

Seams Issues Matrix
(Limited to potential business practice issues)

Orig #	Category	1ST Sub-Category	2ND Sub-Category	Description of Seam Issue	Comments	Resp Org WEQ EC	Issue Type	Resp Org JIC	Currently Being Addressed	Submitter	Consumers Priorities	Energy Priorities	IRC Priorities	ITC Priority	PSEG Priority	ATC Priority	SRP Priorities	WE Energy Priority	Priority Totals	
36	Congestion Management	Congestion Management Market Coordination	Coordinate Hedging Instruments at Market Interfaces	Coordination of market based congestion hedging instruments, such as FTRs, between adjacent RTOs with markets, especially for out and thru transactions		NAESB	National	Undecided		Raj Rana - AEP	1	2	3	1	1	1	3	1	13	13
35	Congestion Management	Congestion Management Market Coordination	Standardize Prices at Market Interfaces	Locational Marginal Prices (LMP) at borders of RTOs with markets (Price cap included)		NAESB	National	Undecided		Raj Rana - AEP	1	2	3	1	1	1	3	1	13	
138	Congestion Management	Congestion Management Market Coordination		Coordination of congestion	Several regional efforts are underway. Coordinate practices and methods between areas with different market approaches.	NAESB	National	NAESB	Yes	Karl Tammar - ISO/RTO Council	1	2	2	1	1	2	2	1	12	
9	Congestion Management	Standardize and Coordinate ATC Calculations and Postings		Transmission Calculations	Transmission calculations are not consistent. Solution: Standardized ATC Calculations.	NAESB	National	Undecided	Yes - SSG - WI	Steven Cobb - SRP	3	3	2	1	1	1	1	2	14	
113	Market Design	Green Power Market		Green power attributes trading		NAESB	National	Undecided	In Northeast Power Markets Seams Action Plan	Jeff Mueller (PSEG), and Andy Rodriguez (PJM)	3	3	3	2	3	2	3	2	21	20
16	Market Design	Transmission Ancillary Service Market Design and Coordination	Reactive Power Compensation	Compensation for Reactive Power	Lack of compensation lessens incentives for operators to solve problems and for accountants to spend money on metering	NAESB	National	Undecided	Yes / IIPTF	Mark Lively - Lively Utility	3	3	3	1	1	2	3	2	18	18
11	Market Monitoring/ Compliance	Market Monitoring Entity Requirements		Market Oversight	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.	Multiple	Regional	Multiple	Yes - SSG - WI	Steven Cobb - SRP	3	2	3	2	3	2	2	2	19	19
10	Market Standards	Energy Market Standard Product Definitions		Energy Products	Entities have disagreements concerning the definitions of various energy products. Solution: Standardized Energy Products.	NAESB	National	NAESB	Yes - WECC	Steven Cobb - SRP	3	2	1	1	2	1	1	2	13	14
3	Market Standards	Energy Market Standard Product Definitions		Definition & treatment of Firm/nonfirm Power	Annual Plan Item 4c moved from MOS	NAESB	National	Undecided	No	Lou Oberski - Dominion Energy	3	2	1	2	2	1	1	2	14	
25	Market Standards	Energy Market Standard Product Definitions		Need for common physical market and products regional variations permitted		NAESB	National	NAESB	No	Linda Horn - WE Energies	3	2	1	2	2	1	1	2	14	
34	Market Standards	Energy Market Standard Product Definitions		Clarification of Product Definitions	Complete/Standard definitions for Liquidated Damages (LD), "Intr", etc.	NAESB	National	NAESB	No	Tony Reed - Southern	3	2	1	2	2	1	1	2	14	
139	Market Standards	Energy Market Standard Product Definitions		Standard definition of energy products	Energy products and services have common attributes in all markets. Standards definitions will improve efficiencies in communicating and operating between areas with various market designs	NAESB	National	NAESB	Yes	Karl Tammar - ISO/RTO Council	3	2	1	2	2	1	1	2	14	
42	Market Standards	Market Standard Communication Protocols and Transparency		Data Visibility	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.	NAESB	National	NAESB	Yes	Marjorie Perlman - Energy East	2	3	1	2	1	2	1	2	14	
52	Market Standards	Market Standard Communication Protocols and Transparency		Confidentiality of Data and Information Shared	Standards of Confidentiality would enhance the capability to resolve data sharing and information posting	NAESB	National	NAESB	Limited	Carl Monroe, Southwest Power Pool	2	3	3	2	1	1	2	1	15	16
140	Market Standards	Market Standard Communication Protocols and Transparency		Standard messaging protocols for market notifications	Market participants will benefit from common messaging protocols.	NAESB	National	NAESB	No	Karl Tammar - ISO/RTO Council	3	3	1	2	2	2	1	2	16	
1	Market Standards	Market Standard Operating Time		Non Standard Time Zone	The lack of a standard Time Zone causes Market Inefficiencies	NAESB	National	NAESB	No	Phil Cox - AEP	3	2	2	1	2	2	2	1	15	
