

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 Firm Transmission Rights and 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

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 [Not Used]

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. Except as noted, 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;
- (g) transmission loss self-provision flag (LOSS CMP FLG): "Yes" indicates that Dispatch Instructions provided to the Generating

Unit will include Transmission Losses associated with the unit's Final Hour-Ahead Schedule as determined by the relevant GMM;

- (h) Congestion Management flag – “Yes” indicates that any Adjustment Bid submitted under item (l) below should be used in the Day-Ahead or Hour-Ahead Market;

- (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) Generating Unit ramp rate in MW/minute;
- (k) 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
- (l) 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) 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);
- (f) Congestion Management flag – "Yes" indicates that any Adjustment Bid submitted for a Dispatchable Load under item (i) below should be used;
- (g) 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;
- (h) 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);
- (i) the MW and \$/MWh values for each Dispatchable Load for which an Adjustment Bid is being submitted consistent with SBP 4; and
- (j) requisite NERC tagging data.

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 dynamic (DYN) or Wheeling (WHEEL);
- (g) external Control Area ID;
- (h) 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);
- (i) contract reference number for Reliability Must-Run Generation or Existing Contract (or set of interdependent Existing Contracts);
- (j) contract type – transmission (TRNS), Energy (ENGY) or both (TR_EN);
- (k) Schedule ID (NERC ID number);
- (l) Congestion Management flag - "Yes" indicates that any Adjustment Bid submitted for an external import/export in item (q) below should be used;
- (m) 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;
- (n) complete WECC tag;
- (o) 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;

- (p) the MW and \$/MWh values for each external import/export for which an Adjustment Bid is being submitted consistent with SBP 4; and
- (q) for dynamically scheduled imports only, the transmission loss self-provision flag (LOSS_CMP_FLG): "Yes" indicates that Dispatch Instructions provided to the resource will include Transmission Losses associated with the resource's Final Hour-Ahead Schedule as determined by the relevant GMM.

SBP 2.1.4 Inter-Scheduling Coordinator Energy Trades ("Internal Imports/Exports") Section of a Balanced Schedule

In the event of an Inter-Scheduling Coordinator Energy 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. 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 Energy 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);
- (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;
- (h) Congestion Management flag – "Yes" indicates that Adjustment Bid submitted under (k) below should be used;
- (i) publish Adjustment Bid flag – "Yes" indicates that the SC wishes the ISO to publish its Adjustment Bid.
- (j) the Generating Unit or Dispatchable Load that is the source or recipient of Energy traded; and
- (k) the MW and \$/MWh values for each Generating Unit or Dispatchable Load that is the source or recipient of Energy traded.

SBP 2.1.5 Inter-Scheduling Coordinator Ancillary Service Trades ("Internal Imports/Exports") Section of a Balanced Schedule

In the event of an Inter-Scheduling Coordinator Ancillary Service Trade, the SCs who are parties to that trade must agree on a Trading Zone in which the trade is deemed to take place and notify the ISO accordingly. The Ancillary Service obligations in the Trading Zone of each

Scheduling Coordinator will be adjusted to reflect the trade. The Inter-Scheduling Coordinator Ancillary Service Trades section of a Schedule will include the following information for each Inter-Scheduling Coordinator Ancillary Service 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) Trading Zone;
- (e) Schedule type-Regulation Up (ARGU), Regulation Down (ARGD), Spinning Reserve (ASPN), Non-Spinning Reserve (ANSP) or Replacement Reserve (AREP); and
- (f) Contracted MW amount of traded Ancillary Service obligation.

SBP 2.1.6

Contract Usage Template Associated with a Balanced Schedule that Includes the Use of Existing Contract Rights or Firm Transmission Rights

The contract usage template can be submitted the day prior to the Trading Day, as set forth in the timing requirements of the SP. The contract usage template can be submitted seven days in advance. However, the contract usage template will not be validated till the trade day. Each contract usage template must include the following information, in compliance with the ISO Data Templates and Validation Rules document which contains the format for submission of contract usage templates:

