
**CALIFORNIA INDEPENDENT SYSTEM
OPERATOR**

AND

[INTERCONNECTED CONTROL AREA]

**INTERCONNECTED CONTROL AREA
OPERATING AGREEMENT**

INTERCONNECTED CONTROL AREA

OPERATING AGREEMENT

ICAA 1 STANDARD OPERATING AGREEMENT

Interconnected Control Area Operating Agreement

THIS INTERCONNECTED CONTROL AREA OPERATING AGREEMENT (OPERATING AGREEMENT) is established this ____ day of _____, ____ and is accepted by and between:

[Full legal name] ({"Entity"}), having its registered and principal executive office at [address],

and

California Independent System Operator Corporation (ISO), a California nonprofit public benefit Corporation having a principal executive office located at such place in the State of California as the ISO Governing Board may from time to time designate, initially 151 Blue Ravine Road, Folsom, California 95630.

{"Entity"} and the ISO are hereinafter referred to as the "Parties".

Whereas:

1. The Parties named above operate interconnected control areas (connected by the "Interconnection").
2. The Parties wish to coordinate operation and maintenance of the Interconnection to satisfy North American Electric Reliability Council (NERC) criteria, Western Systems Coordinating Council (WSCC) Minimum Operating Reliability Criteria (MORC), and Good Utility Practice.
3. The ISO has certain statutory obligations under California law to maintain power system reliability.

NOW THEREFORE, in consideration of the mutual covenants set forth herein, **THE PARTIES AGREE** as follows:

ICAA 1.2 Purpose and Intent**ICAA 1.2.1 Purpose**

The purpose of this Operating Agreement is to establish the rights and obligations of the ISO and {"Entity"} with respect to the operation, maintenance, and control of the Interconnection. This Operating Agreement is based upon the ISO Tariff, WSCC MORC, existing contracts between {"Entity"} and Participating Transmission Owners comprising the ISO, and established operating procedures. This Operating Agreement acknowledges that other Transmission Owners may have concurrent responsibility.

ICAA 1.2.2 Intent

The intent of this Operating Agreement is to acknowledge requirements, establish procedures, and designate responsibilities for the operation and management of the Interconnection. It is not the intent of this Operating Agreement to abrogate or alter the rights and obligations under existing contracts pertaining to the subject of Interconnection.

ICAA 1.3 Term and Termination**ICAA 1.3.1 Effective Date**

This Operating Agreement shall be effective as of the later of the date of execution of this Operating Agreement, or the date this Operating Agreement is accepted for filing and made effective by the Federal Energy Regulatory Commission (FERC), and shall continue in effect until terminated.

ICAA 1.3.2 Termination

This Operating Agreement may be terminated by either Party upon two years written notice to the other Party or upon mutual consent of both Parties. For entities subject to FERC jurisdiction, termination will be effective upon acceptance by FERC of notice of termination. The ISO shall timely file any notice of termination with FERC. The filing of the notice of termination by the ISO will be considered timely if: (1) the request to file a notice of termination is made after the preconditions for termination have been met, and (2) the ISO files the notice of termination within 30 days of receipt of such request.

ICAA 2 DEFINITIONS**ICAA 2.1 WSCC Definitions**

Except as defined below, terms and expressions used in this Operating Agreement shall have the same meanings as those contained in the WSCC MORC Definitions.

ICAA 2.2 Specific Definitions

ICAA 2.2.1 Forced Outage: An Outage for which sufficient notice cannot be given to allow the Outage to be factored into the preschedule processes and the established Outage coordination principles of the control areas.

ICAA 2.2.2 Good Utility Practice: Any of the practices, methods, and acts engaged in or approved by a significant portion of the electric utility industry in the WSCC region during the relevant time period, or any of the practices, methods, and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety, and expedition. Good Utility Practice is not intended to be any one of a number of the optimum practices, methods, or acts to the exclusion of all others, but rather to be acceptable practices, methods, or acts generally accepted in the region.

ICAA 2.2.3 Interconnection: Transmission facilities that connect one control area to another control area. The Interconnection for this Operating Agreement is described in Service Schedule 1.

ICAA 2.2.4 ISO (The California Independent System Operator): The California Independent System Operator Corporation, a state chartered, nonprofit corporation that controls the transmission facilities of all Participating Transmission Owners and dispatches certain generating units and loads.

ICAA 2.2.5 ISO Control Area: The ISO electric power system (initially comprising the electric power systems previously operated as Control Areas by Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), and San Diego Gas & Electric Company (SDG&E), including, but not limited to, the facilities and entitlements which represent the ISO Controlled Grid), for which the ISO has reliability responsibility pursuant to NERC and WSCC requirements.

