

**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**

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.

- (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);
- (k) the MW and \$/MWh values for each Dispatchable Load for which an Adjustment Bid is being submitted consistent with SBP 4; and
- (l) 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);

**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); 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 2.1.5 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;

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 Generation 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 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.

- (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 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 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 [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 and/or Non-Converted Rights will submit their Schedules to the ISO for implementation in accordance with the instructions.

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 (including Physical Scheduling Plants), Dispatchable Loads and external imports/exports. Adjustment Bids cannot be submitted with respect to 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



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). 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 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 regulating Energy if called upon (\$/MWh) (required for validation of bid only).

**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).

- (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.

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

**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

