



# 2024 Summer Energy Market and Electric Reliability Assessment

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May 23, 2024

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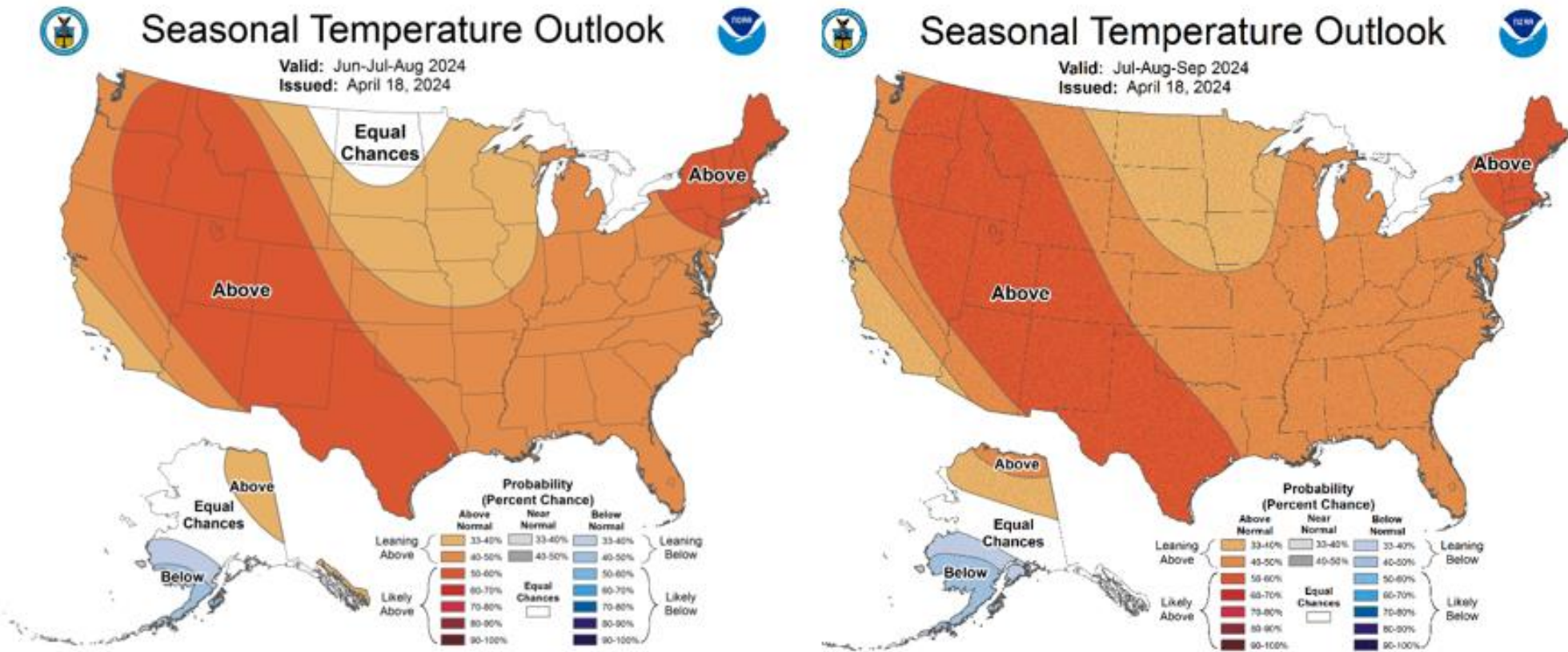


# Key Findings

- Warmer-than-average forecast for summer 2024
- NERC regions expect adequate generation – some regions may be challenged in extreme conditions
  - Higher likelihood of reliability issues during extreme summer conditions: ERCOT, MISO, ISO-NE, WECC-CA/MX and WECC-SW
- Additions outpace retirements – most new capacity from solar and wind
- Lower NG prices due to storage surplus and near record production
- Electric industry faces supply chain concerns and significant load growth

