

NYISO-PJM Congestion Management Process

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Presentation Outline

- ◆ Overview of Protocol and Review of Differences to PJM-MISO Model
- ◆ Outstanding Elements
- ◆ Implementation Evaluation Plan

Overview of Protocol

The NYISO agrees with the following fundamental Congestion Management Process concepts:

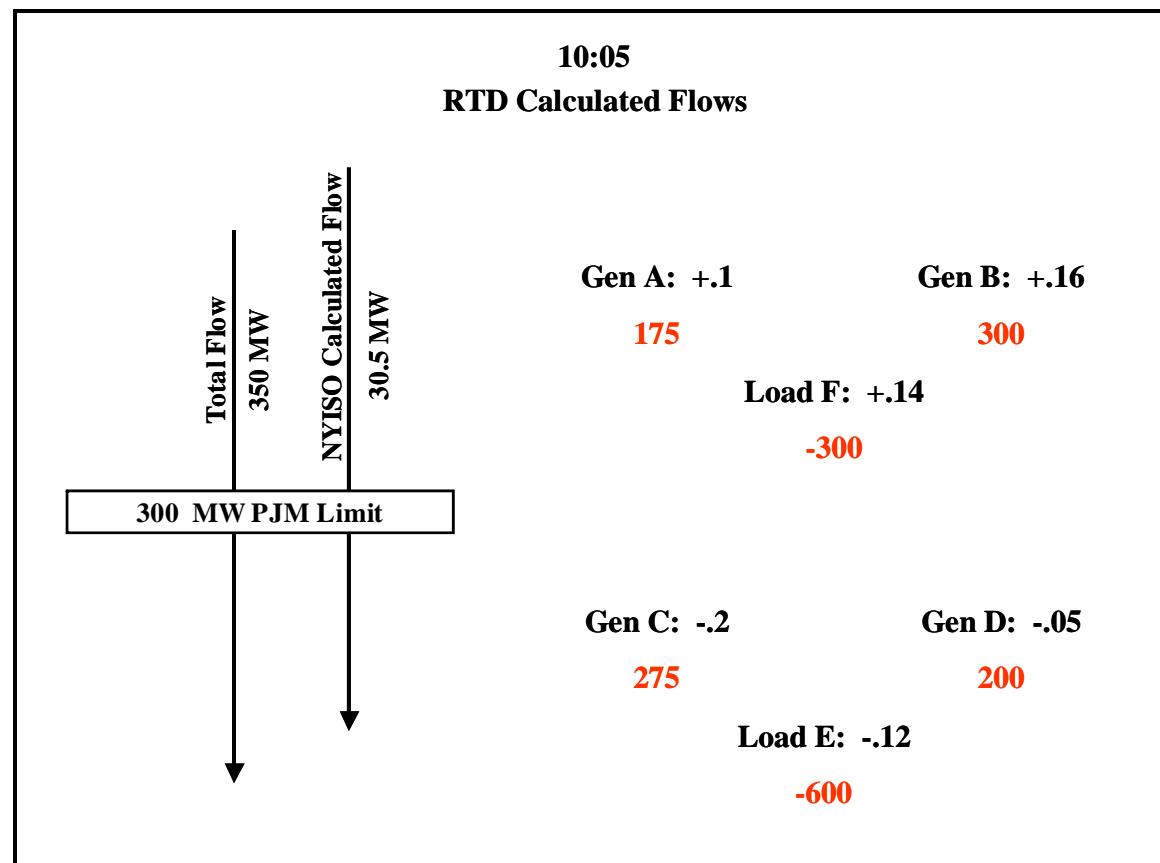
- ◆ **For certain transmission constraints under certain circumstances, the redispatch of generators within a neighboring control area may address transmission constraints more effectively than the redispatch of generators or other control action within the monitoring control area.**
- ◆ **Leveraging the security-constrained economic dispatch models of both control areas to solve transmission constraints provides opportunities to decrease the overall production costs of both systems.**

Review of Differences

- ◆ **The PJM/MISO approach to Congestion Management includes the concept of historical entitlements (Network and Native Load).**
 - *Flow entitlements are used in market settlements to determine compensation based on comparison of actual market flows to entitlements determined based on historical models.*
- ◆ **The NYISO proposes using a dynamic baseline or “entitlement” determined by initial conditions.**