- ICAA 2.2.6** **ISO Controlled Grid:** The system of transmission lines and associated facilities of the Participating Transmission Owners that have been placed under the ISO's operational control.
- ICAA 2.2.7** **ISO Operations Date:** The date on which the ISO first assumes operational control of the ISO Control Area.
- ICAA 2.2.8** **ISO Tariff:** ISO Operating Agreement, Protocols, and Tariff as amended from time to time, together with any appendices or attachments thereto.
- ICAA 2.2.9** **Nomogram:** A set of operating or scheduling rules which are used to ensure that simultaneous operating limits are respected, in order to meet NERC and WSCC operating criteria.
- ICAA 2.2.10** **Outage:** Disconnection or separation, planned or forced, of one or more elements of an electric system.
- ICAA 2.2.11** **Participating Transmission Owner:** An owner of transmission that has placed its transmission assets and entitlements under the ISO's operational control.
- ICAA 2.2.12** **Planned Outage:** An Outage for which sufficient notice has been given to allow the Outage to be factored into the processes and the established Outage coordination principles of the control areas.
- ICAA 2.2.13** **Point of Contact:** A person or entity having the authority to receive and act upon scheduling or dispatch communications from the other control area operator and available through a communications device mutually agreed upon on a 24-hour, 7-day basis.
- ICAA 2.2.14** **Real Time Operating Limits:** The rated transfer capability less reductions during any hour caused by, but not limited to, physical limitations beyond the control of the control area operators, and operational limitations resulting from transmission line Outages, equipment Outages, stability limits and loop flow.
- ICAA 2.2.15** **Scheduling Coordinator:** An entity certified by the ISO for the purposes of undertaking the functions of: submitting schedules for energy, generation, transmission losses, and ancillary services; coordinating generation; tracking, billing, and settling trades with other Scheduling Coordinators; submitting forecast information; paying the ISO's charges; and ensuring compliance with ISO protocols.
- ICAA 2.2.16** **Transmission Owner:** An entity owning transmission facilities or having firm contractual rights to use transmission facilities at the Interconnection.

ICAA 2.2.17 **WSCC Security Coordinator:** One of the area control centers assigned by the WSCC to proactively anticipate and mitigate potential problems, facilitate notification, and coordinate restoration following a disturbance.

ICAA 3 **OPERATIONAL RESPONSIBILITIES**

ICAA 3.1 **General Requirements**

ICAA 3.1.1 **Standards to Be Met**

Both the ISO and {"Entity"} shall plan and operate the Interconnection in conformance with NERC standards, WSCC MORC, and Good Utility Practice.

ICAA 3.1.2 **Existing Contracts**

The ISO will assume certain rights and responsibilities of Participating Transmission Owners in existing contracts, operating agreements, or procedures between {"Entity"} and the Participating Transmission Owners regarding the Interconnection where those rights and responsibilities pertain to the coordinated operation of the interconnected control areas. The ISO and {"Entity"}, after consulting with affected Transmission Owners, shall develop the procedures to be used regarding those rights and responsibilities mentioned herein. The specific provisions of the aforementioned agreements which are affected by this Operating Agreement and the procedures for implementing such existing agreements are identified by the ISO and {"Entity"} in Service Schedule 2.

ICAA 3.1.3 **Communication**

The ISO and {"Entity"} shall each operate and maintain a 24-hour, 7-day control center with real time scheduling and control functions. Appropriate control center staff will be provided by each Party who shall be responsible for operational communications and who shall have sufficient authority to commit and bind that Party.

The ISO and {"Entity"} shall jointly develop communication procedures necessary to support scheduling and dispatch functions. The Points of Contact and the procedures for insuring reliable communication are identified in Service Schedule 3.

ICAA 3.2 Grid Operation**ICAA 3.2.1 Responsibility**

The Parties shall coordinate efforts consistent with Good Utility Practice to mitigate adverse conditions that occur at the Interconnection. The ISO and {"Entity"} are each responsible for exercising operational control over facilities in their respective control areas, and shall not exercise operational control over any part of the Interconnection facilities owned or operated by the other control area operator. The respective jurisdictions for operational control by the ISO and {"Entity"} are identified in Service Schedule 4.

ICAA 3.2.2 Switching Operations

The ISO and {"Entity"} agree that the Transmission Owners retain possession of and will operate those interconnected facilities in accordance with the existing contracts and agreements in force between the Transmission Owners and {"Entity"}. Operations on the Interconnection shall be coordinated through the ISO and {"Entity"} except as otherwise indicated in ICAA 7.4. Specific switching responsibilities are identified in Service Schedule 5.

ICAA 3.2.3 Real Time Operating Limits**ICAA 3.2.3.1 Real Time Operating Limits Established Jointly**

The ISO and {"Entity"}, in consultation with the Transmission Owner(s), shall jointly agree upon the Real Time Operating Limits of the Interconnection. Real Time Operating Limits shall be based on the given real time conditions, current operating criteria, and established Nomograms, graphs, and charts specific to the transfer paths within {"Entity"} and the ISO. These established operating limits are specified in Service Schedule 6.

ICAA 3.2.3.2 Real Time Operating Limits Exceeded

If a Real Time Operating Limit is exceeded or the operation of either the {"Entity"} Control Area or the ISO Control Area is jeopardized, the ISO and {"Entity"} shall communicate and coordinate actions to return the Interconnection and the affected control area(s) to Real Time Operating Limits. In compliance with WSCC Mandatory Reliability Criteria for Stability Rated Paths, the ISO and {"Entity"} will make immediate Control Area to Control Area schedule adjustments to return overloaded stability rated facilities to Real Time Operating Limits within 10 minutes.

