

## **SCHEDULES AND BIDS PROTOCOL**

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**SCHEDULES AND BIDS PROTOCOL (SBP)**

**SBP 1 OBJECTIVES, DEFINITIONS AND SCOPE**

**SBP 1.1 Objectives**

The objectives of this Protocol are:

- (a) to require the provision of scheduling data to enable the ISO to undertake its scheduling process as described in the ISO Tariff and in the Scheduling Protocol (SP) taking into account the exercise of rights under Existing Contracts for transmission service;
- (b) to require the provision of Ancillary Services Schedules and bidding data required by the ISO to enable the ISO to conduct its Ancillary Services auction as described in the ISO Tariff and in the SP; and
- (c) to specify the contents of Schedules and to specify in detail the bidding data referred to in the ISO Tariff. The scheduling process and timing of the submission of data referred to are set forth in the SP.

**SBP 1.2 Definitions**

**SBP 1.2.1 Master Definitions Supplement**

Unless the context requires otherwise, any word or expression defined in the Master Definitions Supplement to the ISO Tariff shall have the same meaning where used in this Protocol. A reference to a Section or an Appendix is to a Section or an Appendix of the ISO Tariff unless otherwise specified. References to SBP are to this Protocol or to the stated paragraph of this Protocol.

**SBP 1.2.2 Special Definitions for this Protocol**

In this Protocol, the following words and expressions shall have the meanings set opposite them:

**“Existing Rights”** as defined in Section 2.4.4.1.1 of the ISO Tariff, **“Non-Converted Rights”** and **“Converted Rights”** as defined in Section 2.4.4.2.1 of the ISO Tariff shall have the same meanings where used in this Protocol.

**SBP 1.2.3 Rules of Interpretation**

- (a) Unless the context otherwise requires, if the provisions of this Protocol and the ISO Tariff conflict, the ISO Tariff will prevail to the extent of the inconsistency. The provisions of the ISO Tariff have been summarized or repeated in this Protocol only to aid understanding.
- (b) A reference in this Protocol to a given agreement, ISO Protocol or instrument shall be a reference to that agreement or instrument as modified, amended, supplemented or restated through the date as of which such reference is made.
- (c) The captions and headings in this Protocol are inserted solely to facilitate reference and shall have no bearing upon the interpretation of any of the terms and conditions of this Protocol.
- (d) This Protocol shall be effective as of the ISO Operations Date.
- (e) References to time are references to the prevailing Pacific Time.

**SBP 1.3 Scope**

**SBP 1.3.1 Scope of Application to Parties**

The SBP applies to the following entities:

- (a) Scheduling Coordinators (SCs);
- (b) Participating Transmission Owners (PTOs); and
- (c) the Independent System Operator (ISO).

**SBP 1.3.2 Liability of the ISO**

Any liability of the ISO arising out of or in relation to this Protocol shall be subject to Section 14 of the ISO Tariff as if references to the ISO Tariff were references to this Protocol.

**SBP 2 SCHEDULES AND NOTIFICATIONS**

**SBP 2.1 Contents of Schedules and Adjustment Bid Data**

SCs must comply with the ISO Data Templates and Validation Rules document, which contains the format for submission of Schedules and bid. Each of the following data sections can be submitted up to seven (7) days in advance.

**SBP 2.1.1      Generation Section of a Balanced Schedule and Adjustment Bid Data**

The Generation section of a Balanced Schedule will include the following information for each Generating Unit:

- (a) SC's ID code;
- (b) type of market (Day-Ahead or Hour-Ahead) and Trading Day;
- (c) name of Generating Unit scheduled;
- (d) type of Schedule: Preferred or Revised (refer to the SP for details);
- (e) priority type, if applicable, to the Settlement Period (use OTHER if scheduling the use of Existing Contract rights or RLB\_MUST\_RUN) for Reliability Must-Run Generation;
- (f) contract reference number for Reliability Must-Run Generation or Existing Contract (or set of interdependent Existing Contracts);
- (g) Congestion Management flag – "Yes" indicates that any Adjustment Bid submitted under item (k) below should be used;
- (h) publish Adjustment Bid flag, which will not be functional on the ISO Operations Date. In the future, "Yes" will indicate that the SC wishes the ISO to publish its Adjustment Bids;
- (i) Generating Unit ramp rate in MW/minute;
- (j) hourly scheduled Generating Unit output in MWh (the ISO will multiply these values by the hourly Generation Meter Multipliers), including any zero values, for each Settlement Period of the Trading Day (in the case of a Day-Ahead Schedule) and for the relevant Settlement Period (in the case of an Hour-Ahead Schedule); and
- (k) the MW and \$/MWh values for each Generating Unit for which an Adjustment Bid is being submitted consistent with SBP 4.

**SBP 2.1.2      Demand Section of a Balanced Schedule and Adjustment Bid Data**

The Demand section of a Balanced Schedule will include the following information for each Demand location:

- (a) SC's ID code;
- (b) type of market (Day-Ahead or Hour-Ahead) and Trading Day;
- (c) Demand ID – Demand location (which must be the name of a Demand Zone, Load group or bus);

- (d) type of Schedule: Preferred or Revised (refer to the SP for details);
- (e) contract reference number for Existing Contract (or set of interdependent Existing Contracts);
- (f) hourly scheduled MWh for each Settlement Period of the Trading Day that uses the Existing Contract indicated in (e) above (which values should be less than or equal to the values indicated in (i) below);
- (g) contract reference number for Existing Contracts (or set of interdependent Existing Contracts);
- (h) Congestion Management flag – “Yes” indicates that any Adjustment Bid submitted for a Dispatchable Load under item (i) below should be used;
- (i) publish Adjustment Bid flag, which will not be functional on the ISO Operations Date. In the future, “Yes” will indicate that the SC wishes the ISO to publish its Adjustment Bids;
- (j) hourly scheduled MWh, including any zero values, for each Settlement Period of the Trading Day (in the case of a Day-Ahead Schedule) and for the relevant Settlement Period (in the case of an Hour-Ahead Schedule); and
- (k) the MW and \$/MWh values for each Dispatchable Load for which an Adjustment Bid is being submitted consistent with SBP 4.

