Second Revised Sheet No. 140 Superseding First Revised Sheet No. 140

3. RELATIONSHIP BETWEEN ISO AND PARTICIPATING TOS.

3.1 Nature of Relationship.

Each Participating TO shall enter into a Transmission Control Agreement with the ISO. In

addition to converting Existing Rights in accordance with Section 2.4.4.2, and except as

provided in Section 3.1.3, New Participating TOs will be required to turn over Operational

Control of all facilities and Entitlements that: (1) satisfy the FERC's functional criteria for

determining transmission facilities that should be placed under ISO Operational Control; (2)

satisfy the criteria adopted by the ISO Governing Board identifying transmission facilities for

which the ISO should assume Operational Control; and (3) are the subject of mutual agreement

between the ISO and the Participating TOs. The ISO shall notify Market Participants when an

application has been received from a potential Participating TO and shall notify Market

Participants that a New Participating TO has executed the Transmission Control Agreement

and the date on which the ISO will have Operational Control of the transmission facilities.

5.1.1 In any year, a Participating TO applicant must declare its intent in writing to the ISO to

become a New Participating TO by January 1 or July 1, and provide the ISO with an application

within 15 days of such notice of intent. Applicable agreements will be negotiated and filed with

the Federal Energy Regulatory Commission as soon as possible for the New Participating TO,

such that the Agreements can be effective the following July 1 or January 1.

3.1.2 With respect to its submission of Schedules to the ISO, a New Participating TO shall

become a Scheduling Coordinator or obtain the services of a Scheduling Coordinator that has

been certified in accordance with Section 2.2.4, which Scheduling Coordinator shall not be the

entity's Responsible Participating TO in accordance with the Responsible Participating

Transmission Owner Agreement, unless mutually agreed, and shall operate in accordance with

the ISO Tariff and applicable

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: September 7, 2004 Effective: November 1, 2004

Effective: January 1, 2005

agreements. The New Participating TO shall assume responsibility for paying all Scheduling Coordinators charges regardless of whether the New Participating TO elects to become a

Scheduling Coordinator or obtains the services of a Scheduling Coordinator.

- 3.1.3 Western Path 15 shall be required to turn over to ISO Operational Control only its rights and interests in the Path 15 Upgrade and shall not be required to turn over to ISO Operational Control Central Valley Project transmission facilities, Pacific AC Intertie transmission facilities, California-Oregon Transmission Project facilities, or any other new transmission facilities or Entitlements not related to the Path 15 Upgrade. For purposes of the ISO Tariff, Western Path 15 shall be treated with respect to revenue recovery as a Project Sponsor in accordance with Section 3.2.7.
- **3.1.4** The capacity provided to the ISO under the Transmission Exchange Agreement originally accepted by FERC in Docket No. ER04-688 is deemed to be ISO Controlled Grid facilities and is subject to all terms and conditions of the ISO Tariff.

3.2 Transmission Expansion.

A Participating TO shall be obligated to construct all transmission additions and upgrades that are determined to be needed in accordance with the requirements of this Section 3.2 and which: (1) are additions or upgrades to transmission facilities that are located within its PTO Service Territory, unless it does not own the facility being upgraded or added and neither terminus of such facility is located within its PTO Service Territory; or (2) are additions to existing transmission facilities or upgrades to existing transmission facilities that it owns, that are part of the ISO Controlled Grid, and that are located outside of its PTO Service Territory, unless the joint-ownership arrangement, if any, does not permit. A Participating TO's obligation to construct such transmission additions and upgrades shall be subject to: (1) its ability, after making a good faith effort, to obtain all necessary approvals and property rights under applicable federal, state, and local laws and (2) the presence of a cost recovery mechanism with cost

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: January 10, 2005

FIRST REPLACEMENT VOLUME NO. I

First Revised Sheet No. 141.00

Superseding Original Sheet No. 141.00

responsibility assigned in accordance with Section 3.2.7. The obligations of the Participating

TO to construct such transmission additions or upgrades will not alter the rights of any entity to

construct and expand transmission facilities as those rights would exist in the absence of the

TO's obligations under this ISO Tariff or as those rights may be conferred by the ISO or may

arise or exist pursuant to this ISO Tariff.

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: January 10, 2005 Effective: January 1, 2005

Superseding Original Sheet No. 141A

First Revised Sheet No. 141A

3.2.1 Determination of Need.

A Participating TO or any other Market Participant may propose a transmission system addition or upgrade. The ISO will determine that a transmission addition or upgrade is needed where it will promote economic efficiency or maintain System Reliability as set forth below.

3.2.1.1 Economically Driven Projects. The Participating TO and Market Participants shall provide the necessary assistance and information to the ISO, as part of the coordinated planning process, to enable the ISO to determine that a project is needed to promote economic efficiency, including, at the ISO's discretion, studies comporting with ISO guidelines that demonstrate whether the project will promote economic efficiency or the information the ISO requires to carry out its own studies for economically driven projects. The ISO shall treat market sensitive information provided to the ISO in accordance with this Section by Participating TOs, Project Sponsors and applicable Market Participants confidentially in accordance with Section 20.3 provided that such information is clearly marked "Confidential" at the time it is provided to the ISO. The determination that a transmission addition or upgrade is needed to promote economic efficiency shall be made in any of the following ways:

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: March 11, 2004 Effective: June 1, 2003

FIRST REPLACEMENT VOLUME NO. I

3.2.1.1.1 If the Participating TO or any party questions the economic need for the project (except where the Project Sponsor commits to pay the full cost of construction) the proposal will be submitted to the ISO ADR Procedures for resolution.

3.2.1.1.2 Where a Project Sponsor other than the Participating TO commits to pay the full cost of construction of a transmission addition or upgrade and its operation, and demonstrates to the ISO financial capability to pay those costs, such commitment and demonstration shall be sufficient to demonstrate need to the ISO. To ensure that the Project Sponsor is financially able to pay the costs of the project to be constructed by the Participating TO, the Participating TO may require (1) a demonstration of creditworthiness (e.g. an appropriate credit rating), or (2) sufficient security in the form of an unconditional and irrevocable letter of credit or other similar security sufficient to meet its responsibilities and obligations for the full costs of the transmission addition or upgrade.

3.2.1.1.3 Where a Project Sponsor asserts that a transmission addition or upgrade is economically beneficial, but that Project Sponsor is unwilling to commit to pay the full cost of the addition or upgrade; where (1) the proposed transmission addition or upgrade was submitted to the Participating TO but was not included in the transmission expansion plan of that Participating TO in accordance with Section 3.2.2 or (2) the operation date of the planned expansion is not acceptable to the ISO or the Project Sponsor or (3) the Participating TO unreasonably delays implementing or subsequently decides not to proceed with the project, the Project Sponsor may submit its proposal to the ISO ADR Procedure for determination of need. A determination of need shall be made as follows:

3.2.1.1.3.1 The Project Sponsor shall include in its proposal: (1) a showing that the economic benefits of the proposed transmission addition or upgrade are expected to exceed its costs (giving consideration to any reasonable alternatives to the construction of transmission

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: March 11, 2003 Effective: June 1, 2003

FIRST REPLACEMENT VOLUME NO. I

Second Revised Sheet No. 143

Superseding First Revised Sheet No. 143

additions or upgrades) using an economic analysis that comports with ISO guidelines, and (2) a

statement of the proposed pricing methodology for the transmission upgrades or additions that

the Project Sponsor elects in accordance with Section 3.2.7 of the ISO Tariff.

3.2.1.1.3.2 If neither any Market Participant nor the ISO disputes the Project Sponsor's

showing, then the proposal is determined to be needed.

3.2.1.1.3.3 If any Market Participant or the ISO disputes the Project Sponsor's showing,

the disputing Market Participant, the ISO, or the Project Sponsor may submit to resolution

through the ISO ADR Procedure the issue of whether the transmission addition or upgrade is

needed on the ground that its economic benefits exceed its costs. If a Market Participant fails

to raise through the ISO ADR Procedure a dispute as to whether a proposed transmission

addition or upgrade is needed, then the Market Participant shall be deemed to have waived its

right to raise such dispute at a later date. The determination under the ISO ADR Procedure as

to whether the transmission addition or upgrade is needed, including any determination by

FERC or on appeal of a FERC determination in accordance with that process, shall be final.

3.2.1.2 Reliability Driven Projects. The ISO in coordination with the Participating TO, will

identify the need for any transmission additions or upgrades required to ensure System

Reliability consistent with all Applicable Reliability Criteria. In making this determination, the

ISO, in coordination with the Participating TO and other Market Participants, shall consider

lower cost alternatives to the construction of transmission additions or upgrades, such as

acceleration or expansion of existing projects, demand-side management,

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: March 11, 2004 Effective: June 1, 2003

Effective: May 8, 2004

remedial action schemes, constrained-on Generation, interruptible Loads or reactive support.

The Participating TO, in cooperation with the ISO, shall perform the necessary studies to

determine the facilities needed to meet all Applicable Reliability Criteria. The Participating TO

shall provide the ISO and other Market Participants with all information relating to a proposed

transmission addition or upgrade that they may reasonably request (other than information

available to them through the WECC or any other applicable regional organization) and shall,

through the WECC or any other applicable regional organization coordinated planning

processes, develop the scope of and assumptions for such studies that are acceptable to the

ISO and those other Market Participants. The ISO shall be free to propose any transmission

upgrades or additions it deems necessary to ensure System Reliability consistent with

Applicable Reliability Criteria, and, subject to appropriate appeals, the Participating TO shall be

obligated to construct such lines. After the ISO Operations Date, the ISO, in consultation with

Participating TOs and any affected UDCs and MSSs, will work to develop a consistent set of

Reliability Criteria for the ISO Controlled Grid which the Participating TOs will use in their

transmission planning and expansion studies or decisions.

3.2.2 Transmission Planning and Coordination.

The ISO shall actively participate with each Participating TO and the other Market Participants

in the ISO Controlled Grid planning process in accordance with the terms of this ISO Tariff and

the Transmission Control Agreement.

3.2.2.1 Each Participating TO with a PTO Service Territory shall develop annually a

transmission expansion plan covering the next five years plus a ten-year case for the Loads

that are geographically embedded within its PTO Service Territory and are within the ISO

Control Area, even if such Loads are served by another Participating TO. Such Participating

TO shall coordinate with the ISO and other Market Participants in the development of such plan.

The Participating TO shall be responsible for ensuring that its transmission expansion plan

meets all Applicable Reliability Criteria.

Issued by: Charles F. Robinson Issued on: March 11, 2004

Issued by: Charles F. Robinson, Vice President and General Counsel

3.2.2.2 The ISO shall review the Participating TOs' transmission expansion plans for the PTO

Service Territory, whether or not such plans are subject to Section 3.2.2.1, to ensure that each

Participating TO's expansion plans meet the Applicable Reliability Criteria. The Participating

TO will provide the necessary assistance and information as part of the coordinated planning

process to the ISO to enable it to carry out its own studies for these purposes. If the ISO finds

that the Participating TO's plan or projects do not meet the Applicable Reliability Criteria, the

ISO will provide comments and the Participating TO will reassess its plans, as appropriate. The

ISO may also propose new projects or suggest project changes (e.g., timing, project size) for

consideration by the Participating TO. Changes or additions made by the ISO and accepted by

the TO will be included in the Participating TO's expansion plan. Changes or additions not

accepted in the coordinated planning process will be resolved through the ISO ADR Procedure.

3.2.2.3 The Participating TO will act as a Project Sponsor for Participating TO proposed

economic or reliability projects that are included in its expansion plan. The Participating TO

shall provide to the ISO any information that the ISO requires to enable the ISO to comply with

WECC and any other applicable regional coordination requirements pursuant to Section 3.2.6.

3.2.2.4 The ISO will be a member of the WECC and other applicable regional organizations

and participate in WECC's operation and planning committees, and in other applicable regional

coordinated planning processes. Neither the ISO nor any Participating TO nor any Market

Participant shall take any position before the WECC or a regional organization that is

inconsistent with a binding decision reached through the ISO ADR Procedure.

3.2.3 Studies to Determine Facilities to be Constructed.

Where a Participating TO is obligated to construct or expand facilities in accordance with this

ISO Tariff or where the ISO or any Market Participant requests that a Facility Study be

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: March 11, 2004 Effective: May 8, 2004 carried out, the Participating TO (in coordination with the ISO or the relevant Market
Participants as the case may require), shall perform the necessary study or studies to
determine the appropriate facilities to be constructed in accordance with the terms set forth in
the TO Tariff. The scope of and assumptions for any studies requested by a Project Sponsor of
a transmission addition or upgrade on economic grounds must be acceptable to the Project
Sponsors and the ISO. Any dispute relating to a Facility Study Agreement (including any
dispute over the scope of the study or its assumptions) shall be resolved through the ISO ADR

3.2.4 Operational Review.

Procedures.

The ISO will perform an operational review of all facilities that are to be connected to, or made part of, the ISO Controlled Grid to ensure that the facilities being proposed provide for acceptable operating flexibility and meet all its requirements for proper integration with the ISO Controlled Grid. If the ISO finds that such facilities do not provide for acceptable operating flexibility or do not adequately integrate with the ISO Controlled Grid, the Participating TO will reassess its determination of the facilities required to be constructed.

3.2.5 State and Local Approval and Property Rights.

3.2.5.1 The Participating TO shall be obligated to make a good faith effort to obtain all approvals and property rights under applicable federal, state and local laws that are necessary to complete the construction of transmission additions or upgrades required to be constructed in accordance with this ISO Tariff. This obligation includes the Participating TO's use of eminent domain authority, where provided by state law.

3.2.5.2 If the Participating TO cannot secure any such necessary approvals or property rights and consequently is unable to construct a transmission addition or upgrade, it shall

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: March 11, 2003 Effective: June 1, 2003

Second Revised Sheet No. 147 Superseding First Sheet No. 147

promptly notify the ISO and the Project Sponsor and shall comply with its obligations under the

TO Tariff to convene a technical meeting to evaluate alternative proposals. The ISO shall take

such action as it reasonably considers appropriate, in coordination with the Participating TO,

the Project Sponsor (if any) and other affected Market Participants, to facilitate the development

and evaluation of alternative proposals including, where possible, conferring on a third party the

right to build the transmission addition or upgrade.

3.2.5.3 Where it is possible for a third party to obtain all approvals and property rights under

applicable federal, state and local laws that are necessary to complete the construction of

transmission additions or upgrades required to be constructed in accordance with this ISO Tariff

(including the use of eminent domain authority, where provided by state law) the ISO may

confer on a third party the right to build the transmission addition or upgrade which shall enter

into the Transmission Control Agreement in relation to such transmission addition or upgrade.

3.2.6 WECC and Regional Coordination.

The Project Sponsor will have responsibility for completing any applicable WECC requirements

and other applicable regional coordination and rating study requirements to ensure that a

proposed transmission addition or upgrade meets regional planning requirements. The Project

Sponsor may request the Participating TO to perform this coordination on behalf of the Project

Sponsor at the Project Sponsor's expense.

3.2.7 Cost Responsibility for Transmission Additions or Upgrades.

Cost responsibility for transmission additions or upgrades constructed pursuant to this Section

3.2 (including the responsibility for any costs incurred under Section 3.2.6) shall be determined

as follows:

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: March 11, 2004 Effective: June 1, 2003

Effective: November 1, 2004

Superseding Second Revised Sheet No. 148

3.2.7.1 Where a Project Sponsor commits to pay the full cost of a transmission addition or

upgrade as set forth in Section 3.2.1.1.2, the full costs shall be borne by the Project Sponsor.

3.2.7.2 Where the need for a transmission addition or upgrade is determined by the ISO or as a

result of the ISO ADR Procedure as set forth in Section 3.2.1.1.3, the cost of the transmission

addition or upgrade shall be borne by the Participating TO that will be the owner of the

transmission addition or upgrade and shall be reflected in its Transmission Revenue

Requirement.

3.2.7.3 Provided that the ISO has Operational Control of the transmission upgrade or addition,

a Project Sponsor that does not recover the investment cost under a FERC-approved rate

through the Access Charge or a reimbursement or direct payment from a Participating TO shall

be entitled to receive:

(a) its share, as determined in subsection (d) below, of the Wheeling revenues calculated

in accordance with Section 7.1.4.3 that are attributable to the transmission addition or

upgrade, which shall be determined by using the capacity increase, if any, of a

Scheduling Point, to the extent such increase results from the addition or upgrade, as

the rating increase for purposes of subsection (d) below;

(b) its share, as determined in subsection (d) below, of the proceeds of the FTR auction for

FTRs defined on the Inter-Zonal Interface of which the transmission addition or upgrade

forms a part as set forth in Section 9.5.3, provided that the Project Sponsor does not

receive FTRs from the ISO in accordance with Section 9.4.3 of the ISO Tariff; and

(c) its share, as determined in subsection (d) below, of the Congestion revenues provided

as calculated pursuant to Section 7.3.1.6 on the Inter-Zonal Interface of which the

transmission addition or upgrade forms a part.

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: September 7, 2004

Superseding Fourth Sub. Original Sheet No. 148A

First Revised Sheet No. 148A

FIRST REPLACEMENT VOLUME NO. I

The Project Sponsor's share of Wheeling, Congestion and FTR auction revenues for (d) the upgraded transmission facility shall be the number that is determined by dividing the number that is determined by subtracting the rating of the transmission facility before the upgrade or addition from the new rating for the upgraded or additional transmission facility by the new rating for the upgraded or additional transmission facility. The Participating TO's share of Wheeling, Congestion and FTR auction revenues for the upgraded or additional transmission facility shall be the number that is determined by subtracting the Project Sponsor's share from one hundred percent (100%). Such allocated shares shall become effective on the date the new rating takes effect. The full amount of capacity added to the system will be as determined through the regional reliability council process of the Western Electricity Coordinating Council or its successor.

3.2.7.4 Once a New Participating TO has executed the Transmission Control Agreement and it has become effective, the cost for New High Voltage Facilities for all Participating TOs shall be included in the ISO Grid-wide component of the High Voltage Access Charge in accordance with Schedule 3 of Appendix F, unless and with respect to Western Path 15 only, cost recovery is provided in Section 3.2.7.3. The

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: November 24, 2004 Effective: November 1, 2004

FIRST REPLACEMENT VOLUME NO. I

First Revised Sheet No. 149

Superseding Original Sheet No. 149

Participating TO who is supporting the cost of the New High Voltage Facility shall include such

costs in its High Voltage Transmission Revenue Requirement, regardless of which TAC Area

the facility is geographically located.

3.2.8 Ownership of and Charges for Expansion Facilities.

3.2.8.1 All transmission additions and upgrades constructed in accordance with this Section

3.2 shall form part of the ISO Controlled Grid and shall be operated and maintained by a

Participating TO in accordance with the Transmission Control Agreement.

3.2.8.2 Each Participating TO that owns or operates transmission additions and upgrades

constructed in accordance with this Section 3.2 shall provide access to them and charge for

their use in accordance with this ISO Tariff and its TO Tariff.

3.2.9 Expansion by "Local Furnishing" Participating TOs.

Notwithstanding any other provision of this ISO Tariff, a Local Furnishing Participating TO shall

not be obligated to construct or expand facilities, (including interconnection facilities as

described in Section 8 of the TO Tariff) unless the ISO or Project Sponsor has tendered an

application under FPA Section 211 that requests FERC to issue an order directing the Local

Furnishing TO to construct such facilities pursuant to Section 3.2 of the ISO Tariff. The Local

Furnishing TO shall, within 10 days of receiving a copy of the Section 211 application, waive its

right to a request for service under FPA Section 213(a) and to the issuance of a proposed order

under FPA Section 212(c). Upon receipt of a final order from FERC that is no longer subject to

rehearing or appeal, such Local Furnishing TO shall construct such facilities in accordance with

this Section 3.2.

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: March 11, 2003 Effective: June 1, 2003

Original Sheet No. 150

3.3 [Not Used]

Original Sheet No. 151

[Page Not Used]

Original Sheet No. 152

[Page Not Used]

Original Sheet No. 153

[Page Not Used]

Original Sheet No. 154

[Page Not Used]

Original Sheet No. 155

[Page Not Used]

Original Sheet No. 156

[Page Not Used]

Original Sheet No. 157

[Page Not Used]

Original Sheet No. 158

[Page Not Used]

Issued by: Roger Smith, Senior Regulatory Counsel Issued on: October 13, 2000

Issued on: October 13, 2000 Effective: October 13, 2000

Original Sheet No. 159

[Page Not Used]

Original Sheet No. 160

[Page Not Used]

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION

FERC ELECTRIC TARIFF

Second Revised Sheet No. 161

FIRST REPLACEMENT VOLUME NO. I

Superseding First Revised Sheet No. 161

4. RELATIONSHIP BETWEEN ISO AND UDCS.

- 4.1 General Nature of Relationship Between ISO and UDCs.
- 4.1.1 The ISO shall not be obliged to accept Schedules, Adjustment Bids or bids for Ancillary Services which would require Energy to be transmitted to or from the Distribution System of a UDC directly connected to the ISO Controlled Grid unless the relevant UDC has entered into a UDC Operating Agreement. The UDC Operating Agreement shall require UDCs to comply with the applicable provisions of this Section 4 and any other expressly applicable Sections of this ISO Tariff and the ISO Protocols as these may be amended from time to time. The ISO shall maintain a pro forma UDC Operating Agreement available for UDCs to enter into with the ISO.
- **4.1.2** The ISO shall operate the ISO Controlled Grid, and each UDC shall operate its Distribution System at all times in accordance with Good Utility Practice and in a manner which ensures safe and reliable operation. The ISO shall, in respect of its obligations set

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: March 11, 2004 Effective: September 1, 2002

forth in this Section 4, have the right by agreement to delegate certain operational

responsibilities to the relevant Participating TO or UDC pursuant to this Section 4. All

information made available to UDCs by the ISO shall also be made available to Scheduling

Coordinators. All information pertaining to the physical state or operation, maintenance and

failure of the UDC Distribution System affecting the operation of the ISO Controlled Grid that is

made available to the ISO by the UDC shall also be made available to Scheduling Coordinators

upon receipt of reasonable notice.

4.2 Coordinating Maintenance Outages of UDC Facilities.

Each UDC and the Participating TO with which it is interconnected shall coordinate their Outage

requirements that will have an effect on their transmission interconnection prior to the

submission by that Participating TO of its Maintenance Outage requirements under Section

2.3.3.

4.3 UDC Responsibilities.

Recognizing the ISO's duty to ensure efficient use and reliable operation of the ISO Controlled

Grid consistent with the Applicable Reliability Criteria, each UDC shall:

4.3.1 operate and maintain its facilities, in accordance with applicable safety and reliability

standards, regulatory requirements, applicable operating guidelines, applicable rates, tariffs,

statutes and regulations governing their provision of service to their End-Use Customers and

Good Utility Practice so as to avoid any material adverse impact on the ISO Controlled Grid;

4.3.2 provide the ISO Outage Coordination Office each year with a schedule of upcoming

maintenance that has a reasonable potential of impacting the ISO Controlled Grid in

accordance with Section 2.3.3.5 of this ISO Tariff; and

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: March 11, 2004 Effective: October 13, 2000

Original Sheet No. 163

4.3.3 coordinate with the ISO, Participating TOs and Generators to ensure that ISO Controlled Grid Critical Protective Systems, including relay systems, are installed and maintained in order to function on a coordinated and complementary basis with UDCs,

Generator's and Participating TO's protective systems.

4.4 System Emergencies.

4.4.1 In the event of a System Emergency, UDCs shall comply with all directions from the

ISO concerning the management and alleviation of the System Emergency and shall comply

with all procedures concerning System Emergencies set out in the ISO Protocols.

4.4.2 During a System Emergency, the ISO and UDCs shall communicate through their

respective control centers and in accordance with procedures established in individual UDC

operating agreements.

4.4.3 Under Frequency Load Shedding (UFLS).

4.4.3.1 Each UDC's agreement with the ISO shall describe the UFLS program for that UDC.

The ISO and UDC shall review the UFLS program periodically to ensure compliance with

Applicable Reliability Criteria.

4.4.3.2 The ISO shall perform periodic audits of each UDC's UFLS system to verify that the

system is properly configured for each UDC.

4.4.3.3 The ISO will use its reasonable endeavors to ensure that UFLS is coordinated among

the UDCs so that no UDC bears a disproportionate share of the ISO's UFLS program.

4.4.3.4 In compiling its UFLS program, the ISO, at its discretion, may also coordinate with other

entities, review and audit their UFLS programs and systems as described in Section 4.4.3.1 to

4.4.3.3.

Issued by: Roger Smith, Senior Regulatory Counsel

Issued on: October 13, 2000 Effective: October 13, 2000

4.4.4 The ISO shall have the authority to direct a UDC to disconnect Load from the ISO Controlled Grid if necessary to avoid an anticipated System Emergency or to regain operational control over the ISO Controlled Grid during an actual System Emergency. The ISO shall direct the UDCs to shed Load in accordance with the prioritization schedule developed pursuant to Section 2.3.2.6. When ISO Controlled Grid conditions permit restoration of Load, the ISO shall restore Load according to the prioritization schedule developed pursuant to Section 2.3.2.6 hereof.

4.5 Electrical Emergency Plan (EEP).

- 4.5.1 The ISO shall in accordance with Section 2.3.2.4 hereof implement the Electrical Emergency Plan in consultation with the UDCs or other entities, at the ISO's discretion, when Energy reserve margins are forecast to be at the levels specified in the plan.
- **4.5.2** Each UDC will notify its End-Use Customers connected to its Distribution System of any voluntary curtailments notified to the UDC by the ISO pursuant to the provisions of the EEP.

4.5.3 Load Shedding

- 4.5.3.1 A portion of the ISO forecast of Control Area Load for each Trading Day will be allocated to each UDC or MSS Service Area. The ISO will aggregate each Scheduling Coordinator's Day-Ahead Schedules to Load in each UDC or MSS Service Area and will compare those aggregated Load Schedules to the ISO's Control Area Load forecast of metered Demand for that UDC or MSS Service Area to determine if the Load in the UDC or MSS Service Area has a resource deficiency based on the Day-Ahead Schedules.
- **4.5.3.2** If the ISO forecasts in advance of the Hour-Ahead Market that Load curtailment will be necessary due to a resource deficiency, the ISO will identify any UDC or MSS Service Area that is resource deficient. The ISO will provide notice to all Scheduling Coordinators if one or more UDC or

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: March 11, 2004 Effective: September 1, 2002

FIRST REPLACEMENT VOLUME NO. I

Original Sheet No. 164A

MSS is deficient. If Load curtailment is required to manage a System Emergency associated

with insufficient Hour-Ahead Schedules of resources, the ISO will determine the amount and

location of Load to be curtailed and will allocate a portion of that required Load curtailment to

each UDC or MSS Operator whose Service Area has been identified, based on Hour-Ahead

Schedules, as being resource-deficient based on the ratio of its resource deficiency to the total

Control Area resource deficiency. Each UDC or MSS Operator shall be responsible for

notifying its customers and Generators connected to its system of curtailments and service

interruptions.

