2022 State of the Markets

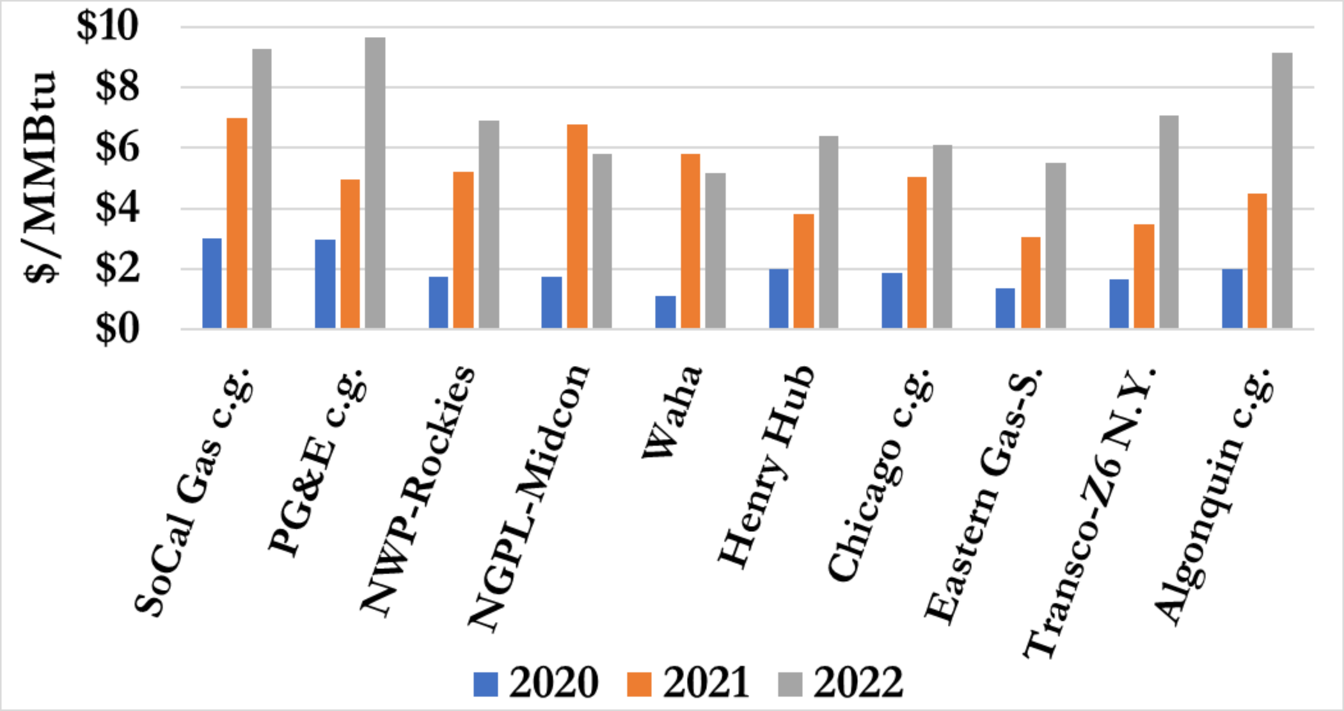
March 16, 2023

Key Findings

- Most generation capacity additions came from wind and solar resources.
- Most retirements came from coal resources.
- Natural gas still holds the largest share of generation at 38.9% in 2022.
- New generating resources encountered interconnection delays.
- Higher wholesale electricity prices and higher natural gas prices in 2022.
- Largest mean wholesale price increases in NYISO Zone J and PJM – over 80%.
- U.S. LNG exports grew in 2022, though at a slower pace than in 2021.
- Western heat wave impacted the Western Interconnection and CAISO.
- December winter storm triggered power outages mainly in the Southeast.

