

Assignments per July 8, 2003 Seams Task Force Meeting

| Name: | E-Mail: | Region or Entity Assigned: |
|-------------------|--------------------------------|-----------------------------------|
| Karl Tammar | ktammar@nyiso.com | ISO-RTO Council |
| Raj Rana | raj_rana@aep.com | Eastern Region |
| Joe Rossignoli | joseph.rossignoli@us.ngrid.com | New England |
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| Tony Reed | tareed@southernco.com | Southeast |
| Ed Davis | edavis@entergy.com | Southeast |
| Marjorie Perlman | marjorie_perlman@rge.com | NYISO Market Participant |
| Steve Kozey | | MISO |
| Syd Berwager | sdberwager@bpa.gov | West, SSG-WI |
| Dave Hawkins | dhawkins@caiso.com | West, Cal. ISO |
| Steve Cobb | sccobb@SRPnet.com | West, West Connect |
| Raj Rana | raj_rana@aep.com | SPP |
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Seams Issues Matrix

| # | Description of Seam Issue | Seam | | Seam | | Currently Being Addressed ? | Submitter | Reference Papers | Comments |
|----|---|------------------------------|---------------------------|---------------------------|--|--------------------------------------|--------------------------------------|------------------|--|
| | | Interface Type | Region 1 | Region 2 | Impediment Type | | | | |
| 1 | Non Standard Time Zone | All | All | All | Market Rule / Business Practice | No | Phil Cox - AEP | No | The lack of a standard Time Zone causes Market Inefficiencies |
| 2 | MaxGen/MaxLoad 345Kv | Other | ECAR | ECAR | Physical | No | Phil Cox - AEP | No | Undersized Transmission Line |
| 3 | Definition & treatment of Firm/nonfirm Power | All | All | All | Market Rule / Business Practice | No | Lou Oberski - Dominion Energy | No | Annual Plan Item 4ci moved from MOS |
| 4 | Definition & treatment of Firm/nonfirm Transmission | All | All | All | Market Rule / Business Practice | No | Lou Oberski - Dominion Energy | No | Annual Plan Item 4cii moved from MOS |
| 5 | Provision of reserves across multiple control areas | All | All | All | Market Rule / Business Practice | No | Lou Oberski - Dominion Energy | No | Annual Plan Item 4cii moved from MOS |
| 6 | Transmission Access | All | Non-RTO Market | Non-RTO Market/ISO Market | Market Rule/Business Practice | Yes - Various Transmission Providers | Steven Cobb - SRP | No | No transmission market one stop shopping available for the Western Interconnection - entities can't find needed information to efficiently conduct business on a preschedule or real-time basis. Solution: Common OASIS Site needed. |
| 7 | Market Price Information | Non-RTO Mkt to Non-RTO Mkt | Non-RTO Market | Non-RTO Market | Market Rule/Business Practice | No | Steven Cobb - SRP | No | Market pricing methodology not comprehensive, consistent or dependable. Solution: Standardized Indices, Independently Managed. |
| 8 | Scheduling | RTO Market to Non-RTO Market | Non-RTO Market | ISO Market | Market Rule/Business Practice | Yes - SSG - WI | Steven Cobb - SRP | No | Inconsistent procedures among entities. Solution: Western Interconnection Standardized Interchange Scheduling Protocols. |
| 9 | Transmission Calculations | All | Non-RTO Market | Non-RTO Market/ISO Market | Market Rule/Business Practice | Yes - SSG - WI | Steven Cobb - SRP | No | Transmission calculations are not consistent. Solution: Standardized TTC & ATC Calculations. |
| 10 | Energy Products | All | Non-RTO Market | Non-RTO Market/ISO Market | Market Rule/Business Practice | Yes - WECC | Steven Cobb - SRP | No | Entities have disagreements concerning the definitions of various energy products. Solution: Standardized Energy Products. |
| 11 | Market Oversight | All | Non-RTO Market/ISO Market | Non-RTO Market/ISO Market | Market Rule/Business Practice | Yes - SSG - WI | Steven Cobb - SRP | No | New and mature markets need oversight to ensure that existing rules are complied with and new rules are adequate in meeting the scenarios they were designed to govern. Solution: Independent Market Auditor or Monitor. |
| 12 | Interchange/Intrachange Scheduling Data Exchange | All | Non-RTO Market/ISO Market | Non-RTO Market/ISO Market | Market Rule/Business Practice | Yes - WECC | Steven Cobb - SRP | No | Current E-Tagging process is inadequate for exchanging reliability and market data within the Western Interconnection. Solution: Electronic Scheduling |
| 13 | Compensation for Unscheduled Flows of Electricity | All | All | All | Market Rule / Business Practice and Physical | Yes/IIPF | Mark Lively - Lively Utility | A - C | Lack of compensation lessens incentives for operators to solve problems and for accountants to spend money on metering. |
| 14 | Compensation for Inadvertent Interchange | All | All | All | Market Rule / Business Practice and Physical | Yes/IIPF | Mark Lively - Lively Utility | A - C | Lack of compensation lessens incentives for operators to solve problems and for accountants to spend money on metering. |
| 15 | Compensation for Loop Flow | All | All | All | Market Rule / Business Practice and Physical | Yes/IIPF | Mark Lively - Lively Utility | A - C | Lack of compensation lessens incentives for operators to solve problems and for accountants to spend money on metering. |
| 16 | Compensation for Reactive Power | All | All | All | Market Rule / Business Practice and Physical | Yes/IIPF | Mark Lively - Lively Utility | A - C | Lack of compensation lessens incentives for operators to solve problems and for accountants to spend money on metering. |
| 17 | TTC-ATC calculation/posting | Other | HQ TransÉnergie | IMO | Market Rule / Business Practice | No | Victor Bissonnette - HQ TransÉnergie | No | Interface between a financial market (no physical transmission arrangements) and physical transmission regions (selling transmission capacity through OASIS reservations): Problems of TTC-ATC calculations coordination |

