

## **23. Temporary Changes to the Real-Time Market for Imbalance Energy**

### **23.1 Application**

Notwithstanding any other provision of the ISO Tariff, the amendments to the ISO Tariff set forth in Sections 23.2 through 23.5 shall continue in effect until such time as:

- (a) the ISO has applied to the FERC for new, long-term, changes to the ISO Tariff in regard to the Real-Time Market for Imbalance Energy, in connection with implementing a sub-hour Settlement Period; and
- (b) the FERC has approved new, long-term, changes to the ISO Tariff in regard to the Real Time Market for Imbalance Energy.

### **23.2 ISO Tariff Amendments**

#### **23.2.1 Amendments to the Body of the ISO Tariff**

##### **2.5.22.4.1 Timing of Supplemental Energy Bids.**

Supplemental Energy bids must be submitted to the ISO no later than ***forty-five (45)*** ~~30~~ minutes prior to the operating hour. Bids may ***also*** be submitted at any time after the Day-Ahead Market closes. These Supplemental Energy bids cannot be withdrawn after ***forty-five (45)*** ~~thirty (30)~~ minutes prior to the Settlement Period. The ISO may dispatch the associated resource at any time during the Settlement Period.

**2.5.22.10 Dispatch instructions.** Dispatch instructions shall include the following information:

- (a) name of the Generating Unit, ***System Unit***, Load or System Resource being dispatched;
- (b) specific MW value to which the Generating Unit, ***System Unit***, Load or System Resource is being dispatched;
- (c) operating level and price point to which the Generating Unit, ***System Unit***, Load or System Resource is being dispatched;
- (d) time the Generating Unit, ***System Unit***, Load or System Resource is required to achieve the Dispatch instruction;
- (e) time of the Dispatch instruction; and
- (f) any other information which the ISO considers relevant.

All Dispatch instructions except those for the Dispatch of Regulation (which will be communicated by direct digital control signals) will be communicated by telephone. Except in the case of deteriorating system conditions or emergency, and except for instructions for the Dispatch of Regulation, the ISO will send all Dispatch instructions to the Scheduling Coordinator for the Generating Unit, **System Unit**, Load or System Resource which it wishes to Dispatch. The recipient Scheduling Coordinator shall ensure that the Dispatch instruction is communicated immediately to the operator of the Generating Unit, **System Unit, external import of System Resources** or Load concerned. **The ISO may, with the prior permission of the Scheduling Coordinator concerned, communicate with and give Dispatch instructions to the operators of Generating Units, System Units, external imports of System Resources and Loads directly without having to communicate through their appointed Scheduling Coordinator.** The recipient **Scheduling Coordinator** of a Dispatch instruction shall confirm the Dispatch instruction by repeating the Dispatch instruction to the ISO. The ISO shall record on tape all voice conversations which occur on the Dispatch instruction communication equipment. These recordings may be used to audit the dispatch instructions, and to verify the response of Generating Units, **System Units, external imports of System Resources and Loads and System Resources** to Dispatch instructions.

The **dispatch Dispatch** instruction and all information associated with it shall be logged and recorded by the ISO as soon as practical after issuing each instruction. The ISO Protocols govern the content, issue, receipt, confirmation and recording of **dispatch Dispatch** instructions.

**2.5.23.1 General Principles.** Imbalance Energy shall be priced **in two-time intervals** using the **BEEP Interval Five Minute Ex Post Prices for Instructed Imbalance Energy per resource** and the Hourly Ex Post Price **for Uninstructed Imbalance Energy**. The **Five Minute Ex Post Prices** shall be based on the bid of the marginal Generating Units, **System Units**, Loads and System Resources dispatched by the ISO to reduce Demand or to increase or decrease Energy output in each **BEEP Interval five minute period**.

The marginal Generating Unit, **System Unit**, Load or System Resource dispatched in **each BEEP Interval the five minute period** is

- (a) if **generation Generation** output is increased, or Demand reduced, the Generating Unit, **System Unit**, Load or System Resource with the highest bid that is accepted by the ISO's **BEEP Software** for incremental Generation, or Demand reduction; or
- (b) if **generation Generation** output is decreased, the Generating Unit, **System Unit, Load** or System Resource with the lowest bid that is accepted by

the ISO's BEEP Software for decremental Generation.

~~*Where a Scheduling Coordinator has identified specific Generating Units, Loads or System Resources as the providers of the additional Operating Reserve required to cover any Interruptible Imports and on-demand obligations which it has scheduled, the Proxy Energy Bid prices of those resources for the incremental Energy, or decremental Demand, dispatched by the ISO from the Operating Reserve provided by those resources, shall not be taken into account in the determination of the Hourly Ex Post Price.*~~

When an Inter-Zonal Interface is operated at the capacity of the interface (whether due to scheduled uses of the interface, or decreases in the capacity of the interface), the marginal incremental or decremental bid prices in some Zones may differ from one another. In such cases, the ISO will determine separate **Hourly** Ex Post Prices for the Zones.

*The ISO will respond to the Dispatch instructions issued by the BEEP Software to the extent practical in the time available and acting in accordance with Good Utility Practice. The ISO will record the reasons for any variation from the Dispatch instructions issued by the BEEP Software.*

#### 2.5.23.2 Determining *Five Minute Ex Post Price and Hourly Ex Post Prices*

*2.5.23.2.1 BEEP Interval Ex Post Prices.* For each *five minute period BEEP Interval*, the ISO will compute an updated dispatch price curve, using the Generating Units, **System Units**, Loads and System Resources dispatched *according to the ISO's BEEP Software* during that time period to meet Imbalance Energy requirements. *For each BEEP Interval of the Settlement Period, BEEP will compute an incremental Ex Post Price and a decremental Ex Post Price. The incremental Ex Post Price will equal the highest price bid selected in the BEEP Interval. The decremental Ex Post Price will equal the lowest price bid selected in the BEEP Interval.* The *Five Minute Ex Post Prices* for each *period BEEP Interval* will equal the marginal bid of the marginal Generating Unit, **System Unit**, Load, or System Resource as described in Section 2.5.23.1.

*If the net quantity of Imbalance Energy in the five minute period t is positive then The BEEP Interval incremental Ex Post Price will be computed for each BEEP Interval i as*

$$P5Min_i = \text{Max}(EnBid_i)$$

$$PI_i = \text{Max}(EnBid_r)_i$$

