Practice.

ISO TARIFF APPENDIX E

Verification of Submitted Data for Ancillary Services

Verification of Submitted Data for Ancillary Services

The ISO shall use the following procedures for verifying the scheduling and bid information submitted by Scheduling Coordinators for Ancillary Services. In this Appendix, a "bid" is a bid submitted by a Scheduling Coordinator in the ISO's competitive Ancillary Services market. A "schedule" is a Schedule including Ancillary Services which the Scheduling Coordinator wishes to self-provide.

1. Bid File and Schedule Format. The ISO shall verify that the bid files and schedules conform to the format specified for the type of Ancillary Service bid or schedule submitted. If the bid file or schedule does not conform to specifications, it shall be annotated by the ISO to indicate the location of the errors, and returned to the Scheduling Coordinator for corrections. Any changes made by a Scheduling Coordinator shall require a new submitted of bid or schedule information, and all validity checks shall be performed on the re-submitted bid or schedule.

2. Generation Schedules and Bids.

2.1. Quantity Data. The ISO shall verify that no Scheduling Coordinator is submitting a scheduled or bid quantity for Regulation, Spinning Reserve, Non-Spinning or Replacement Reserve which exceeds available capacity for Regulation and Reserves on the Generating Units, Loads and resources scheduled for that Settlement Period.

2.2 Location Data. The ISO shall verify that the location data corresponds to the ISO Controlled Grid interconnection data.

2.3. Operating Capability. The ISO shall verify that the operating capability data corresponds to the ISO Controlled Grid interconnection data for each Generating Unit, Load or other resource for which a Scheduling Coordinator is submitting an Ancillary Service bid or schedule.

3. Load Schedules and Bids.

3.1. Quantity data. The ISO shall verify that the quantity of Non-Spinning and Replacement Reserve scheduled or bid from Dispatchable Load does not exceed scheduled consumption quantities for that Settlement Period.

3.2. Location data. The ISO shall verify that the location of the Dispatchable Load corresponds to the ISO Controlled Grid interconnection data for each supplier of Dispatchable Load.

4. Notification of Validity or Invalidity of Ancillary Services Schedules and Competitive Bids. The ISO shall, as soon as reasonably practical following the receipt of competitive bids or self-provided Ancillary Service schedules, send to the Scheduling Coordinator who submitted the schedule or bid the following information:

- (a) acknowledgment of receipt of the competitive bid or self-provided Ancillary Service schedule;
- (b) notification that the bid or schedule has been accepted or reject for noncompliance with the rules specified in this Appendix. If a bid or schedule is rejected, such notification shall contain an explanation of why the bid or schedule was not accepted;
- (c) a copy of the bid or schedule as processed by the ISO.

In response to an invalid schedule or bid, the Scheduling Coordinator shall be given a period of time to respond to the notification. The Scheduling Coordinator shall respond by resubmitting a corrected schedule or bid. If the Scheduling Coordinator does not respond to the notification within the required time frame, the ISO shall proceed without that Scheduling Coordinator's bid or schedule.

5. Treatment of Missing Values.

5.1 Missing Location Values. Any bid submitted without a Location Code shall be deemed to have a zero bid quantity for that Settlement Period.

5.2 Missing Quantity Values. Any bid submitted without a quantity value shall be deemed to have a zero bid quantity for Ancillary Service capacity for that Settlement Period.

5.3 Missing Price Values. Any bid submitted with non-zero quantity value, but with a missing price value, shall be rejected.

6. Treatment of Equal Price Bids. The ISO shall allow these Scheduling Coordinators to resubmit, at their own discretion, their bid no later than 2 hours the same day the original bid was submitted. In the event identical prices still exist following resubmission of bids, the ISO shall determine the merit order for each Ancillary Service by considering applicable constraint information for each Generating Unit, Load or other resource, and optimize overall costs for the Trading Day. If equal bids still remain, the ISO shall proportion participation in the Final Day-Ahead or Hour-Ahead Schedule (as the case may be) amongst the bidding Generating Units, Loads and resources with identical bids to the extent permitted by operating constraints and in a manner deemed appropriate by the ISO.

7. **Receipt of Bids and Schedules.** The ISO shall maintain an audit trail relating to the receipt of bids and schedules and the processing of those bids and schedules.

ISO TARIFF APPENDIX F

Rate Schedules

Schedule 1

Grid Management Charge

Part A – Monthly Calculation of Grid Management Charge (GMC)

The Grid Management Charge consists of seven separate service charges: (1) the Core Reliability Services Charge, (2) the Energy Transmission Services Net Energy Charge, (3) the Energy Transmission Services Uninstructed Deviations Charge, (4) the Forward Scheduling Charge, (5) the Congestion Management Charge, (6) the Market Usage Charge, and (7) the Settlements, Metering, and Client Relations Charge.

- 1. The rate in \$/MW for the Core Reliability Services Charge will be calculated by dividing the GMC costs, as determined in accordance with Part C of this Schedule 1, allocated to this service category in accordance with Part E of this Schedule 1, by the total of the forecasted Scheduling Coordinators' metered non-coincident peak hourly demand in MW for all months during the year.
- 2. The rate in \$/MWh for the Energy Transmission Services Net Energy Charge will be calculated by dividing the GMC costs, as determined in accordance with Part C of this Schedule 1, allocated to this service category in accordance with Part E of this Schedule 1, by the total annual forecast Metered Control Area Load in MWh.
- 3. The rate in \$/MWh for the Energy Transmission Services Uninstructed Deviations Charge will be calculated by dividing the GMC costs, as determined in accordance with Part C of this Schedule 1, allocated to this service category in accordance with Part E of this Schedule 1, by the absolute value of total annual forecast net uninstructed deviations (netted within a Settlement Interval) in MWh.
- 4. The rate in \$ per Schedule for the Forward Scheduling Charge will be calculated by dividing the GMC costs, as determined in accordance with Part C of this Schedule 1, allocated to this service category in accordance with Part E of this Schedule 1, by the annual forecast number of non-zero MW Final Hour-Ahead Schedules, including all awarded Ancillary Service bids.
- 5. The rate in \$/MWh for the Congestion Management Charge will be calculated by dividing the GMC costs, as determined in accordance with Part C of this Schedule 1, allocated to this service category in accordance with Part E of this Schedule 1, by the total annual forecast Scheduling Coordinators' inter-zonal scheduled flow (excluding flows pursuant to Existing Contracts) per path in MWh.
- 6. The rate in \$/MWh for the Market Usage Charge will be calculated by dividing the GMC costs, as determined in accordance with Part C of this Schedule 1, allocated to this service category in accordance with Part E of this Schedule 1, by the annual forecast total purchases and sales (including out-of-market transactions) of Ancillary Services, Supplemental Energy, Instructed Imbalance Energy, and net Uninstructed Imbalance Energy (with uninstructed deviations being netted by Settlement Interval) in MWh.
- 7. The rate for the Settlements, Metering, and Client Relations Charge will be fixed at \$500.00 per month, per Scheduling Coordinator Identification Number ("SC ID") with an invoice value other than \$0.00 in the current trade month.

The rates for the foregoing charges shall be adjusted automatically each year, effective January 1 for the following twelve months, in the manner set forth in Part D of this Schedule.

Part B – Quarterly Adjustment, If Required

Each component rate of the Grid Management Charge will be adjusted automatically on a quarterly basis, up or down, so that rates reflect the annual revenue requirement as stated in the ISO's annual informational filing, if the estimated billing determinant volumes for that component, on an annual basis, change by 5% or more during the year. Such adjustment may be implemented not more than once per calendar quarter, and will be effective the first day of the next calendar month.

