4.5   Real-Time Market Settlements

4.5.2   Real-Time Market Settlements for Energy Injections or When Actual Demand Reductions are Less Than Scheduled Demand Reductions

4.5.2.1   General Rules for Suppliers

A Supplier shall pay or be paid for Energy imbalance to account for differences between Actual Energy Injections, real-time Energy schedules and Day-Ahead Energy schedules.

When the LBMP calculated in that RTD interval at the applicable Generator's bus is positive, the Supplier payment shall be calculated as follows:

$$\text{Supplier payment} = ((\text{MIN}(AE_{iu}, RTS_{iu}) - DAS_{hu}) * LBMP_{iu}^{RT}) * \frac{S_i}{3600}$$

Where:

AE_{iu} = average Actual Energy Injection by Supplier u in interval i or average Actual Energy Withdrawal by ~~an~~ Energy Storage Resource or Hybrid Storage Resource u in interval i;

RTS_{iu} = (1) real-time Energy scheduled for injection by Supplier u in interval i plus Compensable Overgeneration; or (2) real-time Energy scheduled for withdrawal by Energy Storage Resource or Hybrid Storage Resource u in interval i plus 3% of the absolute value of the Energy Storage Resource's or Hybrid Storage Resource's Lower Operating Limit; or (3) average Actual Energy Withdrawal by ~~an~~ Energy Storage Resource or Hybrid Storage Resource u in interval i when it has been designated as operating Out-of-Merit to withdraw at the request of a Transmission Owner or the ISO;

DAS_{hu} = Day-Ahead Energy schedule for Supplier u in hour h containing interval i;

$LBMP_{iu}^{RT}$ = real-time price of Energy at the location of Supplier u in interval i;

S_i = number of seconds in RTD interval i;

When: (1) the LBMP calculated in that RTD interval at the applicable Generator bus is negative; or (2) the ISO initiates a large event reserve pickup or a maximum generation pickup under RTD-CAM that applies to the Load Zone where the Generator is located; or (3) a

Transmission Owner initiates a reserve pickup in accordance with a Reliability Rule, including a Local Reliability Rule, then the Supplier payment shall be calculated as follows:

Supplier Payment = $((AE_{iu} - DAS_{hu}) * LBMP_{iu}^{RT}) * \frac{S_i}{3600}$

Where:

The variables are defined above in this Section 4.5.2.1.

A Generator that is not following Base Point Signals shall not be compensated for Energy in excess of its Real-Time Scheduled Energy injection if its applicable upper operating limit has been reduced below its bid-in upper operating limit by the ISO in order to reconcile the ISO's dispatch with the Generator's actual output, or to address reliability concerns.

If the Energy injections by a Supplier over an RTD interval are less than the Energy injections scheduled for the Supplier Day-Ahead, and if the Supplier reduced its Energy injections in response to instructions by the ISO or a Transmission Owner that were issued in order to maintain a secure and reliable dispatch, the Supplier may be entitled to a Day-Ahead Margin Assurance Payment, pursuant to Attachment J of this ISO Services Tariff.

Suppliers scheduling Imports shall pay or be paid for Energy imbalance to account for differences between real-time Energy schedules and Day-Ahead Energy schedules. For an Import to the LBMP Market that is only scheduled in the Real-Time Market, or to the extent it is scheduled to supply additional or less Energy to the LBMP Market in real-time than it was scheduled to supply Day-Ahead, the Supplier payment shall be calculated as follows:

Supplier Payment = $((RTS_{iup} - DAS_{hup}) * LBMP_{ip}^{RT}) * \frac{S_i}{3600}$

Where:

RTS_{iup} =   real-time Energy scheduled for injection by Supplier u in interval i at Proxy Generator Bus p;

DAS_{hup} =   Day-Ahead Energy schedule for Supplier u in hour h containing interval i at Proxy Generator Bus p;

$LBMP_{ip}^{RT}$ =   real-time price of Energy at the Point of Receipt p (*i.e.*, the Proxy Generator Bus) in interval i;

S_i =   number of seconds in RTD interval i;