New York ISO
Independent System Operator

Market Purchase Hub Transactions – Collateral Update

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Agenda

- **Background**
- **Market Design**
  - Overview
  - Proposed Process
  - Proposed Rules
- **Example Scenarios**

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Background

Background

- Netting of Bilaterals (Trading Hubs) initiative was first proposed in 2008 but was limited to balanced transactions.
  - 6/10/2009 BIC Presentation
  - 7/29/2009 NYISO Filing Letter to FERC
- Market Purchase Hub Transactions is a stakeholder requested project which proposes that the NYISO expand on Trading Hub rules to allow unbalanced transactions as well as hub-to-hub transactions.
  - 8/29/2024 MDCP Presentation
- The 2025 deliverable for this project is Market Design Complete (MDC).

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Project Objectives

- The market design will include modifying zonal trading hubs by allowing unbalanced transactions in the Day-Ahead Market to provide additional flexibility in scheduling of hub transactions.
  - This would allow a Market Participant to establish unbalanced transactions to purchase and sell power in the NYISO Day-Ahead Market.
- The market design will also include allowing bilateral transactions to occur between Trading Hub Energy Owners, both at the same Trading Hub and between Trading Hubs.
- The market design will identify potential tariff, system, and procedural changes necessary to allow these enhancements.

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Market Design Overview

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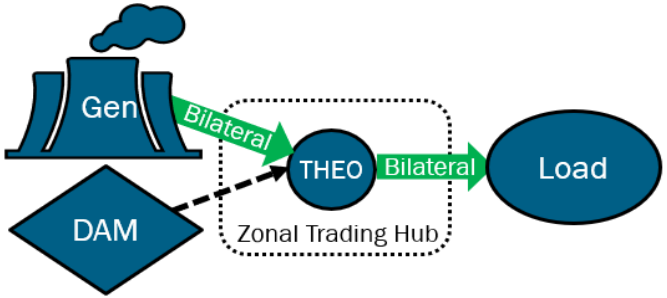
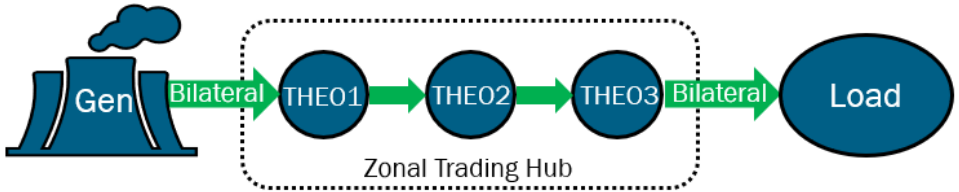
Market Design Overview

- **The NYISO proposes that Trading Hub Energy Owners (THEOs) be able to transfer more MW via bilateral with other THEOs, LSEs, or Load Buses than they have procured via bilateral with a Generator.**
  - Alternatively, THEOs will also be able to transfer less MW via bilateral with other THEOs, LSEs, or Load Buses than they procured via bilateral with a Generator.
  - In scenarios where this is the case, the NYISO would settle the THEO's imbalance by scheduling a purchase or sale by the THEO in the Day-Ahead Market.
- **The NYISO proposes to further add to the flexibility of Trading Hubs by allowing THEO-to-THEO bilateral transactions, both cross-zonally and within the same Zonal Trading Hub.**
- **MPs who wish to utilize either of these functionalities must request a "Chain ID" and reference this Chain ID when scheduling Bilateral Transactions.**





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Process: Chain ID Creation + Usage

- **Market Participants who wish to be involved in a multiple-THEO Transaction Chain and/or have an unbalanced transaction will request the creation of a "Chain ID" through a new User Interface.**
  - The MP who requested the Chain ID is considered the "Owner" of the Chain ID.
  - The NYISO will generate a unique Chain ID to be assigned to transactions involved in the Chain.
- **The Owner of the Chain ID must provide a list of approved entities that may use the Chain ID and therefore schedule bilateral transactions as part of the Chain.**
  - Owner of Chain ID must share it with others of their choosing through offline communication so that other MPs may schedule Bilateral Transactions as part of this Chain.
- **If Chain is to end at physical load and/or an Energy withdrawal by a Withdrawal Eligible Generator (WEG), all load destinations must be under entities that share the same financially responsible party (FRP), and the Owner of the Chain ID must specify who the load/WEG FRP will be for the Chain.**
- **The Chain Owner, as well as entities that received the Chain ID and are on the approved participant list, may schedule bilateral transactions, referencing the Chain ID in a new entry field.**