# Summer Temperatures Likely Warmer Than Normal

## Summer 2024 Temperature Forecast



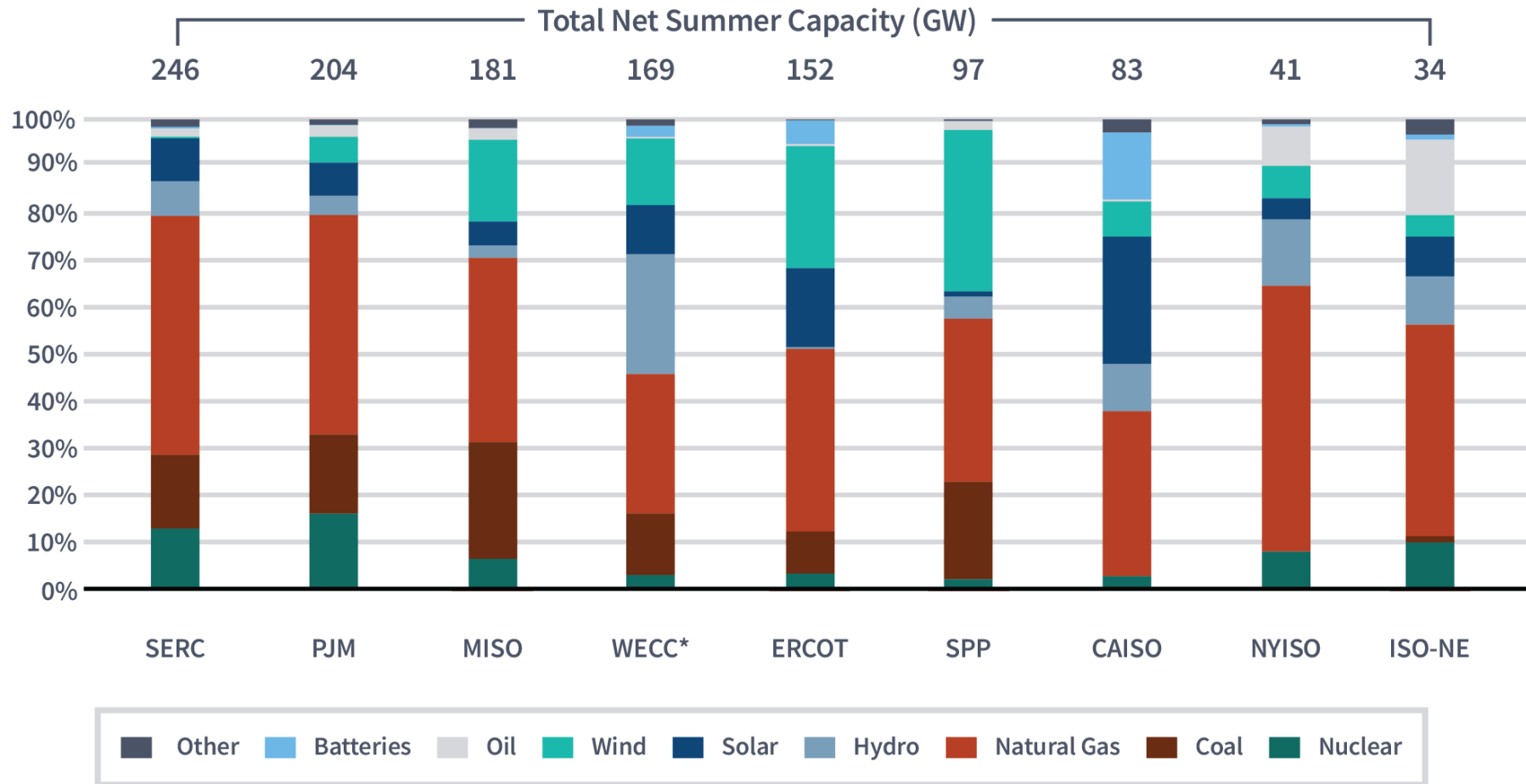
Source: NOAA.