- (a) SC's ID code;
- (b) Type of market (Day-Ahead or Hour-Ahead) and Trading Day;
- (c) From Zone (must be different than "to Zone"), is the Zone in which all sources specified in the contract usage template must be located;
- (d) To Zone (must be different than "from Zone"), is the Zone in which all sinks specified in the contract usage template must be located;
- (e) Contract reference number for each Inter-Zonal Interface for which transmission capacity has been reserved under Existing Contract or Firm Transmission Right. Up to four contract reference numbers can be specified in this field, delimited by commas, for either Existing Contract usage or Firm Transmission Right usage, but not for both (i.e. Existing Contract rights and Firm Transmission Rights cannot be used together in linking sources and sinks on contract usage template). If the use of multiple Inter-Zonal Interfaces are being scheduled, the contract reference numbers must represent a contiguous string of contracts rights from one Zone to the next

- (although the contract reference numbers need not be listed in any particular order since they will be arranged by the ISO's scheduling program to connect the "from Zone" to "to Zone");
- (f) Usage ID (a unique identifier that allows a SC to submit multiple usages for a given Inter-Zonal Interface);
 - (g) Contract usage, in hourly scheduled MW, for the 24 hours of the Trading Day (for Generators, contract usage can be either positive or negative [i.e., for pumps]; for loads, contract usage must be positive; for external imports and inter-Scheduling Coordinator trade imports, contract usage must be negative; for external exports, contract usage must be positive). Each contract usage amount must be less than or equal to the amount of Existing Contract rights specified by the relevant Participating Transmission Owner(s) of Firm Transmission Rights, whichever the case may be. Additionally, any Adjustment Bids that may also be submitted for any particular resource (source or sink) that is also identified on a contract usage template must not overlap the contract usages specified for a particular resource in a contract usage template;
 - (h) Priority usage, relative to all contract usages specified in a SC's Balanced Schedule, as expressed on a scale of one to ten (with 1 having least priority and 10 having highest priority). For Existing Contracts, this priority will be used to adjust usage quantities when scheduled usages exceed the reserved existing transmissions reservations; and
 - (i) Sources or sinks, of hourly scheduled MWH (in the case of Energy usages) or MW (in the case of Ancillary Services usages), specified on the contract usage template must be balanced (except for Ancillary Services which need not be specified with sinks). Each Energy schedule or Ancillary Service bid or self-provided schedule associated with a particular source or sink must have an hourly usage schedule that is greater than or equal to the amounts specified on contract usage templates. The source/sink section of a contract usage template will include the following information (up to five combinations of sources and sinks can be specified on a single contract usage template if an SC is submitting the templates in accordance with SBP 7.2(a), or up to 20 combinations of sources and sinks if an SC is submitting the templates in accordance with SBP 7.2(b) or SBP 7.2(c));
 - (1) Type of resource – Generation (GEN), load (LOAD), interchange (INTRCHANGE) or inter-Scheduling Coordinator trade (INTER_SC);
 - (2) Resource_ID – generator_ID, load_ID, tie_point or trading SC;

- (3) Resource_ID2 (required only for individual interchange schedules and inter-Scheduling Coordinator trades);
- (4) Energy type – firm (FIRM), non-firm (NFIRM), Wheeling (WHEEL), dynamic (DYN), Energy (ENGY), Spinning Reserve (CSPN), Non-Spinning Reserve (CNSPN) or Replacement Reserve (CRPLC); and
- (5) Hourly scheduled Energy or Ancillary Service, utilizing the same sign convention as set forth in (g) above.

SBP 2.1.7 No Scheduling Coordinator shall submit a Circular Schedule. The ISO may periodically provide examples of such Circular Schedules under the ISO Home Page.

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. Additionally, if the ISO detects an invalid contract usage (of either Existing Contract rights or Firm Transmission Rights), the ISO will issue an error message in similar manner to the SC and allow the SC to view the message(s), to make changes, and to resubmit the contract usage template(s) 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 Energy 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. The SC will be notified if the counterpart trade to any Inter-Scheduling Coordinator Ancillary Service Trade has not been submitted, or is infeasible (i.e. if both SCs are selling or both are buying). Mismatches in Inter-Scheduling Coordinator Ancillary Service Trades shall be adjusted to be equal to the amount specified by the selling SC. 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 2.3 The Generation section of a Balanced Schedule, and any associated Adjustment Bids, must accurately reflect the physical capability of each Generating Unit identified in the Schedule (including each Generating Unit's ability to ramp from one hour to the next). For example, a 500 MW Generating Unit specified with a ramp rate of 2 MW/min and an operating point of 100 MWh for the current operating hour is not physically capable of generating 300 MWh in the next operating hour. Likewise, Adjustment Bids submitted for a Generating Unit, applicable to a particular operating hour, should be physically achievable within the applicable operating hour.

