2023 Annual Audit Report on the Southeast Energy Exchange Market

Presented to:

SEEM Annual Meeting of Stakeholders and Participants

By Potomac Economics
Independent Market Auditor

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2023 Annual Report

- Potomac Economics serves as the independent Market Auditor for the SEEM.

- This presentation summarizes the results and findings from our Annual Report for 2023. The topics include:

  ✓ Overview of Auditor Responsibilities

  ✓ Market Activity, including:

    – Trading and Liquidity

    – Market Concentration

    – Prices

  ✓ Network Usage and Constraints

  ✓ Conclusions and Recommendations

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Key Findings

- SEEM Trading volumes have increased throughout 2023, in part due to the addition of Florida participants in July
  - ✓ The monthly average cleared trades for 2023 was 58,000 MWh
  - ✓ The July-December average was 74,000 MWh cleared
  - ✓ First quarter of 2024 had a monthly average of 98,000 MWh
- Market share concentration among individual sellers and buyers declined with the addition of the Florida participants
- About 15,000 MWh – 20,000 MWh of potential economic exchanges are left uncleared each month.
  - ✓ The costs of transmission losses are likely the largest factor.
  - ✓ Transmission constraints do not significantly affect SEEM trading – less than 7% of interval-segments have no availability.
- We recommend stakeholder consider extending the platform to longer trading horizons to capture additional benefits.
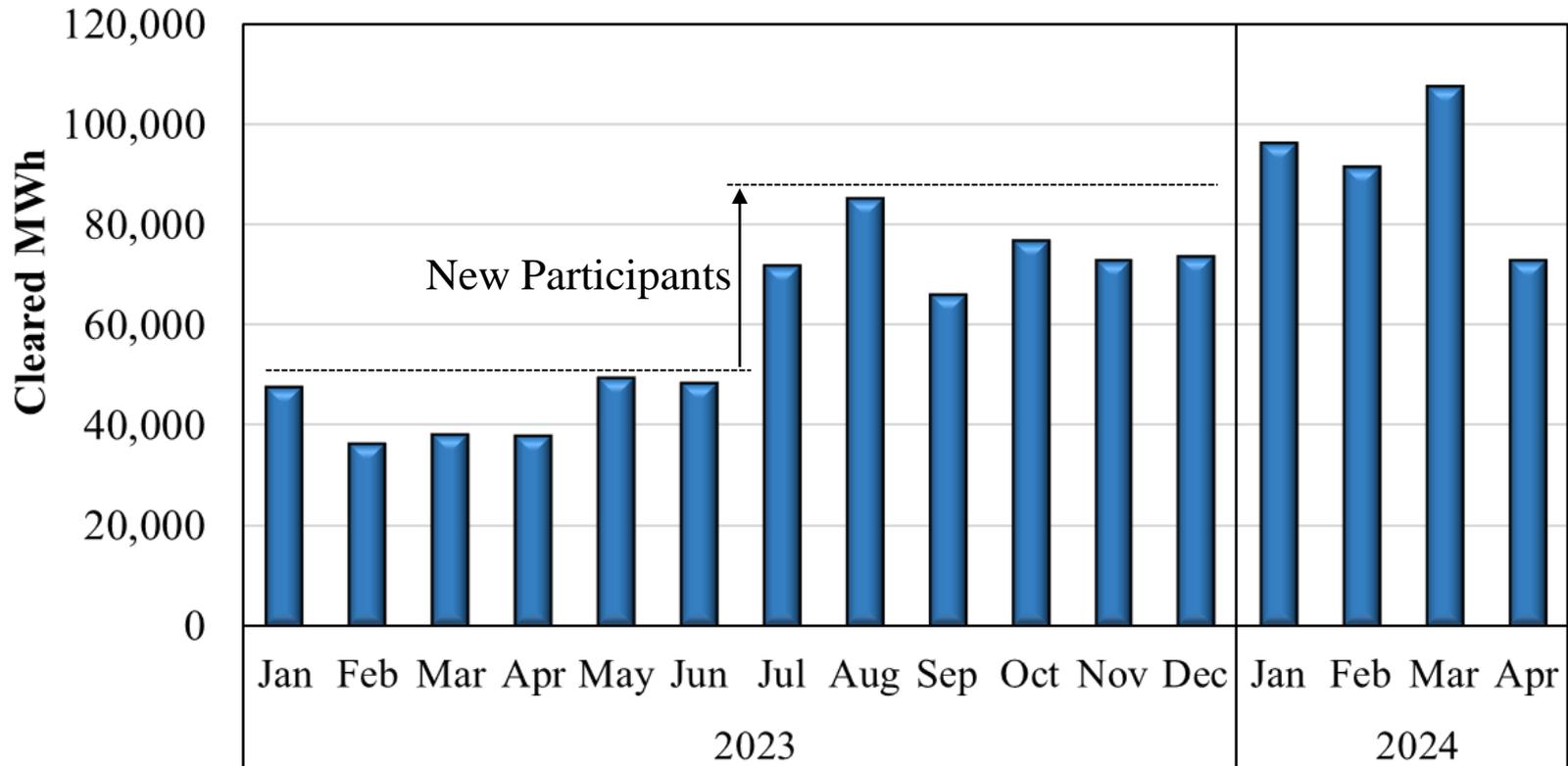
Market Auditing Function