Seams Issues Matrix

| # | Description of Seam Issue | Seam Interface Type | Region 1 | Region 2 | Seam Impediment Type | Currently Being Addressed ? | Submitter | Reference Papers | Comments |
|----|--|-----------------------------|--------------------|----------|------------------------------------|-----------------------------|---|------------------|--|
| 18 | TTC-ATC calculation/posting | Other | HQ TransÉnergie | NYiso | Market Rule / Business Practice | No | Victor Bissonnette - HQ TransÉnergie | No | Interface between a financial market (no physical transmission arrangements) and physical transmission regions (selling transmission capacity through OASIS reservations): Problems of TTC-ATC calculations coordination |
| 19 | TTC-ATC calculation/posting | Other | HQ TransÉnergie | ISO-NE | Market Rule / Business Practice | No | Victor Bissonnette - HQ TransÉnergie | No | Interface between a financial market (no physical transmission arrangements) and physical transmission regions (selling transmission capacity through OASIS reservations): Problems of TTC-ATC calculations coordination |
| 20 | TTC coordination | Other | HQ TransÉnergie | NYiso | Market Rule / Business Practice | Yes | Victor Bissonnette - HQ TransÉnergie | No | Disagreement between two operators on the physical capability of an interconnection (line 7040) |
| 21 | TTC coordination | Other | HQ TransÉnergie | ISO-NE | Market Rule / Business Practice | Yes | Victor Bissonnette - HQ TransÉnergie | No | Disagreement between two operators on the physical capability of an interconnection (Phase II) |
| 22 | Rate pancaking elimination | All | All | All | Market Rule / Business Practice | Yes | Linda Horn - WE Energies | No | Being reviewed by PJM/MISO. |
| 23 | How different congestion management methodologies will interact to ensure parallel flows and impacts are recognized and controlled to ensure system reliability. | All | All | All | Physical | Yes | Linda Horn - WE Energies | No | Being reviewed by PJM/MISO. |
| 24 | Improve Real Time use of transmission interfaces - regional dispatch coordination | All | All | All | Market Rule / Business Practice | Yes | Linda Horn - WE Energies | No | Being reviewed by PJM/MISO. |
| 25 | Need for common market and products and definitions | All | All | All | Market Rule / Business Practice | No | Linda Horn - WE Energies | No | |
| 26 | Transmission expansion planning - coordination between systems and determine who is obligated to build and pay for improvements | All | All | All | Market Rule / Business Practice | Yes | Linda Horn - WE Energies | No | Being reviewed by PJM/MISO. |
| 27 | See PJM presentation "Status Report to FERC on July 31, 2002 Alliance Order" dated Jan 2003, page 6 as posted under NAESB WEQ Seams subcommittee July 8 date. | All | All | All | Market Rule / Business Practice | Yes | Linda Horn - WE Energies | D | Being reviewed by PJM/MISO. |
| 28 | Multiple transmission service charge invoicing | All | All | All | Market Rule / Business Practice | Yes | Linda Horn - WE Energies | No | Being reviewed by PJM/MISO. |
| 29 | Allocation of transmission capacity on reciprocal flow gates amounts to transmission service without compensation. Legitimizes "parallel loop flow". | RTO Market to RTO Market | MISO | PJM | Market Rule / Business Practice | | Dave Nick - DTE Energy | E | |
| 30 | Market allocations over flow gates are approved without regard to flow gate capacity resulting in over subscription of flow gates. | RTO Market to RTO Market | MISO | PJM | Market Rule / Business Practice | | Dave Nick - DTE Energy | E | |
| 31 | MISO- PJM will do their own flowgate contribution analysis and send to NERC IDC if the 5% threshold is exceeded for an individual generator. IDC will not have complete information. | RTO Market to RTO Market | MISO | PJM | Market Rule / Business Practice | | Dave Nick - DTE Energy | E | |