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

The provisions of Sections 2.4.3 and 2.4.4 of the ISO Tariff shall, with respect to the exercise of Existing 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 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, 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 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) a unique contract reference number (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 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 under the Existing Contract(s) identified in the instructions;
 - (m) whether or not real-time modifications to Schedules associated with Existing 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 Emergency and Non-Emergency Conditions

SBP 3.3.2.1 Emergency Conditions

To the extent practicable, the ISO shall allocate necessary curtailments of Existing Rights or Non-Converted Rights under emergency conditions in accordance with the instructions submitted by the Responsible PTO pursuant to SBP 3.3.1. If circumstances prevent the ISO's compliance with such instructions, the ISO shall allocate such curtailments in a non-discriminatory manner consistent with Good Utility Practice.

SBP 3.3.2.2 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, 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 contract usage templates, as described in the SBP 2.1.6 and in the SP.

SBP 3.3.3 [Not Used]

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 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 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 issue an error message to the SC via the WEnet (as described in SBP 2.2.1) 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(s) included on a contract usage template

cannot be found in the ISO's scheduling applications table of contract reference numbers), the scheduled use will be invalidated and the SC notified by the ISO's issuance of an invalidated usage information template.

SBP 4 ADJUSTMENT BIDS

Adjustment Bids will be used by the ISO for Inter-Zonal 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.

SBP 4.1 Content of Adjustment Bids

Adjustment Bids are contained in Preferred Schedules and Revised Schedules submitted by SCs for particular Generating Units (including Physical Scheduling Plants), Dispatchable Loads, external imports/exports, and Generating Units and Dispatchable Loads supporting Inter-Scheduling Coordinator Energy 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 Publication of Adjustment Bids

The ISO will publish Adjustment Bids in accordance with applicable provisions of the ISO Tariff governing the disclosure of bid data.

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 [NOT USED]

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 (including Physical Scheduling Plants), System Unit, Curtailable Demand or System Resource 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). 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. Ramp rates submitted as detailed below will be only used by the ISO for procuring capacity associated with the specific Ancillary Services. The ISO will issue real-time Dispatch Instructions for the Energy associated with the awarded capacity based upon the applicable operational ramp rate submitted with the single Energy Bid curve in accordance with SBP Section 6.5. 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.

SCs with Ancillary Services awards must submit a single Energy Bid curve in the Real Time Market to correspond to any awarded capacity for the relevant resources as described in SBP Section 6.

SBP 5.1.1 Regulation

SBP 5.1.1.1 Regulation: Generating Units or System Units

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); and
- (i) bid price for Regulation capacity (\$/MW).

SBP 5.1.1.2 Regulation: External Imports

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

- (a) type of schedule: (Regulation Ancillary Service);
- (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 WECC tag;
- (i) preferred bid flag, a "YES" indicates a bid and a "NO" indicates a self-provided schedule;
- (j) in the case of Existing contracts, the applicable contract reference number;
- (k) upward and downward range of System Resource capacity over which the System Resource is offering to provide Regulation;
- (l) System Resource operating limits (high and low MW);

- (m) ramp rate (MW/minute); and
- (n) bid price for Regulation capacity (\$/MW).

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); and
- (i) bid price for Spinning Reserve capacity (\$/MW).

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 WECC 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 capacity (\$/MW).

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); and
- (j) bid price for Non-Spinning Reserve capacity (\$/MW).

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); and
- (i) bid price for Non-Spinning Reserve capacity (\$/MW).

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 WECC 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 capacity.

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); and
- (j) bid price for Replacement Reserve capacity (\$/MW).

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); and
- (j) bid price for Replacement Reserve capacity (\$/MW).

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 WECC 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 capacity (\$/MW).