**SBP 2.1.3 External Import/Export Section of a Balanced Schedule and Adjustment Bid Data**

The external import/export section of a Balanced Schedule will include the following information for each import or export:

- (a) SC's ID code;
- (b) type of market (Day-Ahead or Hour-Ahead) and Trading Day;
- (c) Scheduling Point (the name);
- (d)



- type of Schedule: Preferred or Revised (refer to the SP for details);
- (e) interchange ID (the name of the selling entity, the buying entity, and a numeric identifier);
  - (f) Energy type – firm (FIRM), non-firm (NFRM) or Wheeling (WHEEL);
  - (g) dynamic schedule flag – “Yes” indicates the SC will be dynamically scheduling the external import at the Scheduling Point;
  - (h) external Control Area ID;
  - (i) priority type, if applicable, to the Settlement Period (use OTHER if scheduling the use of Existing Contract rights or RLB\_MUST\_RUN for Reliability Must-Run Generation);
  - (j) contract reference number for Reliability Must-Run Generation or Existing Contract (or set of interdependent Existing Contracts);
  - (k) contract type – transmission (TRNS), Energy (ENGY) or both (TR\_EN);
  - (l) Schedule ID (NERC ID number);
  - (m) Congestion Management flag - “Yes” indicates that any Adjustment Bid submitted for an external import/export in item (r) below should be used;
  - (n) publish Adjustment Bid flag, which will not be functional on the ISO Operations Date. In the future, “Yes” will indicate that the SC wishes the ISO to publish its Adjustment Bids;
  - (o) complete WSCC tag;
  - (p) hourly scheduled external imports/exports in MWh (the ISO will multiply these values by the hourly Generation Meter Multipliers), including any zero values, for each Settlement Period of the Trading Day (in the case of a Day-Ahead Schedule) and for the relevant Settlement Period (in the case of an Hour-Ahead Schedule) and with external imports into the ISO Controlled Grid reported as negative quantities and external exports from the ISO Controlled Grid reported as positive quantities; and
  - (q) the MW and \$/MWh values for each external import/export for which an Adjustment Bid is being submitted consistent with SBP 4.

**SBP 2.1.4 Inter-Scheduling Coordinator Trades (“Internal Imports/Exports”) Section of a Balanced Schedule**

In the event of an Inter-Scheduling Coordinator Trade, the SCs who are parties to that trade must agree on a Zone in which the trade will be deemed to take place (“Trading Zone”) and notify the ISO accordingly. If the SCs which are parties to the trade cannot agree on a Trading Zone, the ISO will designate one. The purpose of designating a Trading Zone is to provide for the allocation of Usage Charges which may arise in connection with the trade. The Inter-Scheduling Coordinator Trades section of a Schedule will include the following information for each Inter-Scheduling Coordinator Trade:

- (a) SC’s ID code;
- (b) type of market (Day-Ahead or Hour-Ahead) and Trading Day;
- (c) trading SC (buyer or seller);
- (d) type of Schedule: Preferred or Revised (refer to the SP for details);
- (e) Trading Zone;
- (f) Schedule type – Energy (ENGY); and
- (g) hourly scheduled MWh, including any zero values, for each Settlement Period of the Trading Day (in the case of a Day-Ahead Schedule) and for the relevant Settlement Period (in the case of an Hour-Ahead Schedule), with internal imports into the SC reported as negative quantities and internal exports from the SC reported as positive quantities.

**SBP 2.2 Validation of Balanced Schedules**

Each SC will be assigned a workspace within the ISO’s scheduling system. Each workspace will have a work area for Day-Ahead and Hour-Ahead Schedules, Adjustment Bids and Supplemental Energy bids. The SC shall only be allowed to access and manipulate its Schedule and bid data within this workspace. Each area is organized into segments. A segment is used to hold the SC’s Schedules relating to the same Trading Day. The Schedule validation process is divided into two stages. The ISO shall carry out the first stage validation immediately after it has received a Schedule. The ISO shall carry out the second stage validation ten (10) minutes before (pre-validation) and immediately after each deadline (as specified in the SP) for submission of Schedules. However, a SC can also initiate the stage two validation at any time prior to that deadline, as described in more detail in the SP. If the SC adds a new Schedule or modifies an existing Schedule, that Schedule must be re-validated. SCs must comply with the ISO Data Templates and Validation Rules document, which contains the validation criteria for Balanced Schedules.

**SBP 2.2.1 Stage One Validation**

During stage one validation, each incoming Schedule will be validated to verify proper content, format and syntax. The ISO will check that the SC had not exceeded its Security Amount and verify that the SC is certified in accordance with the ISO Tariff. The ISO will further verify that the SC has inputted valid Generating Unit and Demand location identification. Scheduled Reliability Must-Run Generation will be verified against the contract reference numbers in the ISO's Scheduling Coordinator database. A technical validation will be performed verifying that a scheduled Generating Unit's output is not beyond its declared capacity and/or operating limits. If there is an error found during stage one validation, the SC will be notified immediately through WEnet. The SC can then look at the notification messages to review the detailed list of errors, make changes, and resubmit the Schedule if it is still within the timing requirements of the SP. The SC is also notified of successful validation via WEnet.

**SBP 2.2.2 Stage Two Validation**

During stage two validation, Schedules will be checked to determine whether each SC's aggregate Generation and external imports (adjusted for Transmission Losses) and Inter-Scheduling Coordinator Trades (whether purchases or sales) equals the SC's aggregate Demand forecast, including external exports. The SC must take into account the applicable Generation Meter Multipliers (GMMs) as described in the SP. This validation is performed in accordance with the timing requirement described in the SP. An SC can also check whether its Schedules will pass the ISO's stage two validation by manually initiating validation of its Preferred Schedules or Revised Schedules, as described in the SP, at any time prior to the deadline for submission of Preferred Schedules or Revised Schedules (as the case may be). It is the SC's responsibility to perform such checks, if desired. The SC will be notified immediately through WEnet of any validation errors. For each error detected, an error message will be generated by the ISO in the SC's notification screen which will specify the nature of the error. If the ISO detects a mismatch in Inter-Scheduling Coordinator Trades, the ISO will notify both SCs of the mismatch in Energy quantity and/or location. The SC can then look at the notification messages to review the detailed list of errors, make changes, and resubmit the Schedule if it is still within the timing requirements of the SP. The SC is also notified of successful validation via WEnet.

**SBP 3                    EXISTING CONTRACTS FOR TRANSMISSION SERVICE**

**SBP 3.1                Application of SBP 3 to Rights under Existing Contracts**

**SBP 3.1.1            Existing Rights and Non-Converted Rights**

The provisions of Sections 2.4.3 and 2.4.4 of the ISO Tariff shall, with respect to the exercise of Existing Rights and Non-Converted Rights, following the ISO Operations Date, be implemented in accordance with this SBP 3 and such other operational protocols as may be developed on a case by case basis pursuant to these sections. The objective of this SBP 3 is to properly treat Existing Rights and Non-Converted Rights in accordance with the ISO Tariff and to minimize the need for other operational protocols.

**SBP 3.1.2            Converted Rights**

This SBP 3 shall have no application to the exercise of Converted Rights other than as set forth in Section 2.4.4.3 of the ISO Tariff.

**SBP 3.2                Responsible Participating Transmission Owners**

For each Existing Contract, the party providing transmission service (the "Responsible PTO") shall be responsible for the submission of transmission rights/curtailment instructions ("instructions") to the ISO under this SBP on behalf of the holders of Existing Rights and/or Non-Converted Rights, unless the parties to the Existing Contract agree otherwise. For the purposes of this Protocol, such otherwise agreed party will be acting in the role of Responsible PTO. In accordance with the ISO Tariff, the parties to Existing Contracts will attempt to jointly develop and agree on any instructions that will be submitted to the ISO. To the extent there is more than one PTO providing transmission service under an Existing Contract or there is a set of Existing Contracts which are interdependent from the point of view of submitting instructions to the ISO involving more than one PTO, the relevant PTOs will designate a single PTO as the Responsible PTO and will notify the ISO accordingly. If no such Responsible PTO is designated by the relevant PTOs or the ISO is not notified of such designation, the ISO shall designate one of them as the Responsible PTO and notify the relevant PTOs accordingly.