The rates will be adjusted in accordance with the following formula:

According to the formulae listed in Appendix F, Schedule 1, Part A with the billing determinant(s) readjusted on a going-forward basis to reflect the 5% or greater change from the estimated billing determinant provided in the annual informational filing.

Part C – Costs Recovered through the GMC

As provided in Section 8 of the ISO Tariff, the Grid Management Charge includes the following costs, as projected in the ISO's budget for the year to which the Grid Management Charge applies:

- Operating costs (as defined in Section 8.2.2)
- Financing costs (as defined in Section 8.2.3), including Start-Up and Development costs and
- Operating and Capital Reserve costs (as defined in Section 8.2.4)

Such costs, for the ISO as a whole, are allocated to the seven service charges that comprise the Grid Management Charge: (1) Core Reliability Services Charge, (2) Energy Transmission Services Net Energy Charge, (3) Energy Transmission Services Uninstructed Deviations Charge, (4) Forward Scheduling Charge, (5) Congestion Management Charge, (6) Market Usage Charge, and (7) Settlements, Metering, and Client Relations Charge, according to the factors listed in Part E of this Schedule 1, and

adjusted annually for:

 any surplus revenues from the previous year as deposited in the Operating and Capital Reserve Account, as defined under Section 8.5, or deficiency of revenues, as recorded in a memorandum account;

divided by:

• forecasted annual billing determinant volumes;

adjusted quarterly for:

• a change in the volume estimate used to calculate the individual Grid Management Charge components, if, on an annual basis, the change is 5% or more.

The Grid Management Charge revenue requirement formula is as follows:

Grid Management Charge revenue requirement =

 Operating Expenses + Debt Service + [(Coverage Requirement x Senior Lien Debt Service) and/or (Cash Funded Capital Expenditures)] - Interest Earnings -Other Revenues - Reserve Transfer

Where,

• **Operating Expenses** = O&M Expenses plus Taxes Other Than Income Taxes and Penalties

- O&M Expenses = Transmission O&M Expenses (Accounts 560-574) plus Customer Accounting Expenses (Accounts 901-905) plus Customer Service and Informational Expenses (Accounts 906-910) plus Sales Expenses (Accounts 911-917) plus Administrative & General Expenses (Accounts 920-935)
- **Taxes Other Than Income Taxes =** those taxes other than income taxes which relate to ISO operating income (Account 408.1)
- **Penalties** = payments by the ISO for penalties or fines incurred for violation of WECC reliability criteria (Account 426.3)
- **Debt Service** = for any fiscal year, scheduled principal and interest payments, sinking fund payments related to balloon maturities, repayment of commercial paper notes, net payments required pursuant to a payment obligation, or payments due on any ISO notes. This amount includes the current year accrued principal and interest payments due in April of the following year.
- **Coverage Requirement** = 25% of the Senior Lien Debt Service.
- Senior Lien Debt Service = all Debt Service that has a first lien on ISO Net Operating Revenues (Account 128 subaccounts).
- **Cash Funded Capital Expenditures** = Post current fiscal year capital additions (Accounts 301-399) funded on a pay-as-you-go basis.
- Interest Earnings = Interest earnings on Operating and Capital Reserve balances (Account 419). Interest on bond or note proceeds specifically designated for capital projects or capitalized interest is excluded.
- **Other Revenues** = Amounts booked to Account 456 subaccounts. Such amounts include but are not limited to application fees, WECC reliability coordinator reimbursements, and fines assessed and collected by the ISO.
- **Reserve Transfer** = the projected reserve balance for December 31 of the prior year less the Reserve Requirement as adopted by the ISO Governing Board and FERC. If such amount is negative, the amount may be divided by two, so that the reserve is replenished within a two-year period. (Account 128 subaccounts)
- **Reserve Requirement** = 15% of Annual Operating Expenses.

A separate revenue requirement shall be established for each component of the Grid Management Charge by developing the revenue requirement for the ISO as a whole and then assigning such costs to the seven service categories using the allocation factors provided in Appendix F, Schedule 1, Part E of this Tariff.

Part D – Information Requirements

Budget Schedule

The ISO Governing Board shall set forth a budget schedule that shall specify the dates for the budget posting and public workshop events noted below and other significant budget related milestones providing an opportunity for public input.

Budget Posting

The ISO will post on its Internet site the preliminary proposed ISO operating and capital budget to be effective during the subsequent fiscal year, and the projected billing determinant volumes used to develop the rate for each component of the Grid Management Charge.

Public Workshop

Subsequent to the website posting, and prior to (i) the ISO Governing Board approval of the budget and (ii) the submission of the informational filing described in the next paragraph of this Part D, the ISO shall hold a public budget workshop where it will provide an overview of and answer questions from stakeholders on the proposed budget, cost allocation, and the charges for each of the ISO s services for the following year.

Annual Informational Filing

The ISO will make a filing each year no later than December 15, or the first Business Day thereafter, at FERC that shall contain projected cost data on the ISO presented in conformance with the budget approved by the ISO Governing Board and the FERC Uniform System of Accounts (USOA). This filing shall contain such information as is required to update the GMC rates resulting from the application of the formulae in Part A of this Schedule for the following calendar year.

Periodic Financial Reports

The ISO will create periodic financial reports consisting of an income statement, balance sheet, statement of operating reserves, and such other reports as are required by the ISO Governing Board. The periodic financial reports will be posted on the ISO's Website not less than quarterly.

Part E – Cost Allocation

The Grid Management Charge revenue requirement, determined in accordance with Part C of this Schedule 1, shall be allocated to the seven service charges specified in Part A of this Schedule 1 as follows. Expenses projected to be recorded in each cost center shall be allocated among the seven charges in accordance with the allocation factors listed in Table 1 to this Schedule 1. In the event the ISO budgets for projected expenditures for cost centers are not specified in Table 1 to this Schedule, such expenditures shall be allocated based on the allocation factors for the respective ISO division hosting that newly-created cost center. Such divisional allocation factors are specified in Table 1 to this Schedule 1.

Debt service expenditures for the ISO's year 2000 (or subsequently refinanced) bond offering shall be allocated among the seven charges in accordance with the allocation factors listed in Table 1 to this Schedule 1. Capital expenditures shall be allocated among the seven charges in accordance with the allocation factors listed in Table 2 to this Schedule 1 for the system for which the capital expenditure is projected to be made.

Any costs allocated by the factors listed in Table 1 and Table 2 to the Settlements, Metering, and Client Relations category that would remain un-recovered after the assessment of the charge for that service specified in Section 7 of Part A of this Schedule 1 on forecasted billing determinant volumes shall be reallocated to the remaining GMC service categories in the ratios set forth in Table 3 to this Schedule 1.

