



POWER MO: SECURING MISSOURI'S ENERGY FUTURE

AUGUST 2024

*Working together to responsibly and economically
keep the lights on today and in the future.*



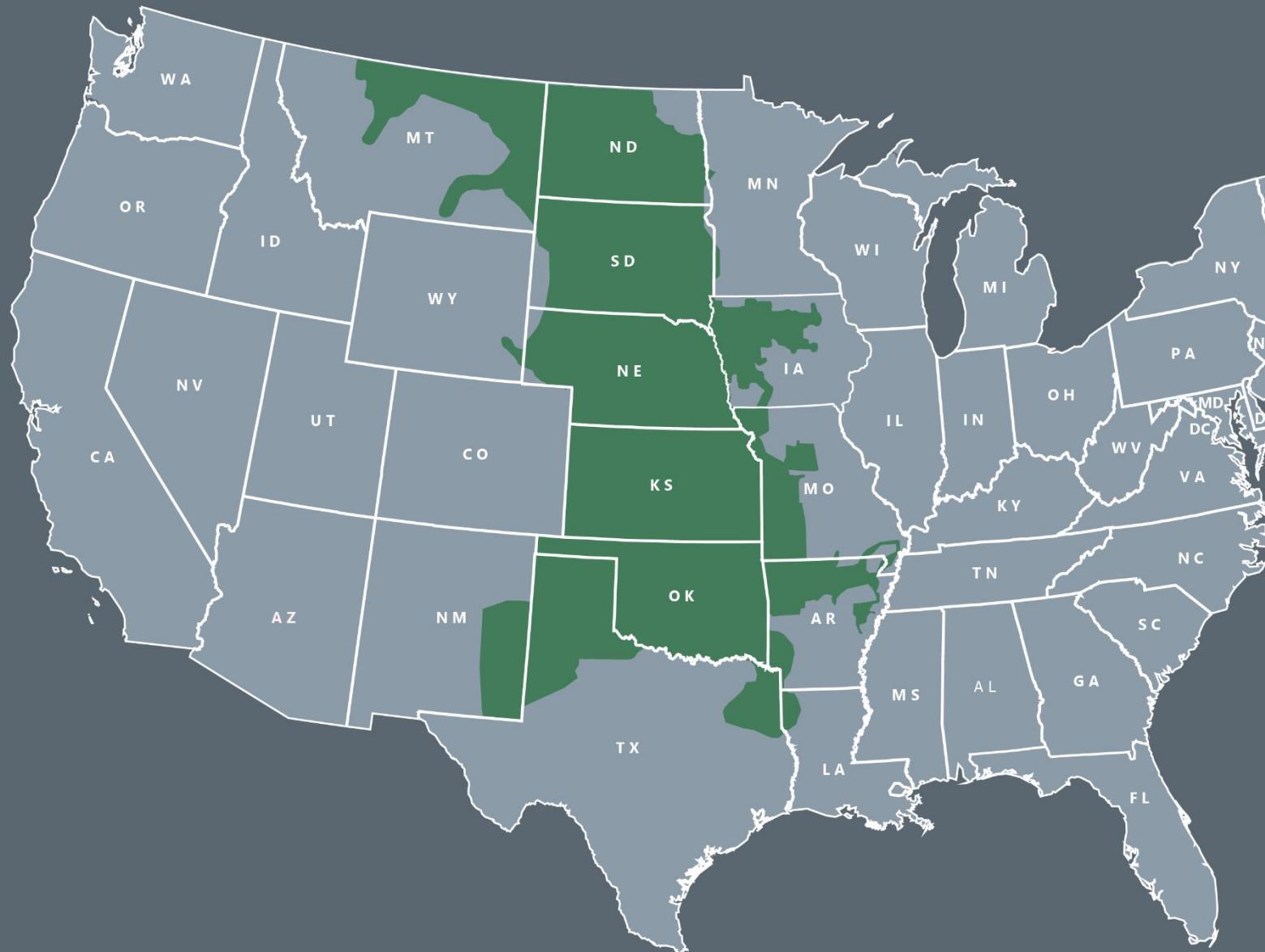
SouthwestPowerPool



SPPorg



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RTO OPERATING REGION

- **552,885** square mile service territory
- **~18 million** population served
- **967*** generating plants
- **5,267*** substations