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# Summer Resource Mix

Total Net Summer Capacity and Percentage Share by Resource Type in September 2024



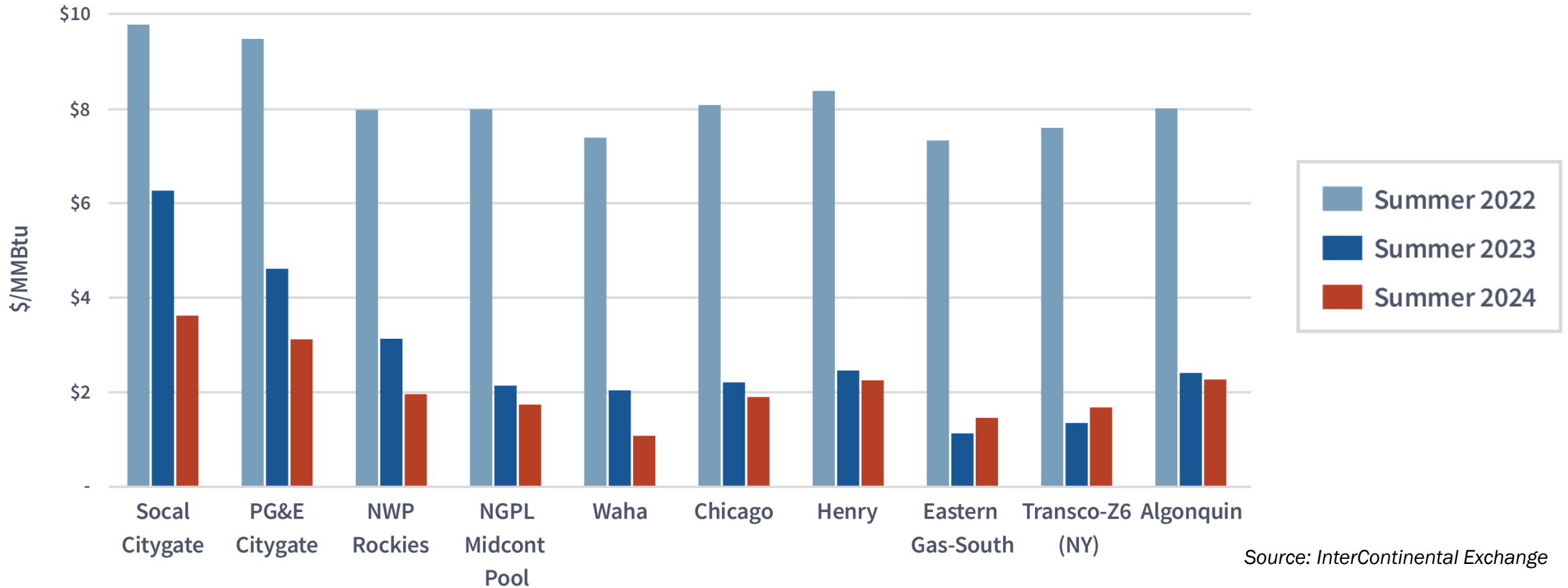