Costs allocated to the Energy Transmission Services category in the following tables are further apportioned to the Energy Transmission Services Net Energy and Energy Transmission Services Uninstructed Deviations subcategories in 80% and 20% ratios, respectively.

| Table | 1 |
|-------|---|
| | |
| | |

| <u>CC #</u> | Cost Center | <u>CRS</u> | <u>ETS</u> | <u>FS</u> | <u>CM</u> | <u>MU</u> | <u>SMCR</u> | <u>Total</u> |
|-------------|------------------------------------|------------|------------|-----------|-----------|-----------|-------------|--------------|
| 1100 | CEO Division | 44% | 22% | 4% | 5% | 10% | 16% | 100% |
| 1111 | CEO - General | 44% | 22% | 4% | 5% | 10% | 16% | 100% |
| 1241 | MD02 | 7% | 0% | 14% | 11% | 28% | 40% | 100% |
| 1521 | Grid Planning | 63% | 38% | 0% | 0% | 0% | 0% | 100% |
| | | | | | | | | |
| 1300 | Finance Division | 44% | 21% | 4% | 4% | 10% | 16% | 100% |
| 1311 | CFO - General | 44% | 21% | 4% | 4% | 10% | 16% | 100% |
| 1321 | Accounting | 44% | 22% | 4% | 5% | 10% | 16% | 100% |
| 1331 | Financial Planning and Treasury | 44% | 22% | 4% | 5% | 10% | 16% | 100% |
| 1351 | Facilities | 44% | 21% | 4% | 4% | 10% | 17% | 100% |
| 1361 | Security & Corporate Services | 44% | 21% | 4% | 4% | 10% | 17% | 100% |
| | | | | | | | | |

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| 1400 | Information Services Division | 38% | 7% | 10% | 5% | 9% | 31% | 100% |
|------|--|------|-----|-----|-----|-----|-----|------|
| 1411 | Chief Information Officer | 38% | 7% | 10% | 5% | 9% | 31% | 100% |
| 1422 | Corporate & Enterprise Applications | 33% | 7% | 1% | 25% | 13% | 21% | 100% |
| 1424 | Asset Management | 35% | 6% | 11% | 5% | 11% | 32% | 100% |
| 1431 | End User Support | 38% | 14% | 8% | 3% | 9% | 27% | 100% |
| 1432 | Computer Operations and Infrastructure Services | 34% | 9% | 12% | 3% | 9% | 33% | 100% |
| 1433 | Network Services | 43% | 12% | 9% | 3% | 9% | 24% | 100% |
| 1441 | Outsourced Contracts | 42% | 11% | 10% | 3% | 9% | 25% | 100% |
| 1442 | Production Support | 25% | 0% | 18% | 3% | 8% | 47% | 100% |
| 1451 | Information Support Services | 25% | 0% | 18% | 3% | 8% | 47% | 100% |
| 1461 | Control Systems | 96% | 2% | 0% | 0% | 1% | 1% | 100% |
| | Field Data Acquisition System (FDAS) | 21% | 0% | 0% | 0% | 0% | 79% | 100% |
| | Operations Systems Services | 50% | 3% | 6% | 1% | 6% | 33% | 100% |
| 1466 | Enterprise Applications | 48% | 7% | 1% | 1% | 3% | 39% | 100% |
| 1467 | Settlement Systems Services | 27% | 11% | 2% | 2% | 5% | 52% | 100% |
| 1468 | Corporate Application Support and Administration | 44% | 21% | 4% | 4% | 10% | 17% | 100% |
| | Analytical and Reporting Applications | 10% | 0% | 0% | 65% | 25% | 0% | 100% |
| 1471 | IT Planning | 25% | 0% | 18% | 3% | 8% | 47% | 100% |
| | Markets and Scheduling System Services | 47% | 3% | 24% | 3% | 18% | 6% | 100% |
| 1482 | Market Systems Support Services | 45% | 1% | 19% | 6% | 24% | 6% | 100% |
| 1500 | Grid Operations Division | 67% | 33% | 0% | 0% | 0% | 0% | 100% |
| 1511 | VP Grid Operations | 67% | 33% | 0% | 0% | 0% | 0% | 100% |
| 1542 | Outage Coordination | 95% | 5% | 0% | 0% | 0% | 0% | 100% |
| 1543 | Loads and Resources | 49% | 51% | 0% | 0% | 0% | 0% | 100% |
| 1544 | Real-Time Scheduling | 60% | 40% | 0% | 0% | 0% | 0% | 100% |
| 1545 | Grid Operations | 67% | 33% | 0% | 0% | 0% | 0% | 100% |
| 1546 | Security Coordination | 100% | 0% | 0% | 0% | 0% | 0% | 100% |
| | Engineering and Maintenance | 46% | 54% | 0% | 0% | 0% | 0% | 100% |
| 1548 | OSAT Group - General | 93% | 7% | 0% | 0% | 0% | 0% | 100% |
| | Operations Training | 50% | 50% | 0% | 0% | 0% | 0% | 100% |
| | Special Projects Engineering | 43% | 57% | 0% | 0% | 0% | 0% | 100% |

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| 1555 Operations Support | 56% | 44% | 0% | 0% | 0% | 0% | 100% |
|-------------------------|-----|-----|----|----|----|----|------|
| Group | | | | | | | |

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION FERC ELECTRIC TARIFF First Rev FIRST REPLACEMENT VOLUME NO. I Superseding Orig

First Revised Sheet No. 376B Superseding Original Sheet No. 376B

| 1558 | Transmission | 58% | 42% | 0% | 0% | 0% | 0% | 100% |
|------|-------------------------------------|------|-----|-----------|-----|-----|------|------|
| | Maintenance | | | | | | | |
| | Operations Application Support | 60% | 40% | 0% | 0% | 0% | 0% | 100% |
| 1561 | Operations Engineering South | 65% | 35% | 0% | 0% | 0% | 0% | 100% |
| 1562 | Operations Engineering North | 55% | 45% | 0% | 0% | 0% | 0% | 100% |
| 1563 | Operations Coordination | 75% | 25% | 0% | 0% | 0% | 0% | 100% |
| 1564 | Operations Scheduling | 100% | 0% | 0% | 0% | 0% | 0% | 100% |
| 1565 | Pre-Scheduling and Support | 77% | 23% | 0% | 0% | 0% | 0% | 100% |
| 1566 | Regional Coordination - General | 100% | 0% | 0% | 0% | 0% | 0% | 100% |
| 1600 | Legal and Regulatory Division | 36% | 22% | 4% | 7% | 17% | 15% | 100% |
| 1611 | VP General Counsel - General | 36% | 22% | 4% | 7% | 17% | 15% | 100% |
| 1631 | Legal and Regulatory | 44% | 22% | 4% | 5% | 10% | 16% | 100% |
| 1641 | Market Analysis | 15% | 26% | 0% | 20% | 31% | 7% | 100% |
| | Market Surveillance Committee | 25% | 25% | 0% | 25% | 25% | 0% | 100% |
| | ISO Governing Board | 44% | 22% | 4% | 5% | 10% | 16% | 100% |
| 1661 | Compliance - General | 22% | 20% | 12% | 0% | 29% | 17% | 100% |
| 1662 | Compliance - Audits | 8% | 0% | 0% | 0% | 50% | 42% | 100% |
| 1700 | Market Services Division | 17% | 2% | 9% | 9% | 20% | 41% | 100% |
| 1711 | VP Market Services - General | 17% | 2% | 9% | 9% | 20% | 41% | 100% |
| 1721 | Billing and Settlements- General | 25% | 0% | 0% | 0% | 0% | 75% | 100% |
| 1722 | Business Development Support | 0% | 0% | 0% | 0% | 0% | 100% | 100% |
| | RMR Settlements | 80% | 20% | 0% | 0% | 0% | 0% | 100% |
| | BBS - PSS | 0% | 0% | 0% | 0% | 0% | 100% | 100% |
| | BBS - FSS | 0% | 0% | 0% | 0% | 0% | 100% | 100% |
| | Contracts and Special Projects | 43% | 7% | 0% | 0% | 0% | 50% | 100% |
| 1741 | Client Relations | 0% | 0% | 0% | 0% | 0% | 100% | 1009 |
| | Market Operations - General | 31% | 0% | 15% | 15% | 35% | 4% | 1009 |
| | Manager of Markets | 27% | 5% | 27% | 22% | 18% | 0% | 1009 |
| | Market Engineering | 21% | 0% | 0% | 28% | 43% | 7% | 1009 |
| 1755 | Business Solutions | 6% | 0% | 47% | 12% | 29% | 6% | 1009 |
| 1755 | | | | | | | | |
| | Market Quality - General | 0% | 0% | 0% 30% | 0% | 71% | 29% | 1009 |

