

**TRANSMISSION CONTROL AGREEMENT**

**APPENDIX D**

**Master Definitions Supplement**

**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, 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.

**Ancillary Services**

Regulation, Spinning Reserve, Non-Spinning Reserve, Replacement Reserve, Voltage Support and Black Start together with such other interconnected operation services as the ISO may develop in cooperation with Market Participants to support the transmission of Energy from Generation resources to Loads while maintaining reliable operation of the ISO Controlled Grid in accordance with Good Utility Practice.

**Applicable Reliability  
Criteria**

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

**Applicants**

Pacific Gas and Electric Company, San Diego Gas & Electric Company, and Southern California Edison Company and any others as applicable.

**Approved Maintenance Outage**

A Maintenance Outage which has been approved by the ISO through the ISO Outage Coordination Office.

**Available Transfer Capacity**

For a given transmission path, the capacity rating in MW of the path established consistent with ISO and WSCC transmission capacity rating guidelines, less any reserved uses applicable to the path.

**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.

**Business Day**

A day on which banks are open to conduct general banking business in California.

**Congestion**

A condition that occurs when there is insufficient Available Transfer Capacity to implement all Preferred Schedules simultaneously. "Congested" shall be construed accordingly.

**Congestion Management**

The alleviation of Congestion in accordance with applicable ISO Protocols and Good Utility Practice.

**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.

**CPUC**

The California Public Utilities Commission, or its successor.

**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.

**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, the PX and other Scheduling Coordinators and which closes with the ISO's acceptance of the Final Day-Ahead Schedule.

**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.

**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.

**EMS (Energy Management System)**

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

**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  
End-User**

A purchaser of electric power who purchases such power to satisfy a Load directly connected to the ISO Controlled Grid or to a Distribution System and who does not resell the power.

**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.

**Entitlements**

The right of a Participating TO obtained through contract

or other means to use another entity's transmission facilities for the transmission of Energy.

**Existing Contracts**

The 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.

**Existing Rights**

Those transmission service rights defined in Section 2.4.4.1.1 of the ISO Tariff.

**Facilities Study Agreement**

An agreement between a Participating TO and either a Market Participant, Project Sponsor, or identified principal beneficiaries pursuant to which the Market Participants, Project Sponsor, and identified principal beneficiaries agree to reimburse the Participating TO for the cost of a Facility Study.

**Facility 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.

**FERC**

The Federal Energy Regulatory Commission or its successor.

**FIITC (Firm Import Interconnection Transmission Capacity)**

The amount of firm transmission capacity in MW

associated with transmission facilities owned by a Participating TO or contracted to the Participating TO under an Existing Contract, which allows Generating Units that are not directly interconnected with that Participating TO's transmission or distribution system to deliver Energy to that Participating TO. For each month of the Self-Sufficiency Test Period, FIITC shall include the maximum amount of requirements and bundled power sale capacity purchased by the Participating TO from the transmission owner to which it is physically interconnected during the hour in which the Monthly Peak Load of the Participating TO occurs.

**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.

**FPA**

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

**Generating Unit**

An individual electric generator and its associated plant and apparatus whose electrical output is capable of being separately identified and metered or a Physical Scheduling Plant that, in either case, is:

- (a) located within the 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).

**Generation**

Energy delivered from a Generating Unit.

**Generator**

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

**Good Utility Practice**

Any of the practices, methods, and acts engaged in or  
approved by a significant portion of the electric utility  
industry during the relevant time period, or any of the  
practices, methods, and acts which, in the exercise of  
reasonable judgment in light of the facts known at the  
time the decision was made, could have been expected to  
accomplish the desired result at a reasonable cost  
consistent with good business practices, reliability, safety,  
and expedition. Good Utility Practice is not intended to  
be any one of a number of the optimum practices,  
methods, or acts to the exclusion of all others, but rather  
to be acceptable practices, methods, or acts generally  
accepted in the region.

**Hour-Ahead Market**

The forward market for Energy and Ancillary Services to  
be supplied during a particular Settlement Period that is

conducted by the ISO, the PX 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.

**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 hydro-electric Energy either immediately or during the forecast period, if hydro-electric Generation is reduced; iv) has increased regulated water output to avoid an impending spill.

**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.

**Interconnection Agreement**

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

**ISO (Independent System Operator)**

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

**ISO ADR Procedures**

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

**ISO Code of Conduct**

For 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 Center**

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

**ISO Controlled Grid**

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

**ISO Governing Board**

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

**ISO Grid Operations Committee**

A committee appointed by the ISO Governing Board pursuant to Article IV, Section 4 of the ISO bylaws to advise on additions and revisions to its rules and protocols, tariffs, reliability and operating standards and other technical matters.