- SEEM is audited by calculating screens, metrics, and other analyses on a daily basis.

- Screens are based on specific requirements in Auditing Process in the SEEM Market Rules.

- In 2023, the screens verified that the market software and outcomes functioned as intended.
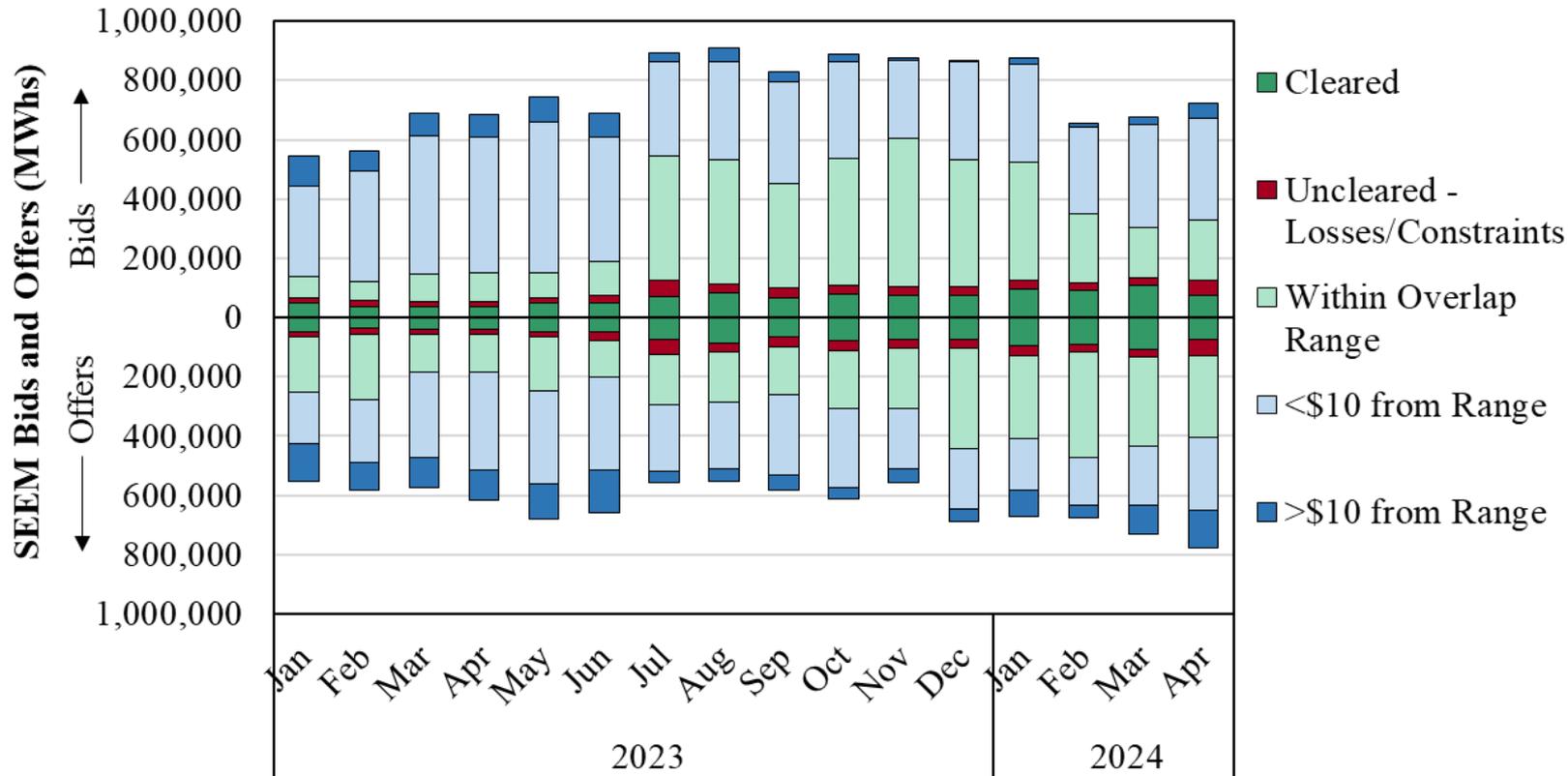
Monthly Cleared Trading Volume
January 2023 to April 2024