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| 1800 | Corporate and Strategic Development Division | 44% | 21% | 4% | 4% | 10% | 16% | 100% |
|-----------|--|------|-----|-----|----|-----|------|------|
| 1811 | VP Corporate and Strategic Development - General | 44% | 21% | 4% | 4% | 10% | 16% | 100% |
| 1821 | Communications | 44% | 22% | 4% | 5% | 10% | 16% | 100% |
| 1831 | Strategic Development | 44% | 22% | 4% | 5% | 10% | 16% | 100% |
| 1841 | Human Resources | 44% | 21% | 4% | 4% | 10% | 17% | 100% |
| 1851 | Project Office | 44% | 22% | 4% | 5% | 10% | 16% | 100% |
| 1861 | Regulatory Policy | 44% | 22% | 4% | 5% | 10% | 16% | 100% |
| Other Rev | venue and Credits | | | | | | | |
| | SC Application and Training Fees | 0% | 0% | 0% | 0% | 0% | 100% | 100% |
| | WECC Reimbursement/NERC Reimbursement | 100% | 0% | 0% | 0% | 0% | 0% | 100% |
| | Interest Earnings | 37% | 12% | 9% | 5% | 11% | 25% | 100% |
| Debt Serv | vice Related | 33% | 8% | 15% | 5% | 9% | 29% | 100 |

Table 2

Capital Cost Allocation Factors

| System | CRS | ETS | FS | СМ | MU | SMCR | Total |
|--|------|-----|-----|----|-----|------|-------|
| ACC Upgrades (Communication between ISO & IOUs) | 100% | 0% | 0% | 0% | 0% | 0% | 100% |
| Ancillary Services Management (ASM) Component of SA | 15% | 0% | 40% | 0% | 45% | 0% | 100% |
| Application Development Tools | 23% | 0% | 22% | 3% | 7% | 45% | 100% |
| Automated Dispatch System (ADS) | 50% | 0% | 25% | 0% | 20% | 5% | 100% |
| Automated Load Forecast System (ALFS) | 70% | 0% | 10% | 0% | 20% | 0% | 100% |
| Automatic Mitigation Procedure (AMP) | 85% | 0% | 0% | 0% | 15% | 0% | 100% |
| Backup systems (Legato/Quantum) | 23% | 0% | 22% | 3% | 7% | 45% | 100% |

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| Balance of Business Systems (BBS) | 0% | 0% | 0% | 0% | 0% | 100% | 100% |
|---|------|-----|-----|-----|------|------|------|
| Balancing Energy Ex Post Price (BEEP) Component of SA | 50% | 0% | 20% | 10% | 20% | 0% | 100% |
| Bill's Interchange Schedule (BITS) | 85% | 0% | 0% | 0% | 15% | 0% | 100% |
| CaseWise (process modeling tool) | 44% | 21% | 4% | 4% | 10% | 17% | 100% |
| CHASE | 44% | 21% | 4% | 4% | 10% | 17% | 100% |
| Common Information Model (CIM) | 100% | 0% | 0% | 0% | 0% | 0% | 100% |
| Compliance (Blaze) | 19% | 16% | 10% | 0% | 33% | 22% | 100% |
| Congestion Management (CONG) (Component of SA) | 10% | 0% | 0% | 65% | 25% | 0% | 100% |
| Congestion Reform-DSOW | 50% | 0% | 0% | 50% | 0% | 0% | 100% |
| Congestion Revenue Rights (CRR) | 0% | 0% | 0% | 80% | 20% | 0% | 100% |
| DataWarehouse | 24% | 18% | 6% | 9% | 24% | 18% | 100% |
| Dept. of Market Analysis Tools (SAS/MARS) | 15% | 26% | 0% | 20% | 31% | 7% | 100% |
| Dispute Tracking System (Remedy) | 0% | 0% | 0% | 0% | 0% | 100% | 100% |
| Documentum | 44% | 21% | 4% | 4% | 10% | 17% | 100% |
| Electronic Tagging (Etag) | 100% | 0% | 0% | 0% | 0% | 0% | 100% |
| Energy Management System (EMS) | 100% | 0% | 0% | 0% | 0% | 0% | 100% |
| Engineering Analysis Tools | 60% | 40% | 0% | 0% | 0% | 0% | 100% |
| Evaluation of Market Separation | 0% | 0% | 0% | 50% | 50% | 0% | 100% |
| Existing Transmission Contracts Calculator (ETCC) | 25% | 0% | 20% | 15% | 20% | 20% | 100% |
| FERC Study Software | 0% | 0% | 0% | 0% | 100% | 0% | 100% |
| Firm Transmission Right (FTR) and Secondary Registration System (SRS) | 0% | 0% | 15% | 60% | 15% | 10% | 100% |

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| | | | | | - | | |
|--|------|-----|------|-----|------|------|------|
| Global Resource Reliability Management Application (GRRMA) | 75% | 15% | 0% | 0% | 10% | 0% | 100% |
| Grid Operations Training Simulator (GOTS) | 56% | 44% | 0% | 0% | 0% | 0% | 100% |
| Hour-Ahead Data AnalysisTool, Day-Ahead Data AnalysisTool, | 0% | 0% | 100% | 0% | 0% | 0% | 100% |
| Human Resources | 44% | 21% | 4% | 4% | 10% | 17% | 100% |
| IBM Contract | 37% | 14% | 10% | 4% | 9% | 26% | 100% |
| Integrated Forward Market (IFM) | 10% | 0% | 35% | 0% | 55% | 0% | 100% |
| Internal Development | 23% | 0% | 22% | 3% | 7% | 45% | 100% |
| Interzonal Congestion Management reform - Real Time | 50% | 0% | 0% | 50% | 0% | 0% | 100% |
| Land and Building Costs | 44% | 21% | 4% | 4% | 10% | 17% | 100% |
| Local Area Network (LAN) | 44% | 21% | 4% | 4% | 10% | 17% | 100% |
| Locational Marginal Pricing (LMPM) | 10% | 0% | 35% | 0% | 55% | 0% | 100% |
| Market Transaction System (MTS) | 0% | 0% | 0% | 0% | 100% | 0% | 100% |
| Masterfile | 20% | 0% | 20% | 0% | 55% | 5% | 100% |
| MD02 Capital | 7% | 0% | 14% | 11% | 28% | 40% | 100% |
| Meter Data Acquisition System (MDAS) | 0% | 0% | 0% | 0% | 0% | 100% | 100% |
| Miscellaneous (2004 related projects) | 23% | 0% | 22% | 3% | 7% | 45% | 100% |
| Monitoring (Tivoli) | 23% | 0% | 22% | 3% | 7% | 45% | 100% |
| New Resource Interconnection (NRI) | 100% | 0% | 0% | 0% | 0% | 0% | 100% |
| New System Equipment (replacement of owned equipment) | 23% | 0% | 22% | 3% | 7% | 45% | 100% |
| NT/web servers | 44% | 21% | 4% | 4% | 10% | 17% | 100% |
| NT-servers | 44% | 21% | 4% | 4% | 10% | 17% | 100% |