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Process: Credit + Chain Validity Checks

- **Three days before Day-Ahead Market (DAM) close:**
  - NYISO performs initial checks of Chain structural validity for Bilaterals submitted more than three days before DAM close.
  - NYISO performs credit checks on THEOs with Unbalanced Bilateral Transactions submitted more than three days before DAM close which are in structurally valid Chains.
- **From three days before DAM close until DAM close:**
  - NYISO continues to check structural validity of Chains and credit of unbalanced THEOs in structurally valid chains.
- **If a given Chain is not yet structurally valid when checked, the Chain and all associated Bilateral Transactions will remain pending until DAM close, when they will be either accepted or rejected.**
- **DAM Close: Deadline for scheduling of Bilateral Transactions**

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Proposed Rules

- **Unbalanced purchase functionality will be limited to the Day-Ahead Market (DAM).**
- **THEO positions will be balanced by the NYISO in the DAM.**
  - If the MW value sunk by a THEO via bilateral is greater or less than the MW value sourced by the THEO via bilateral, the NYISO will calculate the imbalance and administer a DAM purchase/sale by the THEO to settle the imbalance.
  - THEO positions will be balanced by DAM close; they will not carry forward into RT.
- **Transfers between entities will be accounted for in DAM Settlements.**
- **Trading hub purchases and sales will only be enabled at load zone locations and THEOs will pay or receive the Zonal LBMP for imbalances in their bilateral schedules in the Load Zone where the Trading Hub is located.**
- **Transfers between entities will be able to cross zones.**
  - Gen-to-THEO, THEO-to-THEO (between Trading Hubs), THEO-to-Load

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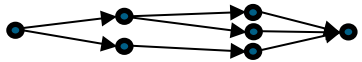
Proposed Rules Cont.

- **In order for chains to be structurally valid:**
  - Owner of Chain ID must be either source or sink in at least one Bilateral Transaction that is submitted with the Chain ID referenced.
  - All bids in the Chain must connect on a unified path.
  - If chain ends in physical load, all final load destinations must share the same FRP.
- **Chain IDs can be reused for other intervals.**
- **All entities in the Chain ID owner approved list do not need to be involved in every instance where the Chain ID is used.**
  - Only the Owner needs to be involved in each implementation.
- **Many-to-many, one-to-many, and many-to-one transaction interactions will be allowed:**



- **Balanced Bilateral Transactions with conventional Generator -> THEO -> Load structure will not be affected and will not require a Chain ID.**
  - All Bilateral Transactions scheduled without referencing a Chain ID will be subject to the existing balanced position requirement.

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Collateral Requirements

- All net short positions at a Trading Hub will be subject to a bidding requirement at DAM close, which will be equal to the Price Cap * Unbalanced MW.
  - Price cap will be $1000 under normal conditions and $2000 when Order 831 triggers.
- The NYISO will hold the bidding requirement until DAM post.
- Once the DAM posts, the credit requirement will equal the cost of the purchase.
- The amount of collateral required to be posted for transmission congestion will be determined in accordance with the NYISO Market Services Tariff ("MST"), Attachment K, Section 26.4.2.1 (Energy and Ancillary Services Component).

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Example Scenarios

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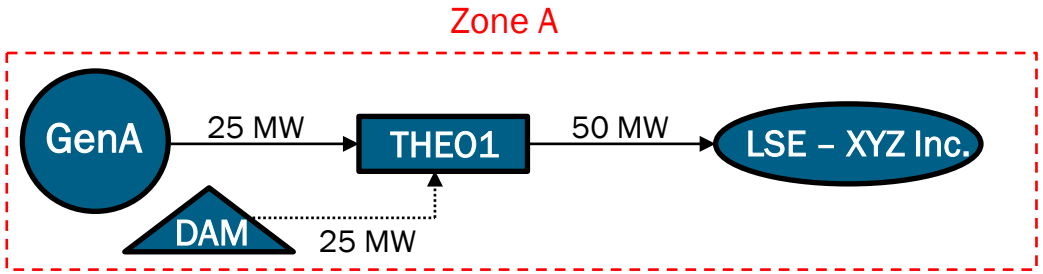
Example 1