- We monitor and evaluate transaction volumes, prices, and network usage.

- Market liquidity has grown over time, in part because of new participants joining in July 2023.

Monthly Cleared Trading Volume
January 2023 to April 2024

- In addition to the rise in cleared quantities, the quantities offered within the the overlap range that could potentially clear rose sharply after July 2023.
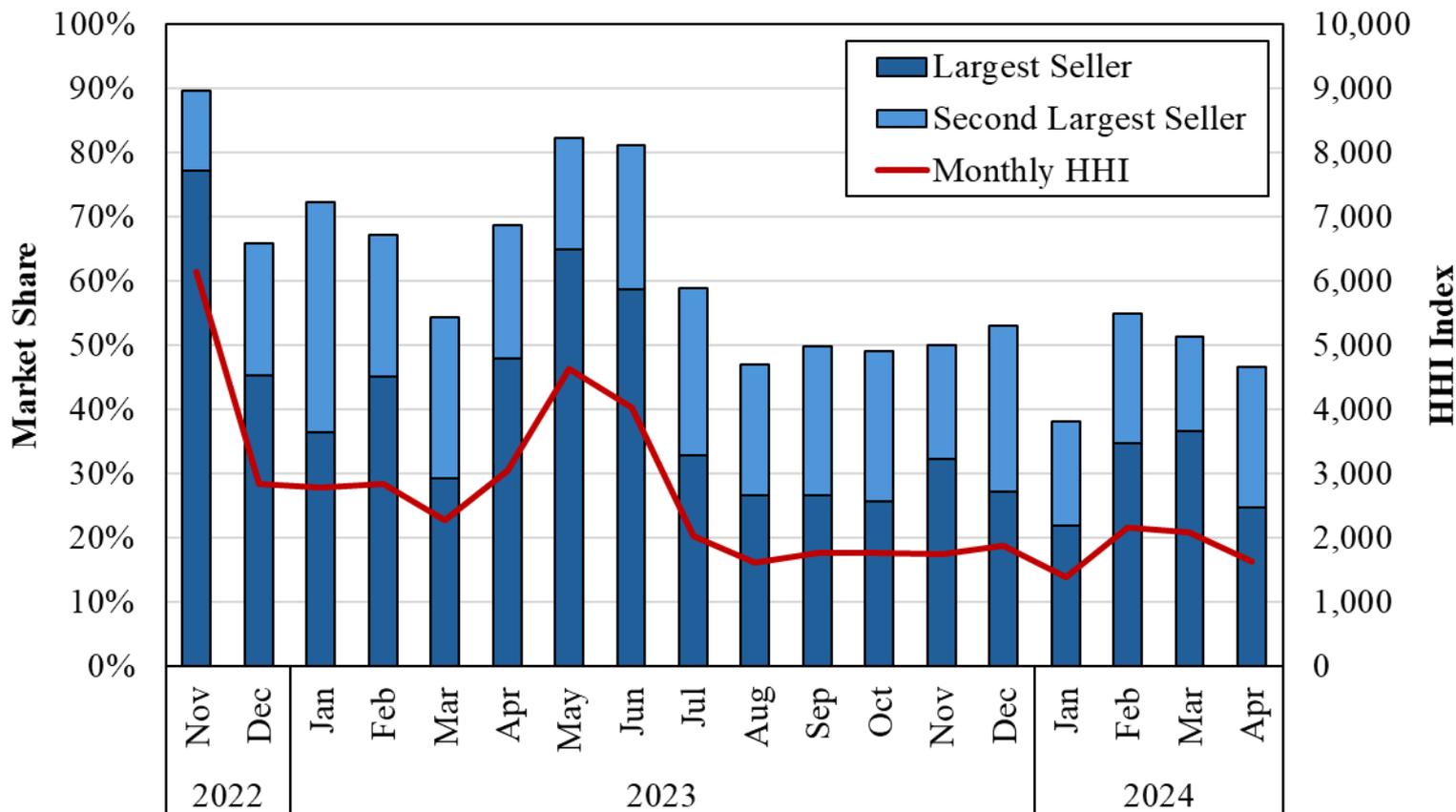
Market Concentration