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| Oracle Enterprise Manager (OEM) | 27% | 0% | 18% | 5% | 9% | 41% | 100% |
|---|------|-----|-----|-----|-----|------|------|
| Office Automation - desktop/laptop (OA) | 44% | 21% | 4% | 4% | 10% | 17% | 100% |
| Office equipment (scanner, printer, copier, fax, Communication Equipment) | 44% | 21% | 4% | 4% | 10% | 17% | 100% |
| Open Access Same Time Information System (OASIS) | 10% | 0% | 25% | 10% | 35% | 20% | 100% |
| Operational Meter Analysis and Reporting (OMAR) | 0% | 0% | 0% | 0% | 0% | 100% | 100% |
| Oracle Corporate Financials | 44% | 21% | 4% | 4% | 10% | 17% | 100% |
| Oracle Licenses | 27% | 0% | 18% | 5% | 9% | 41% | 100% |
| Oracle Market Financials BBS | 0% | 0% | 0% | 0% | 0% | 100% | 100% |
| Out of Sequence Market Operation Settlements Information System (OOS) | 5% | 5% | 0% | 0% | 90% | 0% | 100% |
| Outage Scheduler (OS) | 50% | 0% | 10% | 20% | 20% | 0% | 100% |
| Participating Intermittent Resource Project (PIRP) | 0% | 0% | 94% | 0% | 6% | 0% | 100% |
| Physical Facilities Software Application/Furniture/Leasehold Improvements | 44% | 21% | 4% | 4% | 10% | 17% | 100% |
| Process Information System (PI) | 80% | 0% | 0% | 0% | 10% | 10% | 100% |
| Rational Buyer | 100% | 0% | 0% | 0% | 0% | 0% | 100% |
| Real Time Energy Dispatch System (REDS) | 100% | 0% | 0% | 0% | 0% | 0% | 100% |
| Real Time Nodal Market | 35% | 0% | 10% | 0% | 55% | 0% | 100% |
| Reliability Management System (RMS) | 100% | 0% | 0% | 0% | 0% | 0% | 100% |
| Remedy (related to Transmission Registry, New Resource Interconnection, and Resource Registry) | 100% | 0% | 0% | 0% | 0% | 0% | 100% |
| Remote Intelligent Gateway (RIG) & Data Processing Gateway (DPG) | 100% | 0% | 0% | 0% | 0% | 0% | 100% |
| Resource Register (RR) | 100% | 0% | 0% | 0% | 0% | 0% | 100% |

Original Sheet No. 376G

| RMR Application Validation Engine (RAVE) | 100% | 0% | 0% | 0% | 0% | 0% | 100% |
|---|------|-----|-----|-----|-----|------|------|
| Scheduling & Logging for ISO California (SLIC) | 65% | 0% | 15% | 5% | 15% | 0% | 100% |
| Scheduling Architecture (SA) | 24% | 0% | 20% | 26% | 30% | 0% | 100% |
| Scheduling Infrastructure (SI) | 0% | 0% | 94% | 0% | 6% | 0% | 100% |
| Scheduling Infrastructure Business Rules (SIBR) | 0% | 0% | 94% | 0% | 6% | 0% | 100% |
| Security Constrained Economic Dispatch (SCED) | 40% | 0% | 0% | 0% | 60% | 0% | 100% |
| Security- External/Physical | 44% | 21% | 4% | 4% | 10% | 17% | 100% |
| Security-ISS (CUDA) | 23% | 0% | 22% | 3% | 7% | 45% | 100% |
| Settlements and Market Clearing | 0% | 0% | 0% | 0% | 0% | 100% | 100% |
| Sign Board (Symon Board maint.) | 44% | 21% | 4% | 4% | 10% | 17% | 100% |
| Startup Costs through 3/31/98, Working Capital-3 months | 44% | 21% | 4% | 4% | 10% | 17% | 100% |
| Storage (EMC symmetrix) | 19% | 10% | 14% | 4% | 12% | 42% | 100% |
| System Equipment Buyouts (lease buyouts) | 43% | 1% | 7% | 2% | 11% | 36% | 100% |
| Telephone/PBX | 44% | 21% | 4% | 4% | 10% | 17% | 100% |
| Training Systems | 23% | 0% | 22% | 3% | 7% | 45% | 100% |
| Transmission Constrained Unit Commitment (TCUC) Must Offer Obligation | 100% | 0% | 0% | 0% | 0% | 0% | 100% |
| Transmission Map Plotting & Display | 50% | 50% | 0% | 0% | 0% | 0% | 100% |
| Trustee Costs, Interest- Capitalized, User Groups | 54% | 1% | 11% | 16% | 17% | 2% | 100% |
| Utilities - System i.e. Print drivers | 23% | 0% | 22% | 3% | 7% | 45% | 100% |
| Vitria (Middleware) | 23% | 0% | 22% | 3% | 7% | 45% | 100% |
| Wide Area Network (WAN) | 41% | 2% | 19% | 1% | 8% | 29% | 100% |

Original Sheet No. 376H

| Capital Expenditures for Systems not Specified | 32% | 7% | 15% | 6% | 11% | 29% | 100% |
|--|-----|----|-----|----|-----|-----|------|
| | | | | | | | |

Table 3

<u>Reallocation Factors for Projected Unrecovered Portion of</u> <u>Settlements, Metering, and Client Relations Revenue Requirement</u>

| | CRS | ETS | FS | СМ | MU | SMCR | Total |
|----------------------------|------|-------|------|------|-------|------|--------|
| Functional Association of | 0.0% | 70.3% | 0.0% | 8.2% | 21.4% | 0.0% | 100.0% |
| Settlements, Metering, and | | | | | | | |
| Client Relations | | | | | | | |

Schedule 2

Other Charges

Voltage Support Service

The user rate per unit of purchased Voltage Support will be calculated in accordance with the formula in ISO Tariff Section 2.5.28.5.

Regulation Service

Regulation Obligation:

The amount of Regulation required will be calculated in accordance with Section 4.1 of the Ancillary Services Requirements Protocol (ASRP).

Regulation Rates:

The formulas for calculating the amount of and charges for Regulation Service are referenced in ISO Tariff Sections 2.5.20.1, 2.5.27, and 2.5.28.

The ISO will calculate the user rate for Regulation in each Zone for each Settlement Period in accordance with Section 2.5.28.1.

Spinning Reserve Service

Spinning Reserve Obligation:

The amount of Spinning Reserve required as a component of Operating Reserves is specified in Section 5.1 of the Ancillary Services Requirements Protocol (ASRP).

Spinning Reserve Rates:

The formulas for calculating the amount of and charges for Spinning Reserve Service are referenced in ISO Tariff Sections 2.5.27.2, 2.5.28.2.

The ISO will calculate the user rate for Spinning Reserve in each Zone for each Settlement Period in accordance with ISO Tariff Section 2.5.28.2.

Non-Spinning Reserve Service

Non-Spinning Reserve Obligation:

The amount of Non-Spinning Reserve required as a component of Operating Reserves is specified in Section 5.1 of the Ancillary Services Requirements Protocol (ASRP).

Non-Spinning Reserve Rates:

The formulas for calculating the amount of and charges for Non-Spinning Reserve Service are referenced in ISO Tariff Sections 2.5.27.3, 2.5.28.3.

The ISO will calculate the user rate for Non-Spinning Reserve in each Zone for each Settlement Period in accordance with ISO Tariff Section 2.5.28.3.

Replacement Reserves

The formulas for calculating the amount of and charges for Replacement Reserve Service are referenced in ISO Tariff Sections 2.5.27.4 and 2.5.28.4.

Black Start Capability

The user rate per unit of purchased Black Start capability for each Settlement Period will be calculated in accordance with ISO Tariff Section 2.5.28.6.

Imbalance Energy Charges

Rates for Imbalance Energy will be calculated in accordance with the formula in ISO Tariff Section 11.2.4.1.

Replacement Reserve Charge

The Replacement Reserve Charge will be calculated in accordance with ISO Tariff Sections 2.5.28.4 and 11.2.4.1.

Unaccounted for Energy

Rates for UFE will be calculated in accordance with ISO Tariff Section 11.2.4.1.

Transmission Losses Imbalance Charges

Transmission Losses for each hour will be calculated in accordance with ISO Tariff Sections 7.4.2.

Access Charges

The High Voltage Access Charge and Transition Charge is set forth in ISO Tariff Schedule 3 of Appendix F. The Low Voltage Access Charge of each Participating TO is set forth in that Participating TO's TO Tariff or comparable document.