| # | Description of Seam Issue | Seam Interface Type | Region 1 | Region 2 | Seam Impediment Type | Currently Being Addressed ? | Submitter | Reference Papers | Comments |
|----|---|--------------------------|----------------------|----------------------|---------------------------------|-----------------------------|--------------------------------|------------------|--|
| 32 | MISO- PJM market allocation will give preference to the market as Network over PTP even though the Market allocation may be a non paying transmission customer. | RTO Market to RTO Market | MISO | PJM | Market Rule / Business Practice | | Dave Nick - DTE Energy | E | |
| 33 | Standard for Purchasing of Interhour Transmission | All | All | All | Market Rule / Business Practice | No | Tony Reed - Southern | No | The ability to purchase transmission after the top of the hour when the transmission service is predetermined as available in prior hour. |
| 34 | Clarification of Product Definitions | All | All | All | Market Rule / Business Practice | No | Tony Reed - Southern | No | Complete/Standard definitions for Liquidated Damages (LD), "Into", etc. |
| 35 | LMP prices at borders of RTOs with markets | RTO Market to RTO Market | All RTOs with market | All RTOs with market | Market Rule / Business Practice | | Raj Rana - AEP | No | |
| 36 | Coordination of market based congestion hedging instruments, such as FTRs, between adjacent RTOs with markets, especially for out and thr' transactions | RTO Market to RTO Market | All RTOs with market | All RTOs with market | Market Rule / Business Practice | | Raj Rana - AEP | No | |
| 37 | No seams issues in Southeast. | Southeast | Southeast | Southeast | None | | Ed Davis - Energy | No | |
| 38 | Rate Pancaking | All | NYISO | RTO | Market Rule / Business Rule | Yes | Marjorie Perlman - Energy East | No | Charges to Market Participants who conduct business over more than one RTO. Reciprocal agreements needed to eliminate these charges. NYISO and ISO-NE |
| 39 | Controllable Line Scheduling | All | NYISO | RTO | Market Rule / Business Rule | Yes | Marjorie Perlman - Energy East | No | Concept of operations for general methodology to schedule controllable lines between RTOs. Being reviewed by NYISO |
| 40 | Multiple Proxy Buses for Free Flowing Interfaces | All | NYISO | RTO | Market Rule / Business Rule | Yes | Marjorie Perlman - Energy East | No | Development of multiple proxy buses between RTOs for scheduling and pricing. |
| 41 | Scheduling of Load | All | NYISO | RTO | Market Rule / Business Rule | Yes | Marjorie Perlman - Energy East | No | RTOs have different ramp rates and scheduling requirements that require Market Participants to complete multiple submissions for the same transaction. |
| 42 | Data Visibility | All | NYISO | RTO | Market Rule / Business Rule | Yes | Marjorie Perlman - Energy East | No | Inability to view neighboring markets information through a common software such that this sometimes hinders Market Participants ability to complete business in a timely fashion. |

| # | Reference Paper or Supporting Document Provided |
|---|---|
| A | "Profit-Enhancing Seam Management: A White Paper on Pricing The Unscheduled Flows of Electricity Across the Seams Between Utilities Using A Geographically Differentiated Auction of Inadvertent Interchange", released 2001 March 25 (Mark Lively - Lively Utility). |
| B | "WOLF: Wide Open Load Following," A presentation to the NERC Market Interface Committee, 2002 September 4-5, Houston, Texas (Mark Lively - Lively Utility). |
| C | E-Mail by Mark Lively to NAESB WEQ Seams Subcommittee of 9/4/2003 8:28:10 PM Eastern Standard Time (Mark Lively - Lively Utility). |
| D | See the PJM/MISO JOA dated 8/5/03 (Linda Horn - WE Energies). |
| E | MISO - PJM Managing Congestion to Address Seam Paper, April 28 2003 (Dave Nick - DTE Energy). |
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