Natural Gas Prices Increased at Nearly All Major Hubs

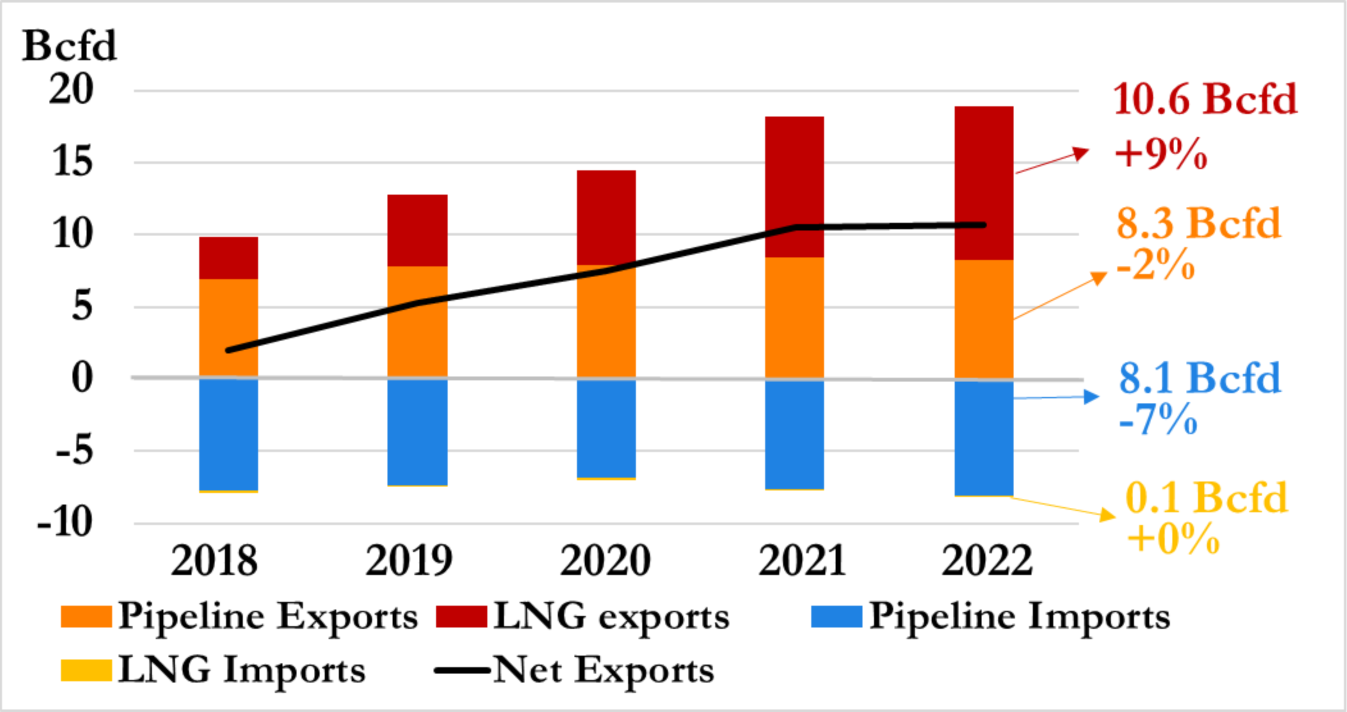
Average Natural Gas Spot Prices



Source: S&P Global Commodity Insights

Natural Gas Net Exports Increase Due to LNG Exports

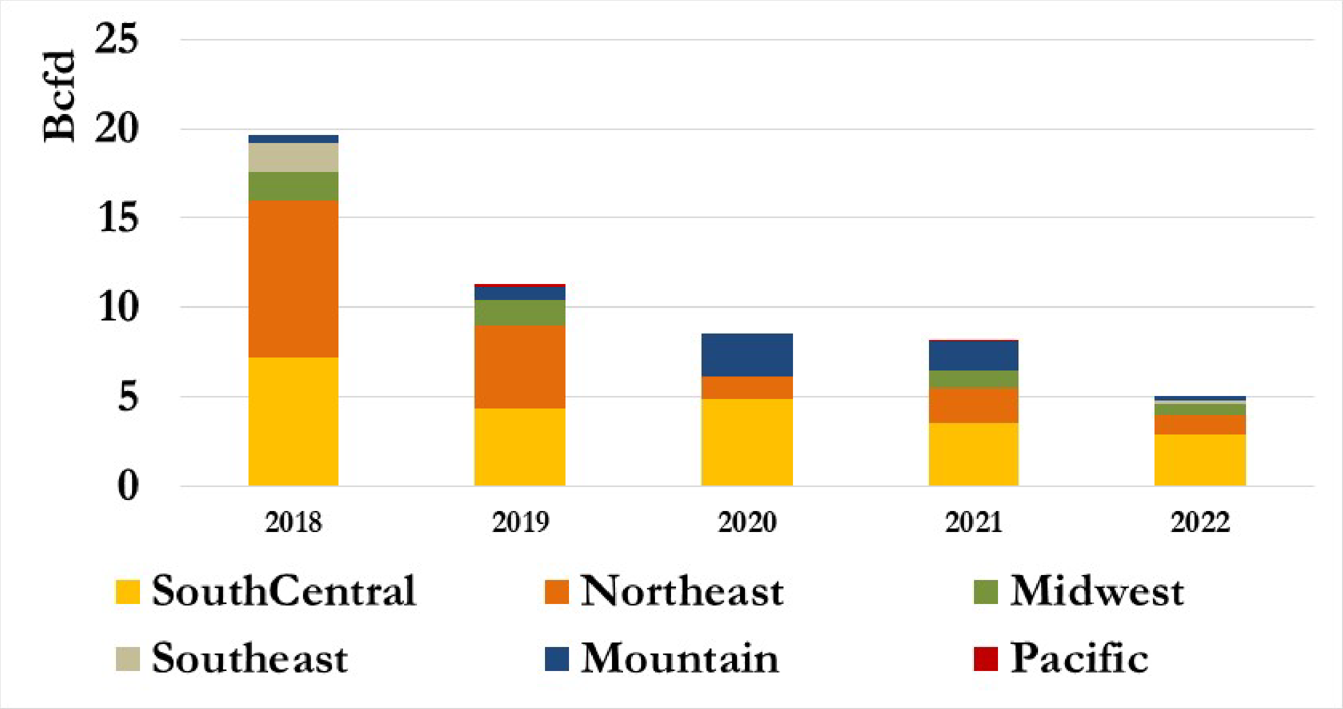
