MISO vs. SEEM

A Strategic Comparison Report

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Highlights

- Regional Transmission Organizations (RTOs) provide centralized market operations, coordinated transmission planning, and reliability oversight across large footprints.
- Southeast Energy Exchange Market (SEEM) is a platform designed for sub-hourly, bilateral trading using available unreserved transmission. Prices are set between the two parties, rather than a centralized market-clearing process.
- RTOs have demonstrated multi-billion annual system benefits through integrated markets and planning. SEEM has reported cumulative production cost savings of $17 million from 2022-2024.

MISO

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Executive Summary

The electric grid is undergoing rapid transformation. Across the United States, utilities, regulators, and market operators are navigating an unprecedented combination of factors: growing electricity demand, a changing resource mix, the retirement of conventional generation, and the increasing frequency of severe weather events. In this environment, the design and scope of the institutions that operate wholesale power markets and coordinate transmission matter more than ever.

The Eastern Interconnection relies on Regional Transmission Organizations and Independent System Operators (RTOs/ISOs) such as PJM, MISO, SPP, ISO-NE, and NYISO to support electricity reliability and market efficiency. Alongside these entities, the Southeast Energy Exchange Market (SEEM) functions in a more limited role as a bilateral trading platform that is designed to facilitate short-term transactions among its participating utilities.

SEEM automates 15-minute, intra-hour bilateral energy exchanges using available transmission capacity between its members. Its scope is intentionally limited: SEEM does not operate centralized markets, enforce resource adequacy standards, plan or allocate the cost of transmission projects, or provide independent market monitoring. These responsibilities remain with individual utilities or other designated entities.

By contrast, RTOs/ISOs perform a broad suite of functions that are central to maintaining the reliability and efficiency of the bulk power system. An RTO/ISO operates as an independent, FERC-regulated entity responsible for coordinating electricity flows over a multi-state footprint. Core responsibilities include administering centralized day-ahead and real-time energy markets, overseeing regional transmission planning and cost allocation, accrediting generation capacity, and performing NERC-designated reliability functions such as Balancing Authority and Reliability Coordinator. Their independence, governance processes, and regulatory oversight ensure transparency, nondiscrimination, and economic efficiency on behalf of all participants in the marketplace.

MISO's RTO services deliver measurable economic and reliability benefits to its members. In 2024, MISO's markets, regional planning, and reliability coordination produced more than $5 billion in net benefits, with over $50 billion in cumulative value since 2007. These benefits stem from efficiencies and capabilities that cannot be realized through bilateral-only platforms such as SEEM. SEEM's Independent Market Auditor reports approximately $17 million in cumulative production cost savings since its launch (through 2024).

While SEEM can complement a utility's operations by capturing some additional short-term transactions, it cannot replace the scope of services or the scale of benefits provided by an RTO. The two are not interchangeable; they serve fundamentally different purposes in today's complex and evolving electric grid.

This report compares the Southeast Energy Exchange Market (SEEM) with Regional Transmission Organizations (RTOs), focusing on clarifying respective purposes, functions, and benefits to members.

KEY TAKEAWAYS
SEEM and RTOs/ISOs serve fundamentally different purposes and cannot substitute for one another.
RTO/ISO membership delivers integrated market, planning, and reliability services at scale, supported by regulatory oversight and independence.
SEEM membership provides access to short-term, incremental trading opportunities but does not include broader regional coordination or system-wide functions.
The quantified benefits of RTO membership exceed those of SEEM by orders of magnitude, reflecting the scale and scope of services an RTO provides,

1. Governance and Oversight

The way a market construct is governed affects its transparency, accountability, and ability to ensure fair market outcomes. Governance determines who makes decisions, how rules are enforced, and the degree of independence from market participants.

SOUTHEAST ENERGY EXCHANGE MARKET (SEEM)

SEEM is governed by its member utilities through participation agreements and related governance documents. Oversight of the trading platform is provided by a platform administrator and an auditor who reviews system performance and compliance with platform rules. SEEM does not have an independent market monitor. Dispute resolution occurs under the terms of the SEEM agreement, typically among members, and is not subject to the same open stakeholder process used by RTOs. Reliability responsibilities and compliance obligations remain with each participating utility and its existing Reliability Coordinator.

REGIONAL TRANSMISSION ORGANIZATIONS (RTOs) – MISO EXAMPLE

MISO's governance model is designed to ensure independence from any single market participant. It is led by an independent Board of Directors, supported by a formal stakeholder process that includes standing committees representing diverse sectors. MISO's rules and operations are established in its FERC-approved tariff, and any changes must go through a transparent stakeholder process before filing with FERC for approval.