* In SPP's balancing authority area

2025 REGIONAL STATE COMMITTEE



John Tuma,
RSC President
Minnesota Public
Utilities Commission



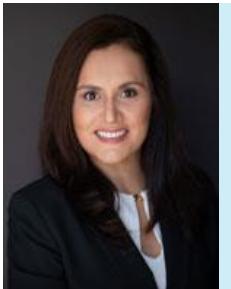
Todd Hiett,
RSC Vice President
Oklahoma Corporation
Commission



Chuck Hutchison,
RSC Secretary/Treasurer
Nebraska Power Review
Board



Randel Christmann
North Dakota Public
Service Commission



Lori Cobos
Public Utility
Commission of Texas



Kristie Fiegen
South Dakota Public Utilities
Commission



Mike Francis
Louisiana Public Service
Commission



Andrew French
Kansas Corporation
Commission



Sarah Martz
Iowa Utilities Board



Pat O'Connell
New Mexico Public Regulation
Commission



Kayla Hahn
Missouri Public Service
Commission



Justin Tate
Arkansas Public Service
Commission

SPP REGIONAL STATE COMMITTEE

Retail regulatory commissioners from:

Arkansas	Minnesota	North Dakota
Iowa	Missouri	Oklahoma
Kansas	Nebraska	South Dakota
Louisiana	New Mexico	Texas

Primary responsibility for:

- Cost allocation for transmission upgrades
- Approach for regional resource adequacy
- Allocation of transmission rights in SPP markets



SPP'S RESOURCE ADEQUACY CONSTRUCT

UNDERSTANDING THE RISKS



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SPP'S CURRENT RESOURCE ADEQUACY APPROACH

- Regional resource adequacy requirements imposed on Load Responsible Entities ("LREs")
- LREs must demonstrate sufficient accredited capacity will be available to meet peak demand plus the Planning Reserve Margin (PRM) requirement
 - Summer Requirement (deficient LREs subject to deficiency payment)
 - Winter Obligation
- LREs build or procure capacity through bilateral market
- PRM requirement established through Loss of Load Expectation (LOLE) analyses performed at least biennially
- Compliance measured through annual data collection process



Capacity

Team members' collective ability to play

Energy

Output of players on field

Reserve margin

Ability of reserve players to contribute

RESOURCE ADEQUACY CHALLENGES

Influx of intermittent renewable generation

Thermal generation retirements

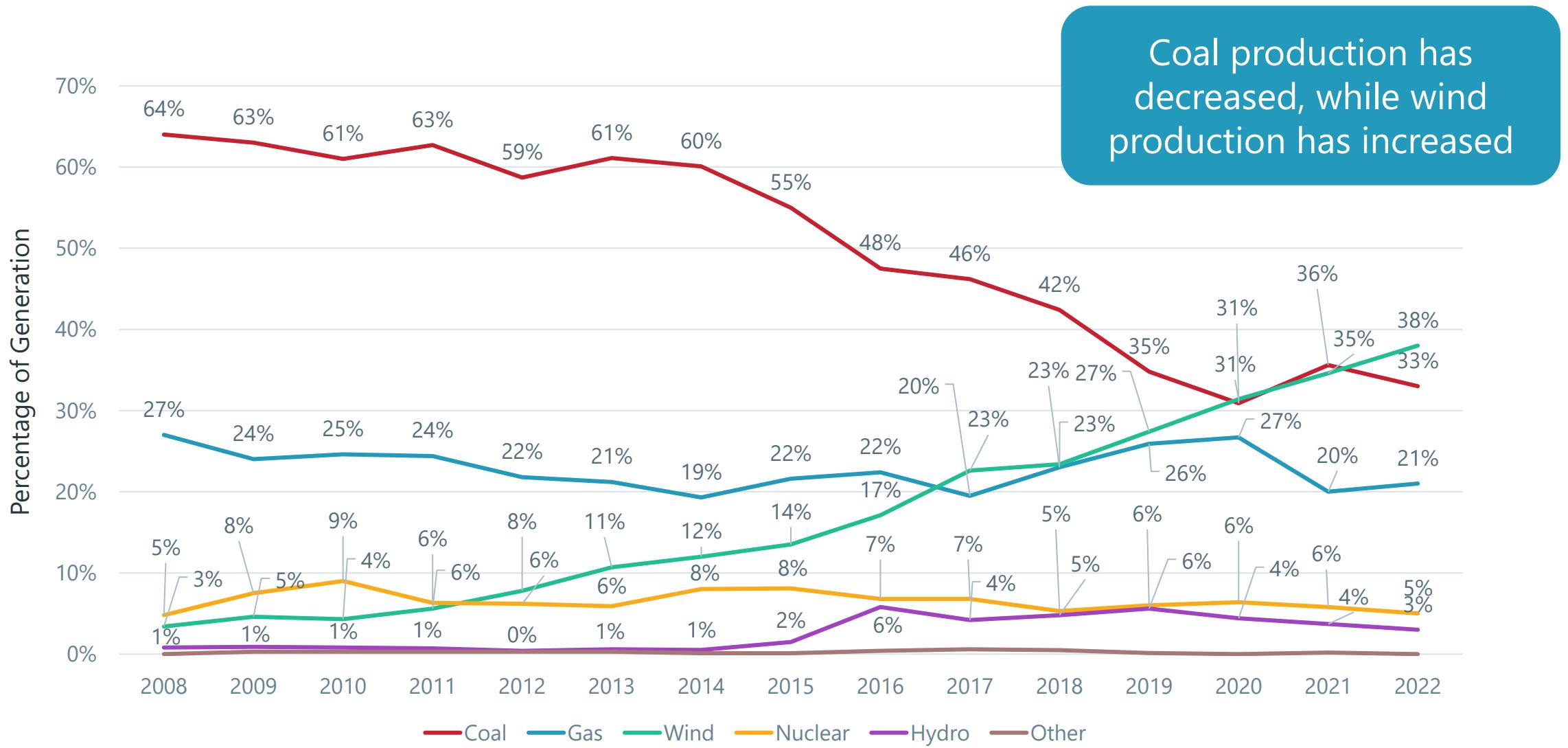
Resource under-performance & unavailability