ICAA 3.2.4 Relay Action

The ISO and {"Entity"} shall provide pertinent relay data and related equipment condition and operational information concerning the

Interconnection to each other as soon as practicable after the occurrence of any relay action on Interconnection equipment, including, as it becomes available, additional information regarding cause, condition, effects, and estimated corrective action. Notwithstanding the foregoing, the ISO and {"Entity"} shall agree upon corrective action and the procedure for returning to normal or adjusted operation.

ICAA 3.2.5 Voltage Control

The ISO and {"Entity"} shall coordinate the use of voltage control equipment to maintain transmission voltages and reactive flows at mutually agreed upon levels to ensure system stability within the operating range of electrical equipment and in accordance with WSCC MORC. The ISO and {"Entity"} shall operate the facilities at the Interconnection at reactive reserve margins that are adequate to maintain minimum acceptable voltage limits under facility Outage conditions. Agreed upon voltage schedule limits and reactive flows are specified in Service Schedule 7.

ICAA 3.2.6 Information Exchange

The ISO and {"Entity"} shall coordinate directly the exchange of any information concerning the reliable operation of the Interconnection facilities and the status of the control areas. Such information shall be communicated through mutually acceptable methods. Procedures and forms for the exchange of emergency information shall be jointly developed and are contained in Service Schedule 8.

ICAA 3.2.6.1 Information Required to be Provided

Details regarding the information necessary to the reliable operation of the Interconnection shall be included in Service Schedule 9.

ICAA 3.2.7 Joint Operating Procedures

Procedures for coordinating the reliable operation of the Interconnection will be jointly administered by the ISO, {"Entity"}, and the Transmission Owners. Such procedures are described in more detail in Service Schedule 10.

ICAA 4 SECURITY COORDINATION

The ISO has been designated WSCC Security Coordinator for the California Subregion.

ICAA 5 SCHEDULING AND DISPATCH**ICAA 5.1 Coordination and Exchange of Information**

The ISO and {"Entity"} shall coordinate and exchange information on schedules and control area checkouts at the Interconnection. All schedules at the Interconnection shall match. In accordance with WSCC MORC, the ISO and {"Entity"} shall verify, at mutually acceptable times, the actual and scheduled interchange numbers for past hours as well as scheduled interchange numbers for current and future hours. The ISO and {"Entity"} shall jointly develop methods and details for coordinating scheduling procedures, information exchange, and notifications in normal, emergency, and curtailment conditions. These methods and details are included in Service Schedule 11.

ICAA 5.2 Notifications

The ISO and {"Entity"} shall jointly develop methods for coordinating the notification of all affected scheduling entities within their respective control areas regarding schedule changes in emergency or curtailment conditions.

ICAA 6 OUTAGE COORDINATION**ICAA 6.1 Maintenance Coordination**

Outages of facilities affecting the Interconnection shall be jointly coordinated with the ISO, {"Entity"}, and the Transmission Owner(s) to minimize a reduction and the duration of such reduction to the operating limits of the Interconnection. The ISO and {"Entity"} shall provide each other reasonable notice of Planned Outages and scheduled maintenance affecting the Interconnection in advance.

The ISO and {"Entity"} shall review Planned Outages and scheduled maintenance to determine the feasibility of initiating the switching process. If, given the current or anticipated system conditions at the time, the ISO and {"Entity"} jointly determine that system reliability may be impaired, the Outage may be canceled.

Outage coordination procedures will be jointly developed by the ISO and {"Entity"} and included in Service Schedule 12.

ICAA 6.2 Forced Outages

The ISO and {"Entity"} shall coordinate and implement operational changes necessary to accommodate Forced Outages, emergencies, or curtailments. All notifications of Forced Outages, emergencies, or

curtailments shall be communicated between the ISO and {"Entity"} control centers as soon as possible. If notice prior to a Forced Outage, emergency, or curtailment cannot be given, the ISO or {"Entity"} shall notify the other Party of the event immediately after it occurs.

All Forced Outage notifications shall be communicated by both control centers to other control area operators likely to be affected by the Forced Outage.

ICAA 7 EMERGENCY OPERATION

ICAA 7.1 Emergency Assistance Arrangements

Service Schedule 13 details emergency assistance arrangements.

ICAA 7.2 Unscheduled Flow Mitigation (Loop Flow)

The ISO shall be the administrator for Unscheduled Flow Mitigation Procedures for the California Subregion, consistent with WSCC procedures.

ICAA 7.3 Emergency Action

In the event of a system emergency, the ISO and {"Entity"} shall take coordinated action, as they consider necessary, to preserve or restore stable operation of the interconnected grid and to preserve or restore reliable, safe, and efficient service as quickly as reasonably practicable. The ISO and {"Entity"} shall, where practicable, keep operators in affected control areas and the appropriate Security Coordinators informed as to the nature and extent of the system emergency.