Independent market oversight is provided by the Independent Market Monitor (IMM), which has the authority to monitor, investigate, and recommend mitigation for potential market power abuses.

Additionally, MISO is registered with the North American Electric Reliability Corporation (NERC) as both a Reliability Coordinator and Balancing Authority, giving it formal responsibilities for maintaining grid reliability across its footprint. These roles are subject to NERC standards and enforcement through regional entities such as the Midwest Reliability Organization (MRO), ReliabilityFirst, and SERC Reliability Corporation.

GOVERNANCE AND OVERSIGHT FEATURES

FEATURE	SEEM	RTO (MISO)
Decision-Making	Member utility governance	Independent board with broad stakeholder input
Oversight	Platform administrator and market auditor	Independent Market Monitor; FERC oversight
Rule Changes	Governed by participation agreement; filed with FERC	Stakeholder process; filed with and approved by FERC
Dispute Resolution	Between members; private or arbitration	Transparent process; may be appealed to FERC
Independence	Not structurally independent from participants	Structural and operational independence from participants
Transparency and Stakeholder Role	Limited; membership-based	Broad, transparent stakeholder structure with state/regulator representation

ROLE OF INDEPENDENT MARKET MONITORING

Independent market monitors in RTOs evaluate market performance, detect market manipulation, and recommend improvements. This function provides transparency and reinforces market confidence by ensuring competitive outcomes. SEEM does not have an IMM; oversight is limited to operational audits of the platform.

2. Market Operations

Market design defines how energy is bought and sold, how prices are determined, and the operational tools available to maintain grid reliability. While SEEM and RTOs both enable energy transactions, their market operations differ substantially in scope and capabilities.

SOUTHEAST ENERGY EXCHANGE MARKET (SEEM)

SEEM operates as an automated platform for 15-minute, intra-hour bilateral energy trades between participating utilities. Transactions occur when the platform matches buyers and sellers at mutually agreeable prices using available, non-firm transmission capacity. Prices are set bilaterally between the two parties, rather than through a centralized market-clearing process.

SEEM does not operate day-ahead or real-time centralized markets, perform security-constrained unit commitment, or co-optimize energy and reserves. Transmission congestion is not managed through locational marginal pricing (LMP); instead, congestion is addressed through the transmission service provisions of the participating utilities' Open Access Transmission Tariffs (OATTs).

REGIONAL TRANSMISSION ORGANIZATIONS (RTOs) – MISO EXAMPLE

MISO operates centralized day-ahead and real-time markets that clear using locational marginal pricing (LMP), which accounts for energy costs, transmission congestion, and marginal losses. The markets are co-optimized, meaning that energy and operating reserves are scheduled together to achieve the most efficient overall dispatch. MISO also performs security-constrained unit commitment to ensure generation is available where and when needed, manages congestion through market mechanisms, and coordinates market operations with neighboring RTOs to optimize flows across seams.

MARKET OPERATIONS FUNCTIONS

FEATURE	SEEM	RTO (MISO)
Market Structure	Automated bilateral matching	Centralized day-ahead and real-time LMP markets
Scheduling Interval	15-minute delivery schedule	Day-ahead and 5-minute, real-time
Pricing	Bilateral agreement between buyer and seller	Market-clearing LMP reflecting energy, congestion, and losses
Co-optimization	None	Energy and reserves co-optimized
Congestion Management	Managed via OATT transmission service	Managed through LMP and congestion rights markets
Unit Commitment	None	Security-constrained unit commitment across the footprint
Interregional Coordination	Limited to member-to-member transactions	Coordinated market operations and congestion management with neighboring RTOs

WHY CENTRALIZED MARKETS MATTER

Centralized markets provide transparent, competitive pricing and optimize resources across a large geographic footprint. By clearing energy and reserves together, MISO reduces total system costs and improves reliability.

3. Transmission Planning and Access

Transmission infrastructure is critical to moving electricity reliably and efficiently across regions. How transmission projects are identified, planned, and paid for can significantly affect system reliability and the cost to consumers.

SOUTHEAST ENERGY EXCHANGE MARKET (SEEM)

SEEM does not perform regional transmission planning or cost allocation. Responsibility for identifying and funding transmission projects remains with individual utilities or separate regional planning entities. Any needed upgrades to enable SEEM transactions are handled through existing processes in the utilities' Open Access Transmission Tariffs (OATTs). Cost recovery is typically assigned to the utility whose system requires the upgrade, with no broader cost sharing among SEEM participants.