Increasing load & volatility

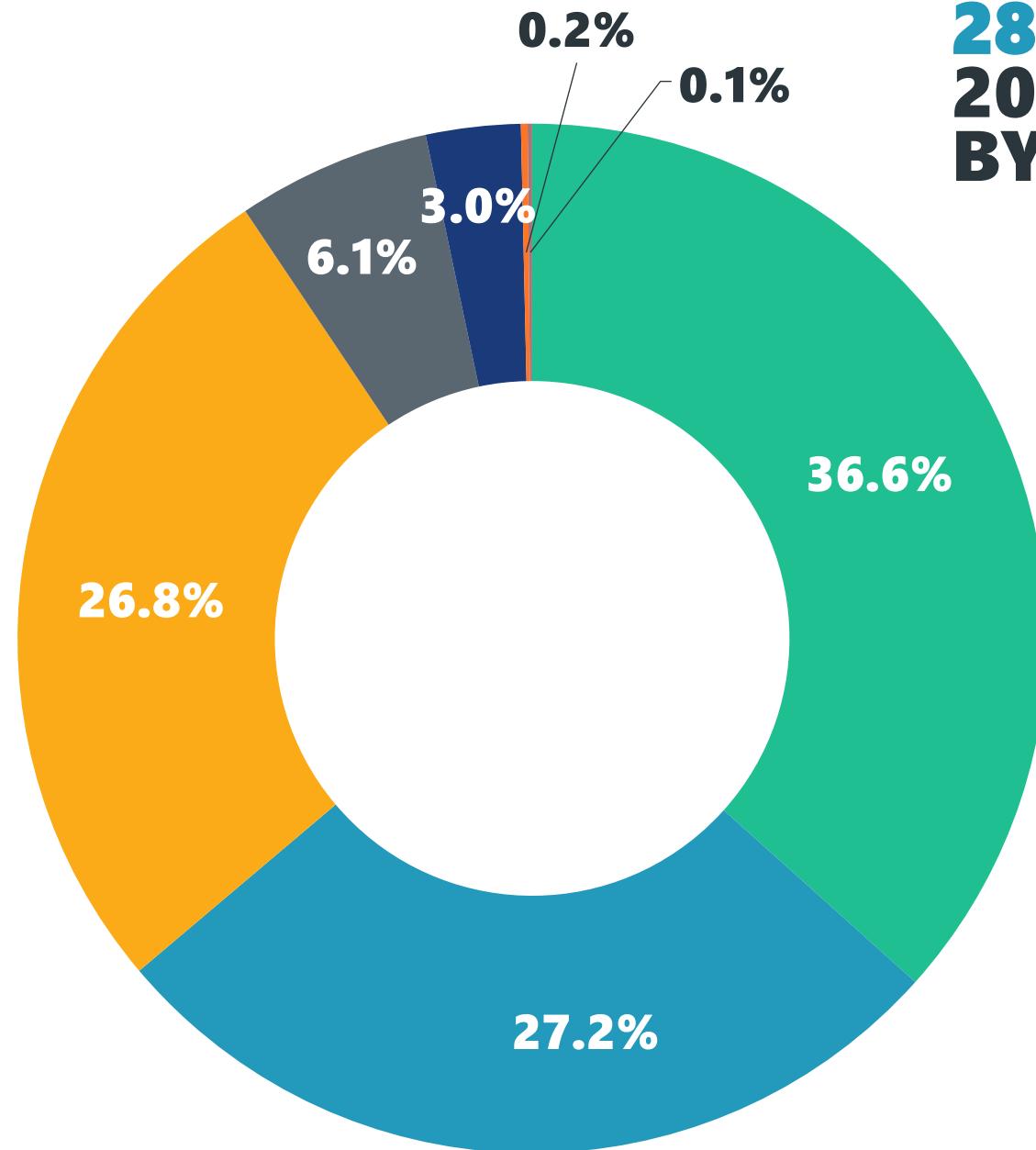
Extreme weather events

Reducing margins

SPP'S EVOLVING ENERGY MIX



Coal production has decreased, while wind production has increased