ICAA 7.4 Operations Exercised Independently

Emergency operation in response to unforeseen system occurrences that may jeopardize the safety of personnel and the general public and/or system stability may be performed independently by {"Entity"}, the ISO, and the Transmission Owner. {"Entity"} shall forward the outcomes to the ISO Control Center as soon as practicable after the occurrence. The ISO Control Center shall forward the outcomes of emergency operation to which it is a party to the {"Entity"} Control Center as soon as practicable after the occurrence. The duties and responsibilities for the ISO Control Center, the {"Entity"} Control Center, and the Transmission Owner(s) under the foregoing circumstances are described in more detail in Service Schedule 14.

ICAA 7.5 Restoration Coordination

The ISO and {"Entity"} shall coordinate restoration on the facilities affecting the Interconnection, and shall take necessary restoration measures on facilities affecting the Interconnection in their respective control areas following an interruption, including coordinating the restarting of either or both systems from a black start, if requested. The ISO and {"Entity"} shall develop restoration procedures, which are included in Service Schedule 15.

ICAA 7.6 Voltage Collapse

The ISO and {"Entity"} shall take measures in their respective control areas to arrest collapsing voltage that affects the Interconnection.

ICAA 8 LIABILITY**ICAA 8.1 Uncontrollable Forces**

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

Neither the ISO nor {"Entity"} will be considered in default of any obligation under this Operating Agreement or liable to the other for direct, indirect, and consequential damages if prevented from fulfilling that obligation due to the occurrence of an Uncontrollable Force.

In the event of the occurrence of an Uncontrollable Force, which prevents either the ISO or {"Entity"} from performing any obligations under this Operating Agreement, the affected entity shall not be entitled to suspend performance of its obligations in any greater scope or for any longer duration than is required by the Uncontrollable Force. The ISO and {"Entity"} shall each use its best efforts to mitigate the effects of such Uncontrollable Force, remedy its inability to perform, and resume full performance of its obligations hereunder.

ICAA 8.2 Liability To Third Parties

Except as otherwise expressly provided herein, nothing in this Operating Agreement shall be construed or deemed to confer any right or benefit on, or to create any duty to, or standard of care with reference to any third party, or any liability or obligation, contractual or otherwise, on the part of ISO or {"Entity"}.

ICAA 8.3 Liability Between the Parties

The Parties' duties and standard of care with respect to each other, and the benefits and rights conferred on each other, shall be no greater than as explicitly stated herein. Neither Party, its directors, officers, employees, or agents, shall be liable to the other Party for any loss, damage, claim, cost, charge, or expense, whether direct, indirect, or consequential, arising from the Party's performance or nonperformance under this Operating Agreement, except for a Party's gross negligence, or willful misconduct.

ICAA 8.4 Liability For Electric Disturbance and Interruptions

The ISO and {"Entity"} shall plan, operate, and maintain their respective systems, consistent with Good Utility Practice, to minimize or avoid electric disturbances that may interfere with the system of the other Party. The limits of responsibility for the ISO and {"Entity"} shall each be for protecting its respective system from possible damage by reason of electric disturbance or faults caused by the operation, faulty operation, or non-operation of its facilities.

Neither Party shall be liable to the other Party for any claim, demand, liability, loss, or damage, whether direct, indirect, or consequential, incurred by the Parties or their respective customers, which results from the separation of the systems in an emergency or interruption.

If a customer within the control area of a Party makes a claim or brings an action against the other Party for any death, injury, loss, or damage arising out of or in connection with electric service to such customer and caused by the operation or failure of operation of the other Party's control area or any portion thereof, the first Party shall indemnify and hold harmless the other Party, its directors, officers, and employees from and against any liability for such injury, loss, or damage.

ICAA 9 SERVICE SCHEDULES

The ISO and {"Entity"} shall establish with each other and where appropriate with the Transmission Owner(s) specific procedures for the reliable operation and scheduling of the Interconnection facilities. The details of these particular operating procedures will be set forth in the Service Schedules.

ICAA 10 MISCELLANEOUS**ICAA 10.1 Assignments**

Either Party to this Operating Agreement may assign its obligations under this Operating Agreement, with the other Party's prior written consent. Such consent shall not be unreasonably withheld.

Obligations and liabilities under this Operating Agreement shall be binding on the successors and assigns of the Parties. No assignment of this Operating Agreement shall relieve the assigning Party from any obligation or liability under this Operating Agreement arising or accruing prior to the date of assignment.

ICAA 10.2 Notices

Any notice, demand, or request which may be given to or made upon either Party regarding this Operating Agreement shall be made in writing and shall be deemed properly served, given, or made: (a) upon delivery if delivered in person, (b) five (5) days after deposit in the mail if sent by first class United States mail, postage prepaid, (c) upon receipt of confirmation by return facsimile if sent by facsimile, or (d) upon delivery if delivered by prepaid commercial courier service. A Party must update the information in Service Schedule 3 relating to its address as that information changes. Such changes shall not constitute an amendment to this Operating Agreement.

ICAA 10.3 Waivers

Any waiver at any time by either Party of its rights with respect to any default under this Operating Agreement, or with respect to any other matter arising in connection with this Operating Agreement, shall not constitute or be deemed a waiver with respect to any subsequent default or matter arising in connection with this Operating Agreement. Any delay short of the statutory period of limitations, in asserting or enforcing any right under this Operating Agreement, shall not constitute or be deemed a waiver of such right.