Usage Charges

The amount payable by Scheduling Coordinators is determined in accordance with ISO Tariff Section 7.3.1.4.1. Usage Charges will be calculated in accordance with ISO Tariff Section 7.3.1.

Default Usage Charge

The Default Usage Charge will be used in accordance with ISO Tariff Section 7.3.1.3.

Grid Operations Charge for Intra-Zonal Congestion

Intra-Zonal Congestion during the initial period of operation will be managed in accordance with ISO Tariff Sections 7.2.6.1 and 7.2.6.2.

Wheeling Access Charges

The Wheeling Access Charge for transmission service is set forth in Section 7.1.4.1 of the ISO Tariff and Appendix II of the TO Tariffs.

Charge for Failure to Conform to Dispatch Instructions

The Charge for Failure to Conform to Dispatch Instructions will be determined in accordance with ISO Tariff Section 2.5.22.11.

Reliability Must-Run Charge

The Reliability Must-Run Charge will be determined in accordance with ISO Tariff Section 5.2.7.

FERC Annual Charge Recovery Rate

The FERC Annual Charge Recovery Rate will be determined in accordance with ISO Tariff Section 7.5.

ISO Tariff Appendix F Schedule 3 High Voltage Access Charges

1. Objectives and Definitions

1.1 Objectives

- (a) The Access Charge will remain utility-specific until a New Participating TO executes the Transmission Control Agreement, at which time the Access Charge will change as discussed below.
- (b) The Access Charge is the charge assessed for using the ISO Controlled Grid. It consists of three components, the High Voltage Access Charge (HVAC), the Transition Charge and the Low Voltage Access Charge (LVAC).
- (c) The HVAC ultimately will be based on one ISO Grid-wide rate. Initially, the HVAC will be based on TAC Areas, which will transition 10% per year to the ISO Grid-wide rate. In the first year after the Transition Date described in Section 4.2 of this Schedule 3, the HVAC will be a blend based on 10% ISO Grid-wide and 90% TAC Area.
- (d) New High Voltage Facility additions and capital additions to Existing High Voltage Facilities will be immediately included in the ISO Grid-wide component of the HVAC. The Transmission Revenue Requirement for New High Voltage Facilities will not be included in the calculation of the Transition Charge.
- (e) The LVAC will remain utility-specific and will be determined by each ParticipatingTO. Each Participating TO will charge for and collect the LVAC.
- (f) The cost-shift associated with transitioning from utility-specific rates to one ISO Grid-wide rate will be mitigated in accordance with the ISO Tariff, including this schedule.

1.2 Definitions

(a) Master Definition Supplement

Unless the context otherwise requires, any word or expression defined in the Master Definition Supplement shall have the same meaning where used in this Schedule 3.

(b) Special Definitions for this Appendix

When used in this Schedule 3 with initial capitalization, the following terms shall have the meanings specified below.

"High Voltage Utility-Specific Rate" means a Participating TO's High Voltage Transmission Revenue Requirement divided by such Participating TO's forecasted Gross Load. **"TAC Benefit"** means 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.

"Transition Date" means the date defined in Section 4.2 of this Schedule.

2. Assessment of High Voltage Access Charge and Transition Charge. All UDCs and MSS Operators in a PTO Service Territory serving Gross Loads directly connected to the transmission facilities or Distribution System of a UDC or MSS Operator in a PTO Service Territory shall pay to the ISO a charge for transmission service on the High Voltage Transmission Facilities included in the ISO Controlled Grid. The charge will be based on the High Voltage Access Charge applicable to the TAC Area in which the point of delivery is located and the applicable Transition Charge. A UDC or MSS Operator that is also a Participating TO shall pay, or receive payment of, if applicable, the difference between (i) the High Voltage Access Charge and Transition Charge applicable to its transactions as a UDC or MSS Operator; and (ii) the disbursement of High Voltage Access Charge revenues to which it is entitled pursuant to Section 7.1.3 of the ISO Tariff.

3. TAC Areas.

- 3.1 TAC Areas are based on the Control Areas in California prior to the ISO Operations Date. Three TAC Areas will be established based on the Original Participating TOs: (1) a Northern Area consisting of the PTO Service Territory of Pacific Gas and Electric Company and the PTO Service Territory of any entity listed in Section 3.3 or 3.5 of this Schedule; (2) an East Central Area consisting of the PTO Service Territory of Southern California Edison Company and the PTO Service Territory of any entity listed in Section 3.4, 3.5 or 3.6 (as indicated therein) of this Schedule 3; and (3) a Southern Area consisting of the PTO Service Territory of San Diego Gas & Electric Company. Participating TOs that are not in one of the above cited PTO Service Territories are addressed below.
- **3.2** If the Los Angeles Department of Water and Power joins the ISO and becomes a Participating TO, its PTO Service Territory will form a fourth TAC Area, the West Central Area.

- 3.3 If any of the following entities becomes a Participating TO, its PTO Service Territory will become part of the Northern Area: Sacramento Municipal Utility District, Western Area Power Administration - Sierra Nevada Region, the Department of Energy California Labs, Northern California Power Agency, City of Redding, Silicon Valley Power, City of Palo Alto, City and County of San Francisco, Alameda Bureau of Electricity, City of Biggs, City of Gridley, City of Healdsburg, City of Lodi, City of Lompoc Utility Department, Modesto Irrigation District, Turlock Irrigation District, Plumas County Water Agency, City of Roseville Electric Department, City of Shasta Lake, and City of Ukiah or any other entity owning or having contractual rights to High Voltage or Low Voltage Transmission Facilities in Pacific Gas and Electric Company's Control Area prior to the ISO Operations Date.
- 3.4 If any of the following entities becomes a Participating TO, its PTO Service Territory will become part of the East Central Area: City of Anaheim Public Utility Department, City of Riverside Public Utility Department, City of Azusa Light and Water, City of Banning Electric, City of Colton, City of Pasadena Water and Power Department, The Metropolitan Water District of Southern California and City of Vernon or any other entity owning or having contractual rights to High Voltage or Low Voltage Transmission Facilities in Southern California Edison Company's Control Area prior to the ISO Operations Date.
- 3.5 If the California Department of Water Resources becomes a Participating TO, its High Voltage Transmission Revenue Requirements associated with High Voltage Transmission Facilities in the Northern Area would become part of the High Voltage Transmission Revenue Requirement for the Northern Area while the remainder would be included in the East Central Area.
- 3.6 If the City of Burbank Public Service Department (Burbank) and/or the City of Glendale Public Service Department (Glendale) become Participating TOs after or at the same time as the Los Angeles Department of Water and Power becomes a Participating TO, then the PTO Service Territory of Burbank and/or Glendale would become part of the West Central Area. Otherwise, if Burbank or Glendale becomes a Participating TO, prior to Los Angeles, its PTO Service Territory will become part of the East Central Area. Once either Burbank or Glendale are part of the East Central Area, they will not move to the West Central Area if such area is established.