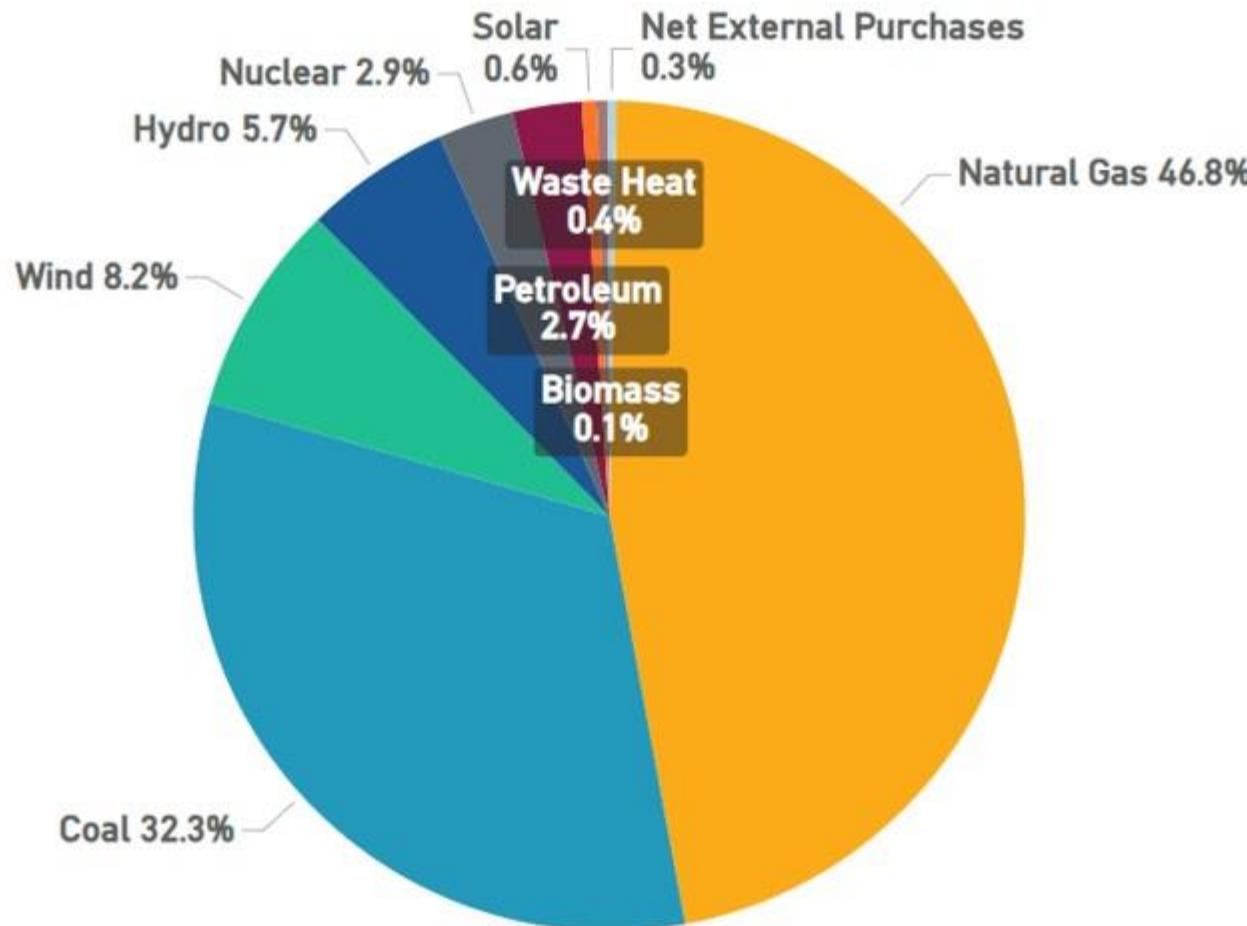


283,577 GWH 2023 ENERGY PRODUCTION BY FUEL TYPE

- Wind (36.63%)
- Coal (27.19%)
- Natural Gas (26.76%)
- Nuclear (6.09%)
- Hydro (2.9%)
- Solar (0.2%)
- Other (0.1%)