4.5.3.3 If a Load curtailment is required to manage System Emergencies, in any circumstances

other than those described in Section 4.5.3.2, the ISO will determine the amount and location of

Load to be reduced and to the extent practicable, will allocate a portion to each UDC based on

the ratio of its Demand (at the time of the Control Area annual peak for the previous year) to

total Control Area annual peak Demand for the previous year taking into account system

considerations and the UDC's curtailment rights under their tariffs. Each UDC or MSS Operator

shall be responsible for notifying its customers and Generators connected to its system of

curtailments and service interruption.

4.6 System Emergency Reports: UDC Obligations.

4.6.1 Each UDC shall maintain all appropriate records pertaining to a System Emergency.

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: July 15, 2002 Effective: September 1, 2002

FIRST REPLACEMENT VOLUME NO. I

First Revised Sheet No. 165

Superseding Original Sheet No. 165

4.6.2 Each UDC shall cooperate with the ISO in the preparation of an Outage review

pursuant to Section 2.3.2.9.

4.7 Coordination of Expansion or Modifications to UDC Facilities.

Each UDC and the Participating TO with which it is interconnected shall coordinate in the

planning and implementation of any expansion or modifications of a UDC's or Participating TO's

system that will affect their transmission interconnection, the ISO Controlled Grid or the

transmission services to be required by the UDC. The Participating TO shall be responsible for

coordinating with the ISO.

4.8 Information Sharing.

4.8.1 System Planning Studies.

The ISO, Participating TOs and UDCs shall share information such as projected Load growth

and system expansions necessary to conduct necessary System Planning Studies to the extent

that these may impact the operation of the ISO Controlled Grid.

4.8.2 System Surveys and Inspections.

The ISO and each UDC shall cooperate with each other in performing system surveys and

inspections to the extent these relate to the operation of the ISO Controlled Grid.

4.8.3 Reports.

4.8.3.1 The ISO shall make available to the UDCs any public annual reviews or reports

regarding performance standards, measurements and incentives relating to the ISO Controlled

Grid and shall also make available, upon reasonable notice, any such reports that the ISO

receives from the Participating TOs. Each UDC shall make available to the ISO any public

annual reviews or reports regarding performance standards,

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: March 11, 2004 Effective: October 13, 2000

FIRST REPLACEMENT VOLUME NO. I

Original Sheet No. 166

Effective: October 13, 2000

measurements and incentives relating to the UDC's distribution system to the extent these

relate to the operation of the ISO Controlled Grid.

4.8.3.2 The ISO and UDCs shall develop an operating procedure to record requests received

for Maintenance Outages by the ISO and the completion of the requested maintenance and

turnaround times.

4.8.3.3 The UDCs shall maintain records that substantiate all maintenance performed on UDC

facilities which are under the Operational Control of the ISO. These records shall be made

available to the ISO upon receipt of reasonable notice.

4.8.4 Installation of and Rights of Access to UDC Facilities.

4.8.4.1 Installation of Facilities.

4.8.4.1.1 Meeting Service Obligations. The ISO and the UDC shall each have the right on

reasonable notice to install or to have installed equipment (including metering equipment) or

other facilities on the property of the other, to the extent that such installation is necessary for

the installing party to meet its service obligations unless to do so would have a negative impact

on the reliability of the service provided by the party owning the property.

4.8.4.1.2 Governing Agreements for Installations. The ISO and the UDC shall enter into

agreements governing the installation of equipment or other facilities containing customary,

reasonable terms and conditions.

4.8.4.2 Access to Facilities.

The UDCs shall grant the ISO reasonable access to UDC facilities free of charge for purposes

of inspection, repair, maintenance, or upgrading of facilities installed by the ISO on the UDC's

system, provided that the ISO must provide reasonable advance notice of its

Issued by: Roger Smith, Senior Regulatory Counsel

Issued on: October 13, 2000

Original Sheet No. 167

intent to access UDC facilities and opportunity for UDC staff to be present. Such access shall

not be provided unless the parties mutually agree to the date, time and purpose of each access.

Agreement on the terms of the access shall not be unreasonably withheld.

4.8.4.3 Access During Emergencies.

Notwithstanding any provision in this Section 4 the ISO may have access, without giving prior

notice, to any UDC's equipment or other facilities during times of a System Emergency or where

access is needed in connection with an audit function.

4.9 UDC Facilities under ISO Control.

The ISO and each UDC shall enter into an agreement in relation to the operation and

maintenance of the UDC's facilities which are under the ISO's Operational Control.

5. RELATIONSHIP BETWEEN ISO AND GENERATORS.

The ISO shall not Schedule Energy or Ancillary Services generated by any Generating Unit

interconnected to the ISO Controlled Grid, or to the Distribution System of a Participating TO or

of a UDC otherwise than through a Scheduling Coordinator. The ISO shall not be obligated to

accept Schedules or Adjustment Bids or bids for Ancillary Services relating to Generation from

any Generating Unit interconnected to the ISO Controlled Grid unless the relevant Generator

undertakes in writing to the ISO to comply with all applicable provisions of this ISO Tariff as they

may be amended from time to time, including, without limitation, the applicable provisions of this

Section 5 and Section 2.3.2.

5.1 General Responsibilities.

5.1.1 Operate Pursuant to Relevant Provisions of ISO Tariff.

Participating Generators shall operate, or cause their facilities to be operated, in accordance

with the relevant provisions of this ISO Tariff, including, but not limited to, the

Issued by: Roger Smith, Senior Regulatory Counsel

Issued on: October 13, 2000 Effective: October 13, 2000

FIRST REPLACEMENT VOLUME NO. I

Original Sheet No. 168

Effective: October 13, 2000

operating requirements for normal and emergency operating conditions specified in Section 2.3

and the requirements for the dispatch and testing of Ancillary Services specified in Section 2.5.

5.1.2 Operate Pursuant to Relevant Operating Protocols.

Participating Generators shall operate, or cause their Generating Units and associated facilities

to be operated, in accordance with the relevant operating protocols established by the ISO or,

prior to the establishment of such protocols, the operating protocols established by the TO or

UDC owning the facilities that interconnect with the Generating Unit of the Participating

Generator.

5.1.3 Actions for Maintaining Reliability of ISO Controlled Grid.

The ISO plans to obtain the control over Generating Units that it needs to control the ISO

Controlled Grid and maintain reliability by purchasing Ancillary Services from the market auction

for these services. When the ISO responds to events or circumstances, it shall first use the

generation control it is able to obtain from the Ancillary Services bids it has received to respond

to the operating event and maintain reliability. Only when the ISO has used the Ancillary

Services that are available to it under such Ancillary Services bids which prove to be effective in

responding to the problem and the ISO is still in need of additional control over Generating

Units, shall the ISO assume supervisory control over other Generating Units. It is expected that

at this point, the operational circumstances will be so severe that a real-time system problem or

emergency condition could be in existence or imminent.

Each Participating Generator shall take, at the direction of the ISO, such actions

affecting such Generator as the ISO determines to be necessary to maintain the reliability

Issued by: Roger Smith, Senior Regulatory Counsel

Issued on: October 13, 2000

FIRST REPLACEMENT VOLUME NO. I

Second Revised Sheet No. 169

Superceding First Revised Sheet No. 169

of the ISO Controlled Grid. Such actions shall include (but are not limited to):

(a) compliance with the ISO's Dispatch instructions including instructions to deliver

Ancillary Services in real time pursuant to the Final Day-Ahead Schedules and Final

Hour-Ahead Schedules;

(b) compliance with the system operation requirements set out in Section 2.3 of this ISO

Tariff;

(c) notification to the ISO of the persons to whom an instruction of the ISO should be

directed on a 24-hour basis, including their telephone and facsimile numbers; and

(d) the provision of communications, telemetry and direct control requirements, including

the establishment of a direct communication link from the control room of the Generator

to the ISO in a manner that ensures that the ISO will have the ability, consistent with

this ISO Tariff and the ISO Protocols, to direct the operations of the Generator as

necessary to maintain the reliability of the ISO Controlled Grid, except that a

Participating Generator will be exempt from ISO requirements imposed in accordance

with this subsection (d) with regard to any Generating Unit with a rated capacity of less

than 10 MW, unless that Generating Unit is certified by the ISO to participate in the

ISO's Ancillary Services and/or to submit Supplemental Energy bids.

5.1.4 Generators Connected to UDC Systems.

With regard to any Generating Unit directly connected to a UDC system, a Participating

Generator shall comply with applicable UDC tariffs, interconnection requirements and

generation agreements. With regard to a Participating Generator's Generating Units directly

connected to a UDC system, the ISO and the UDC will coordinate to develop procedures to

avoid conflicting ISO and UDC operational directives.

Issued by: Roger Smith, Senior Regulatory Counsel

Issued on: April 13, 2001 Effective: January 1, 2001

First Revised Sheet No. 169A Superseding Original Sheet No. 169A

5.1.4.1 Exemption for Generating Units Less Than 1 MW

A Generator with a Generating Unit directly connected to a UDC system will be exempt from compliance with this Section 5 and with Section MP 2.3.5 of the Metering Protocol in relation to that Generating Unit provided that (i) the rated capacity of the Generating Unit is less than 1 MW, and (ii) the Generator does not use the Generating Unit to participate in the ISO's Ancillary Services and/or to submit Supplemental Energy bids. This exemption in no way affects the calculation of or any obligation to pay the appropriate charges or to comply with all the other applicable Sections of this ISO Tariff.

Issued by: Roger Smith, Senior Regulatory Counsel

Issued on: April 13, 2001 Effective: January 1, 2001

5.1.5 Existing Contracts for Regulatory Must-Take Generation.

Notwithstanding any other provision of this ISO Tariff, the ISO shall discharge its responsibilities in a manner which honors any contractual rights and obligations of the parties to contracts, or final regulatory treatment, relating to Regulatory Must-Take Generation of which protocols or other instructions are notified in writing to the ISO from time to time and on reasonable notice.

5.2 Procurement of Reliability Must-Run Generation by the ISO.

- **5.2.1** A Reliability Must-Run Contract is a contract entered into by the ISO with a Generator which operates a Generating Unit giving the ISO the right to call on the Generator to generate Energy and, only as provided in this Section 5.2, or as needed for Black Start or Voltage Support required to meet local reliability needs, or to procure Ancillary Services from Potrero or Hunter's Point power plants to meet operating criteria associated with the San Francisco local reliability area, to provide Ancillary Services from the Generating Units as and when this is required to ensure that the reliability of the ISO Controlled Grid is maintained.
- **5.2.1.1** If the ISO, pursuant to Section 2.5.12(e), has elected to procure an amount of megawatts of its forecast needs for an Ancillary Service in the Hour-Ahead Markets and there is not an adequate amount of capacity bid into an Hour-Ahead Market for the ISO to procure such amount of megawatts of that Ancillary Service (excluding bids that exceed price caps imposed by the ISO or FERC), the ISO may call upon Reliability Must-Run Units under Must-Run Contracts to meet the remaining portion of that amount of megawatts for that Ancillary Service but only after accepting all available bids in the Hour-Ahead Market (including any unused bids that can be used to satisfy that particular Ancillary Services requirement under Section 2.5.3.6), except that the ISO shall not be required to accept bids that exceed price caps imposed by the ISO or the FERC.

Issued by: Roger Smith, Senior Regulatory Counsel

Issued on: October 13, 2000 Effective: October 13, 2000

5.2.1.2 If, at any time after the issuance of Final Day-Ahead Schedules for the Trading Day –

(1) the ISO determines that it requires more of an Ancillary Service than it has procured;

(2) all additional Day-Ahead bids for that Ancillary Service that have not been withdrawn

(including any unused bids that can be used to satisfy that particular Ancillary Services

requirement under Section 2.5.3.6) have been selected pursuant to Section 2.5.21,

except that the ISO shall not be required to accept bids that exceed price caps imposed

by the ISO or the FERC;

(3) the ISO has notified Scheduling Coordinators of the circumstances existing in

paragraphs (1) and (2) of this Section 5.2.1.2; and

(4) after such notice, the ISO determines that a Bid Insufficiency condition exists in the

Hour-Ahead Market for the Settlement Period in which the ISO requires more of an

Ancillary Service;

the ISO may call upon Reliability Must-Run Units under Reliability Must-Run Contracts to meet

the additional needs in addition to any amounts that the ISO has called upon under Section

5.2.1.1. The ISO must provide the notice specified in paragraph (3) of this Section 5.2.1.2 as

soon as possible after the ISO determines that additional Ancillary Services are needed for

which bids are not available. The ISO may only determine that a Bid Insufficiency exists in the

Hour-Ahead Market after the close of the Hour-Ahead Market, unless an earlier determination is

required in order to accommodate the Reliability Must-Run Unit's operating constraints. For the

purposes of this Section, a Bid Insufficiency exists in an Hour-Ahead Market if, and only if -

(a) bids in the Hour-Ahead Market for the particular Ancillary Service (including any unused

bids that can be used to satisfy that particular Ancillary Services requirement under

Section 2.5.3.6) that remain after first procuring the megawatts of the Ancillary

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: March 11, 2004 Effective: October 13, 2000

Superseding Original Sheet No. 172

Service that the ISO had notified Scheduling Coordinators it would procure in the Hour-

Ahead Market pursuant to Section 2.5.12 ("remaining Ancillary Service requirement")

represent, in the aggregate, less than two times such remaining Ancillary Service

requirement; or

(b) there are less than two unaffiliated bidders to provide such remaining Ancillary Service

requirement.

If a Bid Insufficiency condition exists, the ISO may nonetheless accept available market

bids if it determines in its sole discretion that the prices bid and the supply curve created by the

bids indicate that the bidders were not attempting to exercise market power.

5.2.2 [Not Used]

5.2.3 The ISO will, subject to any existing power purchase contracts of a Generating Unit,

have the right at any time based upon ISO Controlled Grid technical analyses and studies to

designate a Generating Unit as a Reliability Must-Run Unit. A Generating Unit so designated

shall then be obligated to provide the ISO with its proposed rates for Reliability Must-Run

Generation for negotiation with the ISO. Such rates shall be authorized by FERC or the Local

Regulatory Authority, whichever authority is applicable.

5.2.4 [Not Used]-

5.2.5 On a yearly basis, the ISO will carry out technical evaluations based upon historic

patterns of the operation of the ISO Controlled Grid and the ISO's forecast requirements for

maintaining the reliability of the ISO Controlled Grid in the next year. The ISO will then

determine which Generating Units it requires to continue to be Reliability Must-Run Units, which

Generating Units it no longer requires to be Reliability Must-Run Units and which Generating

Units it requires to become the subject of a Reliability Must-Run Contract which had not

previously been so contracted to the ISO.

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: March 11, 2004 Effective: October 13, 2000

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

First Revised Sheet No. 173 Superseding Original Sheet No. 173

5.2.6 A *pro forma* of the Reliability Must-Run Contract is attached as Appendix G. From the ISO Operations Date all Reliability Must-Run Units will be placed under the "As Called" conditions, but the parties may, pursuant only to the terms of the Reliability Must-Run Contract, Transfer any such unit to one of the alternative forms of conditions under specific circumstances. The ISO will review the terms of the applicable forms of agreement applying to each Reliability Must-Run Unit to ensure that the ISO will procure Reliability Must-Run Generation from the cheapest available sources and to maintain System Reliability. The ISO shall give notice to terminate Reliability Must-Run Contracts that are no longer necessary or can be replaced by less expensive and/or more competitive sources for maintaining the reliability of the ISO Controlled Grid.

Utility in accordance with Annex 1 to the ISO's Settlement and Billing Protocol an ISO Invoice in respect to those costs incurred under each Reliability Must-Run Contract that are payable to the ISO by such Responsible Utility or payable by the ISO to such Responsible Utility pursuant to Section 5.2.8. The ISO Invoices shall reflect all reductions or credits required or allowed under or arising from the Reliability Must-Run Contract or under this Section 5.2.7. The ISO Invoice shall separately show the amounts due for services from each RMR Owner. Each Responsible Utility shall pay the amount due under each ISO Invoice by the due date specified in the ISO Invoice, in default of which interest shall become payable at the interest rate provided in the Reliability Must-Run Contract from the due date until the date on which the amount is paid in full. For each Reliability Must-Run Contract, the ISO shall establish two, segregated commercial bank accounts under the "Facility Trust Account" referred to in Annex 1 to the ISO's Settlement and Billing Protocol and Article 9 of the Reliability Must-Run Contract. One commercial bank account, the "RMR Owner Facility Trust Account," shall be held in trust

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: March 11, 2004 Effective: October 26, 2000

by the ISO for the RMR Owner. The other commercial bank account, the "Responsible Utility Facility Trust Account," shall be held in trust by the ISO for the Responsible Utility. Payments received by the ISO from the Responsible Utility in connection with the Reliability Must-Run Contract, including payments following termination of the Reliability Must-Run Contract, will be deposited into the RMR Owner Facility Trust Account and payments from the ISO to the RMR Owner will be withdrawn from such account, in accordance with Section 5.2.7, Article 9 of the Reliability Must-Run Contract and Annex 1 to the ISO's Settlement and Billing Protocol. Any payments received by the ISO from the RMR Owner in connection with the Reliability Must-Run Contract will be deposited into the Responsible Utility Facility Trust Account. Any payments due to the Responsible Utility of funds received from the RMR Owner in connection with the Reliability Must-Run Contract will be withdrawn from the Responsible Utility Facility Trust Account, in accordance with this Section 5.27, Annex 1 to the ISO's Settlement and Billing Protocol and Article 9 of the Reliability Must-run Contract. Neither the RMR Owner Facility Trust Account nor the Responsible Utility Trust Account shall have other funds commingled in it an any time. The ISO shall not modify this Section 5.27 or Annex 1 to the ISO Settlement and billing Protocol as it applies to procedures for the billing, invoicing and payment of charges under Reliability Must-Run Contracts without the Responsible Utility's consent, provided, however, that no such consent shall be required with respect to any change in the method by which costs incurred by the ISO under RMR Contracts are allocated to or among Responsible Utilities.

5.2.7.1 Except where the Responsible Utility is also the RMR Owner, the Responsible Utility's payment of the ISO Invoice shall be made without offset, recoupment or deduction of any kind whatsoever. Notwithstanding the foregoing, if the ISO fails to deduct an amount required to be deducted under Section 5.2.7.1.1, the Responsible Utility may deduct such amount from payment otherwise due under such ISO Invoice.

Issued by: Roger Smith, Senior Regulatory Counsel

Issued on: October 13, 2000 Effective: October 26, 2000

5.2.7.1.1 If the Responsible Utility disputes an ISO Invoice, Revised Estimated RMR Invoice, or Revised Adjusted RMR Invoice, or Final Invoice, it shall pay the ISO Invoice but may pay under protest and reserve its right to seek a refund, with interest, from the ISO. If resolution of the dispute results in an amount paid by the Responsible Utility under protest being due from the ISO to the Responsible Utility and from the RMR Owner to the ISO, and such amount was paid to the RMR Owner by the ISO, then such amount, with interest at the interest rate specified in the applicable Reliability Must-Run Contract from the date of payment until the date on which the amount is repaid in full, shall be refunded by the RMR Owner to the ISO and from the ISO to the Responsible Utility, pursuant to Article 9 of the Reliability Must-Run Contract and Annex 1 to the ISO's Settlement and Billing Protocol, by the RMR Owner's inclusion of such refund amount in the appropriate invoice. If the RMR Owner does not include such refund amount (including interest) in the appropriate invoice, then such refund amount shall be deducted by the ISO from the next succeeding amounts otherwise due from the Responsible Utility to the ISO and from the next succeeding amounts otherwise due from the ISO to the RMR Owner with respect to the applicable Reliability Must-Run Contract or, if such Contract has terminated, such amount shall be refunded by the ISO to the Responsible Utility; provided, however, that if and to the extent that such resolution is based on an error or breach or default of the RMR Owner's obligations to the ISO under the Reliability Must-Run Contract, then such refund obligation shall extend only to amounts actually collected by the ISO from the RMR Owner as a result of such resolution. If resolution of the dispute requires the ISO, but not the RMR Owner, to pay the Responsible Utility, then such award shall be recovered from any applicable insurance proceeds, provided that to the extent sufficient funds are not recoverable through insurance, the amount of the award (whether determined through settlement, or ADR or otherwise) shall be collected by the ISO pursuant to Section 13.5, and in any event, the award shall be paid by the ISO to the Responsible Utility pursuant to Section 13.5.

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: March 11, 2004 Effective: October 26, 2000

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION FERC ELECTRIC TARIFF

FIRST REPLACEMENT VOLUME NO. I

Original Sheet No. 175A

Effective: October 26, 2000

5.2.7.1.2 If the Responsible Utility disputes an ISO Invoice, a Revised Estimated Invoice, a

Revised Adjusted RMR Invoice, or a Final Invoice, or part thereof, based in whole or in part on

an alleged error by the RMR Owner or breach or default of the RMR Owner's obligations to the

ISO under the Reliability Must-Run Contract, the Responsible Utility shall notify the ISO of such

dispute within 12 months of its receipt of the applicable Revised Adjusted RMR Invoice or Final

Invoice from the ISO, except that the Responsible Utility may also dispute a Revised Estimated

RMR Invoice, Revised Adjusted RMR Invoice, or Final Invoice for the reasons set forth above in

this Section 5.2.7.1.2, within 60 days from the issuance of a final report with respect to an audit

of the RMR Owner's books and accounts allowed by a Reliability Must-Run Contract.

Issued by: Roger Smith, Senior Regulatory Counsel

Issued on: October 13, 2000

5.2.7.1.3 If the Responsible Utility disputes an ISO Invoice, a Revised Estimated RMR Invoice, a Revised Adjusted RMR Invoice, or a Final Invoice, based in whole or in part on an alleged error by the ISO or breach or default of the ISO's obligations to the Responsible Utility, the Responsible Utility shall notify the ISO of such dispute prior to the later to occur of (i) the date 12 months following the date on which the ISO submitted such invoice to the Responsible Utility for payment or (ii) the date 60 days following the date on which a final report is issued in connection with an operational audit, pursuant to Section 12.2.2, of the ISO's performance of its obligations to Responsible Utilities under this Section 5.2.7 conducted by an independent third party selected by the ISO Governing Board and covering the period to which such alleged dispute relates. The ISO or any Responsible Utility shall have the right to request, but not to require, that the ISO Governing Board arrange for such an operational audit at any time.

5.2.7.1.4 Notwithstanding Section 13 of this ISO Tariff, any Responsible Utility dispute relating to an ISO Invoice, a Revised Estimated Invoice, a Revised Adjusted Invoice, a Final Invoice, or a RMR Charge, RMR Payment or RMR Refund as defined in Annex 1 to the Settlement and Billing Protocol, shall be resolved through the dispute resolution process specified in the relevant RMR Contract. If the Responsible Utility fails to notify the ISO of any dispute as provided above, it shall be deemed to have validated the invoice and waived its right to dispute such invoice.

5.2.7.2 The RMR Owner shall, to the extent set forth herein, be a third party beneficiary of, and have all rights that the ISO has under the ISO Tariff, at law, in equity or otherwise, to enforce the Responsible Utility's obligation to pay all sums invoiced to it in the ISO Invoices but not paid by the Responsible Utility, to the extent that, as a result of the Responsible Utility's failure to pay, the ISO does not Pay the RMR Owner on a timely basis amounts due under the Reliability Must-Run Contract. The RMR Owner's rights as a third party beneficiary shall be no greater than the ISO's rights and shall be subject to the dispute resolution process specified in the relevant RMR Contract. Either the ISO or the

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: March 11, 2004 Effective: October 26, 2000

Superseding Original Sheet No. 177

RMR Owner (but not both) will be entitled to enforce any claim arising from an unpaid ISO

Invoice, and only one party will be a "disputing party" under the dispute resolution process

specified in the relevant RMR Contract with respect to such claim so that the Responsible Utility

will not be subject to duplicative claims or recoveries. The RMR Owner shall have the right to

control the disposition of claims against the Responsible Utility for non-payments that result in

payment defaults by the ISO under a Reliability Must-Run Contract. To that end, in the event of

non-payment by the Responsible Utility of amounts due under the ISO Invoice, the ISO will not

take any action to enforce its rights against the Responsible Utility unless the ISO is requested

to do so by the RMR Owner. The ISO shall cooperate with the RMR Owner in a timely manner

as necessary or appropriate to most fully effectuate the RMR Owner's rights related to such

enforcement, including using its best efforts to enforce the Responsible Utility's payment

obligations if, as, to the extent, and within the time frame, requested by the RMR Owner. The

ISO shall intervene and participate where procedurally necessary to the assertion of a claim by

the RMR Owner.

5.2.7.3 If a Responsible Utility first executed a TCA after April 1, 1998 (a "New Responsible

Utility") and if:

(i) the senior unsecured debt of the New Responsible Utility is rated or becomes

rated at less than A- from Standard & Poor's ("S&P") or A3 from Moody's

Investment Services ("Moody's"), and

(ii) Such ratings do not improve to A- or better from S&P or A3 or better from

Moody's within 60 days,

the New Responsible Utility shall issue and confirm to the ISO an irrevocable and unconditional

letter of credit in an amount equal to three times the highest monthly payment invoiced by the

ISO to the New Responsible Utility (or the prior Responsible

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: July 8, 2003 Effective: Upon Notice After September 6, 2003

Superseding Original Sheet No. 178

Utility) in connection with services under Reliability Must-Run Contracts in the last 3 months for which invoices have been issued. The letter of credit must be issued by a bank or other financial institution whose senior unsecured debt rating is not less than A from S&P and A2 from Moody's. The letter of credit shall be in such form as the ISO may reasonably require from time to time by notice to the New Responsible Utility and shall authorize the ISO or the Owner to draw on the letter of credit for deposit solely into the RMR Owner Facility Trust Account in an amount equal to any amount due and not paid by the Responsible Utility under the ISO Invoice. The security provided by the New Responsible Utility pursuant to this Section 5.2.7.3 is intended to cover the New Responsible Utility's outstanding liability for payments it is liable to make to the ISO under this Section 5.2.7, including monthly payments, any reimbursement for capital improvement, termination fees and any other payments to which the ISO is liable under Reliability Must-Run Contracts.

5.2.8 Responsibility for Reliability Must-Run Charge Except as otherwise provided in Section 5.2.8.1, the costs incurred by the ISO under each Reliability Must-Run Contract shall be payable to the ISO by the Responsible Utility in whose PTO Service Territory the Reliability Must-Run Generating Units covered by such Reliability Must-Run Contract are located or, where a Reliability Must-Run Generating Unit is located outside the PTO Service Territory of any Responsible Utility, by the Responsible Utility or Responsible Utilities whose PTO Service Territories are contiguous to the Service Area in which the Generating Unit is located, in proportion to the benefits that each such Responsible Utility receives, as determined by the ISO. Where costs incurred by the ISO under a Reliability Must-Run Contract are allocated among two or more Responsible Utilities pursuant to this section, the ISO will file the allocation under Section 205 of the Federal Power Act.