U.S. Natural Gas Imports and Exports



Source: U.S. EIA

South Central Has Added the Most Pipeline Capacity

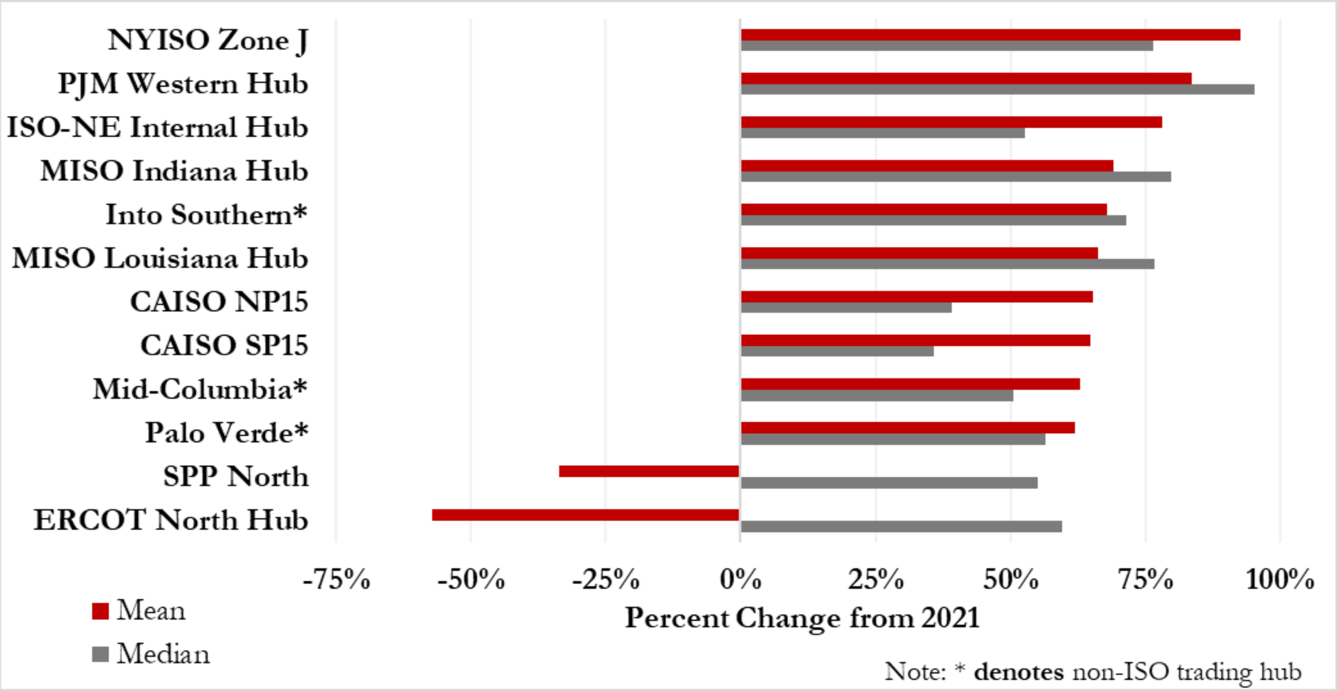
U.S. Interstate Natural Gas Pipeline In-Service
Capacity Additions by Region