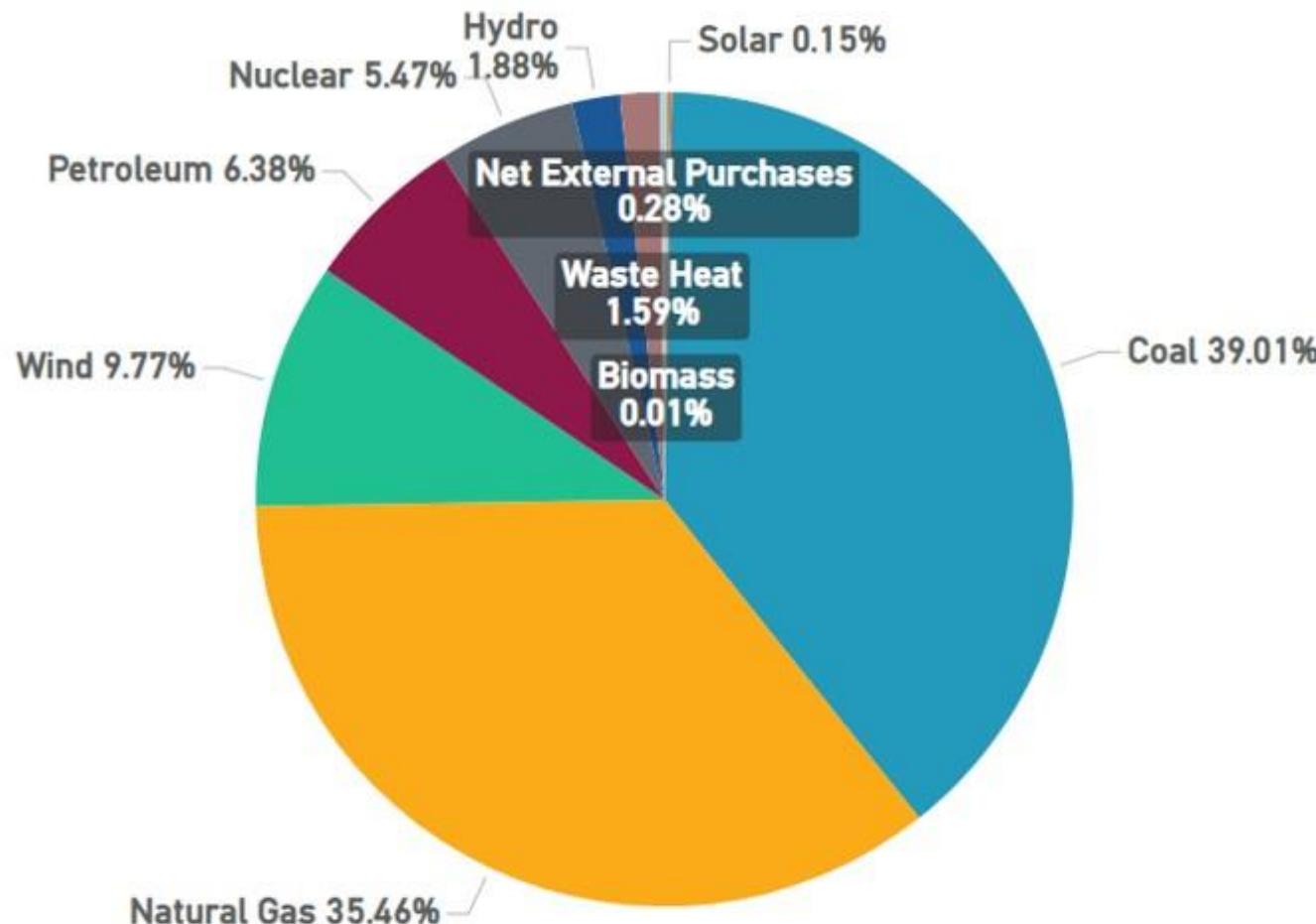
**66,145 MW
ACCREDITED
CAPACITY**

2024 FUEL TYPE SUMMARY - SPP



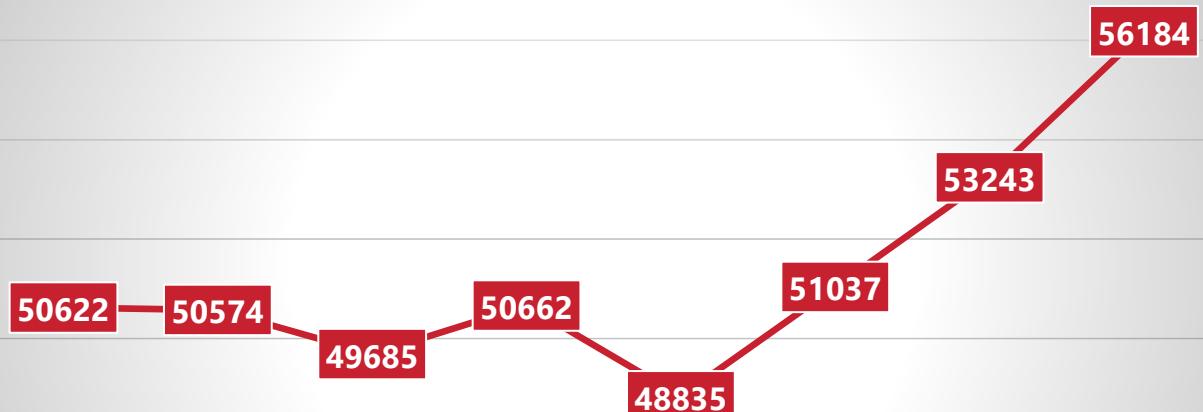
**10,113 MW
ACCREDITED
CAPACITY**

2024 FUEL TYPE SUMMARY - MISSOURI BASED LRES