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: May 21, 2004 Effective: May 8, 2004

Third Revised Sheet No. 179

FIRST REPLACEMENT VOLUME NO. I

5.2.8.1 Responsibility for Reliability Must-Run Charges Associated with SONGS. If the ISO procures Reliability Must-Run Generation from the San Onofre Nuclear Generation Station Units 2 or 3, it shall determine prior to the operation of such facilities as Reliability Must-Run Generation the appropriate allocation of associated charges, if any, among Responsible Utilities. The allocation of such charges shall be based on the reliability benefits that the ISO reasonably identifies through studies and analysis as accruing to the respective Service Areas of the Responsible Utilities.

- **5.2.9** The ISO may Dispatch an RMR Unit that has currently selected Condition 2 of its RMR Contract to provide Energy through an out-of-market transaction for reasons other than to manage Intra-Zonal Congestion or to address local reliability under the following conditions:
 - (1) The ISO projects that it will require Energy from the Condition 2 RMR Unit to (a) meet forecast Demand and operating reserve requirements or (b) manage Inter-Zonal Congestion;
 - (2) If ISO must Dispatch a Condition 2 RMR Unit to meet forecast Demand and operating reserve requirements, the ISO must first revoke or deny waivers of the must-offer obligation from all other Generating Units, including non-Condition 2 RMR Units and Generating Units not subject to an RMR Contract subject to the must-offer obligation and not on outage, except as set forth in item (5) below;
 - (3) If ISO must Dispatch a Condition 2 RMR Unit to manage projected Inter-Zonal Congestion, the ISO must first revoke or deny waivers of the must-offer obligation from all other Generating Units, including non-Condition 2 RMR Units and Generating Units not subject to an RMR Contract subject to the must-offer obligation, that are within the Congested Zone, except as set forth in item (5) below;

Issued by: Charles F. Robinson, Vice President and General Counsel

- (4) Before Dispatching a Condition 2 RMR Unit in accordance with this Section 5.2.9, the ISO must notify Market Participants of (a) the situation for which the ISO is contemplating Dispatching a Condition 2 RMR Unit in accordance with this Section 5.2.9, and (b) the date and time the ISO requires the Condition 2 RMR Unit so Dispatched to be operating. The ISO shall provide such notice as far in advance as practical and prior to directing the Condition 2 Unit to start up;
- (5) The ISO does not have to revoke or deny a waiver to a Generating Unit (a) subject to environmental limitations if doing so would violate such limitations, or cause the Generating Unit to be unavailable in the future, or if the environmental limitations currently restrict the availability or use of the Generating Unit; or (b) if that Generating Unit would cause or exacerbate Congestion, Overgeneration or other operational problem; or (c) if that Generating Unit is incapable of being available for Dispatch in the required timeframe.

Notwithstanding anything to the contrary in the applicable RMR Contract, all MWh, start-ups and service hours provided by a Generating Unit that has currently selected Condition 2 of its RMR Contract pursuant to this Section 5.2.9 outside of the RMR Contract shall not be used to determine future RMR Contract Annual Service Limits. Payment for Dispatches pursuant to this Section 5.2.9 is governed by Section 11.2.4.2 of this Tariff.

5.3 Identification of Generating Units.

Each Generator shall provide data identifying each of its Generating Units and such information regarding the capacity and the operating characteristics of the Generating Unit as may be reasonably requested from time to time by the ISO.

Issued by: Charles F. Robinson, Vice President and General Counsel

Original Sheet No. 179.02

5.4 WECC Requirements.

5.4.1 Generator Performance Standard.

Participating Generators shall, in relation to each of their Generating Units, meet all applicable WECC standards including any standards regarding governor response capabilities, use of power system stabilizers, voltage control capabilities and hourly Energy delivery. Unless otherwise agreed by the ISO, a Generating Unit must be capable of operating at capacity registered in the ISO Controlled Grid interconnection data, and shall follow the voltage schedules issued by the ISO from time to time.

5.4.2 Reliability Criteria.

Participating Generators shall comply with the requirements of the WSCC Reliability Criteria Agreement, including the applicable WSCC Reliability Criteria set forth in Section IV of Annex A thereof. In the event that a Participating Generator fails to comply, it will be subject to the sanctions

Issued by: Charles F. Robinson, Vice President and General Counsel

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION

FERC ELECTRIC TARIFF
FIRST REPLACEMENT VOLUME NO. I

Second Revised Sheet No. 179A

Superseding First Revised Sheet No. 179A

applicable to such failure. Such sanctions shall be assessed pursuant to the procedures

contained in the WSCC Reliability Criteria Agreement. Each and all of the provisions of the

WSCC Reliability Criteria Agreement are hereby incorporated by reference into this Section

5.4.2 as though set forth fully herein, and Participating Generators shall for all purposes be

considered Participants as defined in that Agreement, and shall be subject to all of the

obligations of Participants, under and in connection with the WSCC Reliability Criteria

Agreement. The Participating Generators shall copy the ISO on all reports supplied to the

WECC in accordance with Section IV of Annex A of the WSCC Reliability Criteria Agreement.

5.4.3 Payment of Sanctions.

Each Participating Generator shall be responsible for payment directly to the WECC of any

monetary sanction assessed against that Participating Generator by the WECC pursuant to the

WSCC Reliability Criteria Agreement. Any such payment shall be made pursuant to the

procedures specified in the WSCC Reliability Criteria Agreement.

5.5 Outages.

5.5.1 Planned Maintenance.

Each Participating Generator shall comply with the applicable provisions of Section 2.3.3.

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: March 11, 2004 Effective: May 29, 2001

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION FERC ELECTRIC TARIFF

FIRST REPLACEMENT VOLUME NO. I

Second Revised Sheet No. 180

Superseding First Revised Sheet No. 180

5.5.2 The ISO shall, on the basis of the information supplied by Participating Generators

under Section 5.5.1 and other information available to the ISO, prepare and publish on WEnet

forecast aggregate available Generation capacity and forecast Demand on an annual, quarterly

and monthly basis in accordance with the provisions of the ISO Outage Coordination Protocol.

In publishing these forecasts, the ISO shall identify any expected Congestion conditions caused

by planned Outages of Participating Generators.

5.5.3 Forced Outages.

Procedures equivalent to those set out in Section 2.3.3 shall apply to all Participating

Generators in relation to Forced Outages.

5.6 System Emergencies.

5.6.1 All Generating Units, System Units and System Resources that are owned or controlled

by a Participating Generator are (without limitation to the ISO's other rights

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: March 11, 2004 Effective: May 29, 2001

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION

FERC ELECTRIC TARIFF

Superseding Second Revised Sheet No. 181

Third Revised Sheet No. 181

FIRST REPLACEMENT VOLUME NO. I

under this ISO Tariff) subject to control by the ISO during a System Emergency and in

circumstances in which the ISO considers that a System Emergency is imminent or threatened.

The ISO shall, subject to Section 5.6.2, have the authority to instruct a Participating Generator

to bring its Generating Unit on-line, off-line, or increase or curtail the output of the Generating

Unit and to alter scheduled deliveries of Energy and Ancillary Services into or out of the ISO

Controlled Grid, if such an instruction is reasonably necessary to prevent an imminent or

threatened System Emergency or to retain Operational Control over the ISO Controlled Grid

during an actual System Emergency. The ISO shall have the authority to instruct an RMR Unit

whose owner has selected Condition 2 of its RMR Contract to start-up and change its output if

the ISO has reasonably used all other available and effective resources to prevent a threatened

System Emergency without declaring that a System Emergency exists. It the ISO so instructs a

Condition 2 RMR Unit, it shall compensate that unit in accordance with Section 11.2.4.2 and

allocate the costs in accordance with Section 11.2.4.2.1.1.

5.6.2 The ISO shall, where reasonably practicable, utilize Ancillary Services which it has the

contractual right to instruct and which are capable of contributing to containing or correcting the

actual, imminent or threatened System Emergency prior to issuing instructions to a Participating

Generator under Section 5.6.1.

5.6.3 [Not Used]

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: May 11, 2004 Effective: July 11, 2004

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

Third Revised Sheet No. 181A Superseding Second Revised Sheet No. 181A

[Page Not Used]

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: June 24, 2002 Effective: June 21, 2001

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION

FERC ELECTRIC TARIFF

FIRST REPLACEMENT VOLUME NO. I

Substitute Second Revised Sheet No. 181B

Superseding First Revised Sheet No. 181B

5.7 Interconnection of New Facilities to the ISO Controlled Grid.

5.7.1 Applicability.

For purposes of this Section 5.7, a New Facility shall be:

(a) each Generating Unit that seeks to interconnect to the ISO Controlled Grid;

(b) each existing Generating Unit connected to the ISO Controlled Grid that will be re-powered

and increase the total capability of the power plant; and

(c) each existing Generating Unit connected to the ISO Controlled Grid that will be re-powered

without increasing the total capability of the power plant but has changed the electrical

characteristics of the power plant such that its re-energization may violate Applicable

Reliability Criteria and trigger the application of Section 5.7.5(c).

The owner of a planned New Facility, or its designee, is referred to for purposes of this Section 5.7 as

a New Facility Operator. Only New Facility Operators that have not submitted a Completed

Interconnection Application, as defined under the applicable Interconnecting PTO's TO Tariff, to the

Interconnecting PTO as of the effective date of this Section 5.7 are subject to its provisions.

5.7.2 Requests to Interconnect to the Distribution System.

Any request by a New Facility Operator to connect at distribution level voltage will be processed, as

applicable, pursuant to the Wholesale Distribution Access Tariff of the Interconnecting PTO or CPUC

Rule 21; provided, however, that the New Facility Operator shall be required to mitigate any adverse

impact on reliability on the ISO Controlled Grid in accordance with Section 5.7.5. In addition, each

Interconnecting PTO will provide to the ISO a copy of the System Impact Study used to determine the

impact of a New Facility on the Distribution System and the ISO Controlled Grid pursuant to a request

to interconnect under the applicable Wholesale Distribution Access Tariff.

5.7.3 Interconnection Application.

All New Facility Operators shall submit two copies of a Completed Interconnection Application to the

ISO in the form specified by the ISO. The ISO will date stamp all copies of the

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: January 29, 2002 Effective: June 20, 2001

Interconnection Application, retain one executed copy, and, within 1 Business Day, send the other copy to the Designated Contact Person of the Interconnecting PTO. Within 10 Business Days after the Interconnecting PTO receives an Interconnection Application, the ISO and the Interconnecting PTO shall determine whether the application is complete and the ISO will notify the New Facility Operator that its Interconnection Application is complete; or, in the event that the ISO, in consultation with the Interconnecting PTO, determines that the Interconnection Application is incomplete, the ISO will notify the New Facility Operator of the deficiencies or omissions in its application.

5.7.3.1 Expedited Procedures For New Facilities.

A New Facility Operator may submit a Request for Expedited Interconnection Procedures in accordance with Section 5.7.3.1.1. The ISO will develop and post on the ISO Home Page the Planning Procedures applicable to such expedited processing of Interconnection Applications.

5.7.3.1.1 Request for Expedited Interconnection Procedures.

- (a) If it elects to expedite processing of its Completed Interconnection Application, a New Facility Operator shall submit a Request for Expedited Interconnection Procedures within 10 Business Days after receiving a copy of the System Impact Study for the proposed interconnection. The request should be submitted in writing to the ISO and the Interconnecting PTO.
- (b) Within 10 Business Days after receiving a Request for Expedited Interconnection

 Procedures, the ISO and Interconnecting PTO shall provide to applicant the results of
 any studies required in addition to the System Impact Study, and shall tender an

 Expedited Interconnection Agreement that requires the applicant to compensate the
 Interconnecting PTO for all costs reasonably incurred pursuant to the terms of the ISO
 Tariff and the Interconnecting PTO's applicable TO Tariff for processing the Completed
 Interconnection Application and providing the requested interconnection.

Issued by: Roger Smith, Senior Regulatory Counsel

- (c) Concurrent with the provision, by the ISO and the Interconnecting PTO, of the studies referenced in subsection b, above, the Interconnecting PTO and the ISO shall provide to applicant their best estimate of the cost of any needed Direct Assignment Facilities and Reliability Upgrades, Delivery Upgrades, if requested by the New Facility Operator, and other costs that may be incurred in processing the Interconnection Application and providing the requested interconnection, however, unless otherwise agreed by the ISO, and the Interconnecting PTO, and the applicant, such cost estimate shall not be binding and the New Facility Operator shall compensate the ISO and the Interconnecting PTO for all actual interconnection costs reasonably incurred pursuant to the provisions of this Section 5.7 and the Interconnecting PTO's TO Tariff.
- (d) The New Facility Operator shall execute and return to the Interconnecting PTO, with a copy to the ISO, such Expedited Interconnection Agreement within 10 Business Days of its receipt or the New Facility Operator's Interconnection Application will be deemed withdrawn. In that event, the New Facility Operator shall reimburse the ISO and the Interconnecting PTO for all costs reasonably incurred in the processing of the Interconnection Application, including the Request for Expedited Interconnection.

5.7.3.2 Good Faith Deposit.

- (a) Each New Facility Operator that submits an Interconnection Application will on the date of submission also provide a Good Faith Deposit to the ISO. The ISO shall hold the Good Faith Deposit in trust for each applicant in a separate, interest-bearing account.
- (b) The ISO shall refund the Good Faith Deposit, with accrued Interest, in the event that:
 - (i) The ISO determines that the New Facility is not responsible for any interconnection costs, other than study costs; or
 - (ii) The applicant withdraws its Interconnection Application or its Interconnection Application is deemed withdrawn.

Issued by: Roger Smith, Senior Regulatory Counsel

5.7.3.3 Posting of Interconnection Applications and Non-disclosure.

The ISO will maintain on its OASIS site an updated list of all pending Interconnection

Applications. As soon as practicable after the ISO receives a Completed Interconnection

Application, the ISO will post the nearest substation, the capacity (MW) of the New Facility and
the year the New Facility is proposed to begin operations. At the time it submits its

Interconnection Application, a New Facility Operator may request in writing that the ISO and
Interconnecting PTO not publicly disclose the identity of such New Facility Operator. Upon
such request, the ISO and Interconnecting PTO will not disclose the identity of the applicant
while its Interconnection Application is pending, unless disclosure is permitted under Section

20.3.1 or in the event that an applicant's identity becomes otherwise publicly known.

5.7.4 Interconnection.

5.7.4.1 Detailed Planning Procedures.

The provisions set forth in this Section 5.7 shall govern the interconnection of New Facilities to the ISO Controlled Grid, including the costs of such interconnection. The ISO shall also maintain on the ISO Home Page detailed Planning Procedures and interconnection standards for all such interconnections. The ISO will develop, and post on the ISO Home Page, detailed procedures for updating the Planning Procedures.

5.7.4.2 Studies.

- (a) Except as provided in Section 5.7.4.2(d), for each Completed Interconnection Application, the ISO will direct the Interconnecting PTO to perform the required System Impact Study and Facility Study, and any additional studies the ISO determines to be reasonably necessary.
- (b) The Interconnecting PTO will complete or cause to be completed all studies directed by the ISO within the timelines provided in this section. Any studies performed by the ISO

Issued by: Roger Smith, Senior Regulatory Counsel

- or by a third party at the direction of the ISO shall also be completed within the timelines provided in this section.
- (c) Each New Facility Operator shall pay the reasonable costs of all System Impact and Facility Studies performed by or at the direction of the ISO or the Interconnecting PTO, and any additional studies the ISO determines to be reasonably necessary in response to the Interconnection Application, including any iterative study costs required for other New Facility Operator's that have established a new queue position due to the New Facility Operator either withdrawing its Interconnection Application or because its queue position has been modified pursuant to the procedures in Section 5.7.4.4. A New Facility Operator shall also pay the reasonable cost of Interconnecting PTO review of any System Impact Study or Facility Study that is performed by a New Facility Operator or its designee pursuant to subsection (d).
- (d) A New Facility Operator may perform its own System Impact Study and Facility Study, or contract with a third party to perform the System Impact Study and Facility Study, and shall so notify the ISO and the Interconnecting PTO of this election at the time it submits its Interconnection Application. Any such study or studies performed by a New Facility Operator or third party must be completed within the timelines identified in Sections 5.7.4.2.1 and 5.7.4.2.2. To the extent that the ISO and Interconnecting PTO disagree on the adequacy of the New Facility Operator or third party-sponsored study, the ISO will determine the adequacy of the study, subject to the ISO's ADR Procedures. The ISO and Interconnecting PTO shall complete their review of the New Facility Operator's study within 30 calendar days of receipt of the completed study. The results of any study or studies performed by a New Facility Operator or third party must be approved by both the ISO and the Interconnecting PTO.

Issued by: Roger Smith, Senior Regulatory Counsel

5.7.4.2.1 System Impact Study Procedures.

Within 10 Business Days after receiving a Completed Interconnection Application by the Interconnecting PTO, the ISO and the Interconnecting PTO will determine, on a non-discriminatory basis, whether a System Impact Study is required. The ISO and the Interconnecting PTO will make such determination based on the ISO Grid Planning Criteria and the transmission assessment practices outlined in the ISO Planning Procedures posted on the ISO Home Page. The ISO and Interconnecting PTO will utilize, to the extent possible, existing transmission studies. The System Impact Study will identify whether any Direct Assignment Facilities and Reliability Upgrades are needed, as well as, if requested by the New Facility Operator, any Delivery Upgrades necessary to deliver a New Facility's full output over the ISO Controlled Grid. The System Impact Study will also identify any adverse impact on Encumbrances existing as of the Completed Application Date.

If the ISO and the Interconnecting PTO determine that a System Impact Study is necessary, the Interconnecting PTO shall within 20 Business Days of receipt of Completed Interconnection Application, tender a System Impact Study Agreement that defines the scope, content, assumptions and terms of reference for such study, the estimated time required to complete it, and pursuant to which the applicant shall agree to reimburse the Interconnecting PTO for the reasonable actual costs of performing the required study. The New Facility Operator shall execute the System Impact Study Agreement and return it to the Interconnecting PTO within 10 Business Days, together with payment for the reasonable estimated cost, as provided by the Interconnecting PTO, of the System Impact Study. Alternatively, a New Facility Operator can request that the Interconnecting PTO proceed with the System Impact Study and abide by the terms, conditions, and cost assignment of the System Impact Study Agreement as determined through the ISO ADR Procedures, provided that such request is accompanied by payment for the reasonable estimated cost, as provided by the Interconnecting PTO, of the System Impact

Issued by: Roger Smith, Senior Regulatory Counsel

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION FERC ELECTRIC TARIFF

FIRST REPLACEMENT VOLUME NO. I

First Revised Sheet No. 181H

Superseding Original Sheet No. 181H

Study. If a New Facility Operator elects neither to execute the System Impact Study Agreement

nor to rely upon the ISO ADR Procedures, such New Facility Operator's Completed Application

will be deemed withdrawn. If the New Facility Operator's application is deemed withdrawn, the

New Facility Operator will compensate the Interconnecting PTO for all reasonable costs

incurred to that date in processing the Completed Interconnection Application.

The Interconnecting PTO will use due diligence to complete the System Impact Study within 60

calendar days of receipt of payment and the System Impact Study Agreement or initiation of the

ISO ADR Procedures. If the Interconnecting PTO cannot complete the System Impact Study

within 60 calendar days, the Interconnecting PTO will notify the New Facility Operator, in

writing, of the reason why additional time is required to complete the required study and the

estimated completion date.

5.7.4.2.2 **Facility Study Procedures.**

If a System Impact Study indicates that additions or upgrades to the ISO Controlled Grid are

needed to satisfy a New Facility Operator's request for interconnection, the Interconnecting

PTO shall, within 15 Business Days of the completion of the System Impact Study, tender to a

New Facility Operator a Facility Study Agreement that defines the scope, content, assumptions

and terms of reference for such study, the estimated time to complete the required study, and

pursuant to which the applicant agrees to reimburse the Interconnecting PTO for the actual

costs of performing the required Facility Study. The New Facility Operator shall execute the

Facility Study Agreement and return it to the Interconnecting PTO within 10 Business Days,

together with payment for the reasonable estimated cost, as provided by the Interconnecting

PTO, of the Facility Study. Alternatively, a New Facility Operator may request that the

Interconnecting PTO proceed with the Facility Study and abide by the terms, conditions, and

cost assignment of the Facility Study Agreement ultimately determined through the ISO ADR

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: March 11, 2004 Effective: June 1, 2001 FIRST REPLACEMENT VOLUME NO. I

Superseding Original Sheet No. 1811

Procedures, provided that such request is accompanied by payment for the reasonable estimated cost, as provided by the Interconnecting PTO, of the Facility Study. If a New Facility Operator elects either to not execute the Facility Study Agreement or to rely upon the ISO ADR Procedures, such New Facility Operator's Completed Application will be deemed withdrawn. If the New Facility Operator's application is deemed withdrawn, the New Facility Operator will compensate the Interconnecting PTO for all reasonable costs incurred to that date in processing the Completed Application.

The Interconnecting PTO will use due diligence to complete the Facility Study within 60 calendar days of receipt of payment and the Facility Study Agreement or initiation of the ISO ADR Procedures. If the Interconnecting PTO cannot complete the Facility Study within 60 calendar days, the Interconnecting PTO will notify the New Facility Operator, in writing, of the reason why additional time is required to complete the required study and the estimated completion date.

A New Facility Operator shall be entitled to amend its Completed Interconnection Application once without losing its queue position. Such amendment shall occur on or before 10 Business Days following the Date the Interconnecting PTO tenders a Facility Study Agreement.

Specifically, as an alternative to executing and returning a Facility Study Agreement, a New Facility Operator may submit an amendment to its Completed Interconnection Application to reflect a revised configuration for its New Facility. The amended Completed Interconnection Application shall be treated in accordance with Section 5.7.4.2.1 and the New Facility Operator's Completed Interconnection Application shall not be deemed withdrawn, and it shall maintain its exiting queue position, if (a) the amended Completed Interconnection Application is received by the Interconnecting PTO within 10 Business Days of the Interconnecting PTO's tender of a Facility Study Agreement; and (b) the New Facility Operator has not submitted a previous

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: March 11, 2004 Effective: June 1, 2001

amendment to the Completed Interconnection Application. In the event a New Facility Operator amends its Completed Interconnection Application, it will be responsible for any additional study costs that result from that amendment, including costs associated with revisions to studies for other applicants holding later queue positions.

5.7.4.3 Execution of Interconnection Agreement.

Within 10 Business Days of receipt of a completed Facility Study, a New Facility Operator shall request the Interconnecting PTO to provide to such applicant an Interconnection Agreement.

The Interconnecting PTO shall provide an Interconnection Agreement to an applicant within 30 Business Days of receipt of the request for an Interconnection Agreement. If the ISO and Interconnecting PTO determine, pursuant to Sections 5.7.4.2.1 and 5.7.4.2.2, that either:

- (a) a New Facility Operator's Interconnection Application can be accommodated and that such New Facility Operator will not incur costs for Reliability Upgrades, the New Facility Operator shall execute the Interconnection Agreement within 10 Business Days of receipt of the Interconnection Agreement; or
- (b) a New Facility Operator's Interconnection Application will necessitate Reliability

 Upgrades, the New Facility Operator shall execute the Interconnection Agreement
 within 30 Business Days of receipt of the Interconnection Agreement or, if a New
 Facility Operator and the Interconnecting PTO are unable to agree on the rates, terms
 and conditions of the Interconnection Agreement, the New Facility Operator may
 request that the Interconnecting PTO file an unexecuted Interconnection Agreement at
 FERC. If a New Facility Operator does request that the Interconnecting PTO file an
 unexecuted Interconnection Agreement at FERC, the New Facility Operator shall agree
 to abide by the rates, terms and conditions of such Interconnection Agreement
 ultimately determined by FERC to be just and reasonable.

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: March 11, 2004 Effective: June 1, 2001

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

First Revised Sheet No. 181K Superseding Original Sheet No. 181K

5.7.4.4 Queuing.

- (a) The ISO and Interconnecting PTO will process all Interconnection Applications based on the New Facility's Completed Application Date.
- (b) The queue position for each New Facility that has submitted an Interconnection Application will be established according to the Completed Application Date and the New Facility's compliance with the milestones set forth in Section 5.7.4.4.1.
- (c) For any New Facility Operator that has submitted a request to interconnect to a

 Interconnecting PTO prior to the date that FERC makes Section 5.7 effective, such

 New Facility Operator's position in the queue will be based on its Completed

 Application Date as that term was defined in the Interconnecting PTOs TO Tariff in

 effect at the time the New Facility Operator submitted a request to interconnect to the

 Interconnecting PTO.

5.7.4.4.1 Queuing Milestones.

(a) To maintain its queue position, each New Facility Operator must timely comply with the requirements of the ISO Tariff and the TO Tariff of the Interconnecting PTO and must, within 6 months of its Completed Application Date, satisfy all applicable Data Adequacy Requirements of state and local siting and other regulatory authorities. Any New Facility Operator not subject to state siting requirements must satisfy the information requirements set forth in 18 C.F.R. § 2.20. The ISO will permit a New Facility Operator to retain its queue position if such New Facility Operator requests an extension of the six-month period at least 5 Business Days prior to the expiration of such period. Such extension will be limited to one period of 30 Business Days and additional extensions shall not be granted. A New Facility Operator that does not maintain its queue position, but later satisfies the Data Adequacy Requirements, or the requirements of 18 C.F.R. § 2.20 if applicable, will be placed in a queue position comparable to that of other New Facility Operators that have satisfied the Data Adequacy Requirements, or the

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: March 11, 2004 Effective: June 1, 2001

- requirements of 18 C.F.R. § 2.20, as of the same date. At that time, the ISO and the Interconnecting PTO will determine whether a new System Impact Study must be performed based on the revised queue position of such New Facility Operator.
- (b) Upon satisfaction of the Data Adequacy Requirements, or the requirements of 18
 C.F.R. § 2.20 if applicable, each New Facility Operator, in order to maintain its queue position, must obtain a New Facility License within 15 months after satisfying the Data Adequacy Requirements. A New Facility Operator that does not obtain a New Facility License within the allowed time and does not maintain its queue position, but later obtains a New Facility License, will be placed in a queue position comparable to other New Facility Operators that have satisfied comparable milestones as of that date.
- (c) Any New Facility whose New Facility License or building permit expires or is rescinded will not maintain its queue position.
- (d) A New Facility Operator that has submitted a dispute under Article 13 of the ISO Tariff regarding any part of this Section 5.7 may request that the presiding judge, arbitrator, or mediator of the dispute suspend its obligation to meet milestones in order to maintain its queue position. In the event such a suspension is granted, the New Facility Operator must satisfy the missed milestones specified in this Section 5.7.4.4.1 within 30 calendar days of the date the decision on the dispute becomes final.

