

Trading Hubs

(a.k.a. Netting of Bilaterals)

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Background



- ◆ The trading hubs concept was proposed as a market feature by some Market Participants several years ago.
- ◆ A subsequent FERC order in 2006 directed the NYISO to proceed with a concept of operation for the project.
- ◆ Based on Market Participant support, the NYISO has been moving forward with developing the project.

Timeline



- ✓ July 31, 2007 – NYISO Concept of Operations for trading hubs feature presented at MIWG.
- ✓ October, 2007 – Project Approved for 2008 Budget (project moved into 2009 due to credit dependency).
- ✓ June 16, 2008 - Detailed proposal presented at MIWG.
- ✓ August 13, 2008 – Additional examples presented at MIWG.
- ✓ December 4, 2008 – Credit requirements for trading hub transactions presented to MIWG.
- ✓ March/April MIWG – Tariff language and credit requirements presented to MIWG
- ✓ June 1, 2009 –Updated proposal presented to MIWG.
- ✓ June 10, 2009 - Present proposal to BIC for vote.
- ◆ June 24, 2009 – Present proposal to MC for vote.
- ◆ July 20, 2009 – BOD vote
- ◆ Sept 15, 2009 - Deployment

Proposal Summary



- ◆ Trading hubs introduces a concept whereby bilateral transactions may be sourced from an internal generator and delivered (sink) at a zonal trading hub. Bilateral transactions may also be sourced at the zonal trading hub to deliver energy to other delivery points. One such delivery point is an internal load bus. Another delivery point is a zonal trading hub.
- ◆ In other words, a qualified MP can purchase energy at a trading hub or sell energy from a trading hub.

- ◆ Market Accessibility

- *Trading hubs are intended to facilitate trading by providing additional flexibility for marketers and LSEs in carrying out their physical trades.*

- ◆ Credit

- *Trading hubs may support a means whereby retailers or small LSEs can make better use of the creditworthiness of larger marketing institutions.*
- *Trading hubs may allow a physical load to reduce its NYISO credit coverage requirements.*

- ♦ Each trading hub is modeled at a zonal level and corresponds to a specific NYISO zonal LBMP.
- ♦ A market participant who wants to be a trading hub energy owner must register with NYISO for access to a zonal trading hub.
- ♦ Trading hub energy owners will post appropriate collateral for their anticipated trading hub activities.
 - *Note: Until the credit requirements associated with unbalanced trading hub activity can be automated, a trading hub energy owner must maintain a balanced position at each trading hub for each hour by market close (DAM or RT). A balanced position simply means that the trading hub energy owner must sink the same amount of MWs at a trading hub in a given hour that he sources. This will be enforced by the software at the market close. The dependency of multiple trading hub energy owners on each other as sources or sinks for their transactions can quickly and substantively complicate this balanced position requirement, and the software would need to reject all transactions that did not balance by each market close. Because this requirement would likely result in very few hub to hub transactions, the NYISO is deferring the implementation (not the development) of hub to hub transactions.*
 - *These restrictions will be documented in the tariff filing as well as the NYISO Billing and Accounting Manual.
- ♦ Trading hubs can only involve internal bilateral transactions. This may be expanded to imports/exports in future phases.
- ♦ Transactions sinking at a trading hub will not result in any additional generation being committed above that needed to serve physical load in the state.

Rules - continued



- ♦ Trading hub settlements will be calculated for each trading hub energy owner by calculating a payment or charge for each trading hub transaction.
 - *Scenario #1 – trading hub energy owner sources 10mw from the Zone D Hub, sinking at a load bus in Zone J.*
 - Settlements – trading hub energy owner buys 10mw from the NYISO LBMP market at the Zone D LBMP.
 - *Scenario #2 – trading hub energy owner sinks 10mw into the Zone D Hub, sourcing from a generator in Zone C.*
 - Settlements – trading hub energy owner sells 10mw into the NYISO LBMP market at the Zone D LBMP.
 - *Scenario #3 – trading hub energy owner “A” sources 10mw from the Zone C trading hub, sinking at the Zone D trading hub for trading hub energy owner “B”.*
 - Settlements – Trading hub energy owner “A” buys 10mw from the NYISO LBMP market at the Zone C LBMP. Trading hub energy owner “B” sells 10mw into the NYISO LBMP market at the Zone D LBMP. (note – see credit note on previous slide regarding deferral of hub to hub transactions)
- ♦ Trading hub MWs cannot carry across DAM into RT.

◆ Article 2 – Definitions

■ *Add definition of Trading Hub*

- A virtual location in a given zone, modeled as a generator bus and/or load bus, for the purpose of transferring energy settlement obligation with the ISO via Internal Bilateral Transactions.

■ *Add definition of Trading Hub Energy Owner*

- A NYISO Customer who buys energy and sinks it at a Trading Hub, or who sells energy by sourcing it from a Trading Hub.