- Next slide shows seller market shares and concentration
- Market shares are measured to view competitiveness
  - ✓ Not determinative of market power
- Top seller share declined with Florida participants
  - ✓ Favorable decrease in top market shares
- HHI measures market concentration
  - ✓ Used to determine market competitiveness
  - ✓ Calculated by squaring market share of each firm
  - ✓ Lower values indicate less concentrated market
- HHI in SEEM market highly concentrated
  - ✓ Significant decrease over time is favorable to market effectiveness
- Buyer market share shows similar trend to seller market share
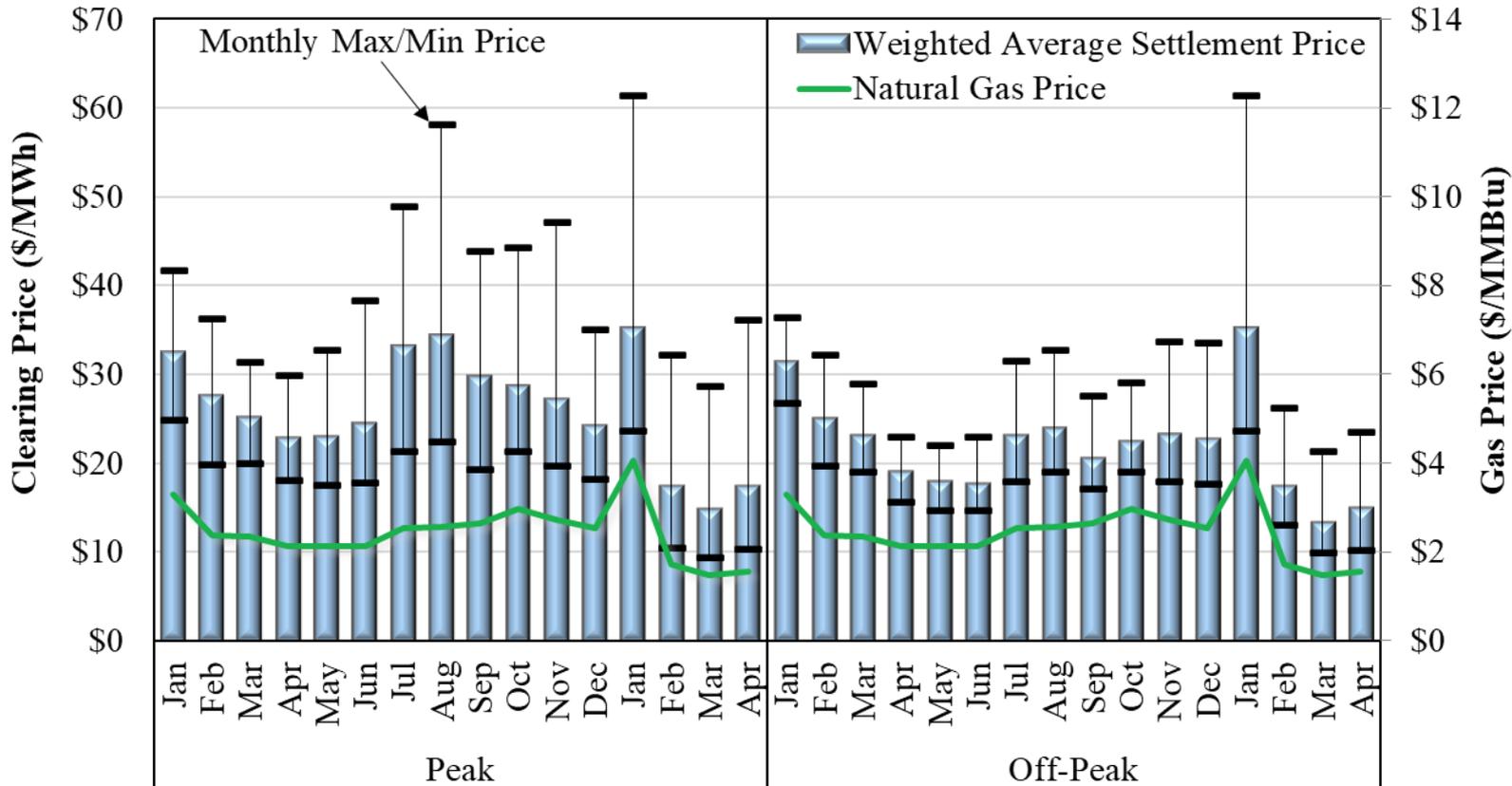 - ✓ See the 2023 Annual Report released today

