

Markets+ Fact Sheet:

Seams in the Western Interconnection: Distinguishing Reliability from Market Seams

Executive Summary

The Western Interconnection has extensive reliability seams today, which are boundaries between two reliability coordinators, 30+ balancing authorities and numerous transmission operators. These operational boundaries manage physical grid stability and won't change regardless of market configurations.

Markets+ introduces a market seam: an economic boundary where pricing and incentives differ from other Western markets. This is fundamentally different from a reliability seam and poses no threat to grid operations.

Confusing market seams with reliability seams leads to misplaced concerns. Markets+ changes economics, not reliability operations.

| | RELIABILITY SEAM | MARKET / ECONOMIC SEAM |
|-------------------------------|--|--|
| Definition | Boundary where reliability responsibilities exist between two systems or operators | Boundary where market pricing or economic signals differ between regions |
| Who Manages | Reliability coordinators (RCs), balancing authorities (BAs), transmission operators (TOPs), load-serving entities (LSEs) | Market operators, participants and trading mechanisms |
| Function | Ensures real-time supply-demand balance, voltage/frequency control, emergency response | Signals costs, incentives, and trade opportunities across systems |
| Impact | Direct effect on system stability, grid reliability | Impacts prices, incentives, and efficiency; does not affect physical reliability |
| Exists Today? | Yes, 30+ BA seams, two RC seams, numerous TOP seams | Yes, between existing market areas; Markets+ adds another |
| Changes with Markets+? | No, all reliability entities and responsibilities remain unchanged | Yes, creates new economic boundary alongside other markets |

key point

While Markets+ operates exclusively within the 'market seam,' the efficiency it generates supports - but does not interfere with - the 'reliability seam.'

Reliability Responsibilities in the West: Unchanged with Markets+

Under the NERC Functional Model, reliability is managed hierarchically:

1. **Reliability Coordinator (RC):** Monitors wide-area reliability, directs emergency actions, resolves seams issues
2. **Balancing Authority (BA):** Maintains real-time supply-demand balance, executes RC directives
3. **Transmission Operator (TOP):** Operates the transmission system, implements switching, monitors flow
4. **Transmission Planner (TP) & Planning Coordinator (PC):** Ensure future reliability and coordinate planning across seams
5. **Generator Operators / Owners (GOP/GO) and Transmission Owners (TO):** Maintain facilities and respond to dispatch instructions
6. **Load-Serving Entities (LSE):** Ensure sufficient resources to meet load obligations

Takeaway: Reliability roles and authority remain unchanged with Markets+. Operational reliability continues to be centrally managed by RCs, BAs, and TOPs

How Markets+ Supports Reliability

Markets+ operates in the economic layer, creating incentives that complement, and never replace, operational reliability decisions:



Providing **transparent price signals** that motivate resources to be in the right place at the right time



Incentivizing **efficient dispatch** that complements operational decision-making by reliability entities



Enabling **economic coordination** across regions to reduce congestion and improve grid utilization

RCs, BAs and TOPs make reliability decisions. Markets+ pricing creates economic incentives that align with those decisions. The operational authority always wins if there's a conflict.

Benefits of Multiple Markets in the West

Introducing Markets+ creates a competitive market environment, delivering:

1. **Choice:** Utilities can participate in different market constructs (energy-only, centralized day-ahead, regional) without being forced into a single model.
2. **Transparency:** Comparable pricing across markets exposes costs and inefficiencies, creating fairer outcomes.
3. **Risk Diversification:** Different markets value different attributes (energy, capacity, ancillary services), reducing dependence on a single construct.
4. **Equity Across Regions:** Exporting and importing utilities are fairly compensated; no single utility bears disproportionate reliability obligations.

Addressing Common Concerns

"Multiple markets create confusion"

Reality: Reliability entities coordinate across many seams today successfully. Market participants already trade across CAISO/non-CAISO boundaries. Adding Markets+ changes economic options, not operational complexity for reliability entities.

"Seams reduce efficiency"

Reality: Poorly managed seams reduce efficiency. Well-managed seams (like SPP-MISO in the East) enable greater efficiency through economic coordination while maintaining clear reliability responsibilities.

"We need one market for reliability"

Reality: Reliability comes from RCs, BAs, and TOPs—not market footprints. The East has multiple RTOs with excellent reliability. The West can have multiple markets with strong reliability coordination.

"Markets+ adds risk"

Reality: The risk isn't Markets+ existing. The risk is poor governance of ANY market. Markets+ independent governance model specifically addresses this through balanced representation and stakeholder control.