Source: U.S. EIA

Wholesale Electricity Prices Increase Across Hubs

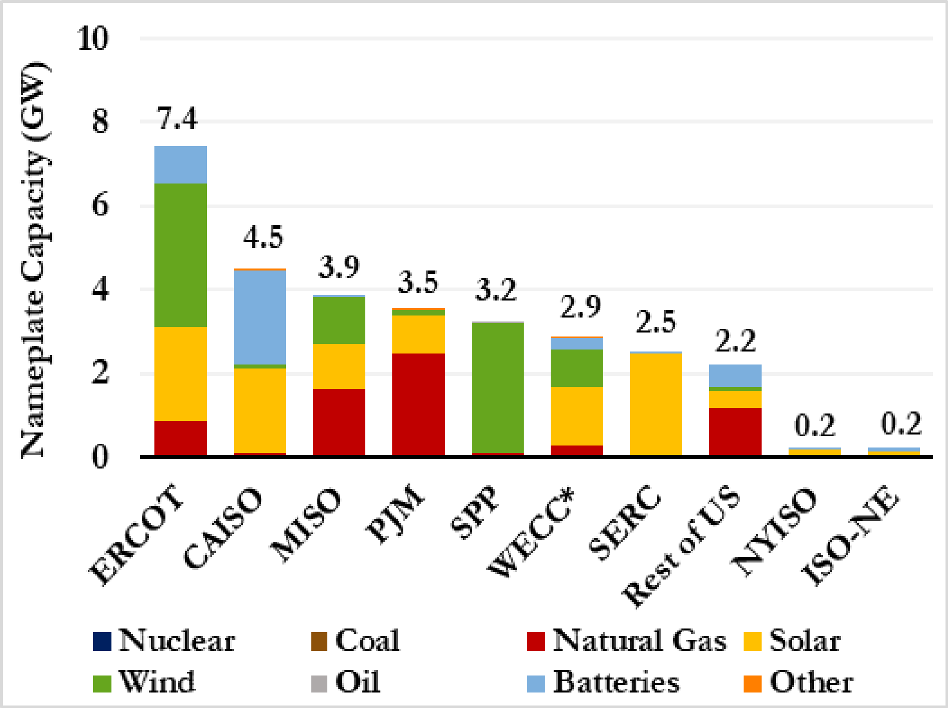
Change in Average Day-Ahead On-Peak Price from 2021 for Select Pricing Hubs



