

Netting Issue on the HQ-NY Interface

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Recalling the Issue

- The NY-HQ interface carries two transfert limits:
 - A global net transfert limit of 1500 MW (incl. imports and wheel-throughs)
 - A NY net import limit of 1200 MW (covering only imports into NY)
- **PROBLEM :**
 - Only the 1500 MW limit is modeled in SCUC and RTC
 - The 1200 MW limit is NOT
 - It is enforced manually by capping imports at 1200 MW
 - When NY exports to HQ zone, the manual process does not "net" the imports and exports, thus not allowing the full amount of imports which could come into NY

Consequences

1. There is no price signal for a key import limit constraint (Congestion only appears when the 1500 MW limit is reached)
2. NY receives LESS imports than it could, based on the NYISO model not being able to "net" imports and exports
3. Import transactions get cut when there is no real transmission constraint
4. Creates a modeling inconsistency between the TCC market and the energy market for the HQ proxy bus

1. No Price Signal

- Since the 1200 MW limit is not modeled, SCUC and RTC do not "see" the constraint
- There is no price or congestion calculated for the 1200 MW import limit
- Consequently, SCUC and RTC accept imports above 1200 MW
- Excess imports are manually cut by the operators during the check-out process, even though imports are in economic merit
- Consequently, DAM imports do get cut and must be settled financially in RT
- During the evaluation, wheel-through transactions may be bumped by imports that were accepted above the 1200 MW limit
- Manual cuts are more subject to error

2. NY Receives Less Imports

- Because the 1200 MW limit is enforced manually with a cap on imports, operators do not take counterflow transactions into account (exports) when cutting import transactions
- Consequently, when imports reach 1200 MW, exports represents a load that cannot be netted with more imports
- More imports tends to lower prices in NY

Missing Imports

Figure 1: without exports

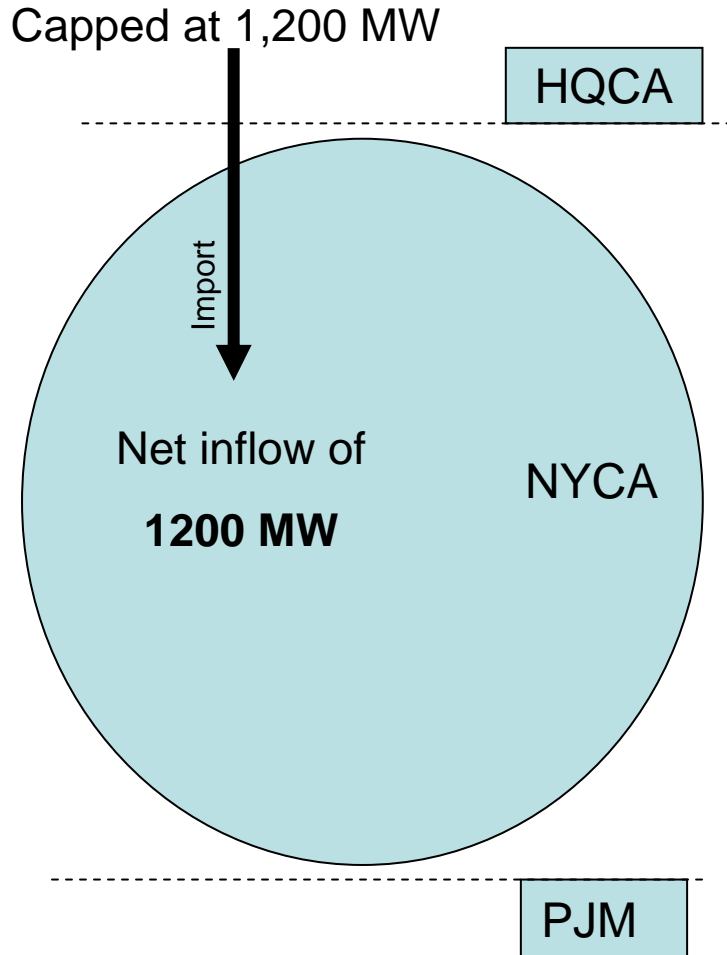
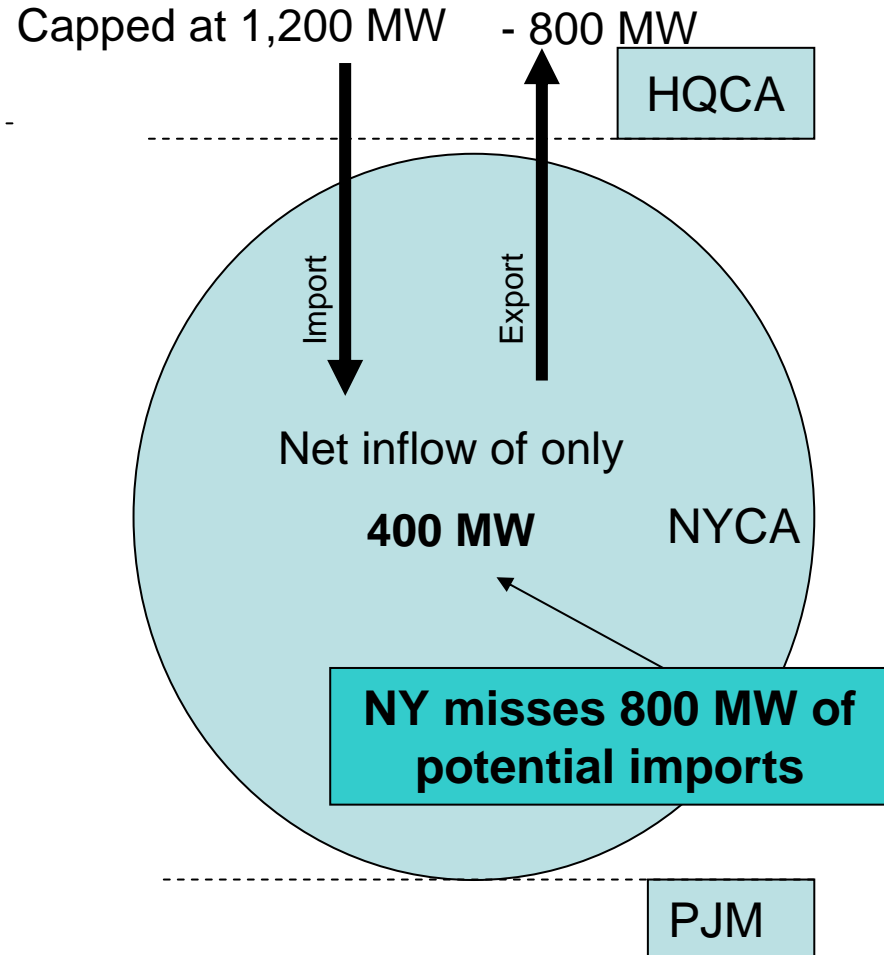