5.7.4.5 Coordination of Critical Protective Systems.

New Facility Operators shall coordinate with the ISO, Participating TOs and UDCs to ensure that a New Facility Operator's Critical Protective Systems, including relay systems, are installed and maintained in order to function on a coordinated and complementary basis with ISO Controlled Grid Critical Protective Systems and the protective systems of the Participating TOs and UDCs. The ISO and Participating TOs will make available all information necessary for a New Facility Operator to determine whether its Critical Protective Systems are compatible with

Issued by: Roger Smith, Senior Regulatory Counsel

those of the ISO, Participating TOs and UDCs. The ISO and New Facility Operators shall also coordinate with entities that own, operate or control facilities outside of the ISO Controlled Grid to ensure that a New Facility's Critical Protective Systems function on a coordinated and complementary basis with such entities Critical Protective Systems.

5.7.5 Cost Responsibility of New Facility Operators.

- (a) Each New Facility Operator shall pay the costs of required studies in accordance with Section 5.7.4.2 and the costs identified in this Section 5.7.5. The ISO and Interconnecting PTO will provide each New Facility Operator an estimate of its total cost responsibility under this Section. A New Facility Operator shall be responsible for the actual costs of all Direct Assignment Facilities and Reliability Upgrades necessitated by its Completed Interconnection Application. The Interconnecting PTO will provide each New Facility Operator a detailed record of the actual costs assessed to it under this Section. A New Facility Operator may request the Interconnecting PTO to provide any additional information reasonably necessary to audit the actual costs the New Facility Operator is assessed.
- (b) The ISO and Interconnecting PTO will process all Interconnection Applications, and determine the cost responsibility of each New Facility Operator based on the New Facility Operator's Completed Application Date or, if applicable, based on the queue position determined by the procedure described in Section 5.7.4.4.1(b). The ISO and Interconnecting PTO will process simultaneously all interconnection requests with the same Completed Application Date.
- (c) Each New Facility Operator shall pay the costs of planning, installing, operating and maintaining the following facilities: (i) Direct Assignment Facilities, and, if applicable, (ii) Reliability Upgrades. In addition, each New Facility Operator shall implement all

Issued by: Roger Smith, Senior Regulatory Counsel

Original Sheet No. 181N

existing operating procedures necessary to safely and reliably connect the New Facility

to the facilities of the Interconnecting PTO and to ensure the ISO Controlled Grid's

conformance with the ISO Grid Planning Criteria, and shall bear all costs of

implementing such operating procedures. The New Facility Operator shall be

responsible for the costs of Reliability Upgrades only if the necessary facilities are not

included in the ISO Controlled Grid Transmission Expansion Plan approved as of the

New Facility Operator's Completed Application Date, or the date for the installation of a

facility is advanced by the interconnection of the New Facility, in which case the New

Facility Operator shall be responsible only for the incremental costs associated with the

earlier installation of the facility.

(d) Each New Facility Operator may, at its own discretion, sponsor, pursuant to Section 3.2

of the ISO Tariff, any Delivery Upgrades.

5.7.5.1 Maintenance of Encumbrances.

No New Facility shall adversely affect the ability of the Interconnecting PTO to honor its

Encumbrances existing as of the time a New Facility submits its Interconnection Application to

the ISO. The Interconnecting PTO, in consultation with the ISO, shall identify any such adverse

effect on its Encumbrances in the System Impact Study performed under Section 5.7.4.2.1. To

the extent the Interconnecting PTO determines that the connection of the New Facility will have

an adverse effect on Encumbrances, the New Facility Operator shall mitigate such adverse

effect.

5.7.5.2 Settlement of Interconnection Costs.

Payment for Direct Assignment Facilities and Reliability Upgrades shall be made by the New

Facility Operator to the Interconnecting PTO pursuant to the terms of payment set forth in the

Interconnection Agreement between the parties.

Issued by: Roger Smith, Senior Regulatory Counsel

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION

FERC ELECTRIC TARIFF FIRST REPLACEMENT VOLUME NO. I Second Revised Sheet No. 182

Superseding First Revised Sheet No. 182

5.7.6 Energization.

Neither the ISO nor the Interconnecting PTO shall be obligated to energize, nor shall the New

Facility Operator be entitled to have its interconnection to the ISO Controlled Grid energized.

unless and until an Interconnection Agreement has been executed, or filed at FERC pursuant to

Section 5.7.4.3, and becomes effective and such New Facility Operator has demonstrated to

the ISO's reasonable satisfaction that it has complied with all of the requirements of this Section

5.7.

5.8 Recordkeeping; Information Sharing.

5.8.1 Requirements for Maintaining Records.

Participating Generators shall provide to the ISO such information and maintain such records

as are reasonably required by the ISO to plan the efficient use and maintain the reliability of the

ISO Controlled Grid.

5.8.2 **Providing Information to Generators.**

The ISO shall provide to any Participating Generator, upon its request, copies of any

operational assessments, studies or reports prepared by or for the ISO (unless such

assessments studies or reports are subject to confidentiality rights or any rule of law that

prohibits disclosure) concerning the operations of such Participating Generator's

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: March 11, 2004 Effective: June 1, 2001

Superseding Original Sheet No. 183

Generating Units, including, but not limited to, reports on major Generation Outages, available

transmission capacity, and Congestion.

5.8.3 Preparation of Reports on Major Incidents.

In preparing any report on a major incident the ISO shall have due regard to the views of any

Participating Generator involved or materially affected by such incident.

5.8.4 Sharing Information on Reliability of ISO Controlled Grid.

The ISO and each Participating Generator shall have the obligation to inform each other, as

promptly as possible, of any circumstance of which it becomes aware (including, but not limited

to, abnormal temperatures, storms, floods, earthquakes, and equipment depletions and

malfunctions and deviations from the Registered Data and operating characteristics) that is

reasonably likely to threaten the reliability of the ISO Controlled Grid or the integrity of the

Participating Generator's facilities. The ISO and each Participating Generator shall also inform

the other as promptly as possible of any incident of which it becomes aware (including, but not

limited to, equipment outages, over-loads or alarms) which, in the case of a Participating

Generator, is reasonably likely to threaten the reliability of the ISO Controlled Grid or, in the

case of the ISO, is reasonably likely to adversely affect the Participating Generator's facilities.

Such information shall be provided in a form and content which is reasonable in all the

circumstances and sufficient to provide timely warning to the other party of the potential impact.

5.9 Access Right.

A Participating Generator shall, at the request of the ISO and upon reasonable notice, provide

access to its facilities (including those relating to communications, telemetry and direct control

requirements) as necessary to permit the ISO or an ISO approved meter

Issued by: Roger Smith, Senior Regulatory Counsel

Issued on: May 11, 2001 Effective: May 29, 2001

Third Revised Sheet No. 184

Superseding Second Revised Sheet No. 184

inspector to perform such testing as is necessary (i) to test the accuracy of any meters upon

which the Participating Generator's compensation is based, or performance is measured, (ii) to

test the Participating Generator's compliance with any performance standards pursuant to

Section 5.4 of this ISO Tariff, or (iii) to obtain information relative to a Forced Outage.

5.10 Black Start Services.

5.10.1 All Participating Generators with Black Start Generating Units must satisfy technical

requirements specified by the ISO.

5.10.2 The ISO shall from time to time undertake performance tests, with or without prior

notification.

5.10.3 The ISO shall have the sole right to determine when the operation of Black Start

Generating Units is required to respond to conditions on the ISO Controlled Grid.

5.10.4 If the ISO has intervened in the market for Energy and/or Ancillary Services pursuant to

Section 2.3.2.3, the price paid by the ISO for Black Start services shall be sufficient to permit

the relevant Participating Generator to recover its costs over the period that it is directed to

operate by the ISO.

5.10.5 If a Black Start Generating Unit fails to achieve a Black Start when called upon by the

ISO, or fails to pass a performance test administered by the ISO, the Market Participant that

has contracted to supply Black Start service from the Generating Unit shall re-pay to the ISO

any reserve payment(s) that it has received since the administration of the last performance test

or the last occasion upon which it successfully achieved a Black Start when called upon by the

ISO, whichever is the shorter period.

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: March 11, 2004 Effective: May 29, 2001

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION FERC ELECTRIC TARIFF

Second Revised Sheet No. 184A

Superseding First Revised Sheet No. 184A

5.11 **Must-Offer Obligations**

5.11.1 Applicability

FIRST REPLACEMENT VOLUME NO. I

The requirements of Section 5.11 shall apply to (a) all Participating Generators, and (b) all

persons, regardless of whether the person is a "public utility" as defined in Section 201 of the

Federal Power Act, that own or control one or more non-hydroelectric Generating Units, System

Units or System Resources located in California from which energy or capacity is either: (i) sold

through any market operated by the ISO, or (ii) transmitted over the ISO Controlled Grid. Each

person described in this Section 5.11.1 is referred to in the ISO Tariff as a "Must-Offer

Generator." The requirements of this Section 5.11 shall apply to all non-hydroelectric

Generating Units located in California that are owned or controlled by a Must-Offer Generator.

5.11.2 Available Generation

For the purposes of this Section 5.11, a Must-Offer Generator's "Available Generation" from a

non-hydroelectric Generating Unit shall be: (a) the Generating Unit's maximum operating level

adjusted for any outages or reductions in capacity reported to the ISO in accordance with

Section 2.3 or 5.11.3 and for any limitations on the Generating Unit's operation under applicable

law, including contractual obligations, which shall be reported to the ISO, (b) minus the

Generating Unit's scheduled operating point as identified in the ISO's Final Hour-Ahead

Schedule, (c) minus the Generating Unit's capacity committed to provide Ancillary Services to

the ISO either through the ISO's Ancillary Services market or through self-provision by a

Scheduling Coordinator, and (d) minus the capacity of the Generating Unit committed to deliver

Energy or provide Operating Reserve to the Must-Offer Generator's Native Load.

5.11.3 Reporting Requirements for Non-Participating Generators

So that the ISO may determine the Available Generation of all Must-Offer Generators, Must-

Offer Generators that are not Participating Generators shall be required to file with the ISO, for

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: March 11, 2004 Effective: June 21, 2001 each non-hydroelectric Generating Unit located in California they own or control: (i) the Unit's minimum operating level; (ii) the Unit's maximum operating level; and (iii) the Unit's ramp rates at all operating levels; and (iv) such other information the ISO determines is necessary to determine available generation and to dispatch Must-Offer Generators. In addition, Must-Offer Generators that are not Participating Generators must, consistent with the notification obligations of Participating Generators and in order to comply with the intent of this Section 5.11, notify the ISO, as soon as practicable, of any Planned Maintenance Outages, Forced Outages, Force Majeure Event outages or any other reductions in their maximum operating levels.

5.11.4 Obligation To Offer Available Capacity

Except as set forth in Section 5.11.6, all Must-Offer Generators shall offer to sell in the ISO's Real Time Market for Imbalance Energy, in all hours, all their Available Generation as defined in Section 5.11.2.

5.11.5 Submission of Bids and Applicability of the Proxy Price

For each Operating Hour, Must-Offer Generators shall submit Supplemental Energy bids for all of their Available Generation to the ISO in accordance with Section 2.5.22.4. In addition, the ISO shall calculate for each gas-fired Must-Offer Generator, in accordance with Section 2.5.23, a Proxy Price for Energy.

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: May 11, 2004 Effective: July 11, 2004

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION

FERC ELECTRIC TARIFF

FIRST REPLACEMENT VOLUME NO. I

Substitute Tenth Revised Sheet No. 184C

Superseding Sub. Ninth Revised Sheet No. 184C

If a Must-Offer Generator fails to submit a Supplemental Energy bid for any portion of its

Available Generation for any Dispatch Interval, the unbid quantity of the Must-Offer Generator's

Available Generation will be deemed by the ISO to be bid at the Must-Offer Generator's Proxy

Price for that hour if: (i) the applicable Generating Unit is a gas-fired unit and (ii) the Must-Offer

Generator has provided the ISO with adequate data in compliance with Sections 2.5.23.3.3 and

5.11.3 for the applicable Generating Unit. For all other Generating Units owned or controlled by

a Must-Offer Generator, the unbid quantity of the Must-Offer Generator's Available Generation

will be deemed by the ISO to be bid and settled in accordance with Section 11.2. In order to

dispatch resources providing Imbalance Energy in proper merit order, the ISO will insert this

unbid quantity into the Must-Offer Generator's Supplemental Energy bid curve above any lower-

priced segments of the bid curve and below any higher-priced segments of the bid curve as

necessary to maintain a non-decreasing bid curve over the entire range of the Must-Offer

Generator's Available Generation.

5.11.6 Must-Offer Obligation Process

Must-Offer Generators may seek a waiver of the obligation to offer all available capacity, as set

forth in Section 5.11.4 of this ISO Tariff, for one or more of their Generating Units.

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: August 10, 2004 Effective: Upon Notice After September 6, 2003

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION

FERC ELECTRIC TARIFF

FIRST REPLACEMENT VOLUME NO. I

Substitute Third Revised Sheet No. 184C.01

Superseding Second Revised Sheet No. 184C.01

All Must-Offer Generators obligated under the must-offer obligation that have not submitted

Day-Ahead Energy Schedules will be deemed to have requested a waiver, either implicitly or

explicitly, of the obligation to offer all available capacity. If conditions permit, and at the ISO's

non-discriminatory and sole discretion, the ISO may grant waivers and allow a Must-Offer

Generator to remove one or more Generating Units from service.

Issued by: Charles F. Robinson, Vice President and General Counsel

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION

FERC ELECTRIC TARIFF

Substitute Fifth Revised Sheet No. 184D

FIRST REPLACEMENT VOLUME NO. I

Superseding Fourth Revised Sheet No. 184D

The hours for which waivers are not granted shall constitute Waiver Denial Periods. A Waiver Denial Period shall be extended as necessary to accommodate Generating Unit minimum up and down times. Units shall be on-line in real time during Waiver Denial Periods, or they will be in violation of the mustoffer obligation. Exceptions shall be allowed for verified forced outages. The ISO may revoke waivers as necessary due to outages, changes in Load forecasts, or changes in system conditions. The ISO shall determine which waiver(s) will be revoked, and shall notify the relevant Scheduling Coordinator(s). The ISO shall inform a Must-Offer Generator that its Waiver request has been approved, disapproved or revoked, and shall provide the Must-Offer Generator with the reason(s) for the decision, which reasons shall be non-discriminatory. The ISO will: (1) notify Must-Offer Generators of the ISO decisions on pending Waiver requests received no later than 10:00 a.m. (beginning of Hour Ending 11) no later than 11:30 a.m. (middle of Hour Ending 12) on the day before the operating day for which the Waivers are requested; (2) at any time but no later than 11:30 a.m. on the following day, notify Must-Offer Generators of the ISO decisions on Waiver requests that were submitted to the ISO after 10:00 a.m. (beginning of Hour Ending 11) on the day before; (3) end Waiver Denial Periods at any time; and (4) revoke Waivers at any time, while making best attempts to revoke a Waiver at least 90 minutes prior to the time a unit would be required to be on-line generating at its Pmin.

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: August 10, 2004 Effective: July 11, 2004

Ninth Revised Sheet No. 184D.01 Superseding Sub. Eighth Revised Sheet No. 184D.01

5.11.6.1 Recovery of Minimum Load Costs By Must-Offer Generators

5.11.6.1.1 Eligibility

FIRST REPLACEMENT VOLUME NO. I

Except as set forth below, Generating Units shall be eligible to recover Minimum Load Costs during Waiver Denial Periods. Units from Must-Offer Generators that incur Minimum Load Costs during hours for which the ISO has granted to them a waiver shall not be eligible to recover such costs for such hours. When a Must-Offer Generator has a Final Hour-Ahead Energy Schedule, the Must-Offer Generator shall not be eligible to recover Minimum Load Costs for any such hours within a Waiver Denial Period. When, on a 10-minute Settlement Interval basis, a Must-Offer Generator generating at minimum load in compliance with the mustoffer obligation, produces a quantity of Energy that varies from its minimum operating level by more than the Tolerance Band, the Must-Offer Generator shall not be eligible to recover Minimum Load Costs for any such Settlement Intervals during hours within a Waiver Denial Period. When, on a Settlement Interval basis, a Must-Offer Generator's resource produces a quantity of Energy above minimum load due to an ISO Dispatch Instruction, the Must-Offer Generator shall recover its Minimum Load Costs and its bid costs, as set forth in Section 11.2.4.1.1.1, for any such Settlement Intervals during hours within a Waiver Denial Period, irrespective of deviations outside of its Tolerance Band. Subject to the foregoing eligibility restrictions set forth in this section, the ISO shall guarantee recovery of the Minimum Load Costs of an otherwise eligible Must-Offer Generator for each Settlement Interval during hours within a Waiver Denial Period as follows: (1) First, ISO will pre-dispatch for real time the minimum load Energy from Must-Offer Generators that have been denied waivers for each hour within a Waiver Denial Period; (2) This minimum load Energy will be accounted as Instructed

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: November 24, 2004 Effective: Upon Notice After September 6, 2003

Imbalance Energy for each Settlement Interval within the relevant hour and be settled at the Resource-Specific Settlement Interval Ex Post Price; (3) To the extent the Instructed Imbalance Energy payments are not sufficient to cover the generator's Minimum Load Cost as defined in Section 5.11.6.1.2 of this Tariff, the generator will also receive an uplift payment for its Minimum Load Cost compensation for the relevant eligible Settlement Intervals of hours during the Waiver Denial Period that the Generating Unit runs at minimum load in compliance with the must-offer obligation; and (4) To the extent the Generator is dispatched for real time Imbalance Energy above its minimum load for any Dispatch Interval within an hour during the Waiver Denial Period, the Generator will be eligible for Bid Cost Recovery, as set forth in Section 11.2.4.1.1.1.

5.11.6.1.1.1 Payments for Imbalance Energy Above the Minimum Operating Level for Generating Units Eligible to Be Paid Minimum Load Costs

When, on a Settlement Interval basis, a Must-Offer Generator's Generating Unit produces a quantity of Energy above the Generating Unit's minimum operating level due to an ISO Dispatch Instruction, the Must-Offer Generator shall recover its Minimum Load Costs and its bid costs, based on the ISO's instruction, as set forth in Section 11.2.4.1.1.1, for any such Settlement Intervals during hours within a Waiver Denial Period, irrespective of deviations outside of its Tolerance Band.

5.11.6.1.1.2 Payments for Imbalance Energy for the Minimum Operating Level for Generating Units Eligible to Be Paid Minimum Load Costs

A Generating Unit operating at or near its operating level during a Waiver Denial Period either (1) without a forward Schedule for its minimum operating level Energy or (2) with a Schedule to a special-purpose Demand ID for the sole purpose of Scheduling the minimum operating level Energy shall be paid, in addition to being paid its Minimum Load Costs subject to eligibility as set forth in Section 5.11.6.1.1, an amount equal to the Resource Specific Settlement Interval Ex Post Price times the amount of Energy actually delivered.

5.11.6.1.2 Minimum Load Costs

The Minimum Load Costs shall be calculated as the sum, for all eligible hours in the Waiver Denial Period and Settlement Periods in which the unit generated in response to an ISO Dispatch Instruction,

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: September 7, 2004 Effective: Upon Notice After September 6, 2003

Original Sheet No. 184E.01

Superseding Original Sheet No. 184E.01

of: 1) the product of the unit's average heat rate (as determined by the ISO from the data provided in accordance with Section 2.5.23.3.3) at the unit's relevant minimum operating level or Dispatchable minimum operating level as set forth in the ISO Master File or as amended through notification to the ISO via SLIC and the gas price 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; and 2) the product of the unit's relevant minimum operating level or Dispatchable minimum operating level as set forth in the ISO Master File or as amended through notification to the ISO via SLIC; and \$6.00/MWh.

5.11.6.1.3 **Invoicing Minimum Load Costs**

The ISO shall determine each Scheduling Coordinator's Minimum Load Costs and make payments for these costs as part of the ISO's market settlement process. Scheduling Coordinators may

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: September 7, 2004 Effective: Upon Notice After September 6, 2003 FIRST REPLACEMENT VOLUME NO. I

submit to the ISO data detailing the hours for which they are eligible to recover Minimum Load Costs. Scheduling Coordinators who elect to submit data on hours they are eligible to recover Minimum Load Costs must: 1) use the Minimum Load Cost invoice template posted on the ISO Home Page, and 2) submit the invoice on or before fifteen (15) Business Days following the last Trading Day in the month in which such costs were incurred, except that Scheduling Coordinators seeking reimbursement for Minimum Load Costs incurred between May 29, 2001,

5.11.6.1.4 Allocation of Minimum Load Costs

and June 30, 2002 must submit their data to the ISO by August 5, 2002.

For each Settlement Interval, the ISO shall determine that the Minimum Load Costs for each unit operating during a Waiver Denial Period are due to (1) local reliability requirements, (2) zonal requirements, or (3) Control Area-wide requirements. For each such month, the ISO shall sum the Settlement Interval Minimum Load Costs and shall allocate those costs as follows:

if the Generating Unit was operating to meet local reliability requirements, the incremental locational cost shall be allocated to the Participating TO in whose PTO Service Territory the Generating Unit is located, or, where the Generating Unit is located outside the PTO Service Territory of any Participating TO, to the Participating TO or Participating TOs whose PTO Service Territory or Territories are contiguous to the Service Area in which the Generating Unit is located, in proportion to the benefits that each such Participating TO receives, as determined by the ISO. Where the costs allocated under this section are allocated to two or more Participating TOs, the ISO shall file the allocation under Section 205 of the Federal Power Act. For the purposes of this section, the incremental locational cost shall be the additional costs associated with committing and operating a particular unit or units to meet a local reliability requirement over the costs of a less expensive unit or units that would have been committed and operated absent the local reliability requirement. If a unit is committed in real-time for local reliability, its Minimum Load costs shall be considered incremental locational costs.

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: May 11, 2004 Effective: Upon Notice by the ISO

Original Sheet No. 184F.01

Costs allocated under this part (1) shall be considered Reliability Services Costs.

- 2) if the Generating Unit was operating due to Inter-Zonal Congestion, the Minimum Load Costs shall be allocated on a monthly basis to each Scheduling Coordinator in the constrained Zone based on the ratio of that Scheduling Coordinator's monthly Demand to the sum of all Scheduling Coordinator's monthly Demand in that Zone;
- 3) if the Generating Unit was operating to satisfy an ISO Control Area-wide need, the ISO shall allocate the Minimum Load Costs in the following way:
 - a. first, to the monthly absolute total of all Net Negative Uninstructed Deviation (determined for each Settlement Interval based on Final Hour-Ahead Schedules) at a per-MWh rate that shall not exceed a figure that is determined by dividing the total Minimum Load Cost in that month by the sum of the minimum loads for Generating Units operating under Waiver Denial Periods in that month;
 - b. finally, all remaining costs not allocated per (a) shall be allocated to each
 Scheduling Coordinator in proportion to the sum of that Scheduling
 Coordinator's monthly Load and Demand within California outside the ISO
 Control Area that is served by exports to the monthly sum of the ISO Control
 Area Gross Load and the projected Demand within California outside the ISO
 Control Area that is served by exports from the ISO Control Area of all
 Scheduling Coordinators.

5.11.6.1.5 Payment Of Available Capacity Under The Must-Offer Obligation

Available capacity that is required to be offered to the Real Time Market, if dispatched by the ISO, shall be settled as follows: the actual amount of the dispatched Energy shall be settled at the applicable Instructed Imbalance Energy Market Clearing Price. Minimum Load Cost compensation shall be paid for all otherwise eligible hours within the Waiver Denial Period, as

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: May 11, 2004 Effective: Upon Notice by the ISO

Original Sheet No. 184F.02

defined in Section 5.11.6.1.1, that the unit generated above minimum load in compliance with ISO Dispatch Instructions.

5.11.6.2 Criteria for Issuing Must-Offer Waivers

The ISO shall grant waivers so as to: 1) provide sufficient on-line generating capacity to meet operating reserve requirements; and 2) account for other physical operating constraints, including Generating Unit minimum up and down times. The ISO shall grant, deny or revoke waivers using a security-constrained unit commitment software application to minimize start-up and Minimum Load Costs.

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: May 11, 2004 Effective: 10 Days After Notice by the ISO

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION

FERC ELECTRIC TARIFF

Fourth Revised Sheet No. 184G

FIRST REPLACEMENT VOLUME NO. I

Superseding Third Revised Sheet No. 184G

- 5.12 [Not Used]
- 5.13 Energy Bids.
- 5.13.1 Energy Bid Definition.

A single Energy Bid curve per resource per hour shall be used in: (a) the real-time Hourly Pre-Dispatch as set forth in Dispatch Protocol 8.6.3, and (b) Dispatch in the Real Time Markets. A corresponding operational ramp rate as provided for in SBP Section 6.5 shall be submitted along with the single Energy Bid curve and shall be used in determination of Dispatch Instructions pursuant to Section 2.5.22.6.1(c).

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: March 11, 2004 Effective: Upon Notice After September 6, 2003

FIRST REPLACEMENT VOLUME NO. I

The Energy Bid shall be a staircase price (\$/MWh) versus quantity (MW) curve of up to 10 segments. The Energy Bid shall be submitted to the real-time Imbalance Energy market using the Supplemental Energy Bid template. The Energy Bid curve shall be monotonically increasing, i.e., the price of a subsequent segment shall be greater than the price of a previous segment. Subject to the foregoing, sellers may increase or decrease bids in the ISO Real Time Market for capacity associated with those parts of the bid curve that were not accepted in or before the Hour-Ahead Market. For capacity associated with those parts of the bid curve previously accepted in or before the Hour-Ahead Market, sellers may only submit lower bids in subsequent markets. Each Forbidden Operating Region must be represented by only one bid segment.

5.13.2 Energy Bid Submission.

5.13.2.1 Real Time Market. Bids shall be submitted for use in the real-time Hourly Pre-Dispatch in DP 8.6.3(j) and the Real-Time Economic Dispatch up to sixty (60) minutes prior to the Operating Hour. Resources required to offer their Available Generation in accordance with Section 5.11.4 shall be required to submit Energy Bids for 1) all of their Available Generation and 2) any Ancillary Services capacity awarded or self-provided in the Day-Ahead or Hour-Ahead Ancillary Services markets. In the absence of submitted bids, default bids will be used for resources required to offer their Available Generation in accordance with Section 5.11.4. Resources not required to offer their Available Generation in accordance with Section 5.11.4 that were awarded or self-provided Ancillary Services capacity must submit an Energy Bid for no less than the amount of awarded or self-provided Ancillary Services capacity. Resources not required to offer their Available Generation in accordance with Section 5.11.4 may voluntarily submit Energy Bids. Submitted Energy Bids shall be subject to the Damage Control Bid Cap as set forth in Section 28.1 and to the Mitigation Measures set forth in Appendix A to the Market Monitoring and Information Protocol.