This approach means that SEEM does not coordinate multi-state transmission projects, nor does it have mechanisms to allocate the costs of projects that benefit multiple participants.

REGIONAL TRANSMISSION ORGANIZATIONS (RTOs) – MISO EXAMPLE

MISO conducts comprehensive, FERC-approved regional transmission planning through its stakeholder-driven, annual MISO Transmission Expansion Plan (MTEP). This process integrates near-term reliability, mid-term economic needs, and long-term strategic goals. States participate through the Organization of MISO States (OMS) and the Entergy Regional State Committee (ERSC). In 2024, the MISO Board of Directors approved a total of $30 billion in transmission investment across its 15-state footprint.

MISO's open access policy ensures all qualifying entities, including independent generators, co-ops, and storage, can request transmission service and interconnection under standardized, transparent processes.

TRANSMISSION PLANNING AND COST ALLOCATION FUNCTIONS

FEATURE	SEEM	RTO (MISO)
Regional Planning	None	Comprehensive annual and long-range planning
Cost Allocation	Utility-specific under OATT	FERC-approved regional cost allocation based on beneficiaries
Multi-State project Coordination	None	Coordinates projects that cross state lines and benefit multiple members
Economic Project Identification	None	Identifies projects that reduce congestion and improve market efficiency
Public Policy Integration	None	Includes public policy drivers in planning (e.g., renewables integration)

WHY TRANSMISSION PLANNING MATTERS

RTOs like MISO provide a structured, transparent process for identifying, approving, and funding transmission investments. Through its annual MTEP and long-range transmission planning (LRTP), MISO ensures the grid evolves to meet future reliability needs, reduce congestion, and integrate renewable resources.

4. Resource Adequacy and Reliability Functions

Maintaining reliability requires more than delivering energy in real time. It also requires ensuring there are enough accredited resources available to meet peak demand plus reserves, coordinating operations across large areas, and complying with NERC reliability standards.

SOUTHEAST ENERGY EXCHANGE MARKET (SEEM)

SEEM does not perform resource adequacy functions. Each member utility is individually responsible for meeting its own capacity needs and reserve requirements, as determined by state regulation or local reliability coordinators. SEEM does not conduct Loss Of Load Expectation (LOLE) studies, accredit resources, or operate a capacity market.

Reliability coordination remains with the entities registered as Balancing Authorities (BAs) and Reliability Coordinators (RCs) under NERC. SEEM itself is not a registered BA or RC, nor does it have operational authority to direct participants during emergencies.

REGIONAL TRANSMISSION ORGANIZATIONS (RTOs) – MISO EXAMPLE

MISO is both a NERC-registered Balancing Authority and Reliability Coordinator, with the authority to direct actions necessary to maintain reliability across its entire footprint. MISO's reliability responsibilities include:

Planning Resource Adequacy: Setting the Planning Reserve Margin Requirement (PRMR) for each Load Serving Entity (LSE) through LOLE studies.

Capacity Accreditation: Assigning capacity values to resources based on performance and availability.

Planning Resource Auction (PRA): Facilitating the annual auction to ensure capacity requirements are met at least cost.

Emergency Operations: Coordinating system-wide responses to extreme conditions, including the commitment of additional generation and coordination with neighboring regions.

This coordinated approach allows MISO to balance risks across a large and diverse footprint, reducing the total reserve requirement and improving overall system resilience.

RELIABILITY AND RESOURCE ADEQUACY FUNCTIONS

FEATURE	SEEM	RTO (MISO)
Resource Adequacy Planning	None. Each utility must meet its own capacity needs independently	PRMR set through LOLE studies for all LSEs
Capacity Accreditation	None	Accreditation based on performance and availability
Capacity Market	None	Annual Planning Resource Auction
NERC Registration	Not registered as BA or RC	Registered BA and RC with operational authority
Emergency Operations	Handled by individual BAs/RCs	Coordinated across entire footprint with authority to direct actions

THE BENEFITS OF REGIONAL RELIABILITY COORDINATION

A coordinated regional reliability model enables efficient pooling of diverse resources, sharing reserves across areas, and swift system-wide response during emergencies. This collective approach lowers reserve requirements, improves resilience to extreme events, and ultimately reduces costs for all participants.

5. Economic and Reliability Benefits

Evaluating the value of market participation requires looking at both financial and operational outcomes. While SEEM and MISO provide different services, the scale and scope of benefits to their participants are not directly comparable.