ICAA 10.4 Governing Law and Forum

Subject to ICAA 10.5, this Operating Agreement shall be deemed to be a contract made under and for all purposes shall be governed by and construed in accordance with the laws of the State of California, except that if a dispute concerns the operation of transmission lines or facilities, the law of the state where the transmission lines or facilities are located will control. The Parties irrevocably consent that any legal action or proceeding arising under or relating to this Operating Agreement shall be brought in any of the following forums, as

appropriate: a court of the State of California or any federal court of the United States of America located in the State of California or, where subject to its jurisdiction, before the Federal Energy Regulatory Commission. No provision of this Operating Agreement shall be deemed to waive the right of any Party to protest, or challenge in any manner, whether this Operating Agreement, or any action or proceeding arising under or relating to this Operating Agreement, is subject to the jurisdiction of the Federal Energy Regulatory Commission.

ICAA 10.5

Consistency with Federal Laws and Regulations

(a) Nothing in this Operating Agreement shall compel any person or federal entity to: (1) violate federal statutes or regulations; or (2) in the case of a federal agency, to exceed its statutory authority, as defined by any applicable federal statutes, regulations, or orders lawfully promulgated thereunder. If any provision of this Operating Agreement is inconsistent with any obligation imposed on any person or federal entity by federal law or regulation to that extent, it shall be inapplicable to that person or federal entity. No person or federal entity shall incur any liability by failing to comply with any provision of this Operating Agreement that is inapplicable to it by reason of being inconsistent with any federal statutes, regulations, or orders lawfully promulgated thereunder; provided, however, that such person or federal entity shall use its best efforts to comply with the ISO Tariff to the extent that applicable federal laws, regulations, and orders lawfully promulgated thereunder permit it to do so.

(b) If any provision of this Operating Agreement requiring any person or federal entity to give an indemnity or impose a sanction on any person is unenforceable against a federal entity, the ISO shall submit to the Secretary of Energy or other appropriate Departmental Secretary a report of any circumstances that would, but for this provision, have rendered a federal entity liable to indemnify any person or incur a sanction and may request the Secretary of Energy or other appropriate Departmental Secretary to take such steps as are necessary to give effect to any provisions of this Operating Agreement that are not enforceable against the federal entity.

ICAA 10.6

Severability

If any term, covenant, or condition of this Operating Agreement or the application or effect of any such term, covenant, or condition is held invalid as to any person, entity, or circumstance, or is determined to be unjust, unreasonable, unlawful, imprudent, or otherwise not in the public interest by any court or government agency of competent jurisdiction, then such term, covenant, or condition shall remain in force

and effect to the maximum extent permitted by law, and all other terms, covenants, and conditions of this Operating Agreement and their application shall not be affected thereby, but shall remain in force and effect and the parties shall be relieved of their obligations only to the extent necessary to eliminate such regulatory or other determination unless a court or governmental agency of competent jurisdiction holds that such provisions are not separable from all other provisions of this Operating Agreement.

ICAA 10.7 Section Headings

Section headings provided in this Operating Agreement are for ease of reading and are not meant to interpret the text in each Section.

ICAA 10.8 Amendments

This Operating Agreement and the Schedules and Attachments attached hereto may be amended from time to time by the mutual agreement of the Parties in writing. Amendments that are subject to FERC approval shall not take effect until FERC has accepted such amendments for filing and has made them effective. If the amendment does not require FERC approval, the amendment will be filed with FERC for information.

ICAA 10.9 Counterparts

This Operating Agreement may be executed in one or more counterparts at different times, each of which shall be regarded as an original and all of which, taken together, shall constitute one and the same Operating Agreement.

IN WITNESS WHEREOF, the Parties hereto have caused this Operating Agreement to be duly executed on behalf of each by and through their authorized representatives as of the date written in ICAA 1.

California Independent System Operator Corporation

By: _____

Name: _____

Title: _____

Date: _____

[Full legal name of {"ENTITY"}]

By: _____

Name: _____

Title: _____

Date: _____

SERVICE SCHEDULE 1

INTERCONNECTION

[Section 2.2.5]

A paragraph description of the overall Interconnection, including number of ties, voltage level, who with, etc

- **Bullet each tie line to list**

- **Tie Line**
 - Point of Interconnection:
 - PTO:
 - ISO Terminal:
 - Other Transmission Owner:
 - {“Entity”} Terminal:
 - Control Area to Control Area:
 - Metering Point:

SERVICE SCHEDULE 2

Existing Contract Provisions and Procedures

[Section 3.1.2]

Existing Transmission Service Contracts

{PTO}, as the Participating Transmission Owner, is responsible for providing the ISO with this Service Schedule, outlining the instructions for {"Entity"}'s existing contract(s).