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: March 11, 2004 Effective: Upon Notice After September 6, 2003

Third Revised Sheet No. 1841 Superseding Second Revised Sheet No. 1841

S.13.2.2 Real-Time Energy Bid Partition. The portion of the single Energy Bid that corresponds to the high end of the resource's operating range, shall be allocated to any awarded or self-provided Ancillary Services in the following order from higher to lower capacity: (a) Regulation Up; (b) Spinning Reserve; (c) Non-Spinning Reserve; and (d) Replacement Reserve. For resources providing Regulation Up, the upper regulating limit shall be used if it is lower than the highest operating limit. The remaining portion of the Energy Bid (i.e. that portion not associated with capacity committed to provide Ancillary Services) shall constitute a Bid to provide Supplemental Energy.

5.13.3 Requirement to Submit Energy Bids For Awarded or Self-Provided Ancillary Services Capacity

Scheduling Coordinators for resources that have been awarded or self-provide Regulation Up, Spinning Reserve, Non-Spinning Reserve or Replacement Reserve capacity must submit a Supplemental Energy bid for at least all the awarded or self-provided Ancillary Services capacity. To the extent a Supplemental Energy bid is not so submitted for a gas-fired resource, the ISO shall calculate a Supplemental Energy bid in accordance with Section 2.5.23.3.4 and insert that bid into the real-time Imbalance Energy market. To the extent a Supplemental Energy bid is not so submitted for a non-gas-fired resource, the ISO shall insert a bid of \$0/MWh into the real-time Imbalance Energy market.

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: March 11, 2004 Effective: October 30, 2002

Original Sheet No. 185

6. TRANSMISSION SYSTEM INFORMATION AND COMMUNICATIONS.

6.1 WEnet.

6.1.1 The ISO shall engage the services of an Internet Service Provider (ISP) to establish,

implement and operate WEnet as a wide-band, wide-area backbone which is functionally

similar to the Internet.

6.1.2 The ISO shall provide non-discriminatory access to information concerning the status of

the ISO Controlled Grid by posting that information on the public access sites on WEnet.

6.1.2.1 WEnet will provide an interface for data exchange between the ISO and Scheduling

Coordinators who shall each have individually assigned login accounts on WEnet.

6.1.2.2 The ISO shall provide public information over WEnet which shall include, at a minimum,

but not limited to:

6.1.2.2.1 Advisory Information: The following may be provided over such time scales as the

ISO may in its discretion decide:

(a) Future planned transmission Outages;

(b) Generator Meter Multipliers.

6.1.2.2.2 Day-Ahead and Hour-Ahead Information:

(a) Date:

(b) Hour;

(c) Total forecast Demand by UDC;

Issued by: Roger Smith, Senior Regulatory Counsel

Issued on: October 13, 2000 Effective: October 13, 2000

FIRST REPLACEMENT VOLUME NO. I

First Revised Sheet No. 186

Superseding Original Sheet No. 186

(d) Inter-Zonal Congestion price per Congested path; Total Regulation and Reserve

service capacity reservation cost by Zone;

(e) Total capacity of Inter-Zonal Interfaces; and

(f) Available capacity of Inter-Zonal Interfaces.

6.1.2.2.3 Ex Post Information:

(a) Date;

(b) Hour; and

(c) Hourly Ex Post Price.

6.1.2.3 WEnet shall be used by the ISO to post Usage Charges for Inter-Zonal Interfaces within

the ISO Controlled Grid.

6.1.2.4 WEnet shall serve as a bulletin board to enable Market Participants to inform one

another of scheduling changes and trades made.

6.1.2.5 WEnet may be used by the ISO to communicate operating orders to the Scheduling

Coordinators and other Market Participants, both in advance of actual operation and in real

time. Such orders may include but are not limited to:

(a) Notifying Scheduling Coordinators and other Market Participants to be on call to provide

Non-Spinning Reserve and Replacement Reserves and Black Start;

(b) Issuing start-up instructions;

(c) Stating the amount of Spinning Reserves to be carried;

(d) Requesting specific Ramping patterns;

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: March 11, 2004 Effective: October 13, 2000

FIRST REPLACEMENT VOLUME NO. I

First Revised Sheet No. 187

Superseding Original Sheet No. 187

(e) Indicating which Scheduling Coordinators and other Market Participants are to provide

Regulation;

(f) Specifying the minimum amount of unloaded capacity that must be maintained in order

to meet Regulation Requirements;

(g) Issuing shut-down instructions; and

(h) Specifying the voltage level and reactive reserve each Market Participant must

maintain.

6.1.2.6 WEnet shall be used by the ISO to provide information to Market Participants regarding

the ISO Controlled Grid. Such information may include but is not limited to:

(a) Voltage control parameters;

(b) ISO historical data for Congestion;

(c) Forecasts of Usage Charges; and

(d) Generation Meter Multipliers to support seven (7) day advance submission of

Schedules by Scheduling Coordinators. Additional Generation Meter Multipliers may

be published for different seasons and loading patterns.

6.2 Reliable Operation of the WEnet.

6.2.1 Market Participants shall arrange access to WEnet through the Internet Service

Provider.

.2.2 The ISO shall arrange for the Internet Service Provider to provide a pathway for public

Internet connectivity through the WEnet backbone to accommodate users other than Market

Participants without the need for a separate, dedicated user data link. This public Internet

connection may provide a reduced level of data exchange and reduced information concerning

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: March 11, 2004 Effective: October 13, 2000

FIRST REPLACEMENT VOLUME NO. I

Original Sheet No. 188

Effective: October 13, 2000

the reliability and performance of the ISO Controlled Grid when compared to that provided to

Market Participants through dedicated user data links.

6.3 Information to be Provided By Connected Entities to the ISO.

6.3.1 Each Participating TO and Connected Entity shall provide to the ISO:

6.3.1.1 A single and an alternative telephone number and a single and an alternative facsimile

number by which the ISO may contact 24 hours a day a representative of the Participating TO

or Connected Entity in, or in relation to, a System Emergency;

6.3.1.2 The names or titles of the Participating TO's or Connected Entity's representatives who

may be contacted at such telephone and facsimile numbers.

6.3.2 Each representative specified pursuant to Section 6.3.1 shall be a person having

appropriate experience, qualification, authority, responsibility and accountability within the

Participating TO or the Connected Entity to act as the primary contact for the ISO in the event of

a System Emergency.

6.3.3 The details required under this Section 6.3 shall at all times be maintained up to date

and the Participating TO and the Connected Entity shall notify the ISO of any changes promptly

and as far in advance as possible.

6.4 Failure or Corruption of the WEnet.

The ISO shall, in consultation with Scheduling Coordinators, make provision for procedures to

be implemented in the event of a total or partial failure of WEnet or the material corruption of

data on WEnet and include these procedures in the ISO Protocols. The ISO shall ensure that

such alternative communications systems are tested periodically.

Issued by: Roger Smith, Senior Regulatory Counsel

Issued on: October 13, 2000

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION

FERC ELECTRIC TARIFF

FIRST REPLACEMENT VOLUME NO. I

Substitute Second Revised Sheet No. 189

Superseding First Revised Sheet No. 189

6.5 Confidentiality.

All information posted on WEnet shall be subject to the confidentiality obligations contained in

Section 20.3 of this ISO Tariff.

6.6 Standards of Conduct.

The ISO and all Market Participants shall comply with their obligations, to the extent applicable,

under the standards of conduct set out in 18 C.F.R. §37.

7. TRANSMISSION PRICING.

7.1 Access Charges.

All Market Participants withdrawing Energy from the ISO Controlled Grid shall pay Access

Charges in accordance with this Section 7.1 and Appendix F, Schedule 3. Prior to the transition

date determined under Section 4 of Schedule 3 to Appendix F, the Access Charge for each

Participating TO shall be determined in accordance with the principles set forth in this Section

7.1 and in Section 5 of the TO Tariff. The Access Charge shall comprise two components,

which together shall be designed to recover each Participating TO's Transmission Revenue

Requirement. The first component shall be the annual authorized revenue requirement

associated with the transmission facilities and Entitlements turned over to the Operational

Control of the ISO by a Participating TO approved by FERC. The second component shall be

based on the Transmission Revenue Balancing Account (TRBA), which shall be designed to

flow through to the Participating TO's Transmission Revenue Credits calculated in accordance

with Section 5 of the TO Tariff and other credits identified in Sections 6 and 8 of Schedule 3 in

Appendix F of the ISO Tariff.

Commencing on the transition date determined under Section 4 of Schedule 3 to

Appendix F, the Access Charges shall be paid by any UDC or MSS Operator that is serving

Gross Load in a PTO Service Territory,

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: May 21, 2004 Effective: May 8, 2004

Superseding Second Revised Sheet No. 190

and shall consist, where applicable, of a High Voltage Access Charge, a Transition Charge and a Low Voltage Access Charge. High Voltage Access Charges and Low Voltage Access Charges shall each comprise two components, which together shall be designed to recover each Participating TO's High Voltage Transmission Revenue Requirement and Low Voltage Transmission Revenue Requirement, as applicable. The first component shall be based on the annual authorized Transmission Revenue Requirement associated with the high voltage or low voltage, as applicable, transmission facilities and Entitlements turned over to the ISO Operational Control by a Participating TO. The second component shall be the Transmission Revenue Balancing Account (TRBA), which shall be designed to flow through the Participating TO's Transmission Revenue Credits associated with the high voltage or low voltage, as applicable, transmission facilities and Entitlements and calculated in accordance with Section 5 of the TO Tariff and other credits identified in Section 6 and 8 of Schedule 3 of Appendix F of the ISO Tariff. Each Participating TO shall provide in its TO Tariff filing with FERC an appendix to such filing that states the Participating TO's High Voltage Transmission Revenue Requirement, its Low Voltage Transmission Revenue Requirement (if applicable) and its Gross Load used in developing the rate. The allocation of each Participating TO's Transmission Revenue Requirement between the High Voltage Transmission Revenue Requirement and the Low Voltage Transmission Revenue Requirement shall be undertaken in accordance with Section 11 of Schedule 3 of Appendix F. To the extent necessary, each Participating TO shall make conforming changes to its TO Tariff.

The applicable High Voltage Access Charge and the Transition Charge shall be paid to the ISO by each UDC and MSS Operator based on its Gross Load connected to a High Voltage Transmission Facility in a PTO Service Territory,

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: May 21, 2004 Effective: May 8, 2004 FIRST REPLACEMENT VOLUME NO. I

Superseding Original Sheet No. 190A

Effective: May 8, 2004

either directly or through intervening distribution facilities, but not through a Low Voltage

Transmission Facility. The applicable High Voltage Access Charge, the Transition Charge and

the Low Voltage Access Charge for the applicable Participating TO shall be paid by each UDC

and MSS Operator based on its Gross Load in the PTO Service Territory. The applicable High

Voltage Access Charge and Transition Charge shall be assessed by the ISO as a charge for

transmission service under this ISO Tariff, shall be determined in accordance with Schedule 3

of Appendix F, and shall include all applicable components of the High Voltage Access Charge

and Transition Charge set forth therein.

The Low Voltage Access Charge for each Participating TO is set forth in that

Participating TO's TO Tariff. Each Participating TO shall charge for and collect the Low Voltage

Access Charge, as provided in its TO Tariff. If a Participating TO is using the Low Voltage

Transmission Facilities of another Participating TO, such Participating TO shall also be

assessed the Low Voltage Access Charge of the other Participating TO by such other

Participating TO. The ISO shall provide to the applicable Participating TO a statement of the

amount of Energy delivered to each UDC and MSS Operator serving Gross Load that utilizes

the Low Voltage Transmission Facilities of that Participating TO on a monthly basis. If a UDC

or MSS Operator that is serving Gross Load in a PTO Service Territory has Existing Rights to

use another Participating TO's Low Voltage Transmission Facilities, such entity shall not be

charged the Low Voltage Access Charge for delivery of Energy to Gross Load for deliveries

using the Existing Rights. Each Participating TO shall recover Standby Transmission

Revenues directly from the Standby Service Customers of that Participating TO through its

applicable retail rates.

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: May 21, 2004

First Revised Sheet No. 191 Superseding Original Sheet No. 191

7.1.1 Publicly Owned Electric Utilities Access Charge

Local Publicly Owned Electric Utilities whose transmission facilities are under ISO Operational Control shall file with the FERC their proposed High Voltage Transmission Revenue Requirements, and any proposed changes thereto, under procedures determined by the FERC to be applicable to such filings and shall give notice to the ISO and to all Scheduling Coordinators of any such filing. A prospective New Participating TO that is a Local Publicly Owned Electric Utility shall submit its first proposed High Voltage Transmission Revenue Requirement to the FERC and the ISO at the time the Local Publicly Owned Electric Utility submits its application to become a New Participating TO in accordance with the Transmission Control Agreement. Federal power marketing agencies whose transmission facilities are under ISO Operational Control shall develop their High Voltage Transmission Revenue Requirement pursuant to applicable federal laws and regulations.

Issued by: Charles F. Robinson, Vice President and General Counsel

Superseding Second Revised Sheet No. 192

The procedures for public participation in a federal power marketing agency's ratemaking process are posted on the federal power marketing agency's website. Each federal power marketing agency shall also post on its 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. At the time the federal power marketing agency submits its application to become a New Participating TO in accordance with the Transmission Control Agreement, it shall submit its first proposed High Voltage Transmission Revenue Requirement to the FERC and the ISO.

7.1.2 High Voltage Access Charge and Transition Charge Settlement. UDCs and MSS Operators serving Gross Load in a PTO Service Territory shall be charged on a monthly basis, in arrears, the applicable High Voltage Access Charge and Transition Charge. The High Voltage Access Charge and Transition Charge for a billing period is calculated by the ISO as the product of the applicable High Voltage Access Charge or Transition Charge, as applicable, and Gross Load connected to the facilities of the UDC and MSS Operator in the PTO Service Territory. The High Voltage Access Charge and Transition Charge are determined in accordance with Schedule 3 of Appendix F of the ISO Tariff. These rates may be adjusted from time to time in accordance with Schedule 3 to Appendix F. During the 10-year transition period described in Section 4 of Schedule 3 of Appendix F of the ISO Tariff, 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 the 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.

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: May 21, 2004 Effective: May 8, 2004

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

The ISO shall collect and pay, on a monthly basis, to Participating TOs all High Voltage Access Charge and Transition Charge revenues at the same time as other ISO charges and payments are settled. High Voltage Access Charge revenues received with respect to the High Voltage Access Charge and the Transition Charge shall be distributed to Participating TOs in accordance with Appendix F, Schedule 3, Section 10.

7.1.3.1 [Not Used]

FIRST REPLACEMENT VOLUME NO. I

- 7.1.3.2 [Not Used]
- 7.1.3.3 [Not Used]
- 7.1.3.4 [Not Used]
- 7.1.3.5 [Not Used]

7.1.4 Wheeling.

Any Scheduling Coordinator or other such entity scheduling a Wheeling transaction shall pay to the ISO the product of (i) the applicable Wheeling Access Charge, and (ii) the total hourly schedules of Wheeling in kilowatt-hours for each month at each Scheduling Point associated with that transaction. Schedules that include Wheeling transactions shall be subject to the Congestion Management procedures and protocols in accordance with Sections 7.2 and 7.3.

7.1.4.1 Wheeling Access Charge. The Wheeling Access Charge shall be determined by the TAC Area and transmission ownership or Entitlement, less all Encumbrances, associated with the Scheduling Point at which the Energy exits the ISO Controlled Grid. The Wheeling

Issued by: Charles F. Robinson, Vice President and General Counsel

FIRST REPLACEMENT VOLUME NO. I

Third Revised Sheet No. 194

Superseding Second Revised Sheet No. 194

Access Charge for Scheduling Points contained within a single TAC Area, that are not joint facilities, shall be equal to the High Voltage Access Charge for the applicable TAC Area in accordance with Section 3 of Appendix F plus the applicable Low Voltage Access Charge if the Scheduling Point is on a Low Voltage Transmission Facility. 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.

7.1.4.2 Wheeling Over Joint Facilities. To the extent that more than one Participating TO owns or has Entitlement to transmission capacity, less all Encumbrances, exiting the ISO Controlled Grid at a Scheduling Point, the Scheduling Coordinator shall pay the ISO each month a rate for Wheeling at that Scheduling Point which reflects an average of the Wheeling Access Charge applicable to those Participating TOs, weighted by the relative share of such ownership or Entitlement to transmission capacity, less all Encumbrances, at such Scheduling Point. If the Scheduling Point is located at High Voltage Transmission Facilities, the Wheeling Access Charge will consist of a High Voltage Wheeling Access Charge component.

Additionally, if the Scheduling Point is located at Low Voltage Transmission Facilities, the applicable Low Voltage Wheeling Access Charge component will be added to the Wheeling Access Charge. The methodology for developing the weighted average rate for Wheeling at each Scheduling Point is set forth in Appendix H.

7.1.4.3 Disbursement of Wheeling Revenues. The ISO shall collect and pay to Participating TOs and other entities as provided in Section 3.2.7.3 all Wheeling revenues at the same time as other ISO charges and payments are settled. The ISO shall provide to the applicable Participating TO and other entities as provided in Section 3.2.7.3 a statement of the aggregate amount of Energy delivered to each Scheduling Coordinator using such Participating TO's Scheduling Point to allow for calculation of Wheeling revenue and auditing of disbursements. Wheeling revenues shall be disbursed by the ISO based on the following:

Issued by: Charles F. Robinson, Vice President and General Counsel

FIRST REPLACEMENT VOLUME NO. I

7.1.4.3.1 Scheduling Point with All Participating TOs in the Same TAC Area: With respect to revenues received for the payment of High Voltage Wheeling Access Charges for Wheeling to a Scheduling Point at which all of the facilities and Entitlements, less all Encumbrances, are owned by Participating TOs in the same TAC Area, Wheeling revenues shall be disbursed to each such Participating TO based on the ratio of each Participating TO's High Voltage Transmission Revenue Requirement to the sum of all such Participating TO's High Voltage Transmission Revenue Requirements. If the Scheduling Point is located at a Low Voltage Facility, revenues received with respect to Low Voltage Wheeling Access Charges for Wheeling to that Scheduling Point shall be disbursed to the Participating TOs that own facilities and Entitlements making up the Scheduling Point in proportion to their Low Voltage Transmission Revenue Requirements. Additionally, if a Participating TO has a transmission upgrade or addition that was funded by a Project Sponsor, the Wheeling revenue allocated to such Participating TO shall be disbursed as provided in Section 3.2.7.3.

7.1.4.3.2 Scheduling Point without All Participating TOs in the Same TAC Area:

With respect to revenues received for the payment of Wheeling Access Charges for Wheeling to a Scheduling Point at which the facilities and Entitlements, less all Encumbrances, are owned by Participating TOs in different TAC Areas, Wheeling revenues shall be disbursed to such Participating TOs as follows. First, the revenues shall be allocated between such TAC Areas in proportion to the ownership and Entitlements of transmission capacity, less all Encumbrances, at the Scheduling Point of the Participating TOs in each such TAC Area. Second, the revenues thus allocated to each TAC Area shall be disbursed among the Participating TOs in the TAC Area in accordance with Section 7.1.4.3.1.

7.1.4.4 Information Required from Scheduling Coordinators. Scheduling
Coordinators that schedule Wheeling Out or Wheeling Through transactions to a Bulk Supply
Point, or other point of interconnection between the ISO Controlled Grid and the transmission

Issued by: Charles F. Robinson, Vice President and General Counsel

First Revised Sheet No. 196 Superseding Original Sheet No. 196

system of a Non-Participating TO, that are located within the ISO Control Area, shall provide the ISO, within 5 days from the end of the calendar month to which the relevant Trading Day relates, details of such transactions scheduled by them (other than transactions scheduled pursuant to Existing Contracts) sorted by Bulk Supply Point or point of interconnection for each Settlement Period (including kWh scheduled). The ISO shall use such information, which may be subject to review by the ISO, to settle Wheeling Access Charges and payments. The ISO shall publish a list of the Bulk Supply Points or interconnection points to which this Section 7.1.4.4 applies together with details of the electronic form and procedure to be used by Scheduling Coordinators to submit the required information on the ISO "Home Page".

Issued by: Charles F. Robinson, Vice President and General Counsel

Original Sheet No. 197

7.1.5 Unbundled Retail Transmission Rates.

The Access Charge for unbundled retail transmission service provided to End-Users by a FERC-jurisdictional electric utility Participating TO shall be determined by the FERC and submitted to the ISO for information only. For a Local Publicly Owned Electric Utility, retail transmission service rates shall be determined by the Local Regulatory Authority and submitted to the ISO for information only.

7.1.6 [Not Used]

7.1.6.1 Tracking Account. If the Access Charge rate methodology implemented pursuant to Section 7.1 results in Access Charge rates for any Participating TO which are different from those in effect prior to the ISO Operations Date, an amount equal to the difference between the new rates and the prior rates for the remainder of the period, if any, during which a cost recovery plan established pursuant to Section 368 of the California Public Utilities Code (as added by AB 1890) is in effect for such Participating TO shall be recorded in a tracking account. The balance of that tracking account will be recovered from customers and paid to the appropriate Participating TO after termination of the cost recovery plan set forth in Section 368 of California Public Utilities Code (as added by AB 1890). The recovery and payments shall be based on an amortization period not exceeding three years in the case of electric corporations regulated by the CPUC or five years for Local Publicly Owned Electric Utilities.

Issued by: Roger Smith, Senior Regulatory Counsel

Issued on: October 13, 2000 Effective: October 13, 2000

FIRST REPLACEMENT VOLUME NO. I

Second Revised Sheet No. 198 Superseding First Revised Sheet No. 198

7.1.6.2 Addition of New Facilities After ISO Implementation. The costs of transmission

facilities placed in service after the ISO Operations Date shall be recovered consistent with the

cost recovery determinations made pursuant to Section 3.2.7.

7.1.6.3 Effect on Tax-Exempt Status. Nothing in this Section shall compel any Participating

TO to violate any restrictions applicable to facilities financed with tax-exempt bonds or

contractual restrictions and covenants regarding the use of transmission facilities.

7.2 Zonal Congestion Management.

7.2.1 The ISO Will Perform Congestion Management.

7.2.1.1 Transmission Congestion. Congestion occurs when there is insufficient

transfer capacity to simultaneously implement all of the Preferred Schedules that Scheduling

Coordinators submit to the ISO.

7.2.1.2 Zone-Based Approach. The ISO will use a Zone-based approach to manage

Congestion. A Zone is a portion of the ISO Controlled Grid within which Congestion is

expected to occur infrequently or have relatively low Congestion Management costs. Inter-

Zonal Interfaces consist of transmission facilities that are expected to have relatively high

Congestion Management costs. For these interfaces, allocation of usage based on the value

placed on these interfaces by the Scheduling Coordinators will increase efficient use of the

ISO Controlled Grid.

7.2.1.3 Types of Congestion. Congestion that occurs on Inter-Zonal Interfaces is referred to

as "Inter-Zonal Congestion." Congestion that occurs due to transmission system Constraints

within a Zone is referred to as "Intra-Zonal Congestion."

Issued by: Charles F. Robinson, Senior Regulatory Counsel

Superseding Second Revised Sheet No. 199

7.2.1.4 Elimination of Potential Transmission Congestion. The ISO's Day-Ahead and

Hour-Ahead scheduling procedures will eliminate potential Inter-Zonal Congestion by:

7.2.1.4.1 scheduling the use of Inter-Zonal Interfaces by the Scheduling Coordinators who

place the highest value on those rights, based on the Adjustment Bids that are submitted by

Scheduling Coordinators; and

7.2.1.4.2 rescheduling Scheduling Coordinators' resources (but so that Intra-Zonal

transmission limits are not violated) using the Adjustment Bids that are submitted by Scheduling

Coordinators.

7.2.1.5 Elimination of Real-Time Inter-Zonal Congestion. In its management of Inter-

Zonal Congestion in real time, the ISO will issue Dispatch Instructions as necessary to relieve

Inter-Zonal Congestion by Dispatching Generation or Demand, as necessary, based on the

Energy Bids in accordance with Dispatch Protocol Section 8.3.

7.2.2 General Requirements for the ISO's Congestion Management. The ISO's

Congestion Management in the Day-Ahead Market and Hour-Ahead Market shall:

7.2.2.1 only operate if the Scheduling Coordinators do not eliminate Congestion voluntarily;

7.2.2.2 adjust the Schedules submitted by Scheduling Coordinators only as necessary to

alleviate Congestion;

7.2.2.3 maintain separation between the resource portfolios of different Scheduling

Coordinators, by not arranging any trades between Scheduling Coordinators as part of the

Inter-Zonal Congestion Management process;

FIRST REPLACEMENT VOLUME NO. I

Original Sheet No. 200

7.2.2.4 for Inter-Zonal Congestion Management, suggest, but not require, rescheduling within

Scheduling Coordinators' portfolios of Schedules to produce a feasible Schedule by the

conclusion of the scheduling procedure;

7.2.2.5 [Not Used]

7.2.2.6 publish information and, if requested by Scheduling Coordinators will provide a

mechanism to facilitate voluntary trades among Scheduling Coordinators;

7.2.2.7 [Not Used]

7.2.2.8 adjust the Schedules submitted by Scheduling Coordinators on the basis of any price

information voluntarily submitted through their Adjustment Bids; and

7.2.2.9 for the hours when the ISO applies its Inter-Zonal Congestion Management apply the

same Usage Charge to all Scheduling Coordinators for their allocated share of the Inter-Zonal

Interface capacity.

7.2.3 Use of Computational Algorithms for Congestion Management and Pricing.

The ISO will use computer optimization algorithms to implement its Congestion Management

process.

7.2.4 Adjustment Bids Will Be Used by the ISO to Manage Congestion.

7.2.4.1 Uses of Adjustment Bids by the ISO.

7.2.4.1.1 The ISO shall use the Adjustment Bids, in both the Day-Ahead Market and the

Hour-Ahead Market, to schedule Inter-Zonal Interface capacity to those Scheduling

Coordinators which value it the most and to reflect the Scheduling Coordinators' implicit values

for Inter-Zonal Interface capacity.

Issued by: Roger Smith, Senior Regulatory Counsel

Issued on: October 13, 2000 Effective: October 13, 2000

7.2.4.1.2 The Adjustment Bids will be used by the ISO to determine the marginal value associated with each Congested Inter-Zonal Interface.