**ISO Operations Date**

The date on which the ISO first 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.

**ISO Protocols**

The rules, protocols, procedures and standards 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 Register**

The 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 Tariff**

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

**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.

**Local Furnishing Bond**

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

**Local Furnishing Participating TO**

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

**Local Regulatory Authority**

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

**Local Reliability Criteria**

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

**Maintenance Outage**

A period of time during which an Operator takes its 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.

**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.

**Monthly Peak Load**

The maximum hourly Demand on a Participating TO's transmission system for a calendar month, multiplied by the Operating Reserve Multiplier.

**Municipal Tax Exempt Debt**

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

**Municipal Tax Exempt TO**

A Transmission Owner that has issued Municipal Tax Exempt Debt with respect to any transmission facilities, or rights associated therewith, that it would be required to place under the ISO's Operational Control pursuant to the Transmission Control Agreement if it were a Participating TO.

**NERC**

The North American Electric Reliability Council or its successor.

**Nomogram**

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

**Non-Converted Rights**

Those transmission service rights as defined in Section 2.4.4.2.1 of the ISO Tariff.

**Non-Participating Generator**

A Generator that is not a Participating Generator.

**Non-Participating TO**

A TO that is not a party to 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.

**NRC**

The Nuclear Regulatory Commission or its successor.

**Operating Procedures**

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

**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.

**Operator**

The operator of facilities comprised in the ISO Controlled Grid or Reliability Must-Run Units.

**Outage**

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

**Participating Generator**

A Generator or other seller of Energy or Ancillary Services through a Scheduling Coordinator over the ISO Controlled Grid and which has undertaken to be bound by the terms of the ISO Tariff.

**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.

**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 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.

**PMS (Power Management System)**

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

**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.

**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.

**RAS (Remedial Action Schemes)**

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

**Regulatory Must-Run Generation**

Hydro Spill Generation and Generation which is required to run by applicable Federal or California laws, regulations, or other governing jurisdictional authority. Such requirements include but are not limited to

hydrological flow requirements, environmental requirements, such as minimum fish releases, fish pulse releases and water quality requirements, irrigation and water supply requirements, or the 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.

**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 Unit**

A Generating Unit which is the subject of the contract between the Generator and the ISO under which, in return for certain payments, the ISO is entitled to call upon the owner to run the unit when required by the ISO for the purposes of the reliable operation of the ISO Controlled Grid.

**RTG (Regional  
Transmission Group)**

A voluntary organization approved by FERC and composed of transmission owners, transmission users, and other entities, organized to efficiently coordinate the planning, expansion and use of transmission on a regional and inter-regional basis.

**SCADA (Supervisory  
Control and Data  
Acquisition)**

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

**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.

**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.

**Self-Sufficiency or Self-Sufficient**

A Participating TO for which the sum of its Dependable Generation and its FIITC is greater than or equal to its Monthly Peak Load.

**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.

**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 Planning Studies**

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

**System Reliability**

A measure of an electric system's ability to deliver uninterrupted service at the proper voltage and frequency.

**Tax Exempt Debt**

Municipal Tax Exempt Debt or Local Furnishing Bonds.

**Tax Exempt Participating TO**

A Participating TO that is the beneficiary of outstanding Tax-Exempt Debt issued to finance any electric facilities, or rights associated therewith, which are part of an integrated system including transmission facilities the

Operational Control of which is transferred to the ISO pursuant to the TCA.

**TCA (Transmission Control Agreement)**

The agreement between the ISO and Participating TOs 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.

**TO (Transmission Owner)**

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

**TO Tariff**

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.

**UDC (Utility Distribution Company)**

An entity that owns a Distribution System for the delivery of 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.

**Uncontrollable Force**

Any act of God, labor disturbance, act of the public

enemy, war, insurrection, riot, fire, storm or flood, earthquake, explosion, breakage, or accident to machinery or equipment, any curtailment, order, regulation or restriction imposed by governmental military or lawfully established civilian authorities or any other cause beyond a Party's reasonable control and without such Party's fault or negligence.

**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.

**WEnet (Western Energy Network)**

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

**Wheeling Out**

Except for Existing Rights and Non-Converted 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 and Non-Converted 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 outside the ISO Controlled Grid to serve a Load located outside the transmission and distribution system of a Participating TO.

**WSCC (Western System Coordinating Council)**

The Western Systems Coordinating Council or its successor.