SERVICE SCHEDULE 3

POINTS OF CONTACT

[Section 3.1.3]

OPERATIONAL CONTACT

ISO:

Transmission Dispatcher:
(Folsom-Primary): _____

Transmission Dispatcher:
(Alhambra-Backup) _____

Real Time Scheduler: _____

Shift Supervisor: _____

Dispatch Fax: _____

Outage Coordination: _____

Fax: _____

Manager of Dispatch and
Security Coordination: _____

Address: California ISO
151 Blue Ravine Road
P.O. Box 639014
Folsom, CA 95763-9014

OPERATIONAL CONTACT

{“Entity”}

Transmission Dispatcher:
(Primary):

Transmission Dispatcher:
(Backup)

Real Time Scheduler:

Dispatch Supervisor:

Outage Coordination:

Fax:

Manager of Dispatch

Address

SERVICE SCHEDULE 4
RESPECTIVE JURISDICTION FOR OPERATIONAL CONTROL
[Section 3.2.1]

- **List tie lines for which information is needed**

- **Tie Line**
 - Jurisdictional Boundary:
 - Metering:
 - ISO/PG&E Switching Responsibility:
 - {“Entity”} Switching Responsibility:
 - Operational Responsibility:
 - Maintenance Responsibility:

SERVICE SCHEDULE 5
SWITCHING OPERATIONS

[Section 3.2.2]

The primary intent of this section is to ensure (1) safe operation of the line; (2) rapid restoration of the line if it is out of service; and (3) both control areas are informed before the line is take out of service or restored to operation. The detailed switching procedures and operations are done under the direction of the transmission line owners.

- **Tie Lines list**

- **Tie Line**

- Clearance/Switching Instructions:

- Line Restoration Instructions:

- Testing Instructions:

- Monitoring and Control Instructions:

SERVICE SCHEDULE 6
REAL TIME OPERATING LIMITS
[Section 3.2.3.1]

- **Tie line list**

- **Tie Line**

Operating Limits MW:

Thermal limit:

Scheduling and Control:

SERVICE SCHEDULE 7

VOLTAGE CONTROL

[Section 3.2.5]

- **Tie line list**

- **Tie Line**
 - Voltage Schedule:
 - MVAR Schedule:
 - MVAR Limits:

SERVICE SCHEDULE 8
INFORMATION EXCHANGE PROCEDURES FOR
GRID OPERATIONS
[Section 3.2.6]

Information Exchange

The ISO and {"Entity"} coordinate the exchange of any information concerning the Interconnection facilities and the status of the control areas that may affect the operation of the Interconnection or either of the interconnected control areas. Real time information is communicated in the most efficient method possible through any shared electronic, voice, or facsimile media. Service Schedule 9 lists information necessary for the reliable operation of the ISO, {"Entity"}, and the WSCC.

SERVICE SCHEDULE 9
INTERCONNECTION INFORMATION
[Section 3.2.6.1]

Information necessary for the reliable operation of the ISO, {"Entity"} and the WSCC includes, but is not limited to, the following operational data:

1. Major transmission Outages, planned or unplanned, as they occur or are effected;
2. Restoration of major transmission facilities after planned or unplanned Outages;
3. Loss or impairment of certain reactive equipment;
4. Loss of load or resources resulting in detectable frequency variation;
5. Detectable significant weather data and/or atmospheric conditions;
6. Significant conditions such as fires, floods, and earthquakes;
7. Activation or deactivation of RAS equipment;
8. Any planned or unplanned operation that can or will impair the availability or transfer capability of resources; and
9. Activation of Emergency Command Centers.

SERVICE SCHEDULE 10
JOINT OPERATING PROCEDURES

[Section 3.2.7]

Beyond that included in the body of the Operating Agreement or other schedules included herein, no additional joint operating procedures currently exist.

SERVICE SCHEDULE 11
INFORMATION EXCHANGE AND COORDINATION
FOR SCHEDULING AND DISPATCH

[Section 5.1]

A. Preschedule Checkout Procedures

Day-Ahead Process: As more fully described in Attachment A, the ISO will confirm net interchange schedules with adjacent control areas based on schedules submitted by Scheduling Coordinators within the parameters of the ISO's Day-Ahead Market after the ISO issues final Day-Ahead schedules.

Hour-Ahead Process: As more fully described in Attachment A, the ISO will confirm hourly net interchange schedules with adjacent control areas based on schedules submitted by Scheduling Coordinators within the parameters of the ISO's Hour-Ahead Market. Interchange schedules submitted by Scheduling Coordinators for existing contract rights-holders that retain rights to submit schedules after the close of the ISO's Hour-Ahead Market parameters will be accepted and the ISO will confirm net interchange schedules with the adjacent control area when the schedule is submitted.

B. Real Time Checkout Procedures

The ISO will confirm net interchange schedules with adjacent control areas on a real time basis as required to meet NERC and WSCC criteria.

C. After the Fact Checkout Procedures

The ISO will confirm net interchange schedules with adjacent control areas after the close of each settlement period (the scheduling hour, "Hour Ending") as required to meet the obligations of inadvertent interchange energy accounting of prevailing NERC or WSCC policy. This is more fully described in Attachment A.