**SBP 3.3 Instructions Defining Transmission Service Rights**

**SBP 3.3.1 Data Requirements**

The Responsible PTO with respect to an Existing Contract or set of interdependent Existing Contracts is required to submit to the ISO, in accordance with the timing requirements of SBP 3.3.5, the instructions that are necessary to implement the exercise of the Existing Rights and/or the Non-Converted Rights in accordance with the ISO Tariff. These instructions will be submitted to the ISO electronically, by the Responsible PTO, utilizing a form provided by the ISO in a format similar to the one set out in the Appendix to this Protocol (the "Transmission Rights/Curtailment Instructions Template"). The instructions will include the following information at a minimum and such other information as the ISO may reasonably require to enable it to carry out its functions under the ISO Tariff and ISO Protocols (the letters below correspond with the letters of the instructions template in the Appendix to this Protocol):

- (a) contract reference number a unique (Existing Contract reference number that will be assigned by the ISO and communicated to the Responsible PTO on the completed instruction and that references a single Existing Contract or a set of interdependent Existing Contracts; the provisions of SBP 3.4 will apply to the validation of scheduled uses of Existing Contract transmission rights);
- (b) whether the instruction can be exercised independent of the ISO's day-to-day involvement (Yes/No);
- (c) name of an operational single point of contact for instructions and a 24-hour a day telephone number for the Responsible PTO;
- (d) name(s) and number(s) of Existing Contract(s);
- (e) path name(s) and location(s) (described in terms of the Zones in which the point(s) of receipt and point(s) of delivery are located);
- (f) names of the party(ies) to the Existing Contract(s);
- (g) SC ID code: the ID number of the SC who will submit Schedules which make use of the Existing Contract(s) for the party(ies) indicated in (f);
- (h) type(s) of rights, by rights holder, by Existing Contract (Existing Rights or Non-Converted Rights);

- (i) type(s) of service, by rights holder, by Existing Contract (firm, conditional firm, or non-firm), with priorities for firm and conditional firm transmission services indicated in Schedules using Adjustment Bids as described in the SP;
- (j) amount of transmission service, by rights holder, by Existing Contract expressed in MW;
- (k) for Day-Ahead scheduling purposes, the time of the day preceding the Trading Day at which the SC submits Schedules to the ISO referencing the Existing Contract(s) identified in the instructions;
- (l) for Hour-Ahead or real time scheduling purposes, the number of minutes prior to the start of the Settlement Period of delivery at which the SC may submit Schedule adjustments to the ISO regarding the Existing Rights or Non-Converted Rights under the Existing Contract(s) identified in the instructions;
- (m) whether or not real time modifications to Schedules associated with Existing Rights or Non-Converted Rights are allowed at any time during the Settlement Period;
- (n) Service period(s) of the Existing Contract(s);
- (o) any special procedures which would require curtailments to be implemented by the ISO in any manner different than that specified in SBP 3.3.2. Any such instructions submitted to the ISO must be clear, unambiguous, and not require the ISO to make any judgments or interpretations as to the meaning, intent, results, or purpose of the curtailment procedures or the Existing Contract (otherwise, they will not be accepted by the ISO); and
- (p) any special procedures relating to curtailments during emergency conditions. Any such instructions submitted to the ISO must be clear, unambiguous, and not require the ISO to make any judgments or interpretations as to the meaning, intent, results, or purpose of the curtailment procedures or the Existing Contract (otherwise, they will not be accepted by the ISO).

**SBP 3.3.2 Curtailment under Non-Emergency Conditions**

Unless otherwise specified by the Responsible PTO in the instructions that it submits to the ISO under SBP 3.3.1, the ISO will allocate any necessary curtailments under non-emergency conditions, *pro rata*, among holders of Existing Rights or Non-Converted Rights, at particular Scheduling Points and/or on particular contract paths, in the order of: (1) non-firm, (2) each priority of conditional firm, and (3) each priority of firm rights. Priorities for firm and conditional firm

transmission service are indicated using Adjustment Bids, as described in the SP.

**SBP 3.3.3 Instructions that can be Exercised Independent of the ISO's Day-to-Day Involvement**

In relation to instructions that define the transmission rights within which uses may be scheduled or curtailed and that can be exercised independent of the ISO's day-to-day involvement, without involving an Inter-Zonal Interface, the outcomes shall be forwarded to the ISO by the SC. These instructions must be submitted to the ISO in accordance with SBP 3.3.1. The outcomes must be delivered by the SC to the ISO at or before 5:00 pm of the fifth (5<sup>th</sup>) day of the month for each Settlement Period of the preceding month and must include, at a minimum, the following attributed specifically to each Existing Contract or set of interdependent Existing Contracts:

- (a) the amount (in MW) and type of transmission service (firm, conditional firm, or non-firm) accounted to each rights holder between each of the Zones and locations identified by the Responsible PTO in the instructions; and
- (b) the amount (in MW) of transmission service curtailments, if any, applied to each rights holder within each Zone identified by the Responsible PTO in the instructions.

**SBP 3.3.4 Instructions that cannot be Exercised Independent of the ISO's Day-to-Day Involvement**

Those instructions that define the transmission rights within which uses may be scheduled or curtailed and that cannot be exercised independent of the ISO's day-to-day involvement must be submitted to the ISO in accordance with SBP 3.3.1. These instructions will be provided by the Responsible PTO to the ISO for implementation unless the parties to the Existing Contracts otherwise agree that the rights holder will do so. For these instructions, the SCs representing the holders of Existing Rights and/or Non-Converted Rights will submit their Schedules to the ISO for implementation in accordance with the instructions.

**SBP 3.3.5 Timing of Submission of Instructions to ISO**

**SBP 3.3.5.1 Initial Submittal of Instructions**

The Responsible PTOs shall submit instructions to the ISO associated with Existing Contracts or sets of interdependent Existing Contracts thirty (30) days prior to either (a) the ISO Operations Date or (b) the date on which the scheduling or curtailment of the use of the Existing

Rights or Non-Converted Rights is to commence pursuant to Sections 2.4.3 or 2.4.4 of the ISO Tariff.

**SBP 3.3.5.2 Changes to Instructions**

Updates or changes to the instructions must be submitted to the ISO by the Responsible PTO, on an as needed or as required basis determined by the parties to the Existing Contracts. The ISO will implement the updated or changed instructions as soon as practicable but not later than seven (7) days after receiving clear and unambiguous details of the updated or changed instructions. If the ISO finds the instructions to be inconsistent with respect to the ISO Protocols or the ISO Tariff, the ISO will notify the Responsible PTO within forty-eight (48) hours after receipt of the updated or changed instructions indicating the nature of the problem and allowing the Responsible PTO to resubmit the instructions as if they were new, updated or changed instructions to which the provisions of this SBP 3.3 will apply. If the ISO finds the updated or changed instructions to be acceptable, the ISO will time-stamp the updated instructions as received, confirm such receipt to the Responsible PTO, and indicate the time at which the updated instructions take effect if prior to the seven (7) day deadline referred to above.