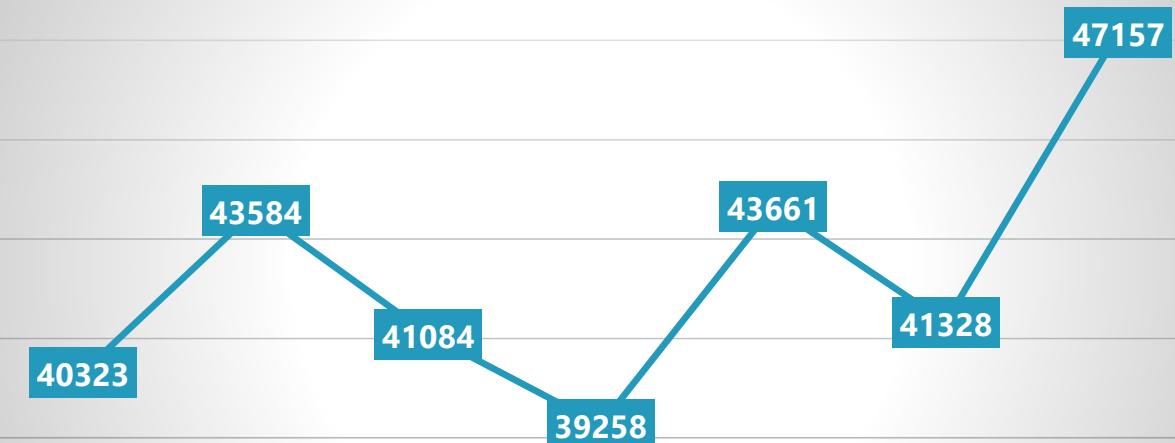
PEAK LOAD TRENDS

SPP Historical Summer Peaks



2016 2017 2018 2019 2020 2021 2022 2023

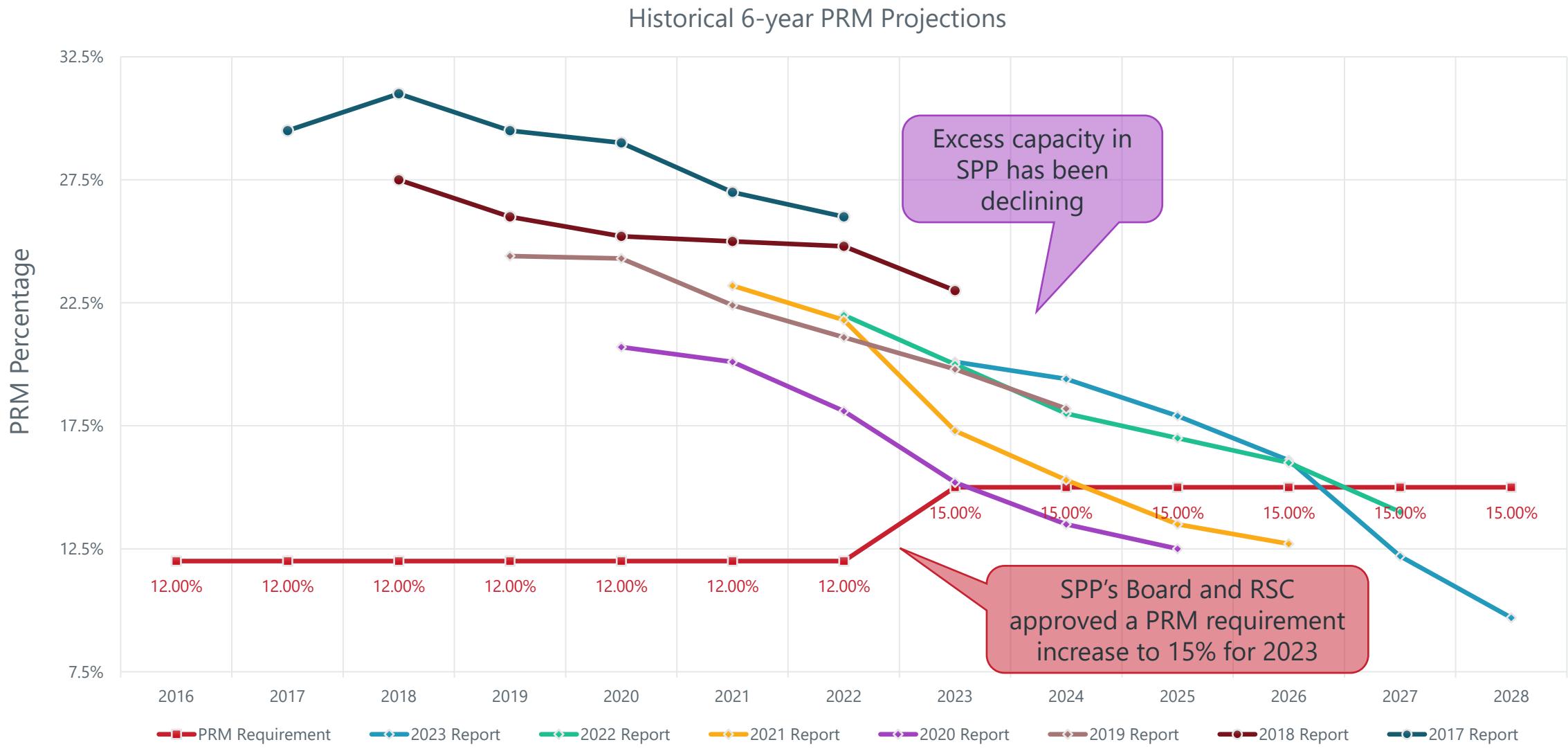
SPP Historical Winter Peaks



2016/2017 2017/2018 2018/2019 2019/2020 2020/2021 2021/2022 2022/2023

2023 summer peak load 5.5% higher than previous peak and 2022/23 winter peak 8% higher than previous winter peak

HISTORICAL MARGIN PROJECTIONS





RESOURCE ADEQUACY PATH FORWARD

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