7.2.4.1.3 [Not used]

7.2.4.1.4 The ISO shall use Energy Bids from Generating Units and from other resources in the ISO's real-time system operation, for increasing resources' output for Intra-Zonal Congestion Management to decrement Generation in order to accommodate Overgeneration conditions, including Reliability Must-Run Generation which the ISO requests under Reliability Must-Run Contracts.

7.2.4.1.5 To facilitate trades amongst Scheduling Coordinators, the ISO will develop procedures to publish Adjustment Bids of those Scheduling Coordinators who authorize the publication of their identity and/or Adjustment Bids. Scheduling Coordinators will then be able to utilize this information to conduct trades to aid Congestion Management.

7.2.4.2 Submission of Adjustment Bids.

7.2.4.2.1 Each Scheduling Coordinator is required to submit a preferred operating point for each of its resources. However, a Scheduling Coordinator is not required to submit an Adjustment Bid for a resource.

7.2.4.2.2 The minimum MW output level specified for a resource, which may be zero MW, and the maximum MW output level specified for a resource must be physically realizable by the resource.

7.2.4.2.3 The Scheduling Coordinator's preferred operating point for each resource must be within the range of the Adjustment Bids.

7.2.4.2.4 Adjustment Bids can be revised by Scheduling Coordinators after the Day-Ahead Market has closed for consideration in the Hour-Ahead Market and, after the Hour-

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: March 11, 2004 Effective: Upon Notice After September 6, 2003

FIRST REPLACEMENT VOLUME NO. I

First Revised Sheet No. 202

Superseding Original Sheet No. 202

Ahead Market has closed, for consideration in the Real Time Market provided that, if the ISO

has accepted all, or a portion of, an offered Adjustment Bid, the Scheduling Coordinator is

obligated to provide the relevant capacity increase or decrease to the ISO at the price of the

accepted Adjustment Bid.

7.2.4.2.5 During the ISO's Day-Ahead scheduling process, the MW range of the Adjustment

Bid, but not the price values, may be changed.

7.2.4.2.6 An Adjustment Bid shall constitute a standing offer to the ISO until it is withdrawn.

7.2.4.2.7 The ISO may impose additional restrictions and bidding activity rules on the form of

Adjustment Bids, the updating of Adjustment Bids, and the Scheduling Coordinator that may

submit Adjustment Bids in connection with inter-Scheduling Coordinator trades, as needed, to

ensure that the ISO's computational algorithms can operate reliably and produce efficient

outcomes.

7.2.5 **Inter-Zonal Congestion Management.**

7.2.5.1 The scheduling procedures in the Day-Ahead Market and Hour-Ahead Market will first

ascertain, through power flow calculations, whether or not Inter-Zonal Congestion would exist if

all of the Preferred and Revised Schedules submitted by the Scheduling Coordinators were

accepted by the ISO. If no Inter-Zonal Congestion would exist, then all Inter-Zonal Interface

uses will be accepted and the Usage Charges will be zero.

7.2.5.2 The purpose of Inter-Zonal Congestion Management is to allocate the use of, and

determine the marginal value of, active Inter-Zonal Interfaces. Inter-Zonal Congestion

Management will comply with the requirements stated in Sections 7.2.2, 7.2.4 and 7.2.5.

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: March 11, 2004 Effective: Upon Notice After October 13, 2000

FIRST REPLACEMENT VOLUME NO. I

First Revised Sheet No. 203

Superseding Original Sheet No. 203

Inter-Zonal Congestion Management will keep each Scheduling Coordinator's 7.2.5.2.1

portfolio of Generation and Demand (i.e., the Scheduling Coordinator's Preferred Schedule)

separate from the portfolios of the other Scheduling Coordinators, as the ISO adjusts the

Schedules to alleviate Inter-Zonal Congestion.

7.2.5.2.2 If Congestion would exist on one or more active Inter-Zonal Interfaces, then the

ISO shall execute its Inter-Zonal Congestion Management algorithms to determine a set of

tentative (in the Day-Ahead procedure) allocations of Inter-Zonal Interface rights and tentative

(in the Day-Ahead procedure) Usage Charges, where the Usage Charges will be calculated as

the marginal values of the Congested Inter-Zonal Interfaces. The marginal value of a

Congested Inter-Zonal Interface is calculated by the ISO's computer optimization algorithm to

equal the total change in Redispatch costs (based on the Adjustment Bids) that would result if

the interface's scheduling limit was increased by a small increment.

7.2.5.2.3 As part of the Day-Ahead scheduling procedure, but not the Hour-Ahead

scheduling procedure, Scheduling Coordinators will be given the opportunity to adjust their

Preferred Schedules (including the opportunity to make trades amongst one another) and to

submit Revised Schedules to the ISO, in response to the ISO's Suggested Adjusted

Schedules and prices for Inter-Zonal Interfaces.

7.2.5.2.4 If the ISO receives any Revised Schedules it will execute its Inter-Zonal Congestion

Management algorithms using revised Preferred Schedules, to produce a new set of allocations

and prices.

7.2.5.2.5 All of the ISO's calculations will treat each Settlement Period independently of the

other Settlement Periods in the Trading Day.

7.2.5.2.6 [Not Used]

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: March 11, 2004 Effective: October 13, 2000 FIRST REPLACEMENT VOLUME NO. I

Superseding Original Sheet No. 204

7.2.5.2.7 If inadequate Adjustment Bids have been submitted to schedule Inter-Zonal

Interface capacity on an economic basis and to the extent that scheduling decisions cannot be

made on the basis of economic value, the ISO will allocate the available Inter-Zonal Interface

capacity to Scheduling Coordinators in proportion to their respective proposed use of that

capacity as indicated in their Schedules and shall curtail scheduled Generation and Demand to

the extent necessary to ensure that each Scheduling Coordinator's Schedule remains

balanced.

7.2.5.2.8 The ISO will publish information prior to the Day-Ahead Market, between the

iterations of the Day-Ahead Market, and prior to the Hour-Ahead Market, to assist the

Scheduling Coordinators to construct their Adjustment Bids so as to actively participate in the

management of Congestion and the valuation of Inter-Zonal Interfaces. This information may

include the ISO's most-current information regarding: potentially Congested paths, projected

transmission uses, projected hourly Loop Flows across Inter-Zonal Interfaces, scheduled line

Outages, forecasts of expected system-wide Load, the ISO's Ancillary Services requirements,

Generation Meter Multipliers, and power flow outputs.

7.2.5.2.9 The ISO will also publish information, once it is available, regarding tentative prices

for the use of Inter-Zonal Interfaces, and Generation shift factors for the use of Inter-Zonal

Interfaces, which indicate the relative effectiveness of Generation shifts in alleviating

Congestion.

7.2.6 **Intra-Zonal Congestion Management.**

Any Generating Unit dispatched to manage Intra-Zonal Congestion shall: (1) if dispatched to

increase its output, be paid the greater of its bid price (or mitigated bid if applicable) or the

relevant Market Clearing Price; (2) if dispatched to decrease its output, be charged the lesser of

its decremental reference price of the relevant Market Clearing Price. The ISO shall not re-

dispatch MSS resources to manage Intra-Zonal congestion as set forth in this section 7.2.6, as

provided for in the MSS Agreement.

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: June 22, 2004 Effective: May 30, 2003 FIRST REPLACEMENT VOLUME NO. I

7.2.6.1 Decremental Bids. With regard to decremental bids, if Final Hour-Ahead Schedules cause Congestion on the Intra-Zonal interface, the ISO shall, after Dispatching available and effective Reliability Must-Run Units to manage the Congestion, apply the decremental reference prices determined by the independent entity that determines the reference prices for the Automatic Mitigation Procedure (AMP) as described in Appendix A to the Market Monitoring and Information Protocol. The ISO shall Dispatch Generating Units according to the decremental reference prices thus established, the resource's effectiveness on the Congestion, and other relevant factors such as Energy limitations, existing contractual restrictions, and Regulatory Must-Run or Regulatory Must-Take status, to alleviate the Congestion after Final Hour-Ahead Schedules are issued. Where the ISO must reduce a Generating Unit's output, the ISO shall Dispatch Generating Units according to the decremental reference prices and not according to Adjustment Bids or Supplemental Energy Bids to alleviate Intra-Zonal Congestion. No Generating Unit shall be Dispatched below its minimum operating level or above its maximum operating level. No Reliability Must-Run Unit shall be Dispatched below the operating level determined by the ISO as necessary to maintain reliability. If Congestion still exists after all Generating Units are Dispatched to their minimum operating levels, the ISO shall instruct Generating Units to shut off in merit order based on their total shutdown costs, beginning with the most expensive unit, where such shut-down costs include the lesser of the cost to start up the Generating Unit or to keep the Generating Unit warm for each Generating Unit with a non-zero Final Day-Ahead Schedule for Energy for the next day. Units shut off due to Congestion as set forth in this Section 7.2.6.1 shall be charged the lesser of the decremental reference price for the operating range between zero MW output and the unit's minimum operating level or the relevant Market Clearing Price.

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: September 16, 2004 Effective: August 18, 2004

If a Generating Unit shut down according to this Section 7.2.6.1 cannot start up in time to meet its next day's Energy Schedules, the ISO shall charge the Scheduling Coordinator for that Generating Unit the lesser of the decremental reference price or the Market Clearing Price at the operating level set forth in the relevant Energy Schedule for any deviation from the next day's Final Day-Ahead Schedules for Energy caused by such shut-down. Charges set forth in this Section 7.2.6.1 shall not apply to (1) Reliability Must-Run Units operating solely under their Reliability Must-Run Contracts or (2) units operating during a Waiver Denial Period in accordance with the must-offer obligation.

The ISO shall apply the decremental reference prices to thermal Generating Units and to non-thermal Generating Units. If a Generating Unit is instructed by the ISO to shut down to manage Intra-Zonal Congestion, and is subsequently re-started, the Owner of that Generating Unit may invoice the ISO for the lesser of (1) the Start-Up Costs incurred and (2) the costs of keeping the Generating Unit warm to meet its Energy Schedules as set forth in Section 2.5.23.3.7.6.

If the ISO Dispatches System Resources or Dispatchable Loads to alleviate Intra-Zonal Congestion, the ISO shall Dispatch those resources in merit order according to the resource's Day-Ahead or Hour-Ahead Adjustment Bid or Imbalance Energy bid.

The ISO shall only Redispatch Regulatory Must-Take or Regulatory Must-Run Generation,

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: September 16, 2004 Effective: August 18, 2004

Revised Original Sheet No. 204B

Intermittent Resources, or Qualifying Facilities to manage Intra-Zonal Congestion after Redispatching all other available and effective generating resources, including Reliability Must-Run Units.

- **7.2.6.1.1 Decremental Bid Reference Levels.** Decremental bid reference levels shall be determined for use in managing Intra-Zonal Congestion as set forth above in Section 7.2.6.1.
 - (a) Determination. Decremental bid reference levels shall be determined by applying the following steps in order as needed:
 - 1. Excluding proxy bids, mitigated bids, and bids used out of merit order for managing Intra-Zonal Congestion, the accepted decremental bid, or the lower of the mean or the median of a resource's accepted decremental bids if such a resource has more than one accepted decremental bid in competitive periods over the previous 90 days for peak and off-peak periods, adjusted for monthly changes in fuel prices using the proxy figure for natural gas prices posted on the ISO Home Page. Accepted and justified decremental bids below the applicable

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: July 18, 2003 Effective: May 30, 2003

Substitute Original Sheet No. 204C

soft cap, as set forth in Section 28.1.3 of this Tariff, will be included in the calculation of reference prices;

- 2. A level determined in consultation with the Market Participant submitting the bid or bids at issue, provided such consultation has occurred prior to the occurrence of the conduct being examined, and provided the Market Participant has provided sufficient data in accordance with specifications provided by the independent entity responsible for determining reference prices;
- 3. 90 percent of the unit's default Energy Bid determined monthly as set forth in Section 5.11.5 (based on the incremental heat rate submitted to the independent entity responsible for determining reference prices, adjusted for gas prices, and the variable O&M cost on file with the independent entity responsible for determining reference prices, or the default O&M cost of \$6/MWh);
- 4. 90 percent of the mean of the economic Market Clearing Prices for the units' relevant location during the lowest-priced 25 percent of the hours that the unit was dispatched or scheduled over the previous 90 days for peak and off-peak periods, adjusted for changes in fuel prices; or
- 5. If sufficient data do not exist to calculate a reference level on the basis of the first, second, or fourth methods and the third method is not applicable or an attempt to determine a reference level in consultation with a Market Participant has not been successful, the independent entity responsible for determining reference prices shall determine a reference level on the basis of:
 - i. the independent entity's estimated costs of an electric facility,
 taking into account available operating costs data, opportunity

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: May 17, 2004 Effective: May 30, 2003

Original Sheet No. 204D

cost, and appropriate input from the Market Participant, and the

best information available to the independent entity; or

ii. an appropriate average of competitive bids of one or more similar

electric Facilities.

(b) Monotonicity.

The decremental bid reference levels (\$/MWh bid price) for the different bid segments

of each resource shall be made monotonically non-decreasing by the independent

entity responsible for determining reference prices by proceeding from the highest MW

bid segment moving through each lower MW bid segment. The reference level of each

succeeding bid segment, moving from right to left in order of decreasing operating level,

shall be the lower of the reference level of the preceding bid segment or the reference

level determined according to paragraph (a) above.

7.2.6.1.2 [Not Used]

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: May 17, 2004 Effective: May 30, 2003

7.2.6.1.3 [Not Used]

7.2.6.1.4 [Not Used]

7.2.6.1.5 [Not Used]

7.2.6.1.6 [Not Used]

7.2.6.2 Incremental Bids. With regard to incremental bids, except as provided in Sections 5.2, 7.2.6.1 and 11.2.4.2, the ISO will perform Intra-Zonal Congestion Management in real time using available Imbalance Energy bids, based on their effectiveness and in merit order, to minimize the cost of alleviating Congestion. In the event no Imbalance Energy bids are available, the ISO will exercise its authority to direct the Redispatch of resources as allowed under the Tariff, including Section 2.4.4.

7.2.6.3 Cost of Intra-Zonal Congestion Management. The net of the amounts paid by the ISO to the Scheduling Coordinators and the amounts charged to the Scheduling Coordinators will be calculated and charged to all Scheduling Coordinators through a Grid Operations Charge, as described in Section 7.3.2.

7.2.6.4 Dispatch of Hydroelectric Resources for Congestion. If the ISO must dispatch hydroelectric resources for which no Supplemental Energy bids have been submitted to manage Congestion, the ISO shall do so only after dispatching all other reasonably effective resources that could be used to manage the Congestion.

7.2.7 Creation, Modification and Elimination of Zones.

7.2.7.1 Active Zones. The Active Zones are as set forth in Appendix I to this ISO Tariff.

7.2.7.2 Modifying Zones. The ISO shall monitor usage of the ISO Controlled Grid to determine whether new Zones should be created, or whether existing Zones should be eliminated, in accordance with the following procedures.

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: September 16, 2004 Effective: Upon Notice After September 6, 2003

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

Original Sheet No. 205A

7.2.7.2.1 If over a 12-month period, the ISO finds that within a Zone the cost to alleviate the Congestion on a path is equivalent to at least 5 percent of the product of the rated capacity of the path and the weighted average High Voltage Access Charge and Low

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: September 16, 2004 Effective: August 18, 2004

Original Sheet No. 206

Effective: October 13, 2000

Voltage Access Charge, as applicable, of the Participating TOs, the ISO may announce its

intention to create a new Zone. In making this calculation, the ISO will only consider periods of

normal operations. A new Zone will become effective 90 days after the ISO Governing Board

has determined that a new Zone is necessary.

7.2.7.2.2 The ISO may, at its own discretion, shorten the 12-month and 90-day periods for

creating new Zones if the ISO Governing Board determines that the planned addition of new

Generation or Load would result in Congestion that would meet the criterion specified in Section

7.2.7.2.1.

7.2.7.2.3 [Not Used]

7.2.7.2.4 If a new transmission project or other factors will eliminate Congestion between

existing Zones, the ISO may modify or eliminate those Zones at its discretion.

7.2.7.2.5 The ISO may change the criteria for establishing or modifying Zone boundaries,

subject to regulatory approval by the FERC.

7.2.7.3 Active and Inactive Zones.

7.2.7.3.1 An Active Zone is one for which a workably-competitive Generation market exists

on both sides of the relevant Inter-Zonal Interface for a substantial portion of the year so that

Congestion Management can be effectively used to manage Congestion on the relevant Inter-

Zonal Interface. Pending the ISO's determination of the criteria for defining "workable

competitive generation markets", the Inactive Zones will, as an interim measure, be those

specified in Section 7.2.7.3.4.

7.2.7.3.2 The Congestion Management described in this Section 7.2, and the Usage

Charges stemming from the application of these procedures, shall not apply to Inter-Zonal

Interfaces with Inactive Zones.

Issued by: Roger Smith, Senior Regulatory Counsel

Issued on: October 13, 2000

FIRST REPLACEMENT VOLUME NO. I

First Revised Sheet No. 207 Superseding Original Sheet No. 207

7.2.7.3.3 [Not Used]

7.2.7.3.4 The initial inactive Inter-Zonal Interfaces are the interface between the San

Francisco Zone and the remainder of the ISO Controlled Grid, and the interface between the

Humboldt Zone and the remainder of the ISO Controlled Grid. The initial Inactive Zones are the

San Francisco Zone and the Humboldt Zone.

7.2.7.3.5 The determination of whether a new Zone or an existing Inactive Zone should

become an Active Zone and the determination of whether a workably-competitive Generation

market exists for a substantial portion of the year, shall be made by the ISO Governing Board,

using the same approval criteria as are used for the creation or modification of Zones. The ISO

Governing Board shall adopt criteria that defines a "workably competitive Generation" market.

The ISO Governing Board will review the methodology used for the creation or modification of

Zones (including Active Zones and Inactive Zones) on an annual basis and make such changes

as it considers appropriate.

7.3 Usage Charges and Grid Operations Charges.

7.3.1 Usage Charges for Inter-Zonal Congestion.

The Usage Charge is used by the ISO to charge Scheduling Coordinators for the use of

Congested Inter-Zonal Interfaces. Subject to Section 2.4.4.4.1, the Usage Charge shall be

paid by all Scheduling Coordinators that use a Congested Inter-Zonal Interface. If a Scheduling

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: March 9, 2004 Effective: May 8, 2004

Coordinator uses more than one Congested Inter-Zonal Interface, it will pay a Usage Charge for each Congested Inter-Zonal Interface that it uses.

7.3.1.1 Calculation and Allocation of Usage Charge. Those Scheduling Coordinators who are permitted by the ISO to use a Congested Inter-Zonal Interface will pay a Usage Charge. The Usage Charge is determined using Inter-Zonal Congestion Management described in Section 7.2.5, and is calculated as the hourly marginal value of an incremental kW of Inter-Zonal Interface capacity (in cents per kWh). The same Usage Charge will be used to compensate Scheduling Coordinators who, in effect, create transmission capacity through counter Schedules on Congested Inter-Zonal Interfaces.

7.3.1.2 Calculation of Marginal Value of an Inter-Zonal Interface. The marginal value of an Inter-Zonal Interface is the basis for the Usage Charge associated with the scheduled use of the Inter-Zonal Interface. This price is calculated from the Adjustment Bids of the Scheduling Coordinators and the ISO's computer optimization algorithms, using the procedures described in Section 7.2.

- **7.3.1.2.1** The price used to determine the Usage Charge will be the Day-Ahead price for those scheduling in the Day-Ahead Market, or the Hour-Ahead price for those Schedules submitted after the Day-Ahead Market closed.
- 7.3.1.2.2 The Day-Ahead prices are calculated based on the Adjustment Bids of the Scheduling Coordinators who participate in the Day-Ahead Market. These Day-Ahead prices are used to calculate Usage Charges for Schedules accepted in the Day-Ahead Market.
- **7.3.1.2.3** The Hour-Ahead prices are calculated based on Adjustment Bids submitted or otherwise still in effect after the Day-Ahead procedures have concluded. These prices are applied to all Schedules for the use of the Congested Inter-Zonal Interfaces that have been

Issued by: Roger Smith, Senior Regulatory Counsel

Issued on: October 13, 2000 Effective: October 13, 2000

FIRST REPLACEMENT VOLUME NO. I

First Revised Sheet No. 209

Effective: October 13, 2000

Superseding Original Sheet No. 209

submitted and accepted after the ISO's Day-Ahead scheduling and Congestion Management

have concluded.

7.3.1.3 Default Usage Charge. If inadequate or unusable Adjustment Bids have been

submitted to the ISO to enable the ISO's Congestion Management to schedule Inter-Zonal

Interface capacity on an economic basis, then the ISO will calculate and impose a default

Usage Charge, in accordance with Sections 7.3.1.3.1 through 7.3.1.3.4.

7.3.1.3.1 The default Usage Charge will be calculated within a range having an absolute

floor of \$0/MWh and an absolute ceiling of \$500/MWh; provided that the ISO may vary the floor

within the absolute limits, with day-prior notice (e.g., applicable to next day's Day-Ahead

Market) to Scheduling Coordinators, and vary the ceiling within the absolute limits, with at least

seven (7) days notice to Scheduling Coordinators.

7.3.1.3.2 The default Usage Charge will be calculated, in accordance with this Section

7.3.1.3, by applying a pre-set adder, ranging from \$0/MWh to \$99/MWh, to the highest

incremental Adjustment Bid used, less the applicable decremental Adjustment Bid used;

provided that in all cases where there are insufficient decremental Adjustment Bids or no

decremental Adjustment Bids available, in the exercise of mitigating Congestion, the applicable

decremental price will be set equal to \$0/MWh; provided, further, that the ISO may vary the pre-

set adder with day-prior notice to Scheduling Coordinators (e.g., applicable to next day's Day-

Ahead Market).

7.3.1.3.3 Upon the ISO Operations Date, and until such time as the ISO determines

otherwise, the ceiling price for the default Usage Charge will be set at \$250/MWh; the floor

price for the default Usage Charge will be set at \$30/MWh; and the pre-set adder that is to be

applied in accordance with Section 7.3.1.3.2 will be set at \$0/MWh.

Issued by: Charles F. Robinson, Senior Regulatory Counsel

Issued on: March 11, 2004

7.3.1.3.4 The ISO will develop and implement a procedure for posting default Usage Charges on the WEnet or ISO Home Page.

7.3.1.3.5 If the Congestion Management software is not capable of calculating the default Usage Charge upon the ISO Operations Date in accordance with Sections 7.3.1.3.1 through 7.3.1.3.4, the ISO will establish a fixed default Usage Charge within the absolute limits of \$0/MWh and \$500/MWh, which may be changed by the ISO with day-prior notice. Initially, the default Usage Charge would be capped at \$100/MWh. As soon as tested and available, the ISO will implement the Congestion Management software to calculate the default Usage Charge in accordance with Sections 7.3.1.3.1 through 7.3.1.3.4 after giving at least seven (7) days notice to Scheduling Coordinators, by way of a notice posted on the ISO Internet "Home Page" at http://www.caiso.com or such other Internet address as the ISO may publish from time to time.

7.3.1.4 Determination of Usage Charges to be Paid by Scheduling Coordinator. All Scheduling Coordinators whose Schedules requiring use of a Congested Inter-Zonal Interface have been accepted by the ISO, shall pay a Usage Charge for each hour for which they have been scheduled to use the Inter-Zonal Interface. The amount payable shall be the product of the Usage Charge referred to in Section 7.3.1.2 for the particular hour, multiplied by the Scheduling Coordinator's scheduled flows (in kW) and capacity, if any, reserved for Ancillary Services over the Inter-Zonal Interface for that particular hour.

7.3.1.5 Determination of Usage Charges to be Paid to Scheduling Coordinators Who Counter-Schedule.

7.3.1.5.1 Scheduling Coordinators who in effect create additional Inter-Zonal Interface transmission capacity on Congested Inter-Zonal Interfaces will receive from the ISO a Usage

Issued by: Roger Smith, Senior Regulatory Counsel

Issued on: October 13, 2000 Effective: October 13, 2000

FIRST REPLACEMENT VOLUME NO. I

Fourth Revised Sheet No. 211 Superseding Substitute Third Revised Sheet No. 211

Charge for each hour they have counter-scheduled on the Congested Inter-Zonal Interfaces. The

amount payable shall be the product of the Usage Charge referred to in Section 7.3.1.2 for that

particular hour, multiplied by the Scheduling Coordinator's scheduled flows.

7.3.1.5.2 If a Scheduling Coordinator fails to provide the scheduled flows in a counter

direction, it must reimburse the ISO for the ISO's costs of buying or selling Imbalance Energy in

each of the Zones affected by the non-provided scheduled flows in a counter direction, at the

ISO's Zonal Imbalance Energy prices. That is, for any Scheduling Coordinator that does not

produce, in real time, the amount of Energy scheduled in the Day-Ahead Market or Hour-Ahead

Market will be deemed to have purchased/sold the amount of Energy under/over produced in the

real-time imbalance market at the real-time price.

7.3.1.6 ISO Disbursement of Net Usage Charge Revenues. The ISO will determine the net

Usage Charges on an interface-by-interface basis by subtracting the Usage Charge fees paid to

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: May 20, 2004 Effective: June 1, 2003

FIRST REPLACEMENT VOLUME NO. I

Substitute Original Sheet No. 211A

Scheduling Coordinators from the Usage Charge fees paid by Scheduling Coordinators. The net

Usage Charge revenues collected by the ISO for each Inter-Zonal Interface shall be, subject to the

provisions of Section 7.3.1.7 of the ISO Tariff, paid to: (i) FTR Holders, in accordance with Section

9.6; and (ii) to the extent not paid to FTR Holders, to Participating TOs who own the Inter-Zonal

Interfaces and Project Sponsors as provided in Section 3.2.7.3. Participating TOs will credit in

turn the Usage Charge revenue to their Transmission Revenue Balancing Accounts, or, for those

Participating TOs that do not have such accounts, to their Transmission Revenue Requirements.

7.3.1.7 ISO Debit of Net Usage Charge Revenues. If, after the issuance of Final Day-Ahead

Schedules by the ISO, (a) Participating TOs instruct the ISO to reduce interface limits based on

operating conditions or (b) an unscheduled transmission Outage occurs and as a result of either

of those events, Congestion is increased and Available Transfer

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: May 20, 2004 Effective: June 1, 2003

FIRST REPLACEMENT VOLUME NO. I

Capacity is decreased in the Inter-Zonal Interface in the Hour-Ahead Market, the ISO shall: (1) charge each Participating TO and Project Sponsor(s) as provided in Section 3.2.7.3, and FTR Holder with an amount equal to its proportionate share, based on its financial entitlement to Usage Charges in the Day-Ahead Market in accordance with Section 7.3.1.6, of the product of (i) the Usage Charge in the Day-Ahead Market and (ii) the reduction in Available Transfer Capacity across the Inter-Zonal Interface in the direction of the Congestion (such amount due to the Participating TOs to be debited by them in turn from their Transmission Revenue Balancing Accounts or, for those Participating TOs that do not have such accounts, to their Transmission Revenue Requirements); (2) charge each Scheduling Coordinator with its proportionate share, based on Schedules in the Day-Ahead Market across the Inter-Zonal Interface in the direction of the Congestion, of the difference between the amount charged to Participating TOs and Project Sponsors as provided in Section 3.2.7.3, and FTR Holders under clause (1) and the Usage Charges in the Hour-Ahead Market associated with the reduced Available Transfer Capacity across the Congested Inter-Zonal Interface; and (3) credit each Scheduling Coordinator whose Schedule in the Hour-Ahead Market for the transfer of Energy across the Congested Inter-Zonal Interface was adjusted due to the reduction in Available Transfer Capacity an amount equal to the product of the adjustment (in MW) and the Usage Charge in the Hour-Ahead Market (in\$/MW).