SERVICE SCHEDULE 12
MAINTENANCE COORDINATION PROCEDURES
[Section 6.1]

For informational purposes, the ISO has included the following Outage coordination procedures which the Participating Transmission Owners are required to meet which may impact {"Entity"}

ISO Outage Coordination Principles

The ISO Outage Coordination Office (OCO) will coordinate Outage scheduling with the Participating Transmission Owners and the interconnected control area operators on the following types of equipment:

1. interconnected transmission lines;
2. interconnected transmission equipment including circuit breakers, transformers, disconnects, reactive devices, wave traps;
3. protection and control schemes, including RAS, SCADA, EMS, or AGC; and
4. facilities within either control area that affect the transfer capability of the Interconnection.

In some cases it may be necessary for the Party requesting an Outage to submit procedures and diagrams to facilitate the switching for the Outage.

The preferred Outage coordination schedule for the ISO is developed in accordance with the following general schedule:

1. **October Outage coordination conference:**
Each year by October 1, the ISO will gather annual Outage schedules from the Participating Transmission Owners. The ISO will confer with other WSCC entities to begin the annual Outage coordination process.
2. **Quarterly Confirmation:**
Each quarter (on the 15th of January, April, and July) the Participating Transmission Owners will update and confirm their Outage schedules with the ISO and interconnected control areas. At that time the ISO OCO will look ahead at the following quarter and at the three following quarters and will confirm Outage schedules for the coming year.
3. **Outage Schedule Revisions:**
Requests for changes, additions, and cancellations to the annual/quarterly Outage schedule can be made at any time. However, the minimum notification for Outage request is governed by the Three-Day and One-Day Confirmation process listed in 4 and 5 below.

4. Three Day Prior Confirmation/Notification:

Any request to confirm or change the schedule of an Outage that may affect transfer capability must be submitted no later than 1130 at least three working days prior to the starting date of the scheduled Outage. (Acknowledgement of requests to the ISO OCO will be made within two working hours and approval will be made by 1530 the following day.) This applies to the following:

- a. all 500 kV facilities;
- b. any transmission line Outage;
- c. any load transformer Outage;
- d. any bus Outage;
- e. relay protection Outages that reduce the transfer capability of a transmission line or path;
- f. any Outage that requires coordination by two or more connected entities;
- g. communication system Outages, including SCADA facilities; and
- h. any other Outage that will affect the transfer capability of any transmission line or path.

5. One Day Prior Confirmation/Notification:

Any request to confirm or change the schedule of an Outage not covered in 4 above must be submitted no later than 11:30 am at least one day prior to the starting date of the Outage.

6. Final Approval:

On the day of the scheduled Outage the ISO Control Center will consult with the interconnected control area operator and determine whether to approve the scheduled Outage.

Forced Outages will be handled as follows:

1. Immediate Forced Outages;

Situations likely to result in a Forced Outage within the next twenty-four hours unless immediate corrective action is taken should be communicated directly to the ISO Control Center. The ISO Control Center operators will work with the Participating Transmission Owner and/or the interconnected control area operator to take actions as necessary.

2. Imminent Forced Outages;

Situations not requiring a removal from service of transmission facilities until some time more than twenty-four hours in the future should be communicated to the ISO OCO and will be scheduled for Outage. Time limits for notification will be waived and the request will be expedited by the ISO OCO provided notice is given as soon as possible.

Switching for scheduled Outages will be coordinated by the ISO Control Center, the interconnected control area operator, the Participating Transmission Owner and the Transmission Owner(s). The ISO Control Center will work with the Participating

Transmission Owner and the interconnected control area operator to create a phone bridge linking the ISO, the Participating Transmission Owner, the interconnected control area operator and switchmen, as necessary, to monitor the opening of circuit breakers. The ISO Control Center will direct the Transmission Owner(s) to perform the remainder of the necessary switching in coordination with the interconnected control area operator and then to report to the ISO Control Center the condition of the affected facilities.

Likewise, when returning facilities to service, the ISO Control Center will direct the Participating Transmission Owner to work with the interconnected control area operator to perform necessary switching in preparation for closing circuit breakers and then will monitor via linked phone lines the actual closing of the circuit breakers.

Clearances will be exchanged between the Transmission Owners and the interconnected control area operators. The ISO Control Center will also keep records of the Outages and clearances.

The ISO OCO will maintain a record of each Outage as it is implemented. Such records will be available for inspection.

A suggested Outage Request form follows:

CALIFORNIA ISO OUTAGE COORDINATION OFFICE

TRANSMISSION OUTAGE REQUEST

Transmission Owner / Operator: _____

New Request: _____ Change to Existing Approved Request: _____

Original Start Date _____ Time: _____ Hours

Facility: _____

Outage Start Date: ____ / ____ / ____ Start Time: _____ Hours

Outage End Date: ____ / ____ / ____ End Time: _____ Hours

NOTE: All start and end times include switching.

