



Commodity exchange
of the year
Nodal Exchange



CAISO CRR Auction Enhancements Working Group

Nodal Exchange Comments

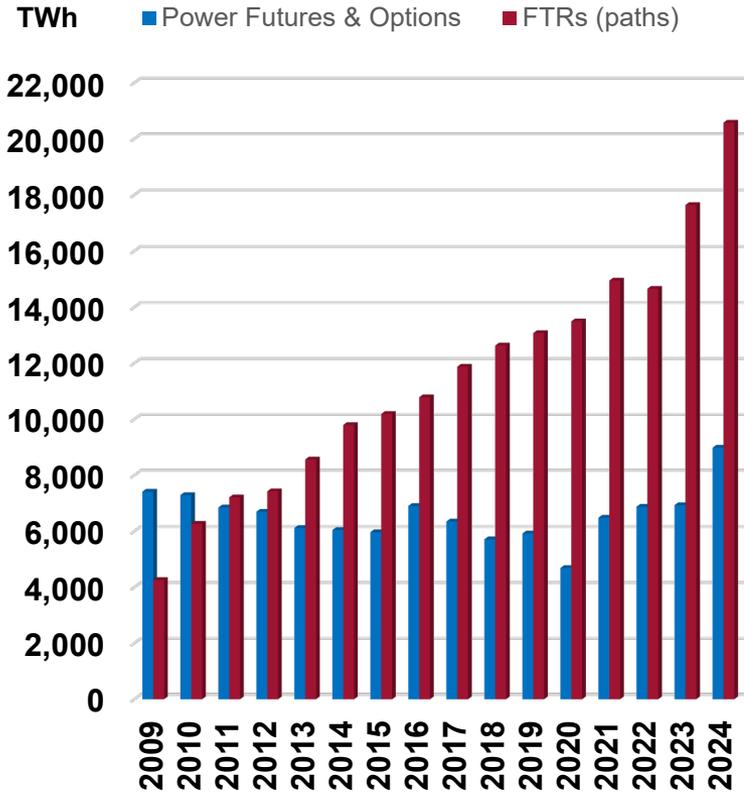
May 12, 2025

Nodal Exchange Overview

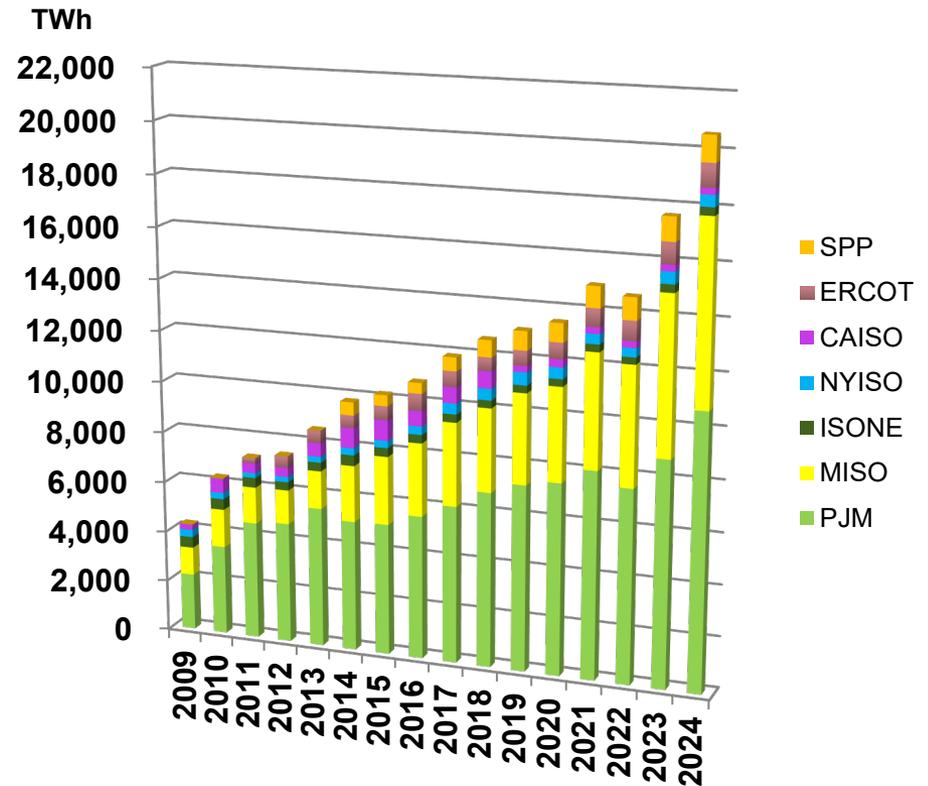
- **Commodity exchange**
 - Designated Contract Market under U.S. CFTC jurisdiction; all contracts are futures and option on futures contracts
 - 56% market share of U.S. power futures open interest at the end of 2024 with over 1 Billion MWh
 - 93% market share of non-hub trading volume in 2024
- **Power, natural gas and environmental contracts**
 - Providing ability to trade power futures and options on hundreds of hubs, zones, and nodes across seven organized markets (and Mid-C)
 - CAISO, ERCOT, ISO-NE, MISO, NYISO, PJM & SPP
 - Natural gas futures and options contracts for Henry Hub
 - The largest set of environmental futures and options contracts in the world, including contracts on renewable energy certificates, emission allowances, and renewable fuels
- **Multiple platforms:**
 - Nodal LiveTrade trading screen as well as Deutsche Börse Group's T7 matching engine with CQG, Trayport, TT, and soon Nodal Access front-ends
 - Block trades (e.g., broker) submission for clearing
- **All contracts are cleared by Nodal Clear using innovative portfolio margining**
 - Nodal Clear, LLC has been permitted to elect Subpart C under Part 39 of the Commodity Exchange Act
 - Nodal Clear was recognized as a third-country central counterparty by ESMA in March 2017
 - Nodal Clear also provides clearing house services to Coinbase Derivatives Exchange (CDE)
- **Nodal Exchange became part of the EEX Group on May 3, 2017; EEX Group is in turn part of the Deutsche Börse Group**