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Seller Market Concentration

- The market has become less concentrated as new participants joined in July and as liquidity has increased

Summary of Market Pricing in 2023

- Prices have been correlated with fuel prices as expected in a competitive market.
- Locational differences caused by network constraints explain much of the range in prices – average price by segment ranged from $10 to $80/MWh.

Evaluation of Network Usage

- We evaluation the SEEM transactions by path - segments
  - ✓ 309 unique segments with ATC values, 51 without ATC (unlimited)
  - ✓ Evaluated all segments and all intervals
- This evaluation shows that segments generally remained available for SEEM trades
  - ✓ Many top paths have over 90% of their intervals uncleared
  - ✓ Less than 7 percent of the segments were constrained;

	Cases	Intervals	%
1	Partially Used	206,882	2.0%
2	Fully Used	5,711	0.1%
3	Unavailable	698,030	6.7%
4	Uncleared	9,482,307	91.2%

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Conclusions and Recommendations

- SEEM platform implementation and operation has been successful
  - ✓ Florida participants integrated in 2023
  - ✓ Liquidity and competitiveness increased over the year
  - ✓ Traders have provided positive feedback from traders
- Recommendation to Improve Current Market
  - ✓ SEEM publishes the daily average price for transactions after the day
  - ✓ *We recommend SEEM publish hourly average prices in real time to improve the price discovery for participants*
- Benefits of improved price discovery
  - ✓ Would help inform more competitive and efficient bids and offers
  - ✓ Could inform other real-time decisions by participants (e.g., starting a fast start unit)

Long-Term Potential Improvements

- SEEM's current market has performed well under its limited scope
  - ✓ It facilitates very short, near-term exchanges of economic energy
- Additional benefits and efficiency could be achieved by transacting further ahead and for longer periods.
- If there is interest, SEEM could consider implementing additional transaction timeframes within the operating day or day-ahead.
- Such an expansion would require:
  - ✓ Bids by buyers and offers by sellers that are comparable to the current market; *and*
  - ✓ Offers by the holders of transmission reservations to make them available at a submitted cost (does not exist in the current market).
- For example, an hourly day-ahead market could facilitate fuller utilization of transmission that would improve resource commitments.

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Thank You