**SBP 3.4 Validation of Existing Contract Schedules**

Each Schedule submitted to the ISO by a SC representing a rights holder to an Existing Contract must include a valid contract reference number in accordance with SBP 3.3. If the Schedule includes an Inter-Scheduling Coordinator Trade, only one of the SCs should submit a contract reference number. If a match of the Schedule's contract reference number is found in the ISO's database and the Schedule is consistent with the instructions submitted previously by the Responsible PTO, the Schedule will be implemented in accordance with the instructions. If a match of the Schedule's contract reference number cannot be found in the ISO's database or if both SCs which are parties to an Inter-Scheduling Coordinator Trade submit contract reference numbers, the ISO will contact the SC and indicate the nature of the problem. The ISO



will assist the SC, within reason, in resolving the problem so that the SC is able to submit the Schedule successfully as soon as possible within the timing requirements of the SP. If the SC uses a contract reference number for which the responsible PTO has not reserved transmission capacity on a particular path (*i.e.*, the contract reference number cannot be found in the ISO's scheduling applications table of contract reference numbers), the scheduled use will be treated as a new firm use with a \$0/MWh Adjustment Bid.

**SBP 4 ADJUSTMENT BIDS**

Adjustment Bids will be used by the ISO for Congestion Management as described in the SP and are initially valid only for the markets into which they are bid, being the Day-Ahead Market or the Hour-Ahead Market. These Adjustment Bids will not be transformed into Supplemental Energy bids. However, these Adjustment Bids are treated as standing offers to the ISO and may be used by the ISO in the Real Time Market for the purpose of managing Intra-Zonal Congestion and Overgeneration conditions.

**SBP 4.1 Content of Adjustment Bids**

Adjustment Bids are contained in Preferred Schedules and Revised Schedules submitted by SCs for particular Generating Units, Dispatchable Loads and external imports/exports. Adjustment Bids cannot be submitted with respect to Inter-Scheduling Coordinator Trades.

Each SC is required to submit a preferred operating point for each Generating Unit, Dispatchable Load and external import/export (these quantities are presented in the SC's submitted Schedule as "Hourly MWh"). The SC's preferred operating point for each Generating Unit, Dispatchable Load and external import/export must be within the range of any Adjustment Bids to be used by the ISO. The minimum MW output level, which may be zero MW (or negative for pumped storage resources), and the maximum MW output level must be physically achievable.

**SBP 4.2 Format of Adjustment Bids**

Adjustment Bids will be presented in the form of a monotonically non-decreasing staircase function for Generating Units and external imports. Adjustment Bids will be presented in the form of a monotonically non-increasing staircase function for Dispatchable Loads and external exports. These staircase functions will be

composed of up to eleven (11) ordered pairs (i.e., ten (10) steps or price bands) of quantity/price information. Adjustment Bids are submitted as an integral part of the SC's Balanced Schedule and must be related to each Generating Unit, Dispatchable Load and external import/export. SCs must comply with the ISO Data Templates and Validation Rules document, which contains the format for submission of Adjustment Bids.

**SBP 4.3            Timing of Submission of Adjustment Bids**

The specific timeline requirements for the submission of Adjustment Bids in both the Day-Ahead Market and the Hour-Ahead Market are described in the SP. During the ISO's Day-Ahead scheduling process, in accordance with the SP, the MW range of the Adjustment Bids specified in the Preferred Day-Ahead Schedule, but not the price values, may be changed by the SC in its Revised Day-Ahead Schedule, if any.

**SBP 4.4            Adjustment Bids Not Published**

The ISO will not publish Adjustment Bids.

**SBP 4.5            Validation of Adjustment Bids**

**SBP 4.5.1        Invalidation**

The absence of an Adjustment Bid in a SC's Preferred Schedule or Revised Schedule will not affect the validation since SCs are not required to submit Adjustment Bids. If an Adjustment Bid is contained in the SC's Preferred Schedule or Revised Schedule but is not in the form described above, both the Schedule and the Adjustment Bid will be rejected. The SC will be notified immediately, via WEnet, of any validation errors. For each error detected, an error message will be generated by the ISO in the SC's notification screen which will specify the nature of the error. The SC can then look at the notification messages to review the detailed list of errors, make changes, and resubmit if it is still within the timing requirements of the SP. The SC is also notified of successful validation via WEnet. The SCs must comply with the ISO Data Templates and Validation Rules document, which contains the validation criteria for Adjustment Bids.

**SBP 4.5.2        Validation Checks**

The ISO's stage one validation checks are performed automatically, whenever Schedules and Adjustment Bids are submitted, as

described in the SP. The ISO's stage two validation is performed automatically in accordance with the timing requirements described in the SP. An SC can also check whether its Adjustment Bids will pass the ISO's stage two validation by manually initiating validation of its Preferred Schedule or Revised Schedule, as described in the SP, at any time prior to the deadline for submission of Preferred Schedules or Revised Schedules. It is a SC's responsibility to perform such checks.

**SBP 4.6 Use of Adjustment Bids to Establish Priorities**

In addition to being used to establish the value each Scheduling Coordinator places on the use of Congested Inter-Zonal Interfaces, Adjustment Bids are also used by the ISO to establish priorities associated with transmission service under Existing Contracts and to establish priorities associated with Reliability Must-Run Generation. Adjustment Bids have been reserved for use in establishing relative priorities. If the Congestion Management software is not capable of supporting the particular Adjustment Bid values and ranges upon the ISO Operations Date, the ISO will establish alternate values and ranges, which may be changed by the ISO with seven (7) days' prior 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. Otherwise, the values and ranges for Adjustment Bids to be submitted by Scheduling Coordinators or Adjustment Bids implicitly assigned by the Congestion Management software for these various purposes are as follows:

**Adjustment Bid**

**Value/Range**

**\$/MWh**

**Use**

10,000

Adjustment Bid value implicitly assigned by the Congestion Management software to Inter-Scheduling Coordinator Trade exports with a valid contract reference number for the amount of the Inter-Scheduling Coordinator Trade equal to or less than the MW amount specified in the Existing Contract (i.e., specified in the "Contract MW" field of the schedule template). Usage Charges are not calculated for these scheduled uses, except for any quantity of Energy scheduled in excess of the MW amount specified in the Existing Contract (i.e., specified in the "Contract MW" field of the schedule template) which is treated as a new firm use of ISO transmission service which the Congestion Management software values at the Adjustment Bid price and for which Usage Charges may be accounted to the Scheduling Coordinator as a price-taker of ISO transmission service.

9,000 to 10,000

Adjustment Bid range available for Demand and external export schedules using Existing Contract rights with a valid contract reference number. Usage Charges are not calculated for these scheduled uses except for quantities of Energy scheduled in excess of the MW amount specified in the Existing Contract (which is treated as a new firm use of ISO transmission service which the Congestion Management software implicitly values at the Adjustment Bid price within this range) and for which Usage Charges may be accounted to the Scheduling Coordinator as a price-taker of ISO transmission service.