ISO/RTO FTR market volumes have increased 57.2% over the last five years (2019-2024)

U.S. Power Traded Volume



FTR Market Path Volume



Note: "FTR" is used as a general term to cover CRR, TCR, TCC, and FTR auctions across the ISO/RTO markets
 FTR volume is based on awarded obligation volume on the path level.

FTR activity drives liquidity in the broader ecosystem of forward hedging

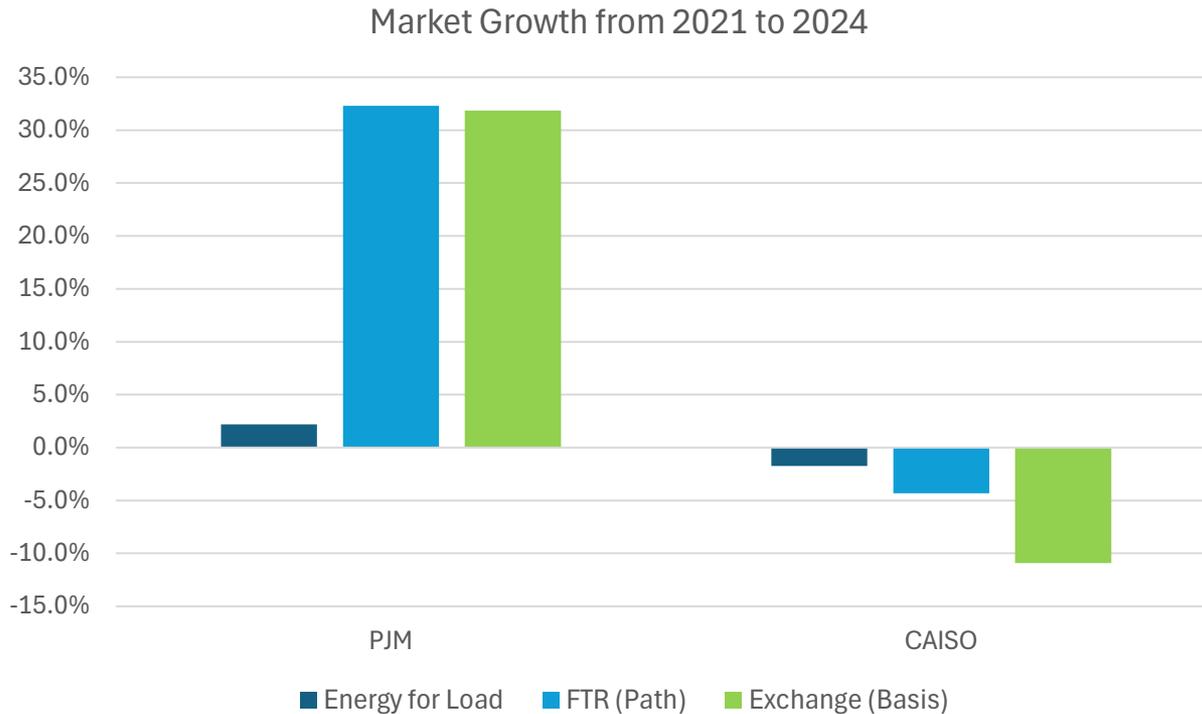
Increase in Nodal Exchange Spread Volume following FTR auction results