- **3.7** If the Imperial Irrigation District or an entity outside the State of California should apply to become a Participating TO, the ISO Governing Board will review the reasonableness of integrating the entity into one of the existing TAC Areas. If the entity cannot be integrated without the potential for significant cost shifts, the ISO Governing Board may establish a separate TAC Area.
- 4. Transition Date
- **4.1** New Participating TOs shall provide the ISO with a notice of intent to join and execute the Transmission Control Agreement by either January 1 or July 1 of any year and provide the ISO with an application within 15 days of such notice of intent.
- 4.2 The transition shall begin on either January 1 or July 1 after the date the first New Participating TO's execution of the Transmission Control Agreement takes effect (Transition Date). The Transition Date shall be the same for the Northern Area, East Central Area and the Southern Area. The Transition Date shall also be the same for the West Central Area, should it come into existence in accordance with Section 3.2 of this Schedule 3, unless the ISO provides additional information demonstrating the need for a deferral. The 10-year transition defined in Section 5.8 of Schedule 3 shall start from that date. If the West Central TAC Area is created after the Transition Date, the applicable High Voltage Access Charge shall transition to an ISO Grid-wide High Voltage Access Charge over the period remaining from the Transition Date, on the same schedule as the other TAC Areas.
- **4.3 Application to Additional TAC Areas.** For any TAC Areas other than those specified in Section 4.2 of this Schedule 3, created after the Transition Date, including any TAC Area created as a result of the application of Section 3.7 of this Schedule 3, whether and over what period the applicable High Voltage Access Charge shall transition to an ISO Grid-wide charge shall be determined by the ISO Governing Board.
- **4.4 Application to Wheeling Access Charges.** The transition described in this Section 4 shall also apply, on the same schedule, to High Voltage Wheeling Access Charges.
- 4.5 Conversion of Existing Rights. During the process by which a New Participating TO executes the Transmission Control Agreement, the ISO and potential New Participating TO that has an obligation to serve Load shall determine the amount of FTRs to be allocated to the New Participating TO for each Existing Right that the New Participating TO converts to Converted Rights. In making that determination, the ISO will consider the amount of contracted transmission capacity, the firmness of the contracted transmission capacity, and other characteristics of the contracted

transmission capacity to determine the amount of FTRs to be given to the New Participating TO in accordance with Section 9.4.3 of the ISO Tariff.

5. Determination of the Access Charge.

- 5.1 The Access Charge consists of a High Voltage Access Charge (HVAC) that is based on a TAC Area component and an ISO Grid-wide component, a Transmission Charge, and a Low Voltage Access Charge (LVAC) that is based on a utility-specific rate established by each Participating TO in accordance with its TO Tariff.
- 5.2 Each Participating TO will develop, in accordance with Section 6 of this Schedule 3, a High Voltage Transmission Revenue Requirement (HVTRR PTO) consisting of a Transmission Revenue Requirement for Existing High Voltage Facility (EHVTRR PTO) and a Transmission Revenue Requirement for New High Voltage Facility (NHVTRR PTO). The HVTRR PTO includes the TRBA adjustment described in Section 6.1 of this Schedule 3.
- **5.3** The Gross Load amount in MWh shall be established by each Participating TO and filed at FERC with each Participating TO's Transmission Revenue Requirement (GL_{PTO}).
- 5.4 The HVAC applicable to each UDC or MSS Operator serving Gross Load in the PTO Service Territory, shall be based on a TAC Area component (HVAC_A) and an ISO Gridwide component (HVAC_I).

$HVAC = HVAC_A + HVAC_I$

5.5 The Existing Transmission Revenue Requirement for the TAC Area component (ETRR_A) is the summation of each Participating TO's EHVTRR $_{PTO}$ in that TAC Area. The Gross Load in the TAC Area (GL_A) is the summation of each Participating TO's Gross Load in that TAC Area (GL_{PTO}). The TAC Area component will be based on the product of Existing Transmission Revenue Requirement for the TAC Area (ETRR_A) and the applicable annual transition percentage (%TA) in Section 5.8 of this Schedule 3, divided by the Gross Load in the TAC Area (GL_A).

ETRR _A =
$$\Sigma$$
 EHVTRR _{PTO}
GL_A = Σ GL _{PTO}

HVAC
$$_{A} = (ETRR _{A} * \%TA) / GL_{A}$$

5.6 The Existing Transmission Revenue Requirement for the ISO Grid-wide component (ETRR_I) will be the summation of all TAC Areas' ETRR A multiplied by the applicable annual transition percentage (%IGW) in Section 5.8 of this Schedule 3. The New Transmission Revenue Requirement (NTRR) is the summation of each Participating TO's NHVTRR PTO. The ISO Grid-wide component will be based on the ETRR_I plus the NTRR, divided by the summation of all Gross Loads in the TAC Areas (GL_A).

$$ETRR_{I} = \Sigma ETRR_{A} * \% IGW$$

$$HVAC_{I} = (ETRR_{I} + NTRR) / \Sigma GL_{A}$$

The foregoing formulas will be adjusted, as necessary to take account of new TAC Areas.

5.7 The Transition Charge shall be calculated separately for each Participating TO by dividing (i) the net difference between (1) the Participating TO's payment responsibility, if any, under Section 8.6 of the ISO Tariff and Section 7 of this Schedule 3; and (2) the amount, if any, payable to the Participating TO in accordance with Section 8.6 of the ISO Tariff and Section 7 of this Schedule 3; by (ii) the total of all forecasted Gross Load in the PTO Service Territory of the Participating TO, including the UDC and/or MSS Operator. If greater than zero, the Transition Charge shall be collected with the High Voltage Access Charge. If less than zero, the Transition Charge shall be credited with the High Voltage Access Charge. The amount of

each Participating TO's NHVTRR shall not be included in the Transition Charge calculation.

5.8 The High Voltage Access Charge shall transition over a 10-year period from TAC Area to ISO Grid-wide. The transition percentage to be used for each year will be based on the following:

| Year | TAC Area | ISO Grid-Wide |
|------|--------------|---------------|
| | High Voltage | High Voltage |
| | (%TA) | (%IGW) |
| 1 | 90% | 10% |
| 2 | 80% | 20% |
| 3 | 70% | 30% |
| 4 | 60% | 40% |
| 5 | 50% | 50% |
| 6 | 40% | 60% |
| 7 | 30% | 70% |
| 8 | 20% | 80% |
| 9 | 10% | 90% |
| 10 | 0% | 100% |

5.9 After the completion of the transition period described in Section 4 of this Schedule 3, the High Voltage Access Charge shall be equal to the sum of the High Voltage Transmission Revenue Requirements of all Participating TOs, divided by the sum of the Gross Loads of all Participating TOs.

6 High Voltage Transmission Revenue Requirement.

- **6.1** The High Voltage Transmission Revenue Requirement of a Participating TO will be determined consistent with ISO procedures posted on the ISO Home Page and shall be the sum of:
 - (a) the Participating TO's High Voltage Transmission Revenue Requirement (including costs related to Existing Contracts associated with transmission by others and deducting transmission revenues actually expected to be received by the Participating TO related to transmission for others in accordance with Existing Contracts, less the sum of the Standby Transmission Revenues); and

(b) the annual high voltage TRBA adjustment shall be based on the principal balance in the high voltage TRBA as of September 30, which shall be calculated as a dollar amount based on the projected Transmission Revenue Credits as adjusted for the true up of the prior year's difference between projected and actual credits. For a Participating TO that is not a UDC, MSS or a Scheduling Coordinator serving End-Use Customers and that does not have Gross Load in its TO Tariff in accordance with Appendix F, Schedule 3, Section 9, the Participating TO shall include any over- or under-recovery of its annual High Voltage Transmission Revenue Requirement in its high voltage TRBA. If the annual high voltage TRBA adjustment involves only a partial year of operations, the Participating TO's over- or under-recovery shall be based on a partial year revenue requirement, calculated by multiplying the Participating TO's High Voltage Transmission Revenue Requirement by the number of days the High Voltage Transmission Facilities were under the ISO's Operational Control divided by the number of days in the year.