4,000

Adjustment Bid value implicitly assigned by the Congestion Management software to protect Day-Ahead commitments of new firm uses in the Hour-Ahead Market (specifically with respect to schedules of Demand and external exports).

1,500	Adjustment Bid value implicitly assigned by the Congestion Management software to Inter-Scheduling Coordinator Trade exports using new firm uses of ISO transmission service. Usage Charges are calculated for these scheduled uses.
700	Adjustment Bid value implicitly assigned by the Congestion Management software for Demand schedules of new firm uses when no Adjustment Bid is provided (i.e., a "price-taker"). Usage Charges are calculated for these scheduled uses. The Congestion Management software also uses this value to extend the lower megawatt end of submitted Adjustment Bids for Demand schedules to zero megawatts.
600	Adjustment Bid value implicitly assigned by the Congestion Management software for external export schedules of new firm uses when no Adjustment Bid is provided (i.e., a "price-taker") or to extend the lower megawatt end of the Adjustment Bid to zero megawatts. This is also the Adjustment Bid value implicitly used by the Congestion Management software to extend the upper megawatt end of a Generator's Adjustment Bid to the Generator's physical maximum limit (for external import schedules, and for external export schedules, the upper megawatt end of the Adjustment Bid is treated as the "physical" maximum limit and, as such, is not extended). Usage Charges are calculated for these scheduled uses.
0.01 to 250	Adjustment Bid range available for scheduling new firm uses of ISO transmission service bid as potential "price-makers." The high-end value of this range is initially set at \$250/MWh, but can be increased by the ISO to \$500/MWh, upon seven days notice. Usage Charges are calculated for these scheduled uses. This is the "normal" economic range for Adjustment Bids. The default Usage Charge is calculated by the Congestion Management software to fall within this range in accordance with Section 7.3.1.3 of the ISO Tariff.

0.001 to < 0.01	Adjustment Bid range available for scheduling the use of conditional firm Existing Contract rights. Although available for Existing Contract use, this range is not protected from Usage Charges since the charges would be calculated in fractions of dollars (e.g., 100 MW at \$0.01/MWh produces a \$1.00 charge). A contract reference number is not used for scheduling use of conditional firm Existing Contract rights.
0	Adjustment Bid value available for scheduling either new firm uses of ISO transmission service or uses of Existing Contract rights and expressing a zero dollar value for adjustments. This is the Adjustment Bid value implicitly assigned by the Congestion Management software for a Generator or external import that is specified with a contract reference number that cannot be verified in the ISO's scheduling system and submitted with a negative Adjustment Bid outside of the range reserved for Existing Contracts (i.e., -\$9,000 to -\$10,000)
-600	Adjustment Bid value implicitly assigned by the Congestion Management software for Generation and external import schedules of new firm uses when no Adjustment Bid is provided (i.e., a "price-taker") or to extend the lower megawatt end of a Generator's Adjustment Bid to the Generator's physical minimum limit. This is also the Adjustment Bid value used by the Congestion Management software to extend the lower megawatt end of an external import's Adjustment Bid to zero megawatts. If a Scheduling Coordinator is relying partially on Existing Contract rights for an external import or Generator schedule bid and wishes to be a "price-taker" for the balance not covered by those rights, it must explicitly submit this value as its Adjustment Bid for the balance.
-1,500	Adjustment Bid value implicitly assigned by the Congestion Management software to Inter-Scheduling Coordinator Trade imports using new firm uses of ISO transmission service. Usage Charges are calculated for these scheduled uses.

-4,000

Adjustment Bid value implicitly assigned by the Congestion Management software to protect Day-Ahead commitments of new firm uses in the Hour-Ahead Market (specifically with respect to schedules of Generation and external imports).

-9,000 to -10,000

Adjustment Bid range available for scheduling Generation and external imports using Existing Contract rights with a valid contract reference number. Usage Charges are not calculated for these scheduled uses except for quantities of Energy scheduled in excess of the MW amount specified in the Existing Contract (which is treated as a new firm use of ISO transmission service and values the additional transmission service at the Adjustment Bid price within this range) and for which Usage Charges may be accounted to the

Scheduling Coordinator as a price-taker of ISO transmission service. An Adjustment Bid, for an Existing Contract use, submitted with a price for the first (or single) segment outside of this range will be treated by the Congestion Management software as a zero price bid.

-10,000

Adjustment Bid value implicitly assigned by the Congestion Management software to Inter-Scheduling Coordinator Trade imports with a valid contract reference number for the amount of the Inter-Scheduling Coordinator Trade equal to or less than the MW amount specified in the Existing Contract. Usage Charges are not calculated for these scheduled uses except for quantities of Energy scheduled in excess of the amount specified in the "Contract MW" field of the scheduling template (for which the amount is treated as a new firm use of ISO transmission service and values the additional transmission service at the Adjustment Bid price within this range) and for which Usage Charges are accounted to the Scheduling Coordinator as a price-taker for ISO transmission service.

-30,000

Adjustment Bid value available for scheduling Reliability Must-Run Generation. Usage Charges are calculated for these scheduled uses. An Adjustment Bid, for such priority type use, submitted with a price for the first (or single) segment less than this value will be treated by the Congestion Management software as a zero value bid.

**SBP 5**

**ANCILLARY SERVICES**

SCs must comply with the ISO Data Templates and Validation Rules document, which contains the format for submission of Ancillary Services schedules and bids. Additionally, SCs should refer to the Ancillary Services bid evaluation and scheduling principles contained in the SP. As also described in the SP, the resources constituting a System Unit which submitted Ancillary Services bids or schedules and which, as a result, has been accepted by the ISO to supply Ancillary Services in a Settlement



Period must be disclosed to the ISO one (1) hour prior to the start of the Settlement Period.

**SBP 5.1 Content of Ancillary Services Schedules and Bids**

Ancillary Services in the Day-Ahead Market and the Hour-Ahead Market are comprised of the following: Regulation, Spinning Reserve, Non-Spinning Reserve and Replacement Reserve. Each Generating Unit, System Unit, Curtailable Demand or external import for which a SC wishes to submit Ancillary Services Schedules and bids must meet the requirements set forth in the Ancillary Services Requirements Protocol (ASRP). For each Ancillary Service offered to the ISO auction or self-provided, SCs must include a bid price for Energy in the form of a staircase function composed of up to eleven (11) ordered pairs (i.e., ten (10) steps or price bands) of quantity/price information. These staircase functions must be either monotonically non-decreasing (Generating Units, System Units, and external imports of System Resources) or monotonically non-increasing (Curtailable Demands). The same resource capacity may be offered into more than one ISO Ancillary Service auction at the same time (the sequential evaluation of such multiple offers between Ancillary Services markets to eliminate double counting of capacity is described in the SP). In each category of Ancillary Service, the reference to "Revised" types of Schedules indicates a submittal which is part of a Revised Day-Ahead Schedule as described in the SP. Each of the following data sections can be submitted up to seven (7) days in advance. There is no provision for external exports with regard to Ancillary Services bids. The functionality necessary to accept such bids does not exist in the ISO scheduling software.