Source: U.S. EIA



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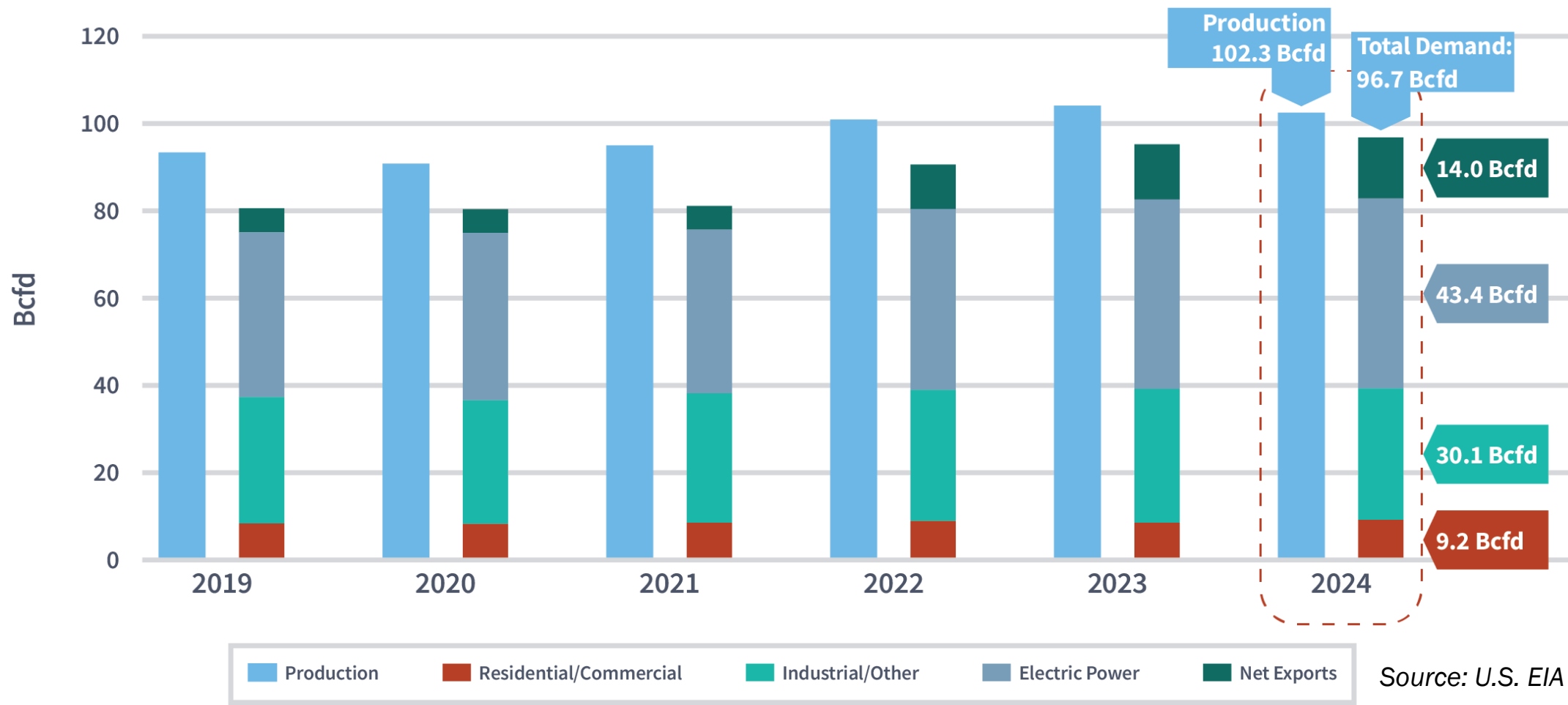
# Natural Gas Futures Prices Decrease

Natural Gas Futures Prices At Major Hubs (June - September)