Figure 2: with exports



3. Imports Are Cut Absent Transmission Constraint

- When exports are scheduled simultaneous with 1200 MW of imports, the net flow is less than 1200 MW
- Consequently, there is no transmission constraint
- Yet, any accepted import transactions above 1200 MW will be cut while there is no transmission constraint to justify the cut

4. Modeling Inconsistency

- While only one limit is modeled for the HQ proxy bus in the energy market . . .
- . . . the 2 limits have been properly modeled in the TCC auction process years ago
- The process uses 2 identifiers for imports and wheel-throughs so that TCC prices can differ to reflect the constraints
- There is no match in the energy market
- Consequently, the TTC process for imports is not working properly in the energy market. Congestion only appears when 1500 MW limit is binding
- TCC for imports are useless against the 1200 MW limit and DAM imports still get cut in real time

Rules for HQ Proxy Bus TCC Auction Manual

Attachment G

Bidding Rules for using the HQ Proxy Bus as a POI or POW Initial TCC Auction And TCC Reconfiguration Auctions

- The following PTID designations will allow the NYISO to identify TCC bids and properly model those bids as they relate to the HQ import limit in the TCC auction.
- **PTID 61844** must be used for the POI or POW (as appropriate) for a bid to purchase TCCs from the HQ Proxy bus to an internal New York bus or zone and from an internal New York bus or zone to the HQ Proxy bus.
- **PTID 23651** must be used for the POI or POW (as appropriate) for a bid to purchase TCCs from the HQ Proxy bus to another external proxy bus (e.g. NE Proxy, OH Proxy, PJM Proxy) and from another external proxy bus to the HQ Proxy bus.

Market Design Flaw

- HQUS believes that persistent absence of modeling of the 1200 MW limit is a market design flaw
- When NYISO opened in 1999, global operating limit was 1200 MW and modeled into SCUC and BME
- Operating limit was increased to 1500 MW in 2000. However, the 1200 MW import limit remained in place but not modeled into SCUC nor BME

Problem: A sub-optimal manual solution was implemented

- Yet, for the TCC auction process, the NYISO properly modeled the 2 constraints
- Proper modeling is still lacking for the energy market

Conservative Estimated Impact for New York

- In 2005, NY could have potentially received an additional 70,000 MWh of energy during 2005, had the netting project been in place
- In the first 4 months of 2006, nearly 60,000 MWh of additional energy could potentially have flowed to NY
- Additional imports reduce prices in New York

Potential Imports that NY has not received due to absence of netting at zone M

	No. of on-peak hours when imports reach 1,200 MW (Hours)	Total imports during peak hours when imports reach 1,200 MW (MWh)	Exports during on-peak hours when imports reach 1,200 MW (MWh)	No. of hours of exports when imports reach 1,200 MW (Hours)	Average MW per hour (MW/hour)
2004	579	765, 735	0	0	0
2005	813	1, 057, 579	70,297 (35,000 MWh during June, July and August)	362 (190 during June, July and August)	194
2006 (Jan. to April)	365	488, 451	59,312	304	195

The Solution is Long Overdue

- First identified problem with the manual solution in 2002
- NYISO proposed to implement proper modeling in 2003
- Solution is still not implemented in 2006
- Problem still persists; imports are still cut while there is no true constraint

Summary

- The manual process implemented in 2000 constraints imports at zone M
- NY could have received more imports in 2005 and 2006, had the import constraint been modeled properly
- Modeling of congestion at zone M is incomplete
- TCCs for imports cannot not work properly
- Import transactions get cut while there is no real transmission constraint and DAM imports are forced to be settled in real time
- Absence of proper modeling represents a market design flaw that needs to be corrected