**SBP 5.1.1 Regulation**

Each SC desiring to self-provide Regulation or to participate in the ISO's Regulation auction will submit the following information for each relevant Generating Unit or System Unit for each Settlement Period of the relevant Trading Day:

- (a) type of schedule: Regulation Ancillary Service (ANC\_SRVC) or Revised Regulation Ancillary Service (REVISED\_ANC\_SRVC);
- (b) SC's ID code;
- (c) type of market (Day-Ahead or Hour-Ahead) and Trading Day;

- (d) Generating Unit or System Unit ID code;
- (e) preferred bid flag, a "YES" indicates a bid and a "NO" indicates a self-provided schedule;
- (f) upward and downward range of Generating Unit or System Unit capacity over which the Generating Unit or System Unit is offering to provide Regulation;
- (g) Generating Unit or System Unit operating limits (high and low MW);
- (h) Generating Unit or System Unit ramp rate (MW/minute);
- (i) bid price for Regulation capacity (\$/MW); and
- (j) bid price for Regulation Energy if called upon (\$/MWh).

**SBP 5.1.2 Spinning Reserve**

**SBP 5.1.2.1 Spinning Reserve: Generating Units or System Units**

Each SC desiring to self-provide Spinning Reserve or to participate in the ISO's Spinning Reserve auction will submit the following information for each relevant Generating Unit or System Unit for each Settlement Period of the relevant Trading Day:

- (a) type of schedule: Spinning Reserve Ancillary Service (ANC\_SRVC) or Revised Spinning Reserve Ancillary Service (REVISED\_ANC\_SRVC);
- (b) SC's ID code;
- (c) type of market (Day-Ahead or Hour-Ahead) and Trading Day;
- (d) Generating Unit or System Unit ID code;
- (e) preferred bid flag, a "YES" indicates a bid and a "NO" indicates a self-provided schedule;
- (f) Generating Unit or System Unit operating limits (high and low MW);
- (g) Spinning Reserve capacity (MW);
- (h) Generating Unit or System Unit ramp rate (MW/minute);
- (i) bid price for Spinning Reserve capacity (\$/MW); and
- (j) bid price for Spinning Reserve Energy if called upon (\$/MWh).

**SBP 5.1.2.2 Spinning Reserve: External Imports/Exports**

Each SC desiring to bid or self-provide Spinning Reserve will submit the following information for each relevant external import for each Settlement Period of the relevant Trading Day:

- (a) type of schedule: Spinning Reserve Ancillary Service (ANC\_SRVC) or Revised Spinning Reserve Ancillary Service (REVISED\_ANC\_SRVC);
- (b) SC's ID code;
- (c) type of market (Day-Ahead or Hour-Ahead) and Trading Day;
- (d) Scheduling Point (the name);
- (e) interchange ID code (the name of the selling entity, buying entity and a numeric identifier);
- (f) external Control Area ID;
- (g) Schedule ID (NERC ID number);
- (h) complete WSCC tag;
- (i) preferred bid flag, which must be set to "NO", indicating a self-provided schedule, until such time as the ISO's scheduling system is able to support Ancillary Services bids from external imports/exports;
- (j) export flag, a "YES" indicates an external export and a "NO" indicates an external import;
- (k) In the case of Existing Contracts, the applicable contract reference number;
- (l) Spinning Reserve capacity (MW);
- (m) ramp rate (MW/minute); and
- (n) bid price for Spinning Reserve Energy if called upon (\$/MWh).

**SBP 5.1.3 Non-Spinning Reserve**

**SBP 5.1.3.1 Non-Spinning Reserve: Generating Units or System Units**

Each SC desiring to self-provide Non-Spinning Reserve or to participate in the ISO's Non-Spinning Reserve auction will submit the following information for each relevant Generating Unit or System Unit for each Settlement Period of the relevant Trading Day:

- (a) type of schedule: Non-Spinning Reserve Ancillary Service (ANC\_SRVC) or Revised Non-Spinning Reserve Ancillary Service (REVISED\_ANC\_SRVC);
- (b) SC's ID code;
- (c) type of market (Day-Ahead or Hour-Ahead) and Trading Day;
- (d) Generating Unit or System Unit ID code;
- (e) preferred bid flag, a "YES" indicates a bid and a "NO" indicates a self-provided schedule;
- (f) time to synchronize following notification (less than ten (10) minutes mandatory);
- (g) Non-Spinning Reserve capacity available within ten (10) minutes following notification (MW);
- (h) Generating Unit or System Unit operating limits (high and low MW);
- (i) Generating Unit or System Unit ramp rate (MW/minute);
- (j) bid price for Non-Spinning Reserve capacity (\$/MW); and
- (k) bid price for Non-Spinning Reserve Energy if called upon (\$/MWh).

**SBP 5.1.3.2 Non-Spinning Reserve: Curtailable Demands**

Each SC desiring to self-provide Non-Spinning Reserve or to participate in the ISO's Non-Spinning Reserve auction will submit the following information for each relevant Curtailable Demand for each Settlement Period of the relevant Trading Day:

- (a) type of schedule: Non-Spinning Reserve Ancillary Service (ANC\_SRVC) or Revised Non-Spinning Reserve Ancillary Service (REVISED\_ANC\_SRVC);
- (b) SC's ID code;
- (c) type of market (Day-Ahead and Hour-Ahead) and Trading Day;
- (d) available Curtailable Demand ID code;
- (e) preferred bid flag, a "YES" indicates a bid and a "NO" indicates a self-provided schedule;
- (f) maximum allocation curtailment duration (hours) (CURT\_HR);
- (g) time to interruption following notification (minutes);

- (h) amount of Curtailable Demand that can be interrupted within ten (10) minutes following notification (MW);
- (i) bid price for Non-Spinning Reserve capacity (\$/MW); and
- (j) bid price for Non-Spinning Reserve Energy if called upon (\$/MWh).

**SBP 5.1.3.3 Non-Spinning Reserve: External Imports/Exports**

Each SC desiring to bid or self-provide Non-Spinning Reserve will submit the following information for each relevant external import for each Settlement Period of the relevant Trading Day:

- (a) type of schedule: Non-Spinning Reserve Ancillary Service (ANC\_SRVC) or Revised Non-Spinning Reserve Ancillary Service (REVISED\_ANC\_SRVC);
- (b) SC's ID code;
- (c) type of market (Day-Ahead or Hour-Ahead) and Trading Day;
- (d) Scheduling Point (the name);
- (e) interchange ID code (the name of the selling entity, buying entity and a numeric identifier);
- (f) external Control Area ID;
- (g) Schedule ID (NERC ID number);
- (h) complete WSCC tag;
- (i) preferred bid flag, which must be set to "NO", indicating a self-provided schedule;
- (j) export flag, a "YES" indicates an external export and a "NO" indicates an external import;
- (k) In the case of Existing Contracts, the applicable contract reference number;
- (l) time to synchronize following notification (less than ten (10) minutes mandatory);
- (m) Non-Spinning Reserve capacity (MW);
- (n) ramp rate (MW/minute); and
- (o) bid price for Non-Spinning Reserve Energy if called upon (\$/MWh).