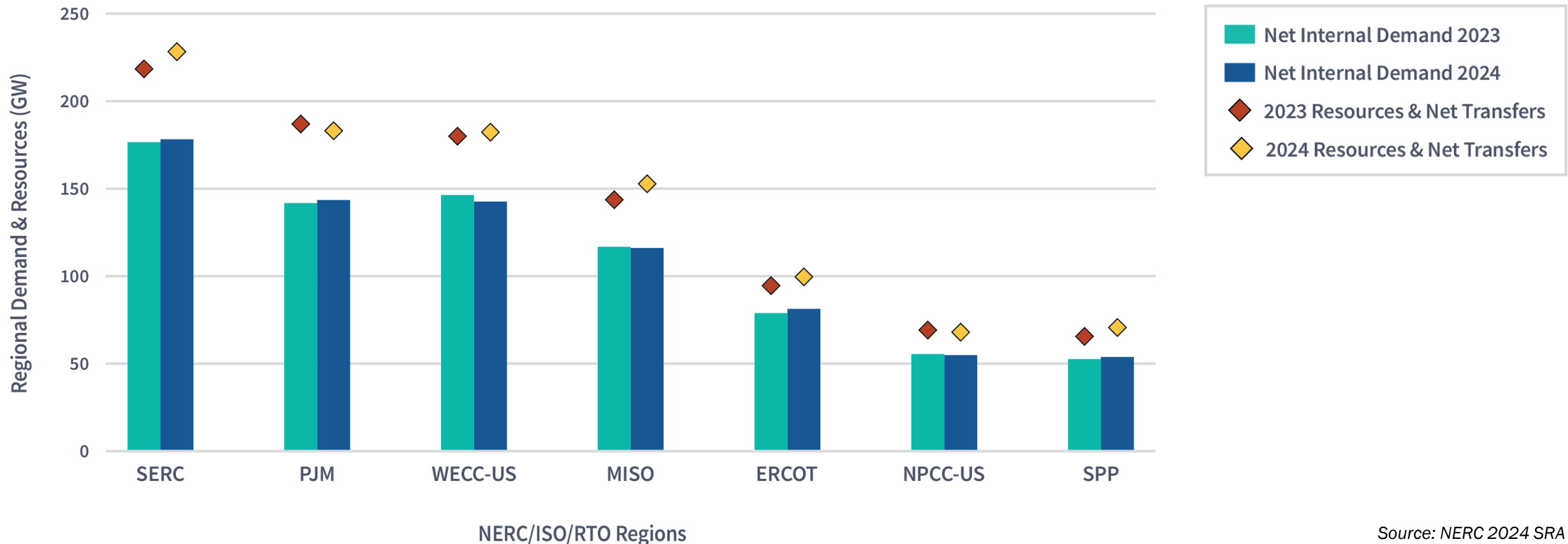
# Natural Gas Demand To Grow Slightly

U.S. Natural Gas Production and Demand



# All Regions Show Available Net Transfers and Resources Exceeding Internal Demand

## 2023 and 2024 Summer Regional Demand and Available Resources



Source: NERC 2024 SRA



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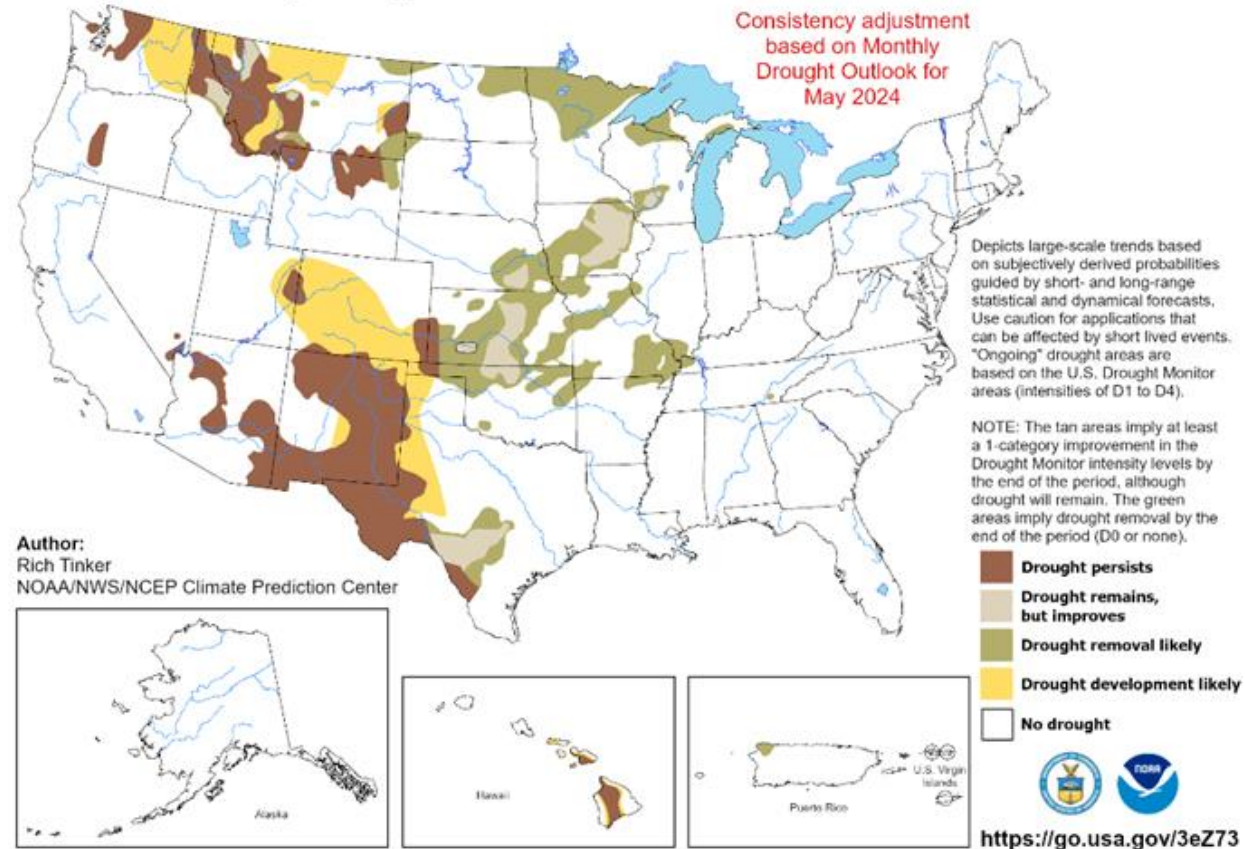