- THEO1 in Zone A has two bilateral transactions scheduled: one where it transfers 50 MW to XYZ Inc., and one where it receives 25 MW from GenA. GenA, THEO1, and XYZ Inc. are all in Zone A.
- Since THEO1 is 25 MW short, it will also have to purchase 25 MW from the DAM, and post collateral to cover this purchase.
  - Bidding requirement until DAM post: $1000/MW * 25 MW = $25000
  - Credit requirement after DAM post: $55/MW * 25 MW = $1375
- Since THEO1 and XYZ Inc. are in the same zones, and GenA's price is equal to the Zone A LBMP, there is no Transmission Usage Charge (TUC) for either Bilateral Transaction.

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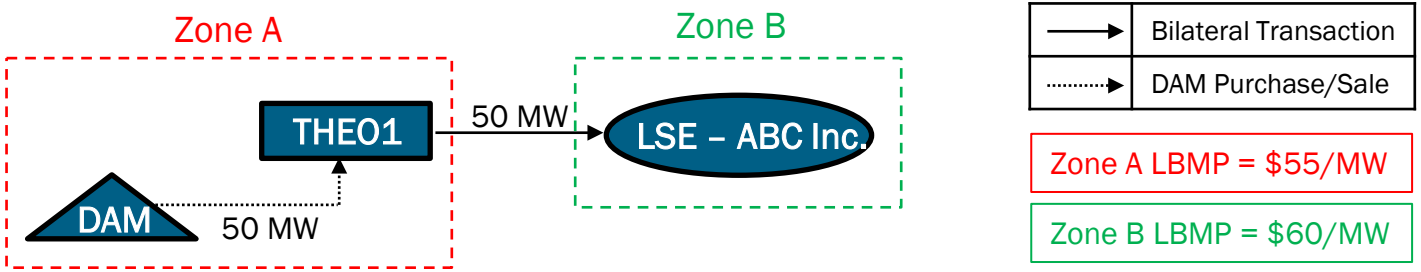
Example 2



- **THEO1 in Zone A has a bilateral transaction scheduled where it transfers 50 MW to ABC Inc. in Zone B.**
  - Note: THEO1 is the FRP for this transaction.
- **Since THEO1 is 50 MW short, it will have to purchase 50 MW from the DAM, and post collateral to cover this purchase.**
  - Bidding requirement until DAM post: $1000/MW * 50 MW = $50000
  - Credit requirement after DAM post: $55/MW * 50 MW = $2750
- **Since THEO1 and ABC Inc. are in different zones with different LBMPs, THEO1 must pay the TUC from Zone A to B and is subject to the Energy and Ancillary Services credit requirement.**
  - Transmission from Zone A -> B: ($60-$55) * 50 MW = $250

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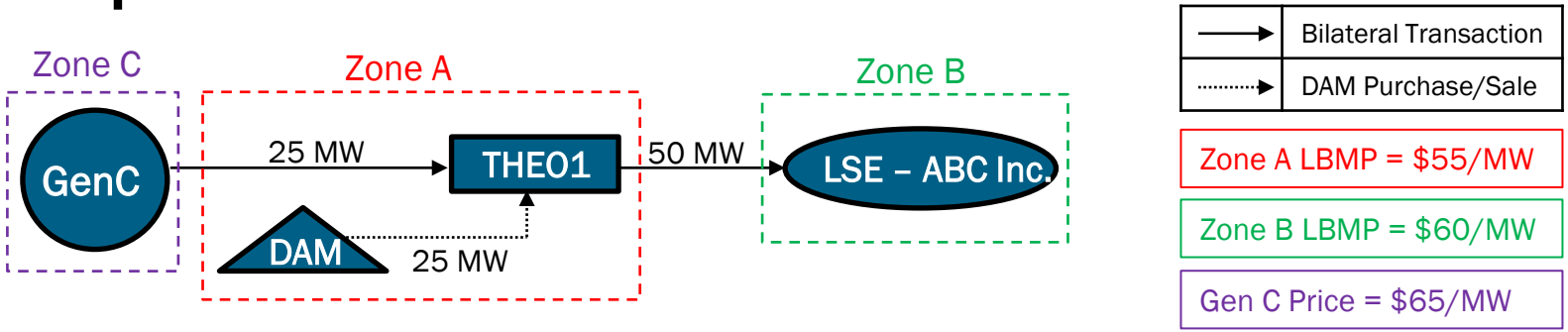
Example 3