**SBP 5.1.4 Replacement Reserve**

**SBP 5.1.4.1 Replacement Reserve: Generating Units or System Units**

Each SC desiring to self-provide Replacement Reserve or to participate in the ISO's Replacement Reserve auction will submit the following information for each relevant Generating Unit or System Unit for each Settlement Period of the relevant Trading Day:

- (a) type of schedule: Replacement Reserve Ancillary Service (ANC\_SRVC) or Revised Replacement Reserve Ancillary Service (REVISED\_ANC\_SRVC);
- (b) SC's ID code;
- (c) type of market (Day-Ahead or Hour-Ahead) and Trading Day;
- (d) Generating Unit or System Unit ID code;
- (e) preferred bid flag, a "YES" indicates a bid and a "NO" indicates a self-provided schedule;
- (f) time to synchronize following notification (less than sixty (60) minutes mandatory);
- (g) Generating Unit or System Unit operating limits (high and low MW);
- (h) Replacement Reserve capacity available within sixty (60) minutes following notification (MW);
- (i) Generating Unit or System Unit ramp rates (MW/minute);
- (j) bid price for Replacement Reserve capacity (\$/MW); and
- (k) bid price for Replacement Reserve Energy if called upon (\$/MWh).

**SBP 5.1.4.2 Replacement Reserve: Curtailable Demands**

Each SC desiring to self-provide Replacement Reserve or to participate in the ISO's Replacement Reserve auction will submit the following information for each relevant Curtailable Demand for each Settlement Period of the relevant Trading Day:

- (a) type of schedule: Replacement Reserve Ancillary Service (ANC\_SRVC) or Revised Replacement Reserve Ancillary Service (REVISED\_ANC\_SRVC);
- (b) SC's ID code;

- (c) type of market (Day-Ahead or Hour-Ahead) and Trading Day;
- (d) Curtailable Demand ID code;
- (e) preferred bid flag, a "YES" indicates a bid and a "NO" indicates a self-provided schedule;
- (f) maximum allocation curtailment duration (hours) (CURT\_HR);
- (g) time to reduction following notification (minutes);
- (h) amount of Curtailable Demand that can be interrupted within sixty (60) minutes following notification (MW);
- (i) Curtailable Demand reduction rate (MW/minute);
- (j) bid price for Replacement Reserve capacity (\$/MW); and
- (k) bid price for Replacement Reserve Energy if called upon (\$/MWh).

**SBP 5.1.4.3 Replacement Reserve: External Imports**

Each SC desiring to bid or self-provide Replacement Reserve will submit the following information for each relevant external import for each Settlement Period of the relevant Trading Day:

- (a) type of schedule: Replacement Reserve Ancillary Service (ANC\_SRVC) or Revised Replacement Reserve Ancillary Service (REVISED\_ANC\_SRVC);
- (b) SC's ID code;
- (c) type of market (Day-Ahead or Hour-Ahead) and Trading Day;
- (d) Scheduling Point (the name);
- (e) interchange ID code (the name of the selling entity, buying entity and a numeric identifier);
- (f) external Control Area ID;
- (g) Schedule ID (NERC ID number);
- (h) complete WSCC tag;
- (i) preferred bid flag, which must be set to "NO", indicating a self-provided schedule, until such time as the ISO's scheduling system is able to support Ancillary Services bids from external imports;
- (j) in the case of Existing Contracts, the applicable contract reference number;

- (k) time to synchronize following notification (less than sixty (60) minutes mandatory);
- (l) Replacement Reserve capacity (MW);
- (m) ramp rate (MW/minute); and
- (n) bid price for Replacement Reserve Energy if called upon (\$/MWh).

**SBP 5.2 Validation of Ancillary Services Bids**

The ISO will verify that each Ancillary Services Schedule or bid conforms to the format specified for the relevant service. If the Ancillary Services Schedule or bid does not so conform, the ISO will send a notification to the SC notifying the SC of the errors in the Schedules and/or bids. SCs will comply with the ISO Data Templates and Validation Rules document, which contains the validation criteria for Ancillary Services Schedules and bids. Shown below are the two stages of validation carried out by the ISO:

**SBP 5.2.1 Stage One Validation**

During stage one validation, each incoming Ancillary Services schedule or bid will be validated to verify proper content, format and syntax. A technical validation will be performed to verify that a schedule or bid quantity of Regulation, Spinning Reserve, Non-Spinning Reserve or Replacement Reserve does not exceed the available capacity for Regulation, Operating Reserves and Replacement Reserve on the Generating Units, System Units, Curtailable Demands and external imports/exports scheduled or bid. The SC will be notified immediately through WEnet of any validation errors. For each error detected, an error message will be generated by the ISO in the SC's notification screen which will specify the nature of the error. The SC can then look at the notification messages to review the detailed list of errors, make changes, and resubmit if it is still within the timing requirements of the SP. The SC is also notified of successful validation via WEnet.

**SBP 5.2.2 Stage Two Validation**

Stage two validation will be conducted by the ISO in accordance with Appendix E of the ISO Tariff.



**SBP 5.2.3      Validation Checks**

The ISO's stage one validation checks are performed automatically whenever Ancillary Services Schedules and bids are submitted, as described in the SP. The ISO's stage two validation is performed automatically in accordance with the timing requirements described in the SP. A SC can also check whether its Ancillary Services Schedules and bids will pass the ISO's stage two validation by manually initiating validation of its Ancillary Services Schedules and bids, as described in the SP, at any time prior to the deadline for submission of Ancillary Services Schedules and bids. It is a SC's responsibility to perform such checks.

**SBP 5.3      Buy Back of Ancillary Services**

Each SC desiring to buy back in the Hour-Ahead Regulation, Spinning Reserve, Non-Spinning Reserve or Replacement Reserve capacity sold to the ISO in the Day-Ahead Market shall do so by submitting in the Hour-Ahead auction for the Settlement Period concerned bids complying with the requirements of SBP 5.1 for the Generating Units/System Units/Curtailable Demands for which the SC wishes to buy back the Ancillary Service capacity concerned, showing the revised quantity (which may be zero) of the Ancillary Service capacity which the SC wishes to provide in the Hour-Ahead Market from the Generating Units/System Units/Curtailable Demands concerned. The ISO will then calculate from this the Ancillary Services capacity which the SC wishes to buy back.

**SBP 6      SUPPLEMENTAL ENERGY BIDS**

There is no requirement for SCs to submit Supplemental Energy bids. Supplemental Energy bids submitted, however, are available to the ISO for procurement and use for Imbalance Energy, additional Voltage Support and Congestion Management in the Real Time Market.

**SBP 6.1      Content of Supplemental Energy Bids**

**SBP 6.1.1      Generation Section of Supplemental Energy Bid Data**

Each SC offering Supplemental Energy to the ISO will submit the following information for each Generating Unit for each Settlement Period:

- (a) SC's ID code;
- (b) name of Generating Unit;

- (c) Generating Unit operating limits (high and low MW);
- (d) Generating Unit ramp rate in MW/minute; and
- (e) the MW and \$/MWh values for each Generating Unit for which a Supplemental Energy bid is being submitted consistent with this SBP 6.