7 Limitation

(a) During each year of the transition period described in this Schedule 3, the increase in the total payment responsibility applicable to Gross Loads in the PTO Service Territory of an Original Participating TO attributable to the total for the year of (i) the amount applicable for the Original Participating TO under Section 8.6 of the ISO Tariff; plus (ii) the amount applicable to the implementation of the High Voltage Access Charge shall not exceed the amount specified in paragraph (b) of this section. This limitation shall be calculated individually for each Original Participating TO, provided that, if the net effect of clauses (i) and (ii) of this paragraph is positive for one or more Original Participating TOs for any year, the combined net effect shall be allocated among all Original Participating TOs in proportion to the amounts specified in paragraph (b) of this section. This limitation shall be applied by the ISO's calculation annually of amounts payable by New Participating TOs to Original Participating TOs such that the combined effect of clauses (i) and (ii) of this paragraph, and the payments received by each Original Participating TO shall not exceed the amounts specified in paragraph (b) of this section. The amount receivable by the Original Participating TO from the New Participating TOs to implement the limitation in paragraph (b) of this section, shall be credited through the Transition Charge established pursuant to Section 5.7 of this Schedule 3.

Payment responsibility under this section, if any, shall be allocated among New Participating TOs in proportion to their TAC Benefits.

- (b) The maximum annual amounts for Original Participating TO shall be as follows:
 - (i) For Pacific Gas and Electric Company and Southern California Edison Company, the maximum annual amount shall be thirty-two million dollars (\$32,000,000.00) each; and
 - (ii) For San Diego Gas & Electric Company, the maximum annual amount shall be eight million dollars (\$8,000,000.00).

8. Updates to High Voltage Access Charges.

- 8.1 High Voltage Access Charges and High Voltage Wheeling Access Charges shall be adjusted: (1) on January 1 and July 1 of each year when necessary to reflect the addition of any New Participating TO and (2) on the date FERC makes effective a change to the High Voltage Transmission Revenue Requirements of any Participating TO. Using the High Voltage Transmission Revenue Requirement accepted or authorized by FERC, consistent with Section 9 of this Schedule 3, for each Participating TO, the ISO will recalculate on a monthly basis the High Voltage Access Charge and Transition Charge applicable during such period. Revisions to the Transmission Revenue Balancing Account adjustment shall be made effective annually on January 1 based on the principal balance in the TRBA as of September 30 of the prior year and a forecast of Transmission Revenue Credits for the next year.
- 8.2 For service provided by a Participating TO prior to the Transition Date, no refund ordered by FERC or amount accrued to that Participating TO's Transmission Revenue Balancing Account related to such service shall be reflected in the High Voltage Access Charge, Low Voltage Access Charge, the High Voltage Transmission Revenue Requirement, or the Low Voltage Transmission Revenue Requirement of a Participating TO. For service provided by a Participating TO following the Transition Date, any refund associated with a Participating TO's Transmission Revenue Requirement that has been accepted by FERC, subject to refund, shall be provided as ordered by FERC. Such refund shall be invoiced separately from the Market Invoice.
- 8.3 If the Participating TO withdraws one or more of its transmission facilities from the ISO Operational Control in accordance with Section 3.4 of the Transmission Control Agreement, then the ISO will no longer collect the TRR for that transmission facility through the ISO's Access Charge effective upon the date the transmission facility is no longer under the Operational Control of the ISO. The withdrawing Participating TO shall be obligated to provide the ISO will all necessary information to implement the withdrawal of the Participating TO's transmission facilities and to make any necessary filings at FERC to revise its TRR. The ISO shall revise its transmission Access Charge to reflect the withdrawal of one or more transmission facilities from ISO Operational Control.

9. Approval of Updated High Voltage Revenue Requirements

9.1 Participating TOs will make the appropriate filings at FERC to establish their Transmission Revenue Requirements for their Low Voltage Access Charges and the applicable High Voltage Access Charges, and to obtain approval of any changes thereto. All such filings with the FERC will include a separate appendix that states the HVTRR, LVTRR (if applicable) and the appropriate Gross Load data and other information required by the FERC to support the Access Charges. The Participating TO will provide a copy of its filing to the ISO and the other Participating TOs in accordance with the notice provisions in the Transmission Control Agreement.

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9.2 Federal power marketing agencies whose transmission facilities are under ISO Operational Control shall develop their High Voltage Transmission Revenue Requirements pursuant to applicable federal laws and regulations, including filing with FERC. All such filings with FERC will include a separate appendix that states the HVTRR, LVTRR (if applicable) and the appropriate Gross Load data and other information required by the FERC to support the Access Charges. The procedures for public participation in a federal power marketing agency's ratemaking process shall be posted on the federal power marketing agency's website. The federal power marketing agency shall also post on the website the Federal Register Notices and FERC orders for rate making processes that impact the federal power marketing agency's High Voltage Transmission Revenue Requirement. The Participating TO will provide a copy of its filing to the ISO and the other Participating TOs in accordance with the notice provisions in the Transmission Control Agreement.

10. Disbursement of High Voltage Access Charge and Transition Charge Revenues.

- **10.1** High Voltage Access Charge and Transition Charge revenues shall be calculated for disbursement to each Participating TO on a monthly basis as follows:
 - (a) the amount determined in accordance with Section 7.1.2 of the ISO Tariff ("Billed HVAC/TC");
 - (b)
- (i) for a Participating TO that is a UDC or MSS Operator and has Gross
 Load in its TO Tariff in accordance with Appendix F, Schedule 3, Section
 9, then calculate the amount each UDC or MSS Operator would have
 paid and the Participating TO would have received by multiplying the
 High Voltage Utility-Specific Rates for the Participating TO whose High
 Voltage Facilities served such UDC and MSS Operator

times the actual Gross Load of such UDCs and MSS Operators ("Utility-specific HVAC"); or

- (ii) for a Participating TO that is not a UDC or MSS Operator and that does not have Gross Load in its TO Tariff in accordance with Appendix F, Schedule 3, Section 9, then calculate the Participating TO's portion of the total Billed HVAC/TC in subsection (a) based on the ratio of the Participating TO's High Voltage Transmission Revenue Requirement to the sum of all Participating TOs' High Voltage Revenue Requirements.
- (c) if the total Billed HVAC/TC in subsection (a) received by the ISO less the total dollar amounts calculated in Utility-specific HVAC in subsection (b)(i) and subsection (b)(ii) is different from zero, the ISO shall allocate the positive or negative difference among those Participating TOs that are subject to the calculations in subsection (b)(i) based on the ratio of each Participating TO's High Voltage Transmission Revenue Requirement to the sum of all of those Participating TOs' High Voltage Transmission Revenue Requirements that are subject to the calculations in subsection (b)(i). This monthly distribution amount is the "HVAC Revenue Adjustment";
- (d) the sum of the HVAC revenue share determined in subsection (b) and the HVAC
 Revenue Adjustment in subsection (c) will be the monthly disbursement to the
 Participating TO.
- 10.2 If the same entity is both a Participating TO and a UDC or MSS Operator, then the monthly High Voltage Access Charge and Transition Charge amount billed by the ISO will be the charges payable by the UDC, MSS Operator, or SCPTO in accordance with Section 7.1.2 of the ISO Tariff less the disbursement determined in accordance with Section 10.1(d). If this difference is negative, that amount will be paid by the ISO to the Participating TO.
- 11 Determination of Transmission Revenue Requirement Allocation Between High Voltage and Low Voltage Transmission Facilities.
- 11.1 Each Participating TO shall allocate its Transmission Revenue Requirement between the High Voltage Transmission Revneue Requirement and Low Voltage Transmission Revenue Requirement based on the "Procedure for Division of Certain Costs Between the High and Low Voltage Transmission Access Charges" posted on the ISO Home Page.

ISO Tariff Appendix F

Schedule 4

Participating Intermittent Resources Forecasting Fee

A charge up to \$.10 per MWh shall be assessed on the metered Energy from Participating

Intermittent Resources. The amount of the charge shall be specified in the ISO Protocols.