Source: S&P Global Intelligence

Increased Solar, Wind, Gas-fired, and Battery Installed Capacity

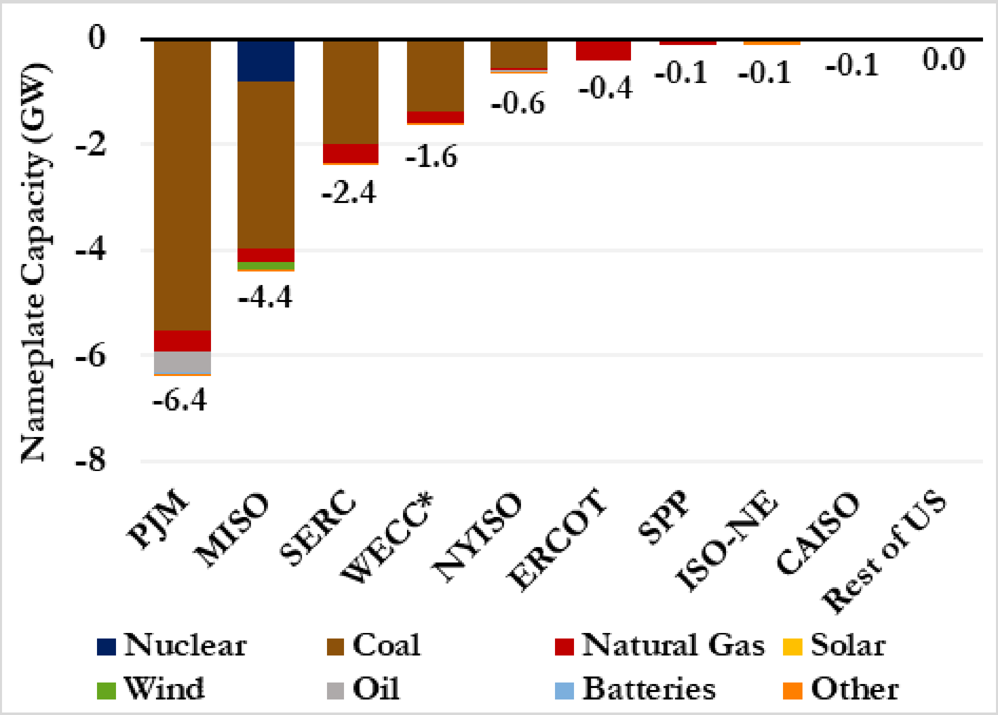
2022 Capacity Additions



Note: the data do not include Alaska and Hawaii Source: EIA 860M

Largest Share of Capacity Retirements Came from Coal

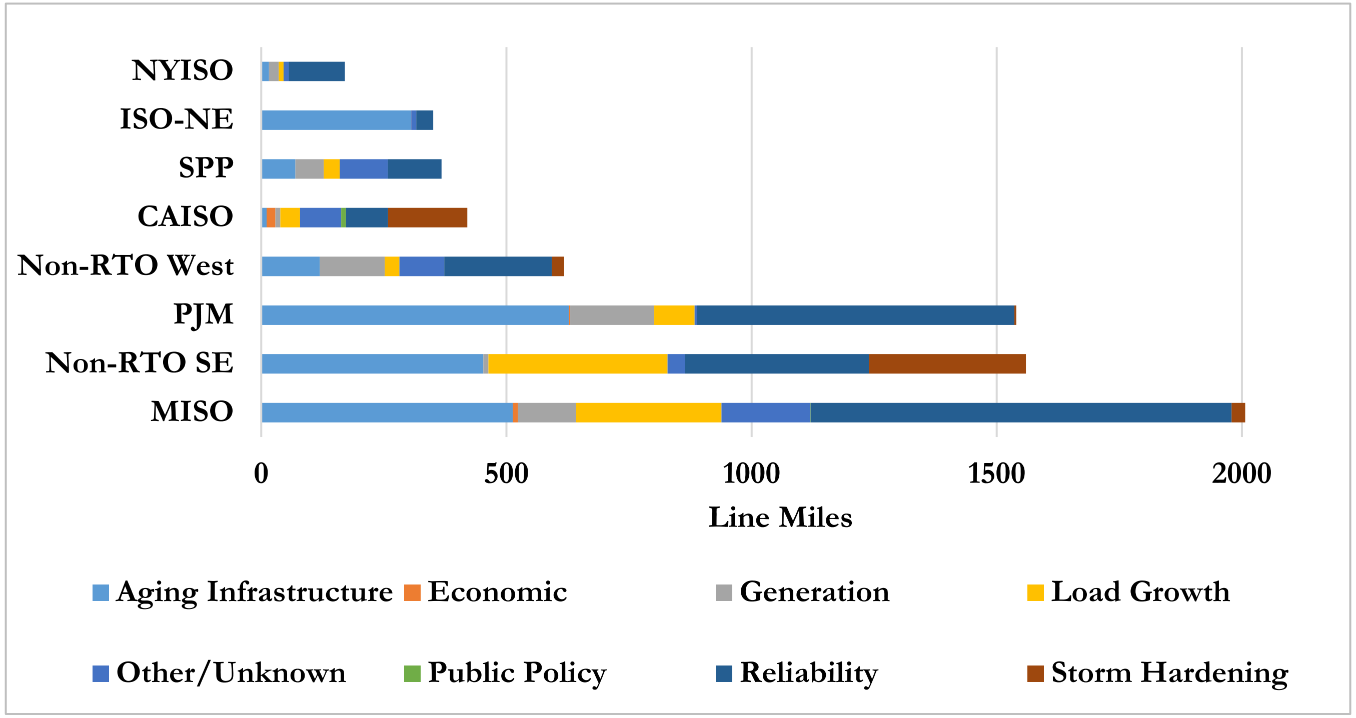
2022 Capacity Retirements



Source: Form EIA-860M, January 2023 Release.

Continued Transmission Investment

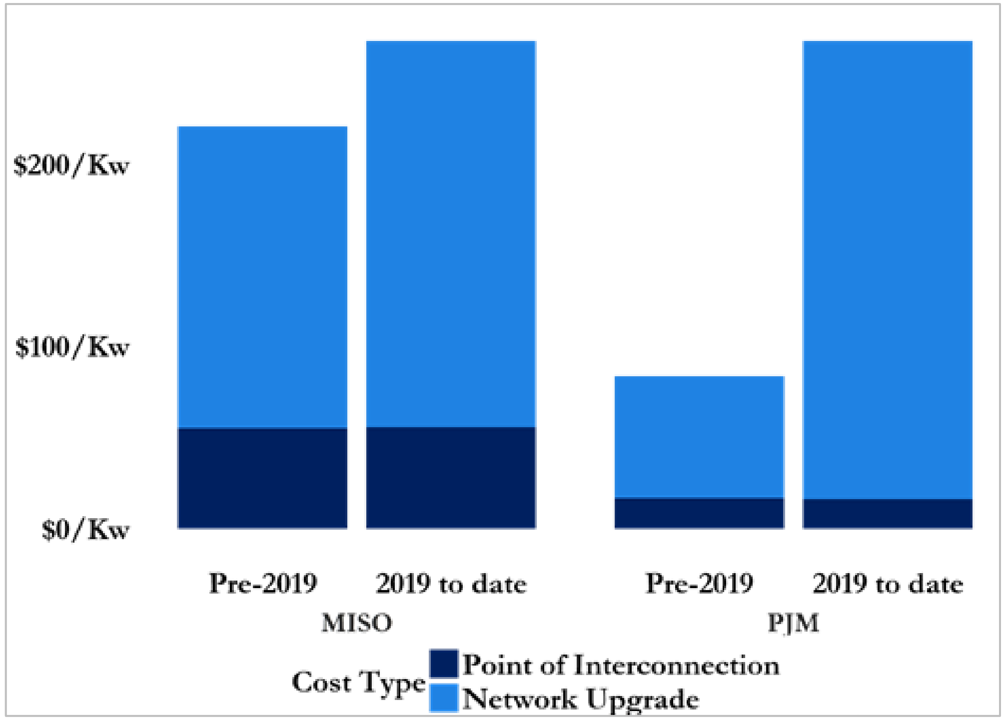
2022 Line-Related Transmission Projects within Order No. 1000 Planning Regions



Source: North American Electric Transmission Project Database, The C Three Group, L.L.C.

Interconnection Becoming More Costly

Average Costs to Interconnect, PJM and MISO Sample



Source: Lawrence Berkeley National Laboratory

Other Topics Discussed in the Report

- Electricity Market Fundamentals
  - Capacity Markets
  - Electricity Demand
  - Electricity Market Expansion and New Arrangements
- Other Market Developments
  - Credit Trends and Events in the Markets
  - Other Fuels Markets
  - Natural Gas Trading

2022 State of the Markets

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