**SBP 6.1.2 Demand Section of Supplemental Energy Bid Data**

Each SC offering Supplemental Energy to the ISO will submit the following information for each Demand for each Settlement Period:

- (a) SC's ID code;
- (b) name of Demand; and
- (c) the MW and \$/MWh values for each Demand for which a Supplemental Energy bid is being submitted consistent with this SBP 6.

**SBP 6.1.3 External Import Section of Supplemental Energy Bid Data**

Each SC offering Supplemental Energy to the ISO will submit the following information for each external import for each Settlement Period;

- (a) SC's ID code;
- (b) name of Scheduling Point;
- (c) interchange ID (the name of the selling entity, the buying entity, and a numeric identifier);
- (d) external Control Area ID;
- (e) Schedule ID (NERC ID number);
- (f) complete WSCC tag;
- (g) ramp rate (MW/minute); and
- (h) the MW and \$/MWh values for each external import for which a Supplemental Energy bid is being submitted consistent with this SBP 6.

**SBP 6.2 Format of Supplemental Energy Bids**

The SC's preferred operating point for each resource must be within the range of the Supplemental Energy bids. The minimum MW output level specified for a resource, which may be zero MW (or negative for pumped storage resources), and the maximum MW output level specified for a resource must be physically achievable

by the resource. All submitted Supplemental Energy bids must be in the form of a monotonically non-decreasing staircase function for Generating Units and external imports and a monotonically non-increasing staircase function for Demands. These staircase functions will be composed of up to eleven (11) ordered pairs (i.e., ten (10) steps or price bands) of quantity/price information, with a single ramp rate associated with the entire MW range. SCs must comply with the ISO Data Templates and Validation Rules document, which contains the format for submission of Supplemental Energy bids.

**SBP 6.3            Timing of Submission of Supplemental Energy Bids**

For specific timeline requirements for the submission of Supplemental Energy bids see the Dispatch Protocol.

**SBP 6.4            Validation of Supplemental Energy Bids**

The ISO will check whether Supplemental Energy bids comply with the format requirements and will notify a SC if its bid does not so comply. A SC can check whether its Supplemental Energy bids will pass the ISO's validation by manually initiating validation of its Supplemental Energy bids at any time prior to the deadline for submission of Supplemental Energy bids. It is the SC's responsibility to perform such checks. SCs must comply with the ISO Data Templates and Validation Rules document, which contains the validation criteria for Supplemental Energy bids.

**SBP 7                INTERFACE REQUIREMENTS**

**SBP 7.1            WEnet**

WEnet provides the backbone on which any of three communications mechanisms will be utilized. These are:

- (a)     use of a web browser such as Netscape;
- (b)     use of File Transfer Protocol (FTP); or
- (c)     use of an Application Programming Interface (API).

Details of the technical aspects of each of these mechanisms, including information on how to change mechanisms and back-up procedures for individual SC failures, will be made available by the ISO to SCs on request. It is assumed that each SC has made application for and signed a Scheduling Coordinator Agreement. As such, each SC will already be familiar with and have arranged the mechanism, including security arrangements, by which it will initially communicate with the ISO.

**SBP 7.2            Templates**

The ISO Data Templates and Validation Rules document provides a description of the templates which will be utilized to enter data into the ISO's systems. For each of the three communications mechanisms, data entry is as follows:

- (a)     direct entry of data into the template screens through the use of a browser;
- (b)     upload of ASCII delimited text through use of an upload button on the template screens which activates the FTP mechanism;  
          or
- (c)     use of the SC's own API.

**SBP 7.3            Public/Private Information**

Through the use of the security provisions of WEnet, some data will be provided on a confidential basis (such as individual SC Schedules and bids) and other ISO data (such as ISO forecasts of Demand) will be published on the public section of WEnet and be available to anyone.

**SBP 7.4            Individual SC Communication Failure**

If there is a failure of communications with a SC, then, at the ISO's discretion, the SC may communicate by facsimile, but only if the ISO and the SC have communicated by telephone in advance.

**SBP 7.5            Failure/Corruption of WEnet**

Based on the designed reliability of the WEnet, there is no external back-up communications system. In the extremely unlikely event of WEnet failure, communications will be lost to all SCs and the ISO will use the latest valid information available to operate until restoration of WEnet.

**SBP 8              AMENDMENTS TO THE PROTOCOL**

If the ISO determines a need for an amendment to this Protocol, the ISO will follow the requirements as set forth in Section 16 of the ISO Tariff.

**SBP APPENDIX**

**TRANSMISSION RIGHTS/CURTAILMENT INSTRUCTIONS TEMPLATE**

**Transmission Rights/Curtailment Instructions Template**

<b>(a) Contract Ref #</b> [a single number]	<b>(b) Ind Imp</b> [yes/no]	<b>(c) Contact Person</b> [phone number] [name(s)]
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**Submitted By PTO:** \_\_\_\_\_

**Date Received By ISO:** \_\_\_\_\_

**Date Accepted By ISO:** \_\_\_\_\_

(d) Contract Name(s)/Number(s)	(e) Path Name(s) and Location(s)			(f) Party	(g) SC ID	(h) ER/NCR	(i)(j) Types and Amounts of Transmission Service			(k) DA (hour-ending)	(l) HA (minutes)	(m) RT (yes/no)	(n) Service Period	
	Path Name(s)	POR Zone	POD Zone				Firm /1/	CF /1/	N-F				Beginning	Ending
[name/number 1]		[zone name]	[zone name]	[party 1] [party 2] [party n]	[sc id 1] [sc id 2] [sc id n]	[er] [ncr] [er]	[MW] [ " ] [ " ]	[MW] [ " ] [ " ]	[MW] [ " ] [ " ]	[1400]  [20]	[30] [n/a] [20]	[yes] [no] [yes]	[hh/dd/mm/yy] [ " ] [ " ]	[hh/dd/mm/yy] [ " ] [ " ]
[name/number 2]		[zone name]	[zone name]	[party 1] [party 2] [party n]	[sc id 1] [sc id 2] [sc id n]	[er] [ncr] [er]	[MW] [ " ] [ " ]	[MW] [ " ] [ " ]	[MW] [ " ] [ " ]	[1400]  [20]	[20] [n/a] [20]	[yes] [no] [yes]	[ " ] [ " ] [ " ]	[ " ] [ " ] [ " ]
[name/number n]		[zone name]	[zone name]	[party 1] [party 2] [party n]	[sc id 1] [sc id 2] [sc id n]	[er] [ncr] [er]	[MW] [ " ] [ " ]	[MW] [ " ] [ " ]	[MW] [ " ] [ " ]	[1500]  [20]	[20] [n/a] [20]	[yes] [no] [yes]	[ " ] [ " ] [ " ]	[ " ] [ " ] [ " ]

**(o) Non-Emergency Curtailments**

[If other than pro rata, attach spreadsheet for ISO to use in allocating curtailments to rights holders between the indicated zones. Otherwise, indicate "pro rata" here.]

**(p) Emergency Curtailments**

[Describe special procedures/requirements here. Indicate "N/A" if none.]

/1/ Priorities for firm and conditional firm transmission service are indicated in Schedules using Adjustment Bids as described in the SP.