

## 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, a~~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 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; ~~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);

- (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 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. ~~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 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 2.2.2 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 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 3.3.2** **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** **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. **[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.

\* \* \* \*

**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 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 ~~external import~~[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 ~~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 [Regulationregulating](#) Energy if called upon (\$/MWh) [\(required for validation of bid only\)](#).

\* \* \* \*

#### **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.

[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.

\* \* \* \*