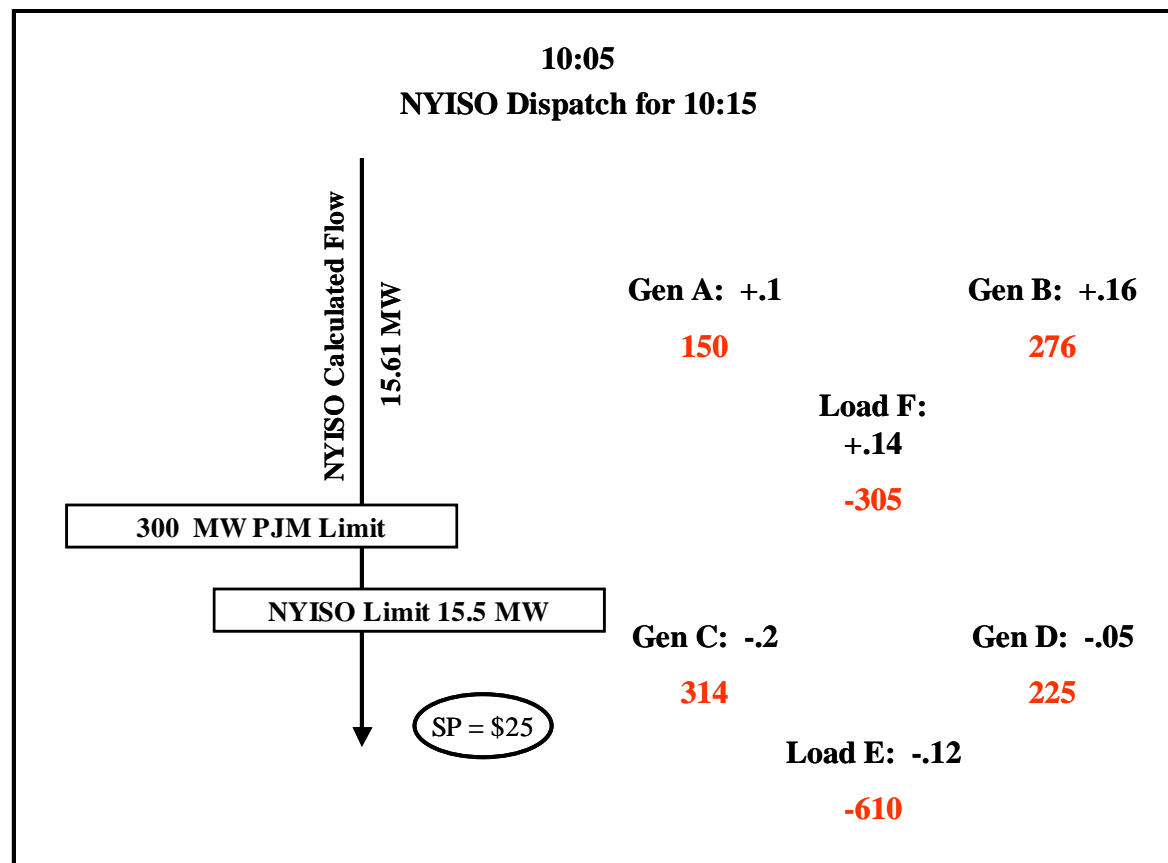
Example - Initial Conditions

- 10:02 - PJM requests 15 MW of relief at a shadow cost of \$40/MW or less
- 10:05 - RTD initializes & incorporates PJM request. Initial conditions at 10:05 establish baseline for settlements.



Example - Redispatch

- The RTD that initializes at 10:05 determines the dispatch for 10:15
- A market flow limit of 15.5 is included resulting in a \$25/MWh shadow cost and a reduction of 14.89 MW of market flow



Example - Settlement with “Dynamic Entitlement” approach

- Assume for simplicity that actual market flow for 10:15 equals expected market flow shown in prior slide
- Coordination would continue beyond 10:15 with 10:05 baseline market flows being used for settlements throughout

	Shift Factor	10:05		10:15	
		Output Load	Baseline Market Flow	Output Load	Market Flow
Gen A	0.1	175	17.5	150	15
Gen B	0.16	300	48	276	44.16
Load F	0.14	-300	-42	-305	-42.7
Gen C	-0.2	275	-55	314	-62.8
Gen D	-0.05	200	-10	225	-11.25
Load E	-0.12	-600	72	-610	73.2
Total		30.5		15.61	
Shadow Price				25	
Market Flow Relief Provided				14.89	
Hourly Cost				372.25	
Interval Cost (PJM owes NYISO)				31.02	

Implementation Evaluation Plan

The NYISO and PJM agreed to share market flow data in order to inform the entitlements discussion.

Next steps:

- ◆ **Agree on market flow calculation**
- ◆ **Develop market flow analysis tool (Larger task for NYISO)**
- ◆ **Exchange data (Confirm authority or defined tariff amendments necessary to do so)**
- ◆ **Review data**
- ◆ **Continue informed entitlements discussion**

Additional Considerations

The following points are being carefully considered as part of the straw man development:

- ◆ **Technical Feasibility** – Ensure that process can be integrated with existing commitment, dispatch and settlement software.
- ◆ **Economics** – Validity of overall concept with respect to price convergence and minimizing regional production costs.
 - *Impact on Market Solution – Impact of redispatch on market outcomes (LBMP).*
- ◆ **Proposal Analysis** – Evaluate process impact on NYISO stakeholders (Possible reduction of PJM TLRs, opportunities for coordination)

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Additional Considerations cont.

- ◆ **Market Differences – Understand the impact of PJM and NYISO market differences on potential design (ex: ex post pricing in PJM vs. ex ante pricing in NY and modeling of PARs).**
- ◆ **Cost Recovery – Identify the appropriate cost recovery mechanism.**
- ◆ **Operating Agreements – Existing Operating Agreements remain in place**
- ◆ **Seams issues**
- ◆ **Tariff modifications required**



The New York Independent System Operator (NYISO) is a not-for-profit corporation that began operations in 1999. The NYISO operates New York's bulk electricity grid, administers the state's wholesale electricity markets, and provides comprehensive reliability planning for the state's bulk electricity system.

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