

Joint Stakeholder Meeting

ISO-NE and NYISO Inter-Regional Interchange Scheduling (IRIS)

May 20, 2011 / Springfield, MA

Agenda

Today:

- Voting Process and Principles - Discussion
- Q&A on Proposals
- DBD and Amendments - Discussion

Joint Stakeholder Meetings

Purpose:

- **Discuss** white paper's options, pros/cons, how they work, rationale, & likely impact on the markets
- **Gather stakeholder input** on merits, concerns, questions
- **Forge consensus** on a design option the ISOs can implement

Joint ISO white paper:

- **Presents** in-depth analysis of problems, solution options, rationales, and joint ISO recommendations for reforms.

Presentation Plan for Element Details

- Day 1** (1/21, AM): Current system and IRIS benefit analysis
(1/21, PM): RT scheduling system (Tie Opt & CTS)
- Day 2** (2/14): RT Scheduling (CTS), DA & RT market linkages;
DA external transactions; interface settlements & pricing
- Day 3** (3/7): FTRs and congestion, NCPC & fee
recommendations, conforming capacity rule changes
- Day 4 & Day 5** (3/28, 4/28): Q&A, discussion of DBD
elements, and follow-ups on additional detail as requested.
- Day 6** (5/20): Q&A, follow-up on additional details, finalize
DBD elements and alternative proposals.



ISO Solution Options: Main Elements

Solution Options: Six Key Elements

1. **New RT Inter-Regional Interchange System (IRIS)**
 - *Two IRIS options for stakeholder consideration (next).*
2. **Higher-frequency** schedule changes (15 min)
3. **Eliminate NCPC/BPGC** credits/debits & fees on ext. txns
4. **DA market:** External txn remain similar to today, *plus:*
5. **Congestion pricing** (DA & RT) at external nodes
6. **FTRs** at external interfaces (NY/NE)

Real-Time Interface Scheduling (IRIS)

- **Design Objectives:**
 1. **Equalize LMPs** at interface at time schedule is set;
 2. **Update** real-time schedule as frequently as feasible.
- **Two design options** for real-time interface scheduling with greatest potential for efficiency improvement:
 - **Tie Optimization (TO)**
 - **Coordinated Transaction Scheduling (CTS)**
- **Both are market-based solutions, but differ** in the market information they require of market participants.



Summary Comparison of Tie Optimization and Coordinated Transaction Scheduling

IRIS Design Comparison – Day-Ahead Market

Category	TO	CTS	For Additional details -see joint stakeholder meeting materials: <i>date, (pages)</i>
Scheduling	Same as today, separate clearing	Same as today, separate clearing	➤2-14-2011, (p 32-43)
Congestion pricing at the interface	Yes, separate congestion pricing	Yes, separate congestion pricing	➤3-7-2011, (p 8-23)
FTR products at the interface	Yes	Yes	➤3-7-2011 (p 24-32)

IRIS Design Comparison – Real-Time Market

Category	TO	CTS	For Additional details -see joint stakeholder meeting materials: <i>date, (pages)</i>
Bidding	<ul style="list-style-type: none"> •No role for RT ETs in setting tie schedule. RT ET financial option included 	<ul style="list-style-type: none"> •RT Transactions provide Interface Bids 	<ul style="list-style-type: none"> ➤TO: 4-28-2011, (p 21-32) ➤CTS: 2-14-2011, (p12-15)
Scheduling	<ul style="list-style-type: none"> •Coordinated scheduling, integrated with economic dispatch 	<ul style="list-style-type: none"> •Coordinated scheduling, integrated with economic dispatch, inclusive of interface bids 	<ul style="list-style-type: none"> ➤TO: 1-21-2011, (p 20-41) ➤TO: 2-14-2011, (p 8-11) ➤CTS: 1-21-2011, (p 42-53) ➤CTS: 2-14-2011, (p12-31)

IRIS Design Comparison – Real-Time Market -continued

Category	TO	CTS	For Additional details -see joint stakeholder meeting materials: <i>date, (pages)</i>
Congestion pricing at the interface	Yes, coordinated congestion pricing, equal allocation of RT congestion rents	Yes, coordinated congestion pricing, equal allocation of RT congestion rents less interface bids	<ul style="list-style-type: none"> ➤ 3-7-2011, (p 33-38) ➤ TO: 3-7-2011, (p39-54) ➤ CTS: 3-7-2011, (p 55-64)
Interchange schedule adjustment frequency	15 minutes	15 minutes	➤ 1-21-2011, (p 32-40)