◆ Article 4 – Market Services

- *4.2.4 SCUC – Ensure that references to Bilateral Transactions exclude those Bilaterals with a Trading Hub as its sink.*
- *4.2.7 Day-ahead Market Settlements – Specify that Trading Hub Energy Owners will pay or will receive a payment based on their trading hub transaction activity.*
- *4.4.2 Bids and Other Requests – Excluded Trading Hub Transactions from Bilateral Transaction language where appropriate.*
- *4.5 Real-time Market Settlements – Specify that Trading Hub Energy Owners will pay or will receive a payment based on their trading hub transaction activity.*

Tariff changes



- ◆ Attachment B
 - *III 2.0 Bilateral Transaction Bidding – Added clarification of the POI and POW for Bilateral Transactions involving Trading Hubs.*

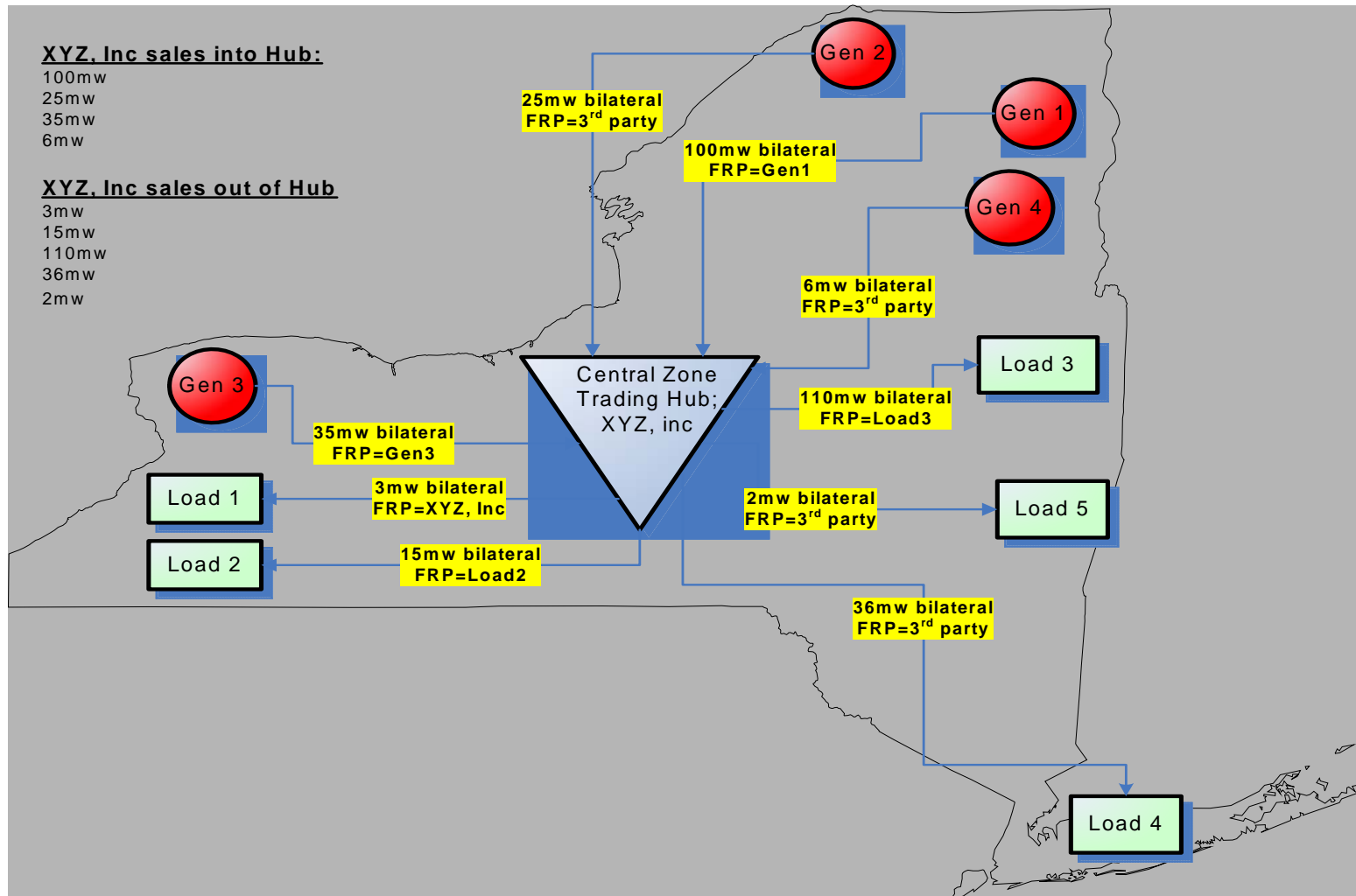
Next steps



- ◆ Present proposed changes at July 20th 2009 BOD meeting.
- ◆ File proposed tariff changes at FERC
- ◆ Implement software changes in September 2009

Example

- The following example shows how a trading hub energy owner might schedule its transactions to acquire and sell mws at a trading hub (simple balanced example).



Example



- ◆ For additional examples, please see the Trading Hubs presentation given at the August 13th Market Issues Working Group:
 - http://www.nyiso.com/public/webdocs/committees/bic_miwg/meeting_materials/2008-08-13/Bilateral_Trading_Hubs.pdf



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