SOUTHEAST ENERGY EXCHANGE MARKET (SEEM)

SEEM's benefits are primarily tied to enabling short-term, intra-hour bilateral trades that may not otherwise occur. This can allow participants to use available transmission capacity more efficiently and capture some economic gains from trading surpluses and deficits in near real time. Trades that clear in SEEM offer participants the ability to reduce output from higher-cost resources and replace it with lower-cost ones. SEEM provided approximately $7.2 million in gross savings during the first six months of 2025.

REGIONAL TRANSMISSION ORGANIZATIONS (RTOs) – MISO EXAMPLE

MISO delivers a broader range of benefits through its centralized markets, transmission planning, and coordinated reliability functions. These benefits are realized in multiple ways:

Market Efficiency: Centralized dispatch and co-optimization of energy and reserves reduce production costs.

Transmission Utilization: Regional congestion management maximizes the use of existing transmission capacity.

Reliability Savings: Shared reserves and coordinated operations reduce the amount of capacity each utility must maintain.

Investment Efficiency: Regional planning and cost allocation enable high-value projects that deliver long-term savings.

THE BENEFITS OF REGIONAL OPERATIONS, PLANNING, AND MARKETS

In 2024, participation in MISO's markets generated hundreds of millions of dollars in net benefits for South Region members alone, primarily from reduced production costs and improved transmission efficiency. Across the entire MISO footprint, annual benefits in 2024 exceeded $5 billion.

COMPARATIVE BENEFITS

FEATURE	SEEM	RTO (MISO)
Energy Trading	Incremental efficiency from intra-hour bilateral trades	Optimized, centralized markets for energy and reserves
Transmission Efficiency	Uses available non-firm capacity between members	Maximizes use of system-wide transmission through congestion management
Capacity Savings	None	Regional pooling reduces reserve requirements
Planning Benefits	None	Regional transmission planning reduces long-term costs
Annual Reported Value	~$7.2 million (Jan—Jun 2025)	$5 billion in 2024

SCALE MATTERS

RTO benefits expand with scale. MISO's ability to pool generation, demand, and transmission assets across multiple states enables efficiencies and cost reductions that cannot be replicated by bilateral-only markets.

Summary

SEEM and RTOs deliver real value to their members. However, the nature and scale of the benefits differ significantly:

- **Scope of Functions:** SEEM focuses narrowly on enabling transactions between members; RTOs provide integrated market, planning, and reliability services.
- **Independence:** SEEM is governed by its members; RTOs operate independently of market participants.
- **Scale:** SEEM benefits are tied to bilateral trade opportunities; RTO advantages magnify with footprint size, diverse assets, and strategic coordination.

BENEFITS OF SEEM MEMBERSHIP

- Lower participation complexity—fewer regulatory and market obligations.
- Access to incremental, 15-minute trading opportunities on existing transmission.
- Governance remains in the hands of member utilities.
- No requirement to contribute to multi-state transmission upgrades.
- Seamlessly integrates with existing utility operations.
- 2024 Economic value: $17 million in benefits.

BENEFITS OF RTO (MISO) MEMBERSHIP

- Independent, centralized grid and market operations.
- Co-optimized wholesale markets that enhance cost efficiency and reliability.
- Advanced congestion management via LMP and transmission rights.
- Regional transmission planning with fair cost allocation.
- Performance-based capacity accreditation and a coordinated capacity market.
- NERC-certified emergency coordination across the grid.
- 2024 Economic value: > $5 billion.

Conclusion

The Southeast Energy Exchange Market (SEEM) and Regional Transmission Organizations (RTOs) like MISO differ fundamentally in purpose, structure, and scope. SEEM enables short-term bilateral energy trades, providing incremental efficiencies, but does not engage in transmission planning, resource coordination, or system-wide reliability management. In essence, SEEM is designed solely to facilitate member-to-member transactions.

By contrast, MISO's RTO model delivers a much broader, integrated set of services. It oversees independent grid operations, centralized wholesale markets, comprehensive transmission planning, and coordinated reliability functions across multiple states—all supported by independent governance frameworks. These capabilities yield benefits far beyond individual trades: substantial annual cost savings, improved utilization of transmission infrastructure, and stronger system resilience during extreme events.

While both SEEM and RTOs play roles in evolving electricity markets, they are not interchangeable. This comparison aims to serve as a factual reference for utilities, regulators, and stakeholders evaluating the services, governance models, and benefits offered by SEEM versus RTOs.

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