The ISO will issue a notice to Scheduling Coordinators of the operating hour, and extent, for which the derate will apply in the relevant Hour-Ahead Markets. The timing and form of such notices shall be set forth in ISO procedures.

7.3.2 Grid Operations Charge for Intra-Zonal Congestion.

Scheduling Coordinators whose resources are Redispatched by the ISO, in accordance with Intra-Zonal Congestion Management as set forth in Section 7.2.6, will be paid or charged as set forth in Settlements and Billing Protocol Appendix B. The net

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: March 11, 2004 Effective: May 30, 2003

Superseding Substitute First Revised Sheet No. 213

Redispatch cost will be recovered for each Settlement Period through the Grid Operations
Charge, which shall be paid to the ISO by all Scheduling Coordinators in proportion to their
metered Demands within the Zone with Intra-Zonal Congestion, and scheduled exports from the
Zone with Intra-Zonal Congestion to a neighboring Control Area, provided that, with respect to
Demands within an MSS in the Zone and scheduled exports from the MSS to a neighboring
Control Area, a Scheduling Coordinator shall be required to pay Grid Operations Charges only
with respect to Intra-Zonal Congestion, if any, that occurs on an interconnection between the
MSS and the ISO Controlled Grid, and with respect to Intra-Zonal Congestion that occurs within
the MSS, to the extent the Congestion is not relieved by the MSS Operator.

7.4 Transmission Losses.

7.4.1 Obligation to Provide for Transmission Losses.

Each Scheduling Coordinator shall ensure that it schedules sufficient Generation to meet both its Demand and Transmission Losses responsibilities as determined in accordance with this Section 7.4. Scheduling Coordinators for Generators, System Units and System Resources are responsible for their respective proportion of Transmission Losses as determined in accordance with Section 7.4.2. For each Final Hour-Ahead Schedule, each Scheduling Coordinator representing Generators, dynamically scheduled System Resources or System Units shall elect through the flag described in SBP Section 2.1.1 to either: 1) generate sufficient additional energy to meet its respective Transmission Losses or 2) be financially responsible for its respective transmission loss obligation based on the Imbalance Energy procured on its behalf by the ISO. Scheduling Coordinators for non-dynamically scheduled System Resources may self-provide transmission losses by scheduling an additional balanced quantity of Energy, both Supply and Demand, equal to their expected transmission loss obligation above their committed delivery quantities in their Hour-Ahead Schedules. In the ISO Imbalance Energy market, all Scheduling

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: September 7, 2004 Effective: Upon Notice After September 6, 2003

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

Original Sheet No. 213.00

Coordinators for Generators, System Units, and System Resources must be financially responsible for all respective Transmission Losses associated with their respective Imbalance Energy Dispatch Instructions in real time, based on the Imbalance Energy procured on their behalf by the ISO. A Scheduling Coordinator for an MSS Operator that has elected

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: September 7, 2004 Effective: Upon Notice After September 6, 2003

Original Sheet No. 213A

to follow Load will be responsible for its transmission loss obligation pursuant to Sections

23.12.1 and 23.16.4.

7.4.1.1 Settlement of Transmission Loss Obligations.

For a Scheduling Coordinator that elects to not or may not, self-provide for its transmission loss

obligation, the ISO will procure Imbalance Energy on the Scheduling Coordinator's behalf for

each relevant Dispatch Interval and explicitly settle its transmission loss obligation for each

applicable Settlement Interval. For a resource under an ISO Dispatch Instruction for Imbalance

Energy, transmission loss obligations shall be settled at the Resource-Specific Settlement

Interval Ex Post Price. For a resource not under an ISO Dispatch Instruction for Imbalance

Energy, transmission loss obligations shall be settled at the simple average of the two

applicable Dispatch Interval Ex Post Prices as defined in Section 2.5.23.2.1. Allocation of

transmission loss obligation settlement shall be treated consistent with Instructed Imbalance

Energy pursuant to Section 11.2.4.2.1.

7.4.2 Determination of Transmission Losses.

The total Demand that may be served by a Generating Unit, in a given hour, taking account of

Transmission Losses, is equal to the product of the total Metered Quantity of that Generating

Unit in that hour and the Ex Post Generation Meter Multiplier calculated by the ISO in the hour

for that Generator location except in accordance with Section 7.4.3. The Ex Post Generation

Meter Multiplier shall be greater than one (1) where the Generating Unit's contribution to the

ISO Controlled Grid reduces Transmission Losses and shall be less than one (1) where the

Generating Unit's contribution to the system increases Transmission Losses. All Generating

Units supplying Energy to the ISO

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: July 8, 2003 Effective: Upon Notice After September 6, 2003

Superseding Original Sheet No. 214

Controlled Grid at the same electrical bus shall be assigned the same Ex Post Generation

Meter Multiplier.

7.4.2.1 Procedures for Calculating Generation Meter Multiplier.

7.4.2.1.1 By 6:00 p.m. two days preceding a Trading Day, the ISO will calculate, and post on

WEnet, an estimated Generation Meter Multiplier for each electrical bus at which one or more

Generating Units may supply Energy to the ISO Controlled Grid. The Generation Meter

Multipliers shall be determined utilizing the Power Flow Model based upon the ISO's forecasts

of total Demand for the ISO Controlled Grid and Demand and Generation patterns throughout

the ISO Controlled Grid. The ISO shall continuously update the data to be used in calculating

the Generation Meter Multipliers to reflect changes in system conditions on the ISO Controlled

Grid, and the ISO shall provide all Scheduling Coordinators with access to such data. The ISO

shall not be required to determine new Generation Meter Multipliers for each hour; the ISO will

determine the appropriate period for which each set of Generation Meter Multipliers will apply,

which period may vary based upon the expected frequency and magnitude of changes in

system conditions on the ISO Controlled Grid.

7.4.2.1.2 The ISO will calculate the Ex Post Generation Meter Multiplier for each electrical

bus at which one or more Generating Units may supply Energy to the ISO Controlled Grid. The

Ex Post Generation Meter Multipliers shall be determined utilizing the Power Flow Model based

upon the ISO's total Demand for the ISO Controlled Grid and Demand and Generation patterns

throughout the ISO Controlled Grid. The ISO's total Demand shall be determined using real-

time power flow data based on a state-estimation result.

First Revised Sheet No. 215

Effective: January 1, 2001

FIRST REPLACEMENT VOLUME NO. I

7.4.2.2 Methodology for Calculating Generation Meter Multiplier. The ISO shall calculate

the Generation Meter Multiplier for each Generating Unit location in a given hour by subtracting

the Scaled Marginal Loss Rate from 1.0.

7.4.2.2.1 The Scaled Marginal Loss Rate for a given Generating Unit location in a given hour

shall equal the product of (i) the Full Marginal Loss Rate for each Generating Unit location and

hour, and (ii) the Loss Scale Factor for such hour.

7.4.2.2.2 The ISO shall calculate the Full Marginal Loss Rate for each Generating Unit

location for an hour by utilizing the Power Flow Model to calculate the effect on total

Transmission Losses for the ISO Controlled Grid of injecting an increment of Generation at

each such Generating Unit location to serve an equivalent incremental MW of Demand

distributed on a pro-rata basis throughout the ISO Controlled Grid.

7.4.2.2.3 The ISO shall determine the Loss Scale Factor for an hour by determining the ratio

of forecast Transmission Losses to the total Transmission Losses which would be collected if

Full Marginal Loss Rates were applied to each Generating Unit in that hour.

7.4.3 In the event that the Power Flow Model fails to determine Ex Post GMMs, for example if

GMMs are outside the range of reasonability (typically 0.8 to 1.1), the ISO will use Default

GMMs in their place.

7.5 FERC Annual Charges.

7.5.1 Obligation for FERC Annual Charges.

7.5.1.1 Each Scheduling Coordinator shall be obligated to pay for the FERC Annual Charges

for its use of the ISO Controlled Grid to transmit electricity, including any use of the ISO

Controlled Grid through Existing Contracts scheduled by the Scheduling Coordinator. Any

FERC Annual Charges to be assessed by FERC against the ISO for such use of the ISO

Controlled Grid shall

Issued by: Roger Smith, Senior Regulatory Counsel

Issued on: December 29, 2000

determined in accordance with this Section 7.5. Such assessment shall be levied monthly against

all Scheduling Coordinators based upon each Scheduling Coordinator's metered Demand and

be assessed against Scheduling Coordinators at the FERC Annual Charge Recovery Rate, as

exports.

7.5.1.2 Scheduling Coordinators may elect, each year, to pay the FERC Annual Charges assessed

against them by the ISO either on a monthly basis or an annual basis. Scheduling Coordinators that

elect to pay FERC Annual Charges on a monthly basis shall make payment for such charges within

five (5) Business Days after issuance of the monthly invoice. The FERC Annual Charges will be

issued to Market Participants once a month, on the first business day after the final market and Grid

Management Charge invoices are issued for the trade month. Once the final FERC Annual Charge

Recovery Rate is received from FERC in the Spring/Summer of the following year, a supplemental

invoice will be issued. Scheduling Coordinators that elect to pay FERC Annual Charges on an

annual basis shall make payment for such charges within five (5) Business Days after the ISO

issues such supplemental invoice. Scheduling Coordinators that elect to pay FERC Annual Charges

on an annual basis shall maintain either an Approved Credit Rating, as defined with respect to either

payment of the Grid Management Charge, or payment of other charges, or shall maintain security in

accordance with Section 2.2.3.2.

7.5.2 FERC Annual Charge Trust Account.

All funds collected by the ISO for FERC Annual Charges shall be deposited in the FERC Annual

Charge Trust Account. The FERC Annual Charge Trust Account shall be an interest-bearing

account separate from all other accounts maintained by the ISO, and no other funds shall be

commingled in it at any time. The ISO shall disburse funds from the FERC Annual Charge Trust

Account in order to pay the FERC any and all FERC Annual Charges assessed against the ISO.

7.5.3 Determination of the FERC Annual Charge Recovery Rate.

7.5.3.1 The FERC Annual Charge Recovery Rate shall be set at the projected total FERC Annual

Charge obligation with regard to transactions on the ISO Controlled Grid during the year

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: June 10, 2003 Effective: August 9, 2003

Effective: January 1, 2001

in which the FERC Annual Charge Recovery Rate is collected, adjusted for interest projected to be earned on the monies in the FERC Annual Charge Trust Account ("Annual Charge Obligation"), divided by the projected Demand and exports during that year for all entities subject to assessment of FERC Annual Charges by the ISO ("Annual Charge Demand"). The FERC Annual Charge Recovery Rate for the period from January 1, 2001 until the first adjustment of the FERC Annual Charge Recovery Rate goes into effect shall be posted on the ISO Home Page at least fifteen (15) days in advance of the date on which the initial rate will go into effect.

- **7.5.3.2** The ISO may adjust the FERC Annual Charge Recovery Rate on a quarterly basis, as necessary, to reflect the net effect of the following:
- the difference, if any, between actual Annual Charge Demand and projected AnnualCharge Demand during the year-to-date;
- (b) the difference, if any, between the projections of the Annual Charge Obligation and the Annual Charge Demand upon which the charge for the year is based and the ISO's most current projections of those values, provided that the projection of the Annual Charge Obligation may only be adjusted on an annual basis for changes in the Federal Energy Regulatory Commission's budget for its electric regulatory program or changes in the projected total transmission volumes subject to assessment of FERC Annual Charges;
- (c) the difference, if any, between actual and projected interest earned on funds in the FERC Annual Charge Trust Account; and
- (d) any positive or negative balances of funds collected for FERC Annual Charges in a previous year after all invoices for FERC Annual Charges for that year have been paid by the ISO, other than those that are addressed through the mechanism described in

Section 7.5.3.4.

Issued by: Roger Smith, Senior Regulatory Counsel

Issued on: December 29, 2000

7.5.3.3 The adjusted FERC Annual Charge Recovery Rate shall take effect on the first day of the calendar quarter. The ISO shall publish all data and calculations used by the ISO as a basis for such an adjustment on the ISO Home Page at least fifteen (15) days in advance of the date on which the new rate shall go into effect.

7.5.3.4 If the FERC Annual Charges assessed by FERC against the ISO for transactions on the ISO Controlled Grid during any year exceed or fall short of funds collected by the ISO for FERC Annual Charges with respect to that year by a range of 10% or less, the ISO shall take such under- or over-recovery into account through an adjustment to the FERC Annual Charge Recovery Rate in accordance with Section 7.5.3.2. Any deficiency of available funds necessary to pay for any assessment of FERC Annual Charges payable by the ISO may be covered by an advance of funds from the ISO's Grid Management Charge, provided any such advanced funds will be repaid. If the ISO's collection of funds for FERC Annual Charges with respect to any year results in an under- or over-recovery of greater than 10%, the ISO shall either assess a surcharge against all active Scheduling Coordinators for the amount under-recovered or shall issue a credit to all active Scheduling Coordinators for the amount over-recovered. Such surcharge or credit shall be allocated among all active Scheduling Coordinators based on the percentage of each active Scheduling Coordinators metered Demand and exports during the relevant year. For purposes of this section, an "active Scheduling Coordinator" shall be a Scheduling Coordinator certified by the ISO in accordance with Section 2.2 of this ISO Tariff at the time the ISO issues a surcharge or credit under this section. The ISO will issue any surcharges or credits under this section within 60 days of receiving a FERC Annual Charge assessment from the FERC.

Issued by: Roger Smith, Senior Regulatory Counsel

Issued on: December 29, 2000 Effective: January 1, 2001

Original Sheet No. 215D

7.5.4 Credits and Debits of FERC Annual Charges Collected from Scheduling Coordinators.

In addition to the surcharges or credits permitted under Sections 7.5.3 or 11.6.3.3 of this ISO Tariff, the ISO shall credit or debit, as appropriate, the account of a Scheduling Coordinator for any over- or under-assessment of FERC Annual Charges that the ISO determines occurred due to the error, omission, or miscalculation by the ISO or the Scheduling Coordinator.

- 8. GRID MANAGEMENT CHARGE.
- 8.1 ISO's Obligations.
- 8.1.1 FERC's Uniform System of Accounts.

The ISO shall maintain a set of financial statements and records in accordance with the FERC's Uniform System of Accounts.

Issued by: Roger Smith, Senior Regulatory Counsel

Issued on: December 29, 2000 Effective: January 1, 2001

FIRST REPLACEMENT VOLUME NO. I

First Revised Sheet No. 216 Superseding Original Sheet No. 216

Effective: January 1, 2001

8.1.2 [Not Used]

8.2 Costs Included in the Grid Management Charge.

8.2.1 [Not Used]

8.2.2 Operating Costs.

Budgeted annual operating costs, which shall include all staffing costs including remuneration

of contractors and consultants, salaries, benefits and any incentive programs for employees,

costs of operating, replacing and maintaining ISO systems, lease payments on facilities and

equipment necessary for the ISO to carry out its business, and annual costs of financing the

ISO's working capital and other operating costs ("Operating Costs").

8.2.3 Financing Costs.

The financing costs that are approved by the ISO Governing Board, including capital

expenditures that may be financed over such period as the ISO Governing Board shall decide.

Financing Costs shall also include the ISO start up and development costs standing to the

credit of the ISO Memorandum Account plus any additional start up or development costs

incurred after the date of Resolution E-3459 (July 17, 1996), plus any additional capital

expenditure incurred by the ISO in 1998 ("Start Up and Development Costs"). The amortized

amount to be included in the Grid Management Charge shall be equal to the amount necessary

to amortize fully all Start Up and Development Costs over a period of five (5) years, or such

longer period as the ISO Governing Board shall decide ("Financing Costs").

Issued by: Roger Smith, Senior Regulatory Counsel

Issued on: November 1, 2000

Effective: January 1, 2004

Superseding Third Revised Sheet No. 217

8.2.4 Operating and Capital Reserves Cost.

The budgeted annual cost of pay-as-you-go capital expenditures and reasonable coverage of

debt service obligations. Such reserves shall be utilized to minimize the impact of any variance

between forecast and actual costs throughout the year ("Operating and Capital Reserves

Costs").

8.3 Allocation of the Grid Management Charge Among Scheduling Coordinators.

The costs recovered through the Grid Management Charge shall be allocated to the eight

service charges that comprise the Grid Management Charge. If the ISO's revenue requirement

for any service charge changes from the most recent FERC-approved revenue requirement for

that service charge, the costs recovered through that service charge shall be delineated in a

filing to be made at FERC as set forth in Section 8.4. The eight service charges are as follows:

(1) Core Reliability Services - Demand Charge,

(2) Core Reliability Services – Energy Exports Charge

(3) Energy Transmission Services Net Energy Charge,

(4) Energy Transmission Services Uninstructed Deviations Charge,

(5) Forward Scheduling Charge,

(6) Congestion Management Charge,

(7) Market Usage Charge, and

(8) Settlements, Metering, and Client Relations Charge.

The eight charges shall be levied separately monthly in arrears on all Scheduling Coordinators

based on the billing determinants specified below for each charge in accordance with formulae

set out in Appendix F, Schedule 1, Part A of this Tariff, subject to the requirements set out in

Appendix F, Schedule 1, Part F of this Tariff.

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: July 29, 2004

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION FERC ELECTRIC TARIFF Fourth Revised Sheet No. 217A FIRST REPLACEMENT VOLUME NO. I

Superseding Third Revised Sheet No. 217A

8.3.1 Core Reliability Services – Demand Charge.

The Core Reliability Services - Demand Charge for a Scheduling Coordinator's Load that is not associated with Energy Exports is calculated using the Scheduling Coordinator's metered noncoincident peak hourly Demand during the month (in megawatts) less the volume of Energy Exports included in the Scheduling Coordinator's non-coincident peak hourly Demand for the month, if any; provided that if the Scheduling Coordinator's metered non-coincident peak hour during the month occurs during the hours ending 0100 through 0600, or during the hours ending 2300 through 2400 the rate shall be sixty-six (66) percent of the standard CRS rate. The standard rate for the Core Reliability Services - Demand Charge is determined by dividing the GMC costs allocated to this service category, including a specified percentage of the costs for the Settlements, Metering, and Client Relations Charge determined to be in excess of what is recovered by that charge, by the total of the forecasted metered non-coincident peak hourly Demand for all months during the year (excluding the portion of such Demand associated with Energy Exports, if any), reduced by thirty-four (34) percent of the sum of all Scheduling Coordinators' metered non-coincident peak hour during the month occurs between the hour ending 2300 and the hour ending 0600, according to the formula in Appendix F, Schedule 1, Part A of this Tariff.

Core Reliability Services – Energy Exports Charge,

The Core Reliability Services - Energy Exports Charge for the load associated with a Scheduling Coordinator's Energy Exports is calculated using the Scheduling Coordinator's metered volume of Energy Exports (in megawatt-hours); The rate for the Core Reliability Services – Energy Exports Charge is determined by dividing the GMC costs allocated to the Core Reliability Services service category, including a specified percentage of the costs for the

Issued by: Charles F. Robinson, Vice President and General Counsel

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION

FERC ELECTRIC TARIFF FIRST REPLACEMENT VOLUME NO. I Second Revised Sheet No. 217A.01

Superseding First Revised Sheet No. 217A.01

Settlements, Metering, and Client Relations Charge determined to be in excess of what is

recovered by that charge, according to the formula in Appendix F, Schedule 1, Part A of this

Tariff.

8.3.3 Energy Transmission Services Net Energy Charge.

The Energy Transmission Services Net Energy Charge for each Scheduling Coordinator is

calculated using that Scheduling Coordinator's Metered Control Area Load (in megawatt-hours).

The rate for the Energy Transmission Services Net Energy Charge is determined by dividing

the GMC costs allocated to this service category, including a specified percentage of the costs

for the Settlements, Metering, and Client Relations Charge determined to be in excess of what

is recovered by that charge, by the total forecasted Metered Control Area Load, according to

the formula in Appendix F, Schedule 1, Part A of this Tariff.

8.3.4 Energy Transmission Services Uninstructed Deviations Charge.

The Energy Transmission Services Uninstructed Deviations Charge for each Scheduling

Coordinator is calculated using that Scheduling Coordinator's net uninstructed deviations by

Settlement Interval. The rate for the Energy Transmission Services Uninstructed Deviations

Charge is determined by dividing the GMC costs allocated to this service category, including a

specified percentage of the costs for the Settlements, Metering, and Client Relations Charge

determined to be in excess of what is recovered by that charge, by the total forecasted net

Issued by: Charles F. Robinson, Vice President and General Counsel

Second Revised Sheet No. 217A.02

Superseding First Revised Sheet No. 217A.02

uninstructed deviations by Settlement Interval according to the formula in Appendix F, Schedule

1, Part A of this Tariff.

8.3.5 Forward Scheduling Charge.

The Forward Scheduling Charge for each Scheduling Coordinator is calculated using the sum

of that Scheduling Coordinator's Final Hour-Ahead Schedules, including all awarded Ancillary

Services bids, with a value other than 0.03 MW. The Forward Scheduling Charge attributable

to Final Hour-Ahead Schedules for Inter-Scheduling Coordinating Energy and Ancillary Service

Trades for each Scheduling Coordinator is fifty (50) percent of the standard Forward Scheduling

Charge. The rate for the Forward Scheduling Charge is determined by dividing the GMC costs

allocated to this service category, including a specified percentage of the costs for the

Settlements, Metering, and Client Relations Charge determined to be in excess of what is

recovered by that charge, by the total forecasted Final Hour-Ahead Schedules and awarded

Ancillary Service bids submitted to the ISO, according to the formula in Appendix F, Schedule 1,

Part A of this Tariff.

8.3.6 Congestion Management Charge.

The Congestion Management Charge for each Scheduling Coordinator is calculated as the

product of the rate for the Congestion Management Charge and the absolute value of the net

scheduled inter-zonal flow (excluding flows pursuant to Existing Contracts) per path for that

Scheduling Coordinator. The rate for the Congestion Management Charge is determined by

dividing the GMC costs allocated to this service category, including a specified percentage of

the costs for the Settlements, Metering, and Client Relations Charge determined to be in

excess of what is recovered by that charge, by the total forecasted inter-zonal scheduled flow

(excluding flows pursuant to Existing Contracts) per path in MWh, according to the formula in

Appendix F, Schedule 1, Part A of this Tariff.

Issued by: Charles F. Robinson, Vice President and General Counsel

8.3.7 Market Usage Charge.

The Market Usage Charge for each Scheduling Coordinator is calculated using the absolute value of the Scheduling Coordinator's market purchases and sales of Ancillary Services, Supplemental Energy, Instructed Imbalance Energy, and net Uninstructed Imbalance Energy (with uninstructed deviations being netted by Settlement Interval). The rate for the Market Usage Charge is determined by dividing the GMC costs allocated to this service category, including a specified percentage of the costs for the Settlements, Metering, and Client Relations Charge determined to be in excess of what is recovered by that charge, by the total forecasted number of market purchases and sales, according to the formula in Appendix F, Schedule 1, Part A of this Tariff.

8.3.8 Settlements, Metering, and Client Relations Charge.

The Settlements, Metering, and Client Relations Charge for each Scheduling Coordinator is fixed at \$500.00 per month, per Scheduling Coordinator ID with an invoice value other than \$0.00 in the current trade month, as indicated in Appendix F, Schedule 1, Part A of this Tariff. Excess GMC costs related to the provision of these services that are not recovered through this charge are allocated to the other GMC service categories as specified above and in Appendix F, Schedule 1, Part E of this Tariff.

8.4 Calculation and Adjustment of the Grid Management Charge.

The eight charges set forth in Section 8.3 that comprise the Grid Management Charge shall be calculated through the formula set forth in Appendix F, Schedule 1, Part A of this Tariff. The formula set forth in Appendix F, Schedule 1, Part C of this Tariff sums the Operating Costs (less any available expense recoveries), Financing Costs, and Operating and Capital Reserves Costs associated with each of the eight ISO service charges to obtain a total revenue requirement. This revenue requirement is allocated among the eight charges of the GMC

through the application of the factors specified in Appendix F, Schedule 1, Part E of this Tariff.

Issued by: Charles F. Robinson, Vice President and General Counsel

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION

FERC ELECTRIC TARIFF

FIRST REPLACEMENT VOLUME NO. I

Third Revised Sheet No. 217B

Effective: January 1, 2004

Superseding Second Revised Sheet No. 217B

The revenue requirement for each service then shall be divided by the forecast annual or

periodic billing determinant volume to obtain a rate for each service, which will be payable by

Scheduling Coordinators as set forth in Section 8.3. The rates so established will be adjusted

annually, through the operation of the formula set forth in Appendix F, Schedule 1, Part A of this

Tariff. The ISO shall post on its website each year, before the adjusted rates go into effect, as

described in Appendix F, Schedule 1, Part D of this Tariff, data showing the rates adjusted to

reflect any change in the annual revenue requirement, variance between forecast and actual

costs for the previous year or period, or any surplus revenues from the previous year or period

(as defined in Section 8.5), or the inability to recover from a Scheduling Coordinator its share of

the Grid Management Charge, or any under-achievement of a forecast of the billing determinant

volumes used to establish the rates. The circumstances under which the ISO is permitted to

put the adjusted rates into effect without submitting a filing to the FERC are described in

Appendix F, Schedule 1, Part D of this Tariff. Appendix F, Schedule 1, Part B of this Tariff sets

forth the conditions under which a quarterly adjustment to the Grid Management Charge will be

made.

8.4.1 Credits and Debits of the Grid Management Charge.

In addition to the adjustments permitted under Section 11.6.3.3, the ISO shall credit or debit, as

appropriate, the account of a Scheduling Coordinator for any overpayment or underpayment of

the Grid Management Charge that the ISO determines occurred due to error, omission, or

miscalculation by the ISO or the Scheduling Coordinator.