Work to be Performed: _____

Special Conditions: _____

Emergency Return to Service Time: _____ Hours

Requestor: _____

Primary Telephone No. _____ Alternate Telephone No. _____

ISO Approval: _____

Other Notifications of Approval: _____

SERVICE SCHEDULE 13
EMERGENCY ASSISTANCE ARRANGEMENTS
[Section 7.1]

To the extent possible, the Parties will assist each other in an emergency by scheduling energy and/or capacity. Such emergency assistance will be available at the sole discretion of the Party supplying it and will be recallable without advance notice as required to meet reliability requirements. ISO and {"Entity"} operators will agree upon and log MW values, start and end times, ramp rates and times, and integrated MWH values for any emergency assistance provided.

The price paid for ISO emergency assistance will be at the ISO market price for energy and/or capacity, plus all applicable charges, as specified in the ISO Tariff and Protocols. Such price may be estimated prior to delivery and finalized in the settlement process. The ISO will establish a Scheduling Coordinator account for {"Entity"} for the sole purpose of facilitating the settlement of such emergency assistance. Payment to the ISO for such emergency assistance will be made in accordance with the settlement process, billing cycle, and payment timeline set forth in the ISO Tariff and Protocols.

The price paid for {"Entity"} emergency assistance will be at a price agreed upon by the Parties or a price established by {"Entity"} for such emergency assistance in advance, as may be applicable. Payment by the ISO for such emergency assistance will be made in accordance with the settlement process, billing cycle, and payment timeline set forth in the ISO Tariff and Protocols.

SERVICE SCHEDULE 14

INDEPENDENT OPERATION DUTIES AND RESPONSIBILITIES

[Section 7.4]

Normally all switching operations are coordinated with all appropriate control area operators prior to performing any actual switching. In situations where the immediate personnel or public safety is an issue, switching may be accomplished without coordination with other control area entities and notification provided afterwards, as stated in ICAA 7.4.

SERVICE SCHEDULE 15
RESTORATION COORDINATION
[Section 7.5]

The {"Entity"} and the ISO will work in close cooperation to maximize the reliability of interconnected operations. As appropriate, priority will be placed by both Parties on restoration of the Interconnection. The Interconnection will be closed only on orders from the ISO and the {"Entity"}.

ATTACHMENTS

A: ISO Description of ISO Schedule Checking Procedures

Attachment A

ISO Scheduling System - Planned Implementation of Interchange Scheduling Procedures -

The interchange scheduling procedures described in Service Schedule 11 of the Interconnected Control Area Operating Agreement are deliberately broad due to the nature of their development and testing prior to the ISO Operations Date. The broadly stated procedures are intended to allow the ISO and adjacent control area a reasonable amount of latitude in refining the working procedures to meet the needs and capabilities of each system. The procedures are based on the parameters of the applicable ISO Tariff sections and may differ from existing practices. To the extent possible, ISO scheduling procedures and practices encompass prevailing practices of interchange scheduling in the WSCC.

This summary is intended to assist adjacent control areas in understanding the ISO scheduling process and to help identify potential changes to current interchange scheduling practices. It is also based on current ISO scheduling system functionality. As enhanced functionality is added to the ISO scheduling system, some of which is anticipated prior to the ISO Operations Date, procedural processes can be modified to streamline interchange scheduling practices.

All schedules turned into the ISO must be submitted by a Scheduling Coordinator as outlined in the ISO's Schedules and Bids Protocol and Scheduling Protocol. The Scheduling Coordinator electronic interface is the only method to input schedules into the ISO's Day-Ahead and Hour-Ahead scheduling database.

If a schedule is not submitted prior to the close of the Day-Ahead Market, it will not exist in the ISO's Day-Ahead scheduling database. Schedules submitted after the ISO's Day-Ahead scheduling deadline can be submitted as Hour-Ahead Schedules anytime after the ISO issues Final Day-Ahead schedules up to two hours prior to the actual settlement period.

The ISO will be able to checkout the next day schedules with adjacent control areas after final schedules of the Day-Ahead Market have been completed. If the Application Program Interface (API) is made available to the adjacent control areas and is operational, confirmation of net interchange schedules can be performed electronically. In the absence of an operational API interface, the ISO will continue the prevailing practice of confirmation by telephone.

Hour-Ahead data will be available, for checkout, to the ISO in advance of the beginning of each settlement period.

The ISO will be able to make real time schedule adjustments (after the ISO has issued Final Hour-Ahead Schedules) under specific circumstances. Existing contracts (with

defined rights to schedule after the ISO issues Final Hour-Ahead Schedules), Supplemental Energy interchange schedules, and emergency changes are the most likely circumstances. Changes to correct interchange mismatches not discovered during preliminary control area checkouts will be made as required in the Real Time Market.

As required, and if no other arrangements have been made by existing contract rights-holders, a Participating Transmission Owner will likely provide the services of a Scheduling Coordinator for existing contract rights-holders. In any event, the ISO will be able to confirm net interchange, and confirm individual interchange schedules, based on the schedules it has in the ISO scheduling database contingent on the time they were submitted by Scheduling Coordinators.

After-the-fact interchange values should be available to the ISO via its scheduling system for checkout as soon as practicable after the end of each settlement period. This will enable the ISO to meet the requirements of inadvertent interchange accounting and interchange schedule reporting with adjacent control areas. As a practical matter, these after-the-fact checkouts will be performed during the next business day.