- **THEO1 in Zone A has two bilateral transactions scheduled: one where it transfers 50 MW to ABC Inc. in Zone B, and one where it receives 25 MW from GenC in Zone C.**
  - Note: THEO1 is the FRP for both transactions.
- **Since THEO1 is 25 MW short, it will also have to purchase 25 MW from the DAM, and post collateral to cover this purchase.**
  - Bidding requirement until DAM post: $1000/MW * 25 MW = $25000
  - Credit requirement after DAM post: $55/MW * 25 MW = $1375
- **Since THEO1 and ABC Inc. are in different zones with different LBMPs, THEO1 is responsible for the TUC from Zone C to A and Zone A to B. However, THEO1 does not owe anything to the NYISO as a result of these transactions:**
  - Transmission from Zone C -> A: ($55-$65) * 25 MW = -$250
  - Transmission from Zone A -> B: ($60-$55) * 50 MW = $250

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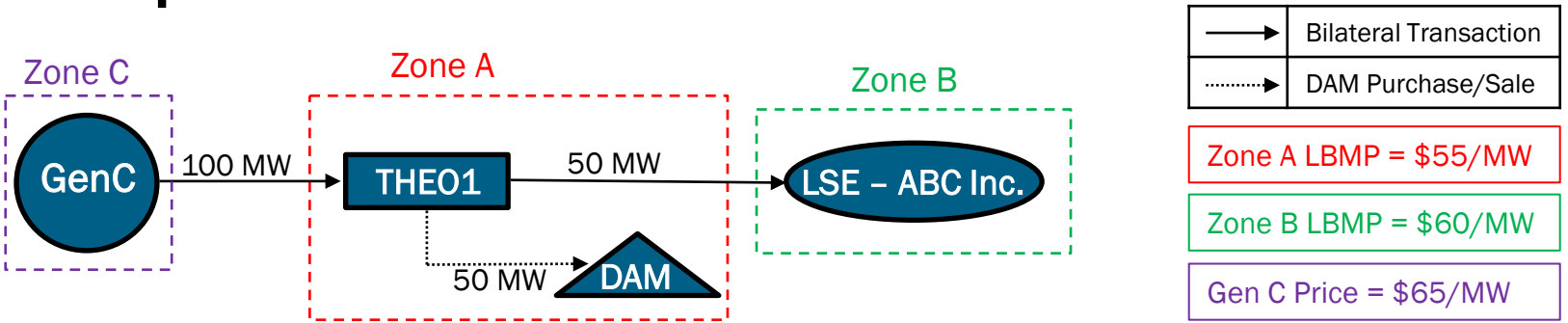
Example 4



- THEO1 in Zone A has two bilateral transaction scheduled: one where it receives 100 MW from GenC in Zone C, and one where it sells 50 MW to ABC Inc. in Zone B.
  - Note: THEO1 is the FRP for both transactions.
- Since THEO1 is 50 MW long, THEO1 sells the 50 MW back into the DAM. The NYISO will therefore owe the THEO for the DAM sale.
  - NYISO owes THEO1: $55/MW * 50 MW = $2750
- Since THEO1 and ABC Inc. are in different zones with different LBMPs, THEO1 would be responsible for the TUC Zone A B. However, since GenC's price is higher than Zone A LBMP, THEO1 is credited for Zone C to A.
  - Transmission from Zone C -> A: ($55-$65) * 100 MW = -$1000
  - Transmission from Zone A -> B: ($60-$55) * 50 MW = $250
- In total, THEO1 would be credited $3500 ($2750 + $1000 - $250).

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Next Steps

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Next Steps

- Return to ICAPWG/MIWG with proposed tariff changes
- 2025 Milestone: Market Design Complete

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Our Mission & Vision

Mission

Ensure power system reliability and competitive markets for New York in a clean energy future

Vision

Working together with stakeholders to build the cleanest, most reliable electric system in the nation

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