14	Market Standards	Physical and/or Financial Resolution of Inadvertent Interchange		Compensation for Inadvertent Interchange	Lack of compensation lessens incentives for operators to solve problems. Explicit compensation for inadvertent interchange is necessary for appropriate definition of other products, in that such compensation ensures that the defined product is delivered.	NAESB	National	NAESB	Yes / IIPTF	Mark Lively - Lively Utility	3	3	1	2	1	2	3	1	16	
46	Planning	Transmission Expansion and Generator Interconnection Coordination	Generator Interconnection - Affected Systems	Generation Interconnection Studies	Generation Interconnections close to seams affects both areas	NAESB	National	Undecided	Limited	Carl Monroe, Southwest Power Pool	3	2	3	3	1	1	3	1	17	18
57	Planning	Transmission Expansion and Generator Interconnection Coordination	Generator Interconnection Transmission Requirements	Transmission interconnection procedures	Need consistent approach to treating merchant generation interconnection procedures with transmission	Multiple	Regional	Multiple	Northeast ISO	Joe Rossignoli National Grid	3	2	3	3	3	1	3	2	20	
114	Planning	Transmission Expansion and Generator Interconnection Coordination	Interregional Transmission Planning Procedures	Coordination of interregional planning including transmission facilities and generator interconnection procedures		Multiple	Regional	Undecided	In Northeast Power Markets Seams Action Plan	Jeff Mueller (PSEG), and Andy Rodriguez (PJM)	3	2	3	3	1	1	3	2	18	

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26	Planning	Transmission Expansion and Generator Interconnection Coordination	Transmission Expansion Cost and Construction Responsibilities	Transmission expansion planning - coordination between systems and determine who is obligated to build and pay for improvements	Being reviewed by PJM/MISO.	Multiple	Regional	Multiple	Yes	Linda Horn - WE Energies	3	2	3	3	2	1	3	1	18	
50	System Reliability	Generation-Load Balance	Interchange Schedule Ramping Requirements	Schedule Ramp Management	Ramping standard differences across the seams hinder business	NAESB	National	Undecided	Limited	Carl Monroe, Southwest Power Pool	3	2	2	3	1	1	2	1	15	15
12	Transaction Scheduling	Interchange Scheduling Standardized Protocols	Develop Electronic Scheduling	Interchange/Intrachange Scheduling Data Exchange	Current E-Tagging process is inadequate for exchanging reliability and market data within the Western Interconnection. Solution: Electronic Scheduling	NAESB	National	NAESB	Yes - WECC	Steven Cobb - SRP	3	2	1	2	3	2	1	1	15	
41	Transaction Scheduling	Interchange Scheduling Standardized Protocols	Inter-Market Ramping Requirements Standardization	Scheduling Coordination (including Ramp Rates)	RTOs have different ramp rates and scheduling requirements that require Market Participants to complete multiple submissions for the same transaction.	NAESB	National	Undecided	Yes	Margorie Perlman - Energy East	2	2	1	3	1	1	2	1	13	14
79	Transaction Scheduling	Interchange Scheduling Standardized Protocols	Standardize Inter-Market Scheduling Timelines	Market Design - Day Ahead. Other Scheduling Requirements	Should the time intervals and submission times be synchronized to mitigate obstacles to inter-RTO trade? (Issue I.b.12)	NAESB	National	NAESB	SSG-WI, CMA Work Group	Syd Benwager - Bonneville PA	2	2	1	2	1	3	1	1	13	
78	Transaction Scheduling	Interchange Scheduling Standardized Protocols	Tools and Procedures to Accommodate Inter-Market Interchange Scheduling Requirements	Market Design - Day Ahead. Schedule Components	Can tools be developed for scheduling submission that assist the user in meeting any differences in protocols between RTOs? (Issue I.b.11)	NAESB	National	Undecided	SSG-WI, CMA Work Group	Syd Benwager - Bonneville PA	2	2	1	2	1	3	1	2	14	
106	Transaction Scheduling	Interchange Scheduling Standardized Protocols		Transaction Scheduling - Inconsistent information and market timing rules lead to uncertainty and risk that discourage the scheduling of some inter-regional transactions.		NAESB	National	NAESB	In Northeast Power Markets Seams Action Plan	Jeff Mueller (PSEG), and Andy Rodriguez (PJM)	2	2	1	2	1	3	1	2	14	
104	Transaction Scheduling	Interchange Scheduling Standardized Protocols		Transmission Checkout Failure - Operators curtail transactions due to mismatched tag data, different MW volumes, etc. The curtailment of transactions due to data incompatibility is disruptive to both the marketplace and the reliable operation of the grid.		NAESB	National	NAESB	In Northeast Power Markets Seams Action Plan	Jeff Mueller (PSEG), and Andy Rodriguez (PJM)	2	2	1	2	1	3	2	2	15	