# Changes in Drought Conditions

## Summer Drought Forecast

### U.S. Seasonal Drought Outlook Drought Tendency During the Valid Period

Valid for May 1 - July 31, 2024  
Released April 30, 2024



Source: U.S. Drought Monitor



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# Electric Reliability Risks and Trends

## New and Continuing Reliability Concerns

- Equipment and Materials
  - Supply chain disruptions
  - Critical equipment shortages
- Load Growth Due to Newly Constructed Data Centers
  - Emerging technologies
  - Projected load growth in primary markets



## *Supply shortages anticipated during extreme summer conditions*

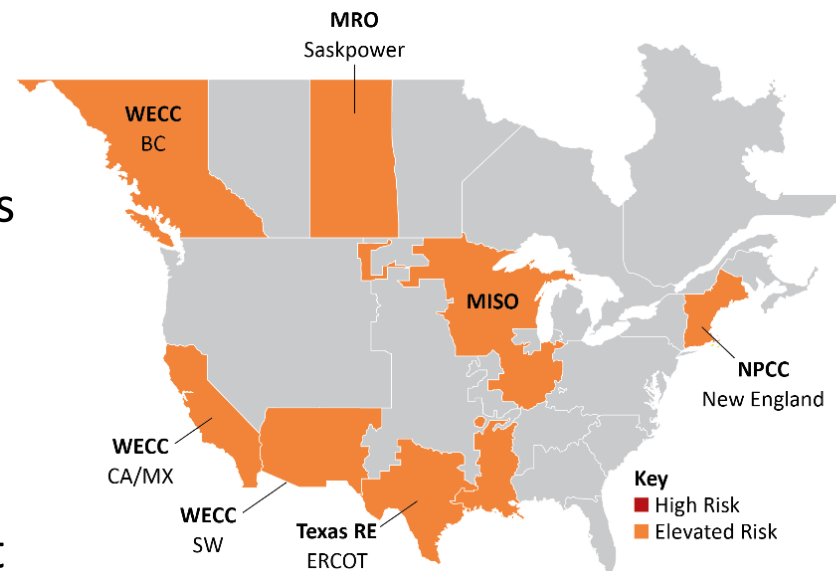
**MISO:** Wind generator performance is a key factor in meeting reserves during high demand

**NPCC-New England:** Generator retirements have reduced available capacity making the area more reliant on external transfers

**Texas RE-ERCOT:** Strong growth in load straining parts of the transmission network; significant solar growth helps peak demand but shifts energy risk period to early evening

**WECC-California/Mexico:** Wide-area heat events that threaten imports continue to pose energy risks (new and planned resources are improving the outlook)

**WECC-Southwest:** Demand growth and drought conditions can strain electricity supplies in extreme heat



Seasonal Risk Assessment Summary	
Elevated	Insufficient Operating Reserves in Extreme Conditions
Normal	Sufficient Operating Reserves

Extreme summer conditions include 90/10 demand scenarios, historical high generator outage rates, and low variable energy resource scenarios

- Operators in risk areas review plans for resolving supply shortfalls
- Operators and load-serving entities develop and coordinate procedures for demand-side management
- Generator owners with Solar PV and batteries implement NERC's *Inverter-Based Resource Performance Issues Alert* (March 2023)
- State regulators and industry prepare for managing emergent requests for air-quality restriction waivers





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