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: July 29, 2004

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION

FERC ELECTRIC TARIFF

Fifth Revised Sheet No. 218

FIRST REPLACEMENT VOLUME NO. I

Superseding Fourth Revised Sheet No. 218

8.5 Operating and Capital Reserves Account.

Revenues collected to fund the ISO financial operating reserves shall be deposited in an Operating and Capital Reserves Account until such account reaches a level specified by the ISO Governing Board. The Operating and Capital Reserves Account shall be calculated separately for each GMC service category (Core Reliability Services – Demand, Core Reliability Services – Uninstructed Deviations, Forward Scheduling, Congestion Management, Market Usage, and Settlements, Metering and Client Relations). The allocation factors, reassignments and reallocations specified in Schedule 1, Parts E and F, will be accounted for in the development of the Operating and Capital Reserves Account for each component. If the Operating and Capital Reserves Account as calculated for such service category is fully funded, surplus funds will be considered an offset to the revenue requirement of the next fiscal year.

8.6 Transition Mechanism.

During the ten-year transition period described in Section 4 of Schedule 3 to Appendix F, the Original Participating TOs collectively shall pay to the ISO each year an amount equal to, annually, for all New Participating TOs, the amount, if any, by which the New Participating TO's cost of Existing High Voltage Facilities associated with Gross Loads in the PTO Service Territory of the New Participating TO is increased by the implementation of the High Voltage Access Charge described in Schedule 3 to Appendix F. Responsibility for such payments shall be allocated to Original Participating TOs in

Issued by: Charles F. Robinson, Vice President and General Counsel

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION

FERC ELECTRIC TARIFF

Second Revised Sheet No. 219

FIRST REPLACEMENT VOLUME NO. I

Superseding First Revised Sheet No. 219

accordance with Schedule 3 to Appendix F. Amounts payable by Original Participating TOs

under this section shall be recoverable as part of the Transition Charge calculated in

accordance with Schedule 3 of Appendix F. Amounts received by the ISO under this section

shall be disbursed to New Participating TOs with Existing High Voltage Facilities based on the

ratio of each New Participating TO's net increase in costs in the categories described in the first

sentence of this section, to the sum of the net increases in such costs for all New Participating

TOs with Existing High Voltage Facilities.

9. FIRM TRANSMISSION RIGHTS

9.1 General

9.1.1 Commencing in 2000, on the effective date established by the ISO Governing Board,

the ISO shall make FTRs available in the amounts determined in accordance with Section 9.3,

with the rights and other characteristics described in Sections 9.2, 9.6, 9.7 and 9.8, and through

the processes described in Section 9.4. Proceeds of the ISO's auction of FTRs shall be

distributed as described in Section 9.5. The owners of FTRs shall be entitled to share in Usage

Charge revenues associated with Inter-Zonal Congestion in accordance with Section 9.6, and

to scheduling priority in the event of Congestion in the Day-Ahead Market, as described in

Section 9.7. For the purpose of Section 9, the term "Zone" shall be construed to mean both

"Zone" and "Scheduling Point."

9.2 Characteristics of Firm Transmission Rights

9.2.1 Each FTR shall be defined by a transmission path from an originating Zone to a

contiguous receiving Zone. Each FTR shall entitle the FTR Holder to a share of Usage

Charges attributable to Inter-Zonal Congestion for transfers on that path from the designated

originating Zone to the designated receiving Zone in accordance with Section 9.6. An FTR is a

right in one direction only. An FTR Holder shall not be entitled to share in (i) Usage Charges

attributable to Inter-Zonal Congestion from the designated receiving Zone to the designated

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: March 11, 2004

Effective: June 1, 2003

FIRST REPLACEMENT VOLUME NO. I

Original Sheet No. 220

Effective: October 13, 2000

originating Zone; or (ii) Usage Charges payable in accordance with Section 7.3.1.5.1 to a

Scheduling Coordinator that counter-schedules from the designated originating Zone to the

designated receiving Zone.

9.2.2 The ISO Governing Board shall, from time to time, approve the amount of FTRs to be

auctioned for each FTR Market and the ISO shall publish this information on the ISO Home

Page at least thirty (30) days prior to the auction. The ISO may issue FTRs in one or more

auctions in any year so long as the total FTRs for any interface do not exceed the maximum

amount permitted in Section 9.3.

9.2.2.1 Should the ISO create additional Zones or otherwise change the ISO's defined Inter-

Zonal Interface, and if such changes would affect outstanding FTRs, such changes will not take

effect prior to the expiration date of any such outstanding FTRs. The ISO shall also publish an

announcement of any such pending changes on the ISO Home Page and WEnet at least thirty

(30) days prior to the applicable FTR auction.

9.2.2.2 Any additional FTRs auctioned as a result of changes in the ISO's defined Inter-Zonal

Interfaces shall not affect the rights associated with existing FTRs.

9.2.3 Each FTR shall be issued in the denomination of 1 MW. The initial release of FTRs

shall start with the hour beginning at 12:00 a.m., on February 1, 2000 and end with the hour

beginning at 11:00 p.m., on March 31, 2001. An FTR shall not afford the FTR Holder any right

to share in Usage Charges attributable to Inter-Zonal Congestion occurring in any hour before

or after the term of the FTR.

9.2.4 The portion of the Usage Charges to which the FTR Holder is entitled shall be

determined in accordance with Section 9.6.

Issued by: Roger Smith, Senior Regulatory Counsel

Issued on: October 13, 2000

- **9.2.5** FTR Holders shall be entitled to priority in the scheduling of Energy in the Day-Ahead Market as specified in Section 9.7.
- 9.2.6 Any entity, with the exception of the ISO, shall be eligible to acquire FTRs by participating in the ISO's auction of FTRs, as described in Section 9.4, or by purchasing FTRs in secondary markets. To participate in the ISO's auction of FTRs, an entity must either be a certified Scheduling Coordinator or have met financial requirements equivalent to the financial certification criteria required of all Scheduling Coordinators. An entity may not acquire FTRs with a total value that exceeds the financial security proved by that entity to the ISO. In addition, an FTR Bidder must have, or have access to, the necessary technical equipment to participate in the electronic auction.
- 9.2.7 All entities which acquire FTRs by participating in the ISO's auction of FTRs, as described in Section 9.4, directly from the ISO pursuant to Section 9.4.3, or by purchasing FTRs in secondary markets, must register as an FTR Holder with the ISO. To complete this registration, the FTR Holder must notify the ISO, through the form specified for that purpose by the ISO, of all Affiliates of the FTR Holder that are themselves FTR Holders or Market Participants. The requirement that an FTR Holder notify the ISO of all Affiliates that are FTR Holders or Market Participants is continuing for as long as the FTR Holder owns FTRs, and FTR Holders must provide the ISO with supplemental notification concerning FTR Holders and/or Market Participants that become affiliated with the FTR Holder or Affiliates that subsequently become FTR Holders or Market Participants in order to satisfy this requirement.

9.3 Maximum Number of Firm Transmission Rights

9.3.1 On each Inter-Zonal Interface and direction combination for which FTRs are issued, the ISO shall issue a number of FTRs that is less than or equal to the difference between:

Issued by: Roger Smith, Senior Regulatory Counsel

Issued on: October 13, 2000 Effective: October 13, 2000

FIRST REPLACEMENT VOLUME NO. I

First Revised Sheet No. 222

Superseding Original Sheet No. 222

(i) The WECC approved path rating of the interface in the direction from the

originating Zone to the receiving Zone or, if the interface has not received a

WECC approved rating, a rating determined by a methodology that is consistent

with the WECC's rating methodology; and

(ii) The portion of the transfer capability of the interface available for transmission

scheduling under Existing Contracts as Existing Rights.

and ensures the ISO's ability to honor all of its FTRs simultaneously under normal operating

conditions.

9.4 Issuance of Firm Transmission Rights by the ISO

9.4.1 The ISO shall make FTRs available by conducting an annual primary auction of FTRs,

commencing approximately two months before the beginning of the term of the FTRs; provided;

however that for the initial FTR release, the primary auction shall be as determined by the ISO

Governing Board. The auction of FTRs shall be a simultaneous multi-round, clearing price auction

conducted separately and independently, as set forth in Section 9.4.2, for each FTR Market. In

addition, if the ISO Governing Board decides to make available, between annual auctions, FTRs in

addition to those that were purchased in the last annual auction, the ISO may conduct additional

auctions of such FTRs in accordance with Section 9.4.2. The term of such FTRs shall only be for

the remaining duration of the FTR term defined for the primary auction applicable to the year

during which they were issued.

9.4.2 The ISO shall conduct the auction of FTRs through the following procedures:

9.4.2.1 At least thirty (30) days prior to the scheduled start of the auction, the ISO shall post on the

ISO Home Page the following information:

Issued by: Charles F. Robinson, Vice President and General Counsel

- (i) the number of FTRs to be issued for each FTR Market;
- (ii) the starting bid price at which FTRs will be made available in each FTR Market in the first round of the auction, which price will be set in each FTR Market at a level equal to the greater of (a) \$100 per MW-year; (b) twenty (20) percent of the ratio of the net Usage Charges collected by the ISO with respect to that FTR Market in the most recent twelve-month period for which data are available to the total MW-years of Energy scheduled over the Inter-Zonal Interface in the relevant direction during that period; or (c) twenty (20) percent of the ration of the net Grid Operation Charges (for new Inter-Zonal Interfaces that previously were transmission paths within a Zone) collected by the ISO in the most recent twelve-month period for which data are available to the total MWyears of Energy scheduled over the transmission paths in the relevant direction during that period, provided that, if data are available for only a portion of the twelve-month period, such data shall be used on annualized basis;
- (iii) the formula through which the ISO will determine how much to adjust the price of FTRs in each FTR Market for subsequent rounds of the auction, including the initial coefficients to be used in the formula and the range over which the coefficients may be adjusted in accordance with Section 9.4.2.3;

Issued by: Roger Smith, Senior Regulatory Counsel

Issued on: October 13, 2000 Effective: October 13, 2000

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

First Revised Sheet No. 224 Superseding Original Sheet No. 224

- (iv) the date and time prior to the commencement of the auction by which each entity desiring to bid on FTRs must have satisfied the necessary financial requirements as outlined in Section 9.2.6;
- (v) the specifications for the technical equipment necessary to participate in the auction, which will be conducted electronically, the date and time by which bids must be submitted in the first round of the auction, which shall be the same for all FTR Markets, and the form and format in which bids must be submitted; and
- (vi) a schedule for the conduct of subsequent rounds of the auction, including the interval between rounds of the auction and the anticipated duration of the auction.
- 9.4.2.2 On or before the date specified in Section 9.4.2.1(v), any entity desiring to obtain FTRs in the ISO's auction must submit, via equipment satisfying the technical requirements specified in accordance with Section 9.4.2.1(v), a bid for each FTR Market in which the entity desires to participate, specifying the number of FTRs the entity is willing to purchase at the price specified in Section 9.4.2.1(ii). All individual bids will remain confidential throughout all rounds of the auction in each FTR Market. Once submitted to the ISO, a bid for FTRs in any round of an auction may not be cancelled or rescinded by the FTR Bidder. The ISO shall announce simultaneously to all FTR Bidders the total quantity of FTRs for which valid bids are submitted for each FTR Market.
- 9.4.2.3 In each round of the auction following the first round, the ISO will increase the price at which FTRs are made available in each FTR Market in accordance with the formula posted in accordance with Section 9.4.2.1(iii), or in accordance with any adjustment to the coefficients in that formula that is announced by the ISO to the FTR Bidders at least one round in advance of the round for which the adjustment is made. Price increases need not be uniform for all FTR Markets.

Issued by: Charles F. Robinson, Vice President and General Counsel

FIRST REPLACEMENT VOLUME NO. I

First Revised Sheet No. 225

Effective: October 13, 2000

Superseding Original Sheet No. 225

In the case of an FTR Market in which the demand for FTRs in the preceding round is less than or

equal to the quantity of FTRs being made available, the price shall not increase and the auction for

that FTR Market shall close. After each round of the auction, the ISO shall announce

simultaneously to all FTR Bidders the total quantity of FTRs for which valid bids were submitted in

each FTR Market, whether the auction for each FTR Market is closed, and, the revised prices for

the following round of the auctions that remain open. Within the timeframe set by the ISO in

accordance with Section 9.4.2.1(vi), each FTR Bidder may submit bids for the quantity of FTRs it

desires to purchase in each FTR Market at the revised price, provided that an FTR Bidder may not

bid for a number of FTRs in an FTR Market that exceeds the total number of FTRs in that FTR

Market for which that entity submitted bids in the preceding round of the auction. The ISO shall

conduct subsequent rounds of the auction in each FTR Market until the demand for FTRs in the

FTR Market is less than or equal to the quantity of FTRs being made available, at which point the

auction shall be closed in that FTR Market.

9.4.2.4 Subject to Section 9.4.2.5, each successful FTR Bidder shall receive a number of

FTRs in each FTR Market equal to the number of FTRs for which it bid in the last round of the

auction for that FTR Market.

9.4.2.5 For any FTR Market in which, when the auction has closed, the number of FTRs being

made available exceeds the demand for FTRs in that FTR Market in the last round of the auction,

each FTR Bidder shall be awarded a number of FTRs determined in accordance with the following

formula, provided that, if the number of FTRs that would be awarded under the formula to an FTR

Bidder that did not submit a bid in the last round of the auction is less than five percent (5%) of the

initial bid submitted by that FTR Bidder for the FTR Market, that FTR Bidder shall have the option

of declining the award of FTRs resulting from the formula:

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: March 11, 2004

$$N = B + [(R/TR) * D]$$

where

- N = The total number of FTRs awarded to an FTR Bidder for an FTR Market, which shall be in whole MWs and shall not exceed the number of FTRs for which that FTR Bidder bid in the round preceding the final round of the auction;
- B = The number of FTRs for which an FTR Bidder bid in the final round of the auction for the FTR Market in accordance with Section 9.4.2.4 (or zero, if the FTR Bidder did not bid in that round);
- R = The difference between the number of FTRs for which the FTR Bidder bid in the round preceding the final round of the auction and B, but not less than zero;
- TR = The total of the demand reductions (R) for all FTR Bidders
 that submitted bids in the last round of the auction
 (treating the failure by an FTR Bidder to submit a bid as a
 bid of zero); and
- D = The difference between the total demand for FTRs in the final round of the auction and the quantity of FTRs being made available for the FTR Market.
- 9.4.2.6 The price of FTRs in an FTR Market shall be the last price at which the demand for FTRs in the FTR Market exceeded or equaled the quantity of FTRs being made available pursuant to Section 9.4.2.1(i), except that, if the demand for FTRs in an

Issued by: Roger Smith, Senior Regulatory Counsel

Issued on: October 13, 2000 Effective: October 13, 2000

Account.

FIRST REPLACEMENT VOLUME NO. I

will not be awarded in that auction.

FTR Market in the first round of the auction was less than the quantity of FTRs being made available for that FTR Market, the price of FTRs in that FTR Market shall be the first round price and each FTR Bidder in that FTR Market will receive a number of FTRs equal to the quantity of bids they submitted in the first round. Any remaining FTRs in that FTR Market

- 9.4.2.7 Each FTR Bidder shall pay the ISO an amount equal to the sum, for all FTR Markets, of the products of the FTR price in each FTR Market (determined in accordance with Section 9.4.2.6) and the total quantity of FTRs awarded to that FTR Bidder in that FTR Market (determined in accordance with Section 9.4.2.4 or Section 9.4.2.5, as applicable). FTR Bidders shall pay the amount determined in accordance with the foregoing sentence within ten (10) Business Days of receiving an invoice from the ISO by making payment to the ISO Clearing Account in accordance with Section 11.10. If the FTR Bidder fails to make timely payment of the full amount due, the ISO may enforce any guarantee, letter of credit or other credit support provided by the defaulting FTR Bidder in accordance with Section 9.2.6 and, if the ISO is required to institute proceedings to collect any unpaid amount, the defaulting FTR Bidder shall pay Interest on the unpaid amount for the period from the Payment Date until the date on which payment is remitted to the ISO Clearing
- 9.4.2.8 The ISO shall post on the ISO Home Page the prices at which FTRs are sold in each FTR Market through the primary auction.
- 9.4.3 For the ten-year transition period described in Section 4 of Schedule 3 to Appendix F, a New Participating TO that has an obligation to serve Load shall receive FTRs for Inter-Zonal Interfaces to which the transmission facilities and Converted Rights for Inter-Zonal Interfaces that the New Participating TO turns over to the ISO's Operational Control give it transmission rights. The amount of FTRs will be determined when the Transmission Control Agreement is executed and shall be commensurate with the

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: March 11, 2004 Effective: August 9, 2003

FIRST REPLACEMENT VOLUME NO. I

Second Revised Sheet No. 228

Superseding First Revised Sheet No. 228

transmission capacity the New Participating TO is turning over to ISO Operational Control. FTRs

issued in accordance with this section shall entitle the FTR Holder to receive Usage Charge

revenues and to priority in the scheduling of Energy in the Day-Ahead Market in accordance with

the provisions of the ISO Tariff. FTRs associated with Converted Rights shall terminate on the

earlier of termination of the Existing Contract or the end of the ten-year transition period.

9.5 Distribution of Auction Revenues Received by the ISO for Firm Transmission Rights

9.5.1 For each Inter-Zonal Interface and direction for which an FTR is defined, the total

proceeds received by the ISO through the auction described in Section 9.4 shall be allocated and

paid by the ISO to the Participating TO that is entitled in accordance with Section 7.3.1.6 to receive

Usage Charge revenues with respect to the corresponding Inter-Zonal Interface. Each

Participating TO shall credit its FTR auction proceeds against its high voltage TRBA if the FTR is

for a High Voltage Transmission Facility or against its low voltage TRBA if the FTR is a for a Low

Voltage Transmission Facility.

9.5.2 In the event the transmission facilities or rights making up an Inter-Zonal Interface with

respect to which FTRs are defined are owned by more than one Participating TO, the proceeds of

the auction of such FTRs shall be allocated to those Participating TOs who auction FTRs in

proportion to the FTRs associated with their Inter-Zonal Interface as of the date of the FTR auction

compared to all FTRs auctioned for such Inter-Zonal Interface.

9.5.3 In the event the transmission facilities or rights making up an Inter-Zonal Interface with

respect to which FTRs are defined have been upgraded resulting in increased transmission

capacity on the Inter-Zonal Interface, and the costs of construction and operation were paid for by

a Project Sponsor pursuant to Section 3.2.7.1 and were not included in the ISO's transmission

Access Charge or a reimbursement or direct payment from a Participating TO, the proceeds of the

auction of such

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: March 11, 2003 Effective: June 1, 2003

FIRST REPLACEMENT VOLUME NO. I

First Revised Sheet No. 228A

Superseding Original Sheet No. 228A

FTRs shall be allocated to the Project Sponsors according to the allocated shares determined as

set forth in Section 3.2.7.3 (d).

9.6 Distribution of Usage Charges to FTR Holders

9.6.1 The FTR Holder shall be entitled to receive from the ISO a portion of the total Congestion

revenues related to Inter-Zonal Congestion calculated by the ISO in the Day-Ahead Market and

collected by the ISO with respect to the Inter-Zonal Interface and direction combination for which

the FTR was defined. This portion equals the Usage Charge calculated by the ISO in the Day-

Issued by: Charles F. Robinson, Vice President and General Counsel

Issued on: March 11, 2003 Effective: June 1, 2003

FIRST REPLACEMENT VOLUME NO. I

First Revised Sheet No. 229 Superseding Original Sheet No. 229

Ahead Market for the transfer of 1 MW from the originating Zone to the receiving Zone during each

hour in which Usage Charges apply, multiplied by the number of FTRs owned by that FTR Holder,

subject to adjustment in accordance with Section 9.6.3.

9.6.2 In addition, an FTR Holder shall be entitled to receive a portion of the additional net Usage

Charges related to Inter-Zonal Congestion calculated by the ISO in the Hour-Ahead Market and

collected by the ISO with respect to the Inter-Zonal Interface and direction combination for which

the FTR was defined. The FTR Holder shall receive a portion of the net Usage Charges in the

Hour-Ahead Market proportionate to the share of the Usage Charges it received in the Day-Ahead

Market in accordance with Section 9.6.1.

9.6.3 When the Day-Ahead scheduling capability of an Inter-Zonal Interface and direction is less

than its scheduling capacity, determined in accordance with Section 9.3, prior to the Day-Ahead

Market, the entitlements of FTR Holders associated with that FTR Market to Usage Charge

revenues shall not be reduced until and unless the entitlements of Participating TOs associated

with that FTR Market to Usage Charge revenues in accordance with Section 7.3.1.6 have been

reduced to zero. In that event, the financial entitlements associated with the corresponding FTRs

shall be multiplied by a factor equal to the amount of scheduling capability available to holders of

the remaining FTRs divided by the number of such FTRs. When the Day-Ahead scheduling

capability of an Inter-Zonal Interface and direction is greater than its scheduling capacity,

determined in accordance with Section 9.3, prior to the Day-Ahead Market, the entitlements of FTR

Holders associated with that FTR Market to Usage Charge revenues shall not be increased.

9.6.4 When the Congestion Usage Charges calculated and collected by the ISO from the Hour-

Ahead Market with respect to transfers across an Inter-Zonal Interface in a particular direction

result in a net obligation to the ISO, in the circumstances described in Section 7.3.1.7, the

Issued by: Charles F. Robinson, Vice President and General Counsel

FIRST REPLACEMENT VOLUME NO. I

First Revised Sheet No. 230

Superseding Original Sheet No. 230

provisions of this Section 9.6 shall continue to apply, and FTR Holders shall be required to pay the

ISO these amounts.

9.6.5 The ISO will calculate the Congestion Usage Charge revenues to be credited or debited to

the account of each FTR Holder on an hourly basis. Such calculation will identify the Inter-Zonal

Interface and direction to which each credit or debit applies.

9.7 Scheduling Priority of FTR Holders

9.7.1 FTRs will not affect the ISO's dispatch and operation of the ISO Controlled Grid except

that each FTR Holder will have a priority, as described in this Section 9.7, for the scheduling of

Energy in the Day-Ahead Market when an Inter-Zonal Interface experiences Inter-Zonal

Congestion in the direction for which its FTR is defined. Any FTRs not used in Preferred

Schedules in the Day-Ahead Market for any hour have no scheduling priority for that hour in the

Trading Day. FTR Holders shall have no scheduling priority in the Hour-Ahead Market or in real-

time operations.

9.7.2 When Inter-Zonal Congestion is experienced or projected to be experienced in the Day-

Ahead Market, the ISO shall first attempt to relieve the Inter-Zonal Congestion using Adjustment

Bids submitted by Scheduling Coordinators in accordance with Section 7.2.4.

9.7.2.1 If the ISO is unable to relieve the Day-Ahead Inter-Zonal Congestion using Adjustment

Bids, then the ISO will allocate Day-Ahead inter-zonal transmission capacity first to Schedules of

Market Participants that are using Existing Contract rights that have higher scheduling priority than

Converted Rights capacity and second to Market Participants who hold FTRs and have indicated

to the ISO that they wish to exercise their scheduling priority option. The ISO will allocate any

remaining transmission capacity to remaining Market Participants' Schedules pro rata.

9.7.3 When the scheduling capability of an Inter-Zonal Interface is less than or greater than its

normal scheduling capability prior to the Day-Ahead Market, as described in Section 9.6.3, the

priority scheduling rights of FTR Holders, as described in Section 9.7.2, shall remain constant (in

Issued by: Charles F. Robinson, Vice President and General Counsel

First Revised Sheet No. 231 Superseding Original Sheet No. 231

MWs) to the extent that the total scheduling rights of FTR Holders do not exceed the total Interface scheduling capability of the associated Inter-Zonal Interface after adjustments have been made for transmission capacity allocated to Existing Contract rights that have higher scheduling priority than Converted Rights. If the total Interface scheduling capability, adjusted for transmission capacity allocated to Existing Contract rights that have higher scheduling priority than Converted Rights, is less than the total of all scheduling capability represented by FTR Holders who have chosen to exercise the FTR scheduling priority option, scheduling capability shall be allocated to FTR Holders pro rata.

9.7.4 The scheduling priority of FTR Holders:

(i) Shall not apply in the Hour-Ahead Market or in real-time dispatch and operation of

the ISO Controlled Grid;

(ii) Shall not apply to any transfer of Energy other than a transfer across the Inter-

Zonal Interface in the direction for which the FTR was defined during the hour or

hours during which the circumstances described in Section 9.7.2.1 apply; and

(iii) Shall not be transferable, except in connection with a transfer of the FTR that is

registered with the ISO, as described in Section 9.8.

9.8 Assignment of Firm Transmission Rights

9.8.1 An FTR may be assigned, sold, or otherwise transferred by the FTR Holder to any entity

eligible to be an FTR Holder in full MW increments, either for the entire term of the FTR or for any

portion of that term providing, however, that any such transfer shall be in full hour increments that

correspond to the FTR issued to the FTR Holder. All FTRs that are so assigned, sold, or

otherwise transferred by the FTR Holder are subject to the terms and conditions for FTRs

approved by FERC and set forth in the ISO Tariff. Both the FTR Holder of record and the entity to

which the FTRs have been transferred shall register the transfer of the FTR with the ISO by

Issued by: Charles F. Robinson, Vice President and General Counsel

notifying the ISO through the form specified for that purpose by the ISO, and within the number of Business Days following the transfer published by the ISO on the ISO Home Page and WEnet but no later than such time as the ISO shall specify before the deadline applicable to scheduling Energy in the Day-Ahead Market, of (i) the identity of the FTR Holder of record; (ii) the identity of the entity to which the FTRs have been transferred; (iii) the quantity and identification numbers of the FTRs being transferred; (iv) the portion of the term of the FTR for which they are transferred; (v) the price at which the FTRs are being transferred; and (vi) whether the transfer of FTRs is subject to any conditions. The entity to which the FTRs have been transferred must also notify the ISO of all entities with which the transferee is affiliated that are FTR Holders or Market Participants as defined in the ISO Tariff, pursuant to Section 9.2.7. After the ISO receives such notices, the transferee shall be considered the FTR Holder of record with respect to the portion of the term of the FTR that is transferred. In order to use the Scheduling Priority of an FTR, pursuant to Section 9.7, an FTR must be registered with the ISO.

- **9.8.2** The ISO shall publish on the ISO Home Page such information concerning the concentration of ownership of FTRs in each FTR Market as determined by the ISO Governing Board from time to time.
- 9.8.3 To facilitate the operation of secondary markets in FTRs, the ISO shall post on WEnet and the ISO Home Page: (i) the identity of entities that hold FTRs that have been registered with the ISO, together with the quantity of FTRs held by such entities in each FTR Market and the path rating of the interface; and (ii) the name and a contact telephone number or telecopy number of any entity that operates a secondary market in FTRs and that requests the ISO to post such information. The ISO shall also post the prices at which FTRs are transferred through secondary market transactions and shall indicate whether such transfers are conditional.

Issued by: Charles F. Robinson, Vice President and General Counsel