8	Transaction Scheduling	Interchange Scheduling Standardized Protocols		Scheduling	Inconsistent procedures among entities. Solution: Western Interconnection Standardized Interchange Scheduling Protocols.	Multiple	Regional	Multiple	Yes - SSG - WI	Steven Cobb - SRP	2	2	1	2	3	3	1	2	16	
103	Transmission Service	Transmission Market Standard Product Definitions and Priorities		Transmission Service - Market participants require consistent treatment of transmission products across multiple control areas to reduce perceived market risk, scheduling confusion and uncertainty.		NAESB	National	NAESB	In Northeast Power Markets Seams Action Plan	Jeff Mueller (PSEG), and Andy Rodriguez (PJM)	1	2	1	2	1	1	1	1	10	13
4	Transmission Service	Transmission Market Standard Product Definitions and Priorities		Definition & treatment of Firm/nonfirm Transmission	Annual Plan Item 4cii moved from MOS	NAESB	National	Undecided	No	Lou Oberski - Dominion Energy	1	2	1	2	2	2	1	2	13	
141	Transmission Service	Transmission Market Standard Product Definitions and Priorities		Replacement of contract path with flow-based transmission service		Multiple	Regional	Multiple	No	Ed Davis - Entergy	3	2	1	1	3	1	3	2	16	
117	Transmission Service	Transmission Service Procurement	Common Reservation System for Market Interface Transmission ATC	Contract Tie Capacity - One Stop Shopping		NAESB	Regional	NAESB	No	Jeff Mueller (PSEG), and Andy Rodriguez (PJM)	3	3	2	2	1	2	1	2	16	17
6	Transmission Service	Transmission Service Procurement	Common Western Interconnection Wide OASIS	Transmission Access	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.	Multiple	Regional	Undecided	Yes - Various Transmission Providers	Steven Cobb - SRP	3	3	2	1	3	2	1	2	17	
33	Transmission Service	Transmission Service Procurement	Intra-Hour Transmission Service Procurement	Standard for Purchasing of Intra-Hour Transmission	The ability to purchase transmission after the top of the hour when the transmission service is predetermined as available in prior hour.	NAESB	National	NAESB	No	Tony Reed - Southern	3	3	2	2	2	2	1	3	18	
67	Transmission Service	Transmission Service Procurement	Secondary Transmission Service Market Standardization	Market Design - Prior to Day Ahead. Primary Release Mechanism	There seems to be agreement here that a secondary market would be outside the RTO. If the resulting secondary market is not westwide, will coordination be needed? (Issue I.a.8)	Multiple	Regional	Multiple	SSG-WI, CMA Work Group	Syd Benwager - Bonneville PA	3	2	2	2	3	3	1	3	19	
28	Transmission Service	Transmission Service Settlement	Consolidate Multiple Market Transmission Service Settlement Statements	Multiple transmission service charge invoicing	Being reviewed by PJM/MISO.	NAESB	National	NAESB	Yes	Linda Horn - WE Energies	2	3	2	3	3	1	2	1	17	
13	Market Design	Unscheduled/Parallel Path Flow Management	Compensation for Unscheduled/Parallel Path Flow	Compensation for Unscheduled Flows of Electricity	Lack of compensation lessens incentives for operators to solve problems and for accountants to spend money on metering.	NAESB	National	Undecided	Yes / IIPTF	Mark Lively - Lively Utility	2	3	2	1	2	1	3	2	16	17

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15	Market Design	Unscheduled/Parallel Path Flow Management	Compensation for Unscheduled/Parallel Path Flow	Compensation for Loop Flow	Lack of compensation lessens incentives for operators to solve problems and for accountants to spend money on metering	NAESB	National	Undecided	Yes / IPTF	Mark Lively - Lively Utility	2	3	2	1	2	1	3	2	16
29	Market Design	Unscheduled/Parallel Path Flow Management	Compensation for Unscheduled/Parallel Path Flow	Allocation of transmission capacity on reciprocal flow gates amounts to transmission service without compensation. Legitimizes "parallel loop flow".		NAESB	National	Undecided		Dave Nick - DTE Energy	3	3	2	1	2	1	3	2	17
134	Market Design	Unscheduled/Parallel Path Flow Management	Compensation for Unscheduled/Parallel Path Flow	Compensation for parallel flows		NAESB	National	NAESB	In PJM/MISO Congestion Management Proposal Whitepaper	Jeff Mueller (PSEG), and Andy Rodriguez (PJM)	3	3	2	1	2	1	3	2	17
142	Market Design	Unscheduled/Parallel Path Flow Management	Compensation for Unscheduled/Parallel Path Flow	Pricing for native load loop flow impacts		Multiple	Regional	Multiple	No	Ed Davis - Entergy	3	3	2	1	2	2	3	2	18