IRIS Design Comparison – Real-Time Market -continued

Category	TO	CTS	For Additional details -see joint stakeholder meeting materials: <i>date, (pages)</i>
Schedule duration	15 minutes	15 minutes	➤ 1-21-2011, (p 32-40)
Scheduling integrated with Economic Dispatch	Yes	Yes	➤ TO: 1-21-2011, (p 20-30) ➤ TO: 2-14-2011, (p 8-11) ➤ CTS: 2-14-2011, (p12-31)

IRIS Design Comparison – Settlement

Category	TO	CTS	For Additional details -see joint stakeholder meeting materials: <i>date, (pages)</i>
Day ahead transactions flow into real time	Transaction clearing both ISOs' DAM automatically deemed to flow in real time	Must clear interface bid to flow in real time	<ul style="list-style-type: none"> ➤ TO: 2-14-2011, (p 54-59) ➤ CTS: 2-14-2011, (p 44-53) ➤ 2-14-2011, (p 60-73)
Elimination of fees and uplift allocation to RT ET	Yes	Yes	➤ 3-7-2011 presentation, p 65-88

IRIS Design Comparison – Latency

Category	TO	CTS	For Additional details -see joint stakeholder meeting materials: <i>date, (pages)</i>
Latency delay	Same - approx 15 minutes	Same - approx 15 minutes	➤ 1-21-2011, (p 32-40)
Latency Risk Management	Uplift/Downlift allocated to consumers	By Transactions via Interface Bids	➤ 2-14-2001, (p 74-84) ➤ 4-28-2011, (p 8-19)

IRIS Design Comparison – Implementation

Category	TO	CTS	For Additional details -see joint stakeholder meeting materials: <i>date, (pages)</i>
Implementation cost and timeline	Similar - scheduling protocols, interchange tagging, settlement procedures	Similar - common bidding platform, scheduling protocols, settlement procedures	

IRIS Design Comparison – Benefits

Category	TO	CTS	For Additional details -see joint stakeholder meeting materials: <i>date, (pages)</i>
Annual Production Cost Savings (\$M/yr)	\$11.8	\$8.9 - \$11.2	➤ 1-21-2011 [Potomac Economics,] (p 8)
Annual Consumer Savings (\$M/yr)	\$145.8	\$128.9 - \$139.2	➤ 1-21-2011 [Potomac Economics,] (p 8)

IRIS Design Comparison – System Utilization

Category	TO	CTS	For Additional details -see joint stakeholder meeting materials: <i>date, (pages)</i>
Transmission Utilization	Improved	Improved	<ul style="list-style-type: none"> ➤ 1-21-2011, (p 41, 53) ➤ 1-21-2011 [Potomac Economics,] (p 10)
Counter Intuitive Flows	Improved	Improved	<ul style="list-style-type: none"> ➤ 1-21-2011, (p 41, 53)
Average Flow adjustments	~230 MWs	~95 MWs	<ul style="list-style-type: none"> ➤ 1-21-2011 [Potomac Economics,] (p 10)

IRIS Design Comparison – Capacity Market

Category	TO	CTS	For Additional details -see joint stakeholder meeting materials: <i>date, (pages)</i>
Impact on external capacity supplier obligations	Similar	Similar	➤3-7-2011, (p 89-95) ➤4-28-2011, (p 33-57)



DBD Discussion and Q&A



Final Points:

Upcoming Joint Schedule and Logistics

Stakeholder Review & Discussion

Next joint stakeholder meeting:

- Voting on DBD and alternative proposals.
- ISOs need *common DBD* on IRIS due to coordination issue
- **Joint Meeting Schedule:**
 - Feb 14 (ISO-NE hosting)
 - March 7 (ISO-NE hosting)
 - March 28 (NYISO hosting)
 - April 28 (NYISO hosting)
 - May 20 (ISO-NE hosting)
 - June 1 (NYISO hosting)

Next Steps: 2011+ Schedule

- **Jan-May:** Joint stakeholder meetings
- **June 1:** Advisory votes on design options (DBD) *from both NEPOOL and NYISO stakeholders*
- **June-Oct:** Stakeholder tariff & market rule processes (separate but parallel timing)
- **Dec 2011:** Target FERC filings (ISO-NE & NYISO)
- **Spring 2013 (est):** Implementation complete

Questions?



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