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

A Scheduling Coordinator who has sold or self-provided Regulation, Spinning Reserve, Non-Spinning Reserve or Replacement Reserve capacity to the ISO in the Day-Ahead Market shall be required to replace such capacity to the extent scheduled self-provision is decreased between the Day-Ahead and Hour-Ahead Markets, or to the extent the Ancillary Service associated with a Generating Unit, Curtailable Demand, or System Resource successfully bid in a Day-Ahead Ancillary Service Market is reduced in the Hour-Ahead Market, for any reason (other than the negligence or willful misconduct of the ISO, or a Scheduling Coordinator's involuntary decrease in such sold capacity or scheduled self-provision on the instruction of the ISO). The price for such replaced Ancillary Service shall be at the Market Clearing Price in the Hour-Ahead Market for the same Settlement Period for the Ancillary Service capacity concerned.

SBP 6 ENERGY BIDS

SCs must submit Energy Bids for resources providing Spinning, Non-Spinning, or Replacement Reserves. The upper portion of the Energy Bid that corresponds to the resource's available capacity up to the highest operating limit, shall be allocated to any awarded or self-provided Ancillary Services in the following order from higher to lower capacity: a) Regulation Up; b) Spinning Reserve; c) Non-Spinning Reserve; and d) Replacement Reserve. For resources providing Regulation Up, the upper regulating limit shall be used if it is lower than the highest operating limit. The remaining portion of the Energy Bid, if there is any, shall constitute Supplemental Energy. Supplemental Energy bids 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 Energy Bids

SBP 6.1.1 Generation Section of Energy Bid Data

Each SC offering Spinning, Non-Spinning, or Replacement Reserve, or 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 operational ramp rate in MW/minute;
- (e) Generating Unit startup time function in minutes;
- (f) Generating Unit startup cost function in \$/start;
- (g) Generating Unit Minimum Load Cost in \$/hr; and

- (h) the MW and \$/MWh values for each Generating Unit for which a Supplemental Energy bid is being submitted consistent with this SBP 6.

A Physical Scheduling Plant shall be treated as a single Generating Unit for Supplemental Energy bid purposes.

SBP 6.1.2 Demand Section of Energy Bid Data

Each SC offering Spinning, Non-Spinning, or Replacement Reserve, or 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;
- (c) Demand shutdown time in minutes;
- (d) Demand shutdown cost in \$/start;
- (e) Demand minimum curtailed load cost in \$/hr; and
- (f) 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 Energy Bid Data

Each SC offering Spinning, Non-Spinning, or Replacement Reserve, or 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 WECC tag;
- (g) operational ramp rate (MW/minute);
- (h) the MW and \$/MWh values for each external import for which a Supplemental Energy bid is being submitted consistent with this SBP 6;
- (i) minimum block of hours that bid must be dispatched;
- (j) Flag indicating the bid must be capable available for intra-hour Redispatch. If this flag is set to no then the bid is indicating that the bid must be pre-dispatched and not re-dispatched during the real-time operating hour;
- (k) interchange ID code;
- (l) external Control Area ID;
- (m) Schedule ID (NERC ID number) and complete WECC tag;
- (n) preferred bid flag, a "YES" indicates a bid and a "NO" indicates a self-provided schedule; and
- (o) the contract reference number, if applicable

SBP 6.2 Format of Energy Bids

The SC's Final Hour-Ahead Schedule for each resource must be within the range of the 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 Energy Bids must be in the form of a monotonically 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 an operational ramp rate associated with the

entire MW range as provided for in SBP Section 6.5. SCs must comply with the ISO Data Templates and Validation Rules document, which contains the format for submission of Energy Bids.

SBP 6.3 Timing of Submission of Energy Bids

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

SBP 6.4 Validation of Energy Bids

The ISO will check whether 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 Energy Bids will pass the ISO's validation by manually initiating validation of its Energy Bids at any time prior to the deadline for submission of 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 Energy Bids.

SBP 6.5 Format and Validation of Operational Ramp Rates

The submitted operational ramp rate expressed in megawatts per minute (MW/min) as a function of the operating level, expressed in megawatts (MW), must be a staircase function with up to nine segments defined by a set of 1 to 10 pairs, e.g., (50,1),(100,3),(200,2), (300,2). There is no monotonicity requirement for the operational ramp rate. The submitted operational ramp rate shall be validated as follows:

- The range of the submitted operational ramp rate must cover the entire capacity of the resource, from the minimum to the maximum operating capacity, as registered in the Master File for the relevant resource.
- The operating level entries must match exactly (in number, sequence, and value) the corresponding minimum and maximum operational ramp rate breakpoints, as registered in the Master File for the relevant resource.
- If a Scheduling Coordinator does not submit an operational ramp rate for a generating unit for a day, the ISO shall use the maximum ramp rate for each operating range set forth in the Master File as the ramp rate for that unit for that same operating range for that day.
- The last ramp rate entry shall be equal to the previous ramp rate entry and represent the maximum operating capacity of the resource as registered in the Master File. The resulting operational ramp rate segments must lie between the minimum and maximum operational ramp rates, as registered in the Master File.
- The submitted operational ramp rate must be the same for each hour of the Trading Day, i.e., the operational ramp rate submitted for a given hour must be the same with the one(s) submitted earlier for previous hours in the same Trading Day.

- Outages that affect the submitted operational ramp rate must be due to physical constraints, reported in SLIC and are subject to ISO approval. All approved changes to the submitted operational ramp rate will be used in determination of

Dispatch Instructions for the shorter period of the balance of the Trading Day or duration of reported Outage.

- For all ISO Dispatch Instructions of Reliability Must Run resources the operational ramp rate will be the ramp rate declared in the Reliability Must Run Contract Schedule A.

SBP 6.6 Format and Validation of Startup and Shutdown Times

For a Generating Unit, the submitted startup time expressed in minutes (min) as a function of down time expressed in minutes (min) must be a staircase function with up to 10 segments defined by a set of 1 to 10 down time and startup time pairs. The startup time is the time required to start the resource if it is offline longer than the corresponding down time. The last segment will represent the time to start the unit from a cold start and will extend to infinity. The submitted startup time function shall be validated as follows:

- The first down time must be 0 min.
- The down time entries must match exactly (in number, sequence, and value) the corresponding down time breakpoints of the maximum startup time function, as registered in the Master File for the relevant resource.
- The startup time for each segment must not exceed the startup time of the corresponding segment of the maximum startup time function, as registered in the Master File for the relevant resource.
- The startup time function must be strictly monotonically increasing, i.e., the startup time must increase as down time increases.

For Curtailable Demand, a single shutdown time in minutes is the time required for the resource to shut down after receiving a Dispatch Instruction.

SBP 6.7 Format and Validation of Startup and Shutdown Costs

For a Generating Unit, the submitted startup cost expressed in dollars (\$) as a function of down time expressed in minutes (min) must be a staircase function with up to 10 segments defined by a set of 1 to 10 down time and startup cost pairs. The startup cost is the cost incurred to start the resource if it is offline longer than the corresponding down time. The last segment will represent the cost to start the resource from cold startup and will extend to infinity. The submitted startup cost function shall be validated as follows:

- The first down time must be 0 min.
- The down time entries must match exactly (in number, sequence, and value) the corresponding down time breakpoints of the cost-based startup cost function, as registered in the Master File for the relevant resource.

- The startup cost for each segment must not be negative and must not exceed the startup cost of the corresponding segment of the cost-based startup cost function, as registered in the Master File for the relevant resource. For gas-fired resources, the cost-based startup cost function shall be derived from the startup fuel function, as registered in the Master File for the relevant resource, and the applicable gas price index as approved by FERC.
- The startup cost function must be strictly monotonically increasing, i.e., the startup cost must increase as down time increases.

For Curtailable Demand, a single shutdown cost in \$ is the cost incurred to shut down the resource after receiving a Dispatch Instruction. The submitted shutdown cost must not be negative.

SBP 6.8 Format and Validation of Minimum Load Costs

For a Generating Unit, the submitted Minimum Load Cost expressed in dollars per hour (\$/hr) is the cost incurred for operating the unit at minimum load. The submitted Minimum Load Cost must not be negative and must not exceed the cost-based Minimum Load Cost, as registered in the Master File for the relevant resource. For gas-fired resources, the cost-based Minimum Load Cost shall be derived pursuant to Section 5.11.6.1.2.

For Curtailable Demand, the submitted Minimum Load Cost (\$/hr) is the cost incurred while operating the resource at reduced consumption after receiving a Dispatch Instruction. The submitted Minimum Load Cost must not be negative.

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

(a) Contract Ref # [a single number]		(b) Ind Imp [yes/no]		(c) Contact Person [phone number] [name(s)]		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/NC R	(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] [n/a] [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] [n/a] [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] [n/a] [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.