	Analysis Period	Average Increase
PJM	2017-2020	87%
MISO	2018-2021	70%

Nodal Exchange collaborated with London Economics (LEI)^{1,2} on this analysis, finding a significant bump in exchange spread trading in the week after FTR results are published compared to other days of the year. This increase highlights the important role FTR auctions play in the price discovery process and the close relationship between the FTR and futures markets.

1. LEI Review of PJM's Auction Revenue Rights and Financial Transmission Rights, section 6.7: <https://www.pjm.com/-/media/DotCom/committees-groups/task-forces/afmtf/postings/lei-review-of-pjm-arrs-and-ftrs-report.ashx>
 2. LEI Independent Evaluation of MISO's Auction Revenue Rights and Financial Transmission Rights, section 7.6: https://cdn.misoenergy.org/20230112_LEI%20ARR-FTR%20Market%20Evaluation%20Report627572.pdf

Robust FTR markets support healthy and competitive cleared exchange activity, maximizing low-cost hedging channels



The growth in the PJM FTR market corresponds to growth in exchange basis trading, creating opportunities for both lower-cost hedging and more granular risk management.

Note: Historical load data compiled from annual reports for each ISO/RTO, FTR auction data published by each ISO/RTO, and publicly available monthly and annual power futures volume for Nodal Exchange and Intercontinental Exchange. 2024 CAISO Energy for Load is estimated, since the 2024 Annual Report on Market Issues and Performance has not been published yet.

Recommendations from an Exchange perspective*

- **The physical network model currently in place for clearing CRR auctions is uniquely capable of creating liquidity.**
 - Shifting to a financial network or bilateral model threatens to reduce liquidity.
- **Robust FTR markets support healthy and competitive cleared exchange activity, maximizing low-cost hedging channels.**
 - Outside of the FTR markets and cleared exchanges, the main alternative for hedging power exposure is through bilateral trading, typically with bank desks and generally with lower competition setting higher fees, resulting in suboptimal levels of risk management and increasing systemic risk in the power markets.
- **The buyer of a CRR is taking on the risk of the yet-unknown outcome of the day-ahead market results.**
 - As such, it is expected that this buyer would be able to pay a lower price for the CRR than its expected settlement value in return for accepting the risk. This difference, the amount by which CRR payouts exceed auction revenues, is the hedge premium.
 - It's not uncommon for spread premiums to represent a much higher percentage of notional value than for outright exposure.
 - As LEI identified in its evaluation of the PJM market, the benefits resulting from the hedge premium should be weighed against its absolute size to determine whether its reasonable.
- **Rather than making broad changes to the CRR auction design that would threaten liquidity, Nodal asks that CAISO consider model improvements that would achieve both greater auction revenue for ratepayers and a lower cost of hedging for participants.**

*For full discussion, please refer to the Nodal Exchange Comment Letter from Dec. 12, 2024:

<https://stakeholdercenter.caiso.com/Comments/AllComments/83ff416f-27ce-445a-9560-a0ba23805201#org-b4dffe0f-82fd-4c3d-9158-571f135954e1>

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