

Enhanced Scarcity Pricing



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Current Process Review

- ◆ **Step 1 Activation** – Operations identifies the reliability need that allows it to activate EDRP / SCR. After a 21 hour-ahead notice, a real-time activation notice is issued, typically with 2 hours notice.
- ◆ **Step 2 Estimated Load Reductions** – The estimated load reductions are reported by the EDRP/SCR resources and entered into MIS prior to the event start time.
 - *East and NYCA scarcity pricing curves built based upon registration data and Zones activated.*

Current Process Review Cont.

- ◆ **Step 3 Reserve Shortage Check** – Each interval as per MST Attachment B, Section 17.1.2 is checked to determine if reserves would have been insufficient but for the EDRP/SCR load reductions.
 - If Available Reserves – [EDRP/SCR + reserve req.] < 0 then scarcity pricing applies.
 - Available Reserves as defined in the MST Section 2 are ‘the capability of all Suppliers that submit Incremental Energy Bids to provide Spinning Reserves, Non-Synchronized 10-Minute Reserves, and 30-Minute Reserves in that interval and in the relevant location, and the quantity of recallable External ICAP Energy sales in that interval’.
 - For NYCA, consider requirement for total 30-min reserves.
 - For East, consider requirement for 10-Minute Reserves located East of Central-East.

Current Process Review Cont.

- ◆ **Step 4 Scarcity Pricing Applied** - Scarcity pricing will be applied regardless of the reason for activation if, in any RTD interval, reserves would have been insufficient but for EDRP/SCR and the resulting scarcity pricing LBMP is higher.
 - *The scarcity pricing rules are governed by MST Attachment B, Sections 17.1.2 including 17.1.2.2 and 17.1.2.3.*
 - *As per MST Section 17, Attachment B, if SCR/EDRP NYCA is called and needed, Scarcity Pricing Rule A (NYCA) is applied in the West and East and Scarcity Pricing Rule B (East) is not applied.*

Primary Enhancement Objectives

- ◆ **Set pricing consistent with locational activations.**
- ◆ **Obtain consistency between dispatch and scarcity assumptions.**

Proposed Enhancements

- ◆ **Allow activations to be tested and priced for the specific zone(s).**
 - *NYISO will continue to activate EDRP/SCR in the specific zone(s) needed to maintain reliability and allow scarcity pricing to apply to the energy price (LBMP) in the activated zone(s).*

- ◆ **Align latent reserve calculation in ‘but for’ Scarcity Pricing test with existing Ancillary Service market rules.**
 - *Remove inclusion of recallable External ICAP Energy sales as reserves*

Details

- ◆ **The Real Time market will run its normal dispatch then immediately test the ‘but for’ scenario:**
 - But for is defined as: If Latent Reserves – [EDRP/SCR + scheduled reserves] < 0 then scarcity pricing applies.
 - Latent Reserves are defined as ‘the capability of all Suppliers to provide Spinning Reserves, Non-Synchronized 10-Minute Reserves, and/or 30-Minute Reserves in that interval and in the relevant location’.

Details Cont.

◆ Energy Calculation

- *Calculate the Scarcity Price LBMP for each generator in the activated zone(s).*
 - Scarcity LBMP = Marginal Cost of Losses (MCL) + Scarcity Price (\$500)
- *The maximum of the original RTD LBMP and the Scarcity LBMP becomes the Final LBMP.*
- *Example:*
 - RT LBMP = \$50 (\$48 ref bus + \$2 MCL)
 - Scarcity LBMP = \$2 MCL + \$500 SP= \$502
 - MAX (\$50 RT LBMP, \$502 Scarcity LBMP) = \$502

Details Cont.

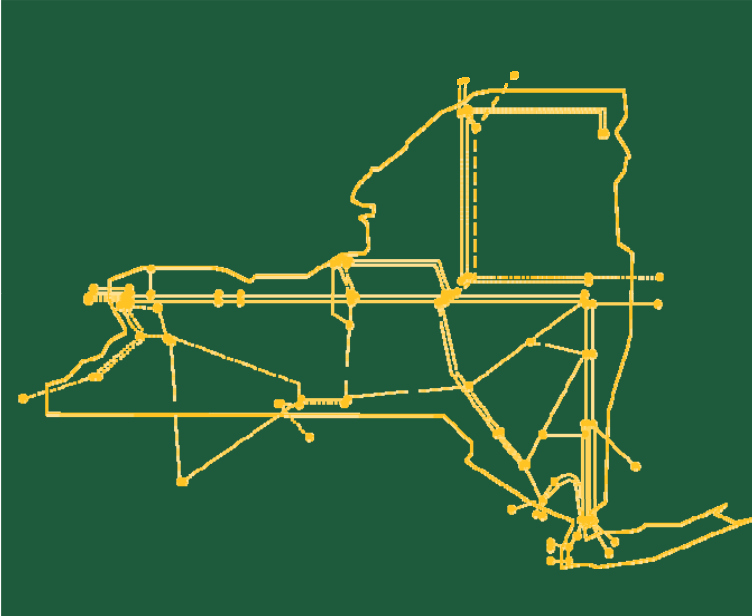
◆ Ancillary Calculation

- *For every gen in the scarcity zone (SZ), calculate an Energy Lost Opportunity Cost (ELOC).*
 - ELOC = Final LBMP - unit's economic bid point
- *For Regulation:*
 - Scarcity Regulation Cost (SRC) = ELOC + Regulation bid of the unit
 - MAX SRC is the highest SRC for all units in the SZ with an ideal Reg schedule > 0 and are not bound by an ideal ramp rate constraint.
 - If the MAX SRC is greater than the Real Time clearing price for Regulation, set the MAX SRC clearing price as the Final Regulation clearing price.
- *For all other ancillary products (Spin and Non Spin, 10 and 30):*
 - Take the MAX ELOC for all units in SZ with an ideal schedule > 0 in that product. If the MAX ELOC is greater than the Real Time clearing price for that product, replace the Ideal clearing price with the MAX ELOC for that product.
- *Note: These are the same calculations as today.*

Next Steps

- ◆ **MIWG on 11/7, 11/16**
- ◆ **BIC on 12/5**
- ◆ **MC on 12/19**
- ◆ **Implementation targeted for Q2 2013**

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