

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:

$$\text{Supplier payment} = ((\text{MIN}(\text{AE}_{iu}, \text{RTS}_{iu}) - \text{DAS}_{hu}) * \text{LBMP}_{iu}^{RT}) * \frac{S_i}{3600}$$

Where:

AE_{iu}	= average Actual Energy Injection by Supplier u in interval i or average Actual Energy Withdrawal by an -Energy Storage Resource <u>or Hybrid Storage Resource</u> 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 <u>or Hybrid Storage Resource</u> u in interval i plus 3% of the absolute value of the Energy Storage Resource's <u>or Hybrid Storage Resource's</u> Lower Operating Limit; or (3) average Actual Energy Withdrawal by an -Energy Storage Resource <u>or Hybrid Storage Resource</u> 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:

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

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:

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

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>i.e.</i> , the Proxy Generator Bus) in interval i ;
S_i	= number of seconds in RTD interval i ;

4.5.2.2 Failed Transactions

If an Energy injection scheduled by RTC at a Proxy Generator Bus fails in the ISO's checkout process and the checkout failure occurred for reasons within the Supplier's or Transmission Customer's control, it will be required to pay the "Financial Impact Charge" described below. The ISO will determine whether the Transaction associated with an injection failed for reasons within a Supplier's or Transmission Customer's control.

If an Energy injection at a Proxy Generator Bus is determined to have failed for reasons within a Supplier's or Transmission Customer's control, the Financial Impact Charge will equal: (i) the difference computed by subtracting the actual real-time Energy injection from the amount of the Import scheduled by RTC; multiplied by (ii) the greater of the Real-Time Market Congestion Component of the LBMP in the relevant interval, or zero.

If a Wheel Through fails for reasons within a Supplier's or Transmission Customer's control, the Financial Impact Charge will equal the sum of the Financial Impact Charge described in this section and the Financial Impact Charge described below in Section 4.5.3.2.

All Financial Impact Charges collected by the ISO shall be used to reduce the charges assessed under Rate Schedule 1 of this ISO Services Tariff. In the event that the Energy injections for an Import scheduled by RTC or RTD, at a Proxy Generator Bus is Curtailed at the request of the ISO, and (i) the real-time Energy Profile MW is equal to or greater than the Day-Ahead Energy Schedule for that interval, and (ii) the real-time Decremental Bid is less than or

equal to the default real-time Decremental Bid amount as established by ISO procedures, then the Supplier or Transmission Customer that is subjected to the Curtailment, in addition to the charge for Energy Imbalance, shall be eligible to receive an Import Curtailment Guarantee Payment for its curtailed Import pursuant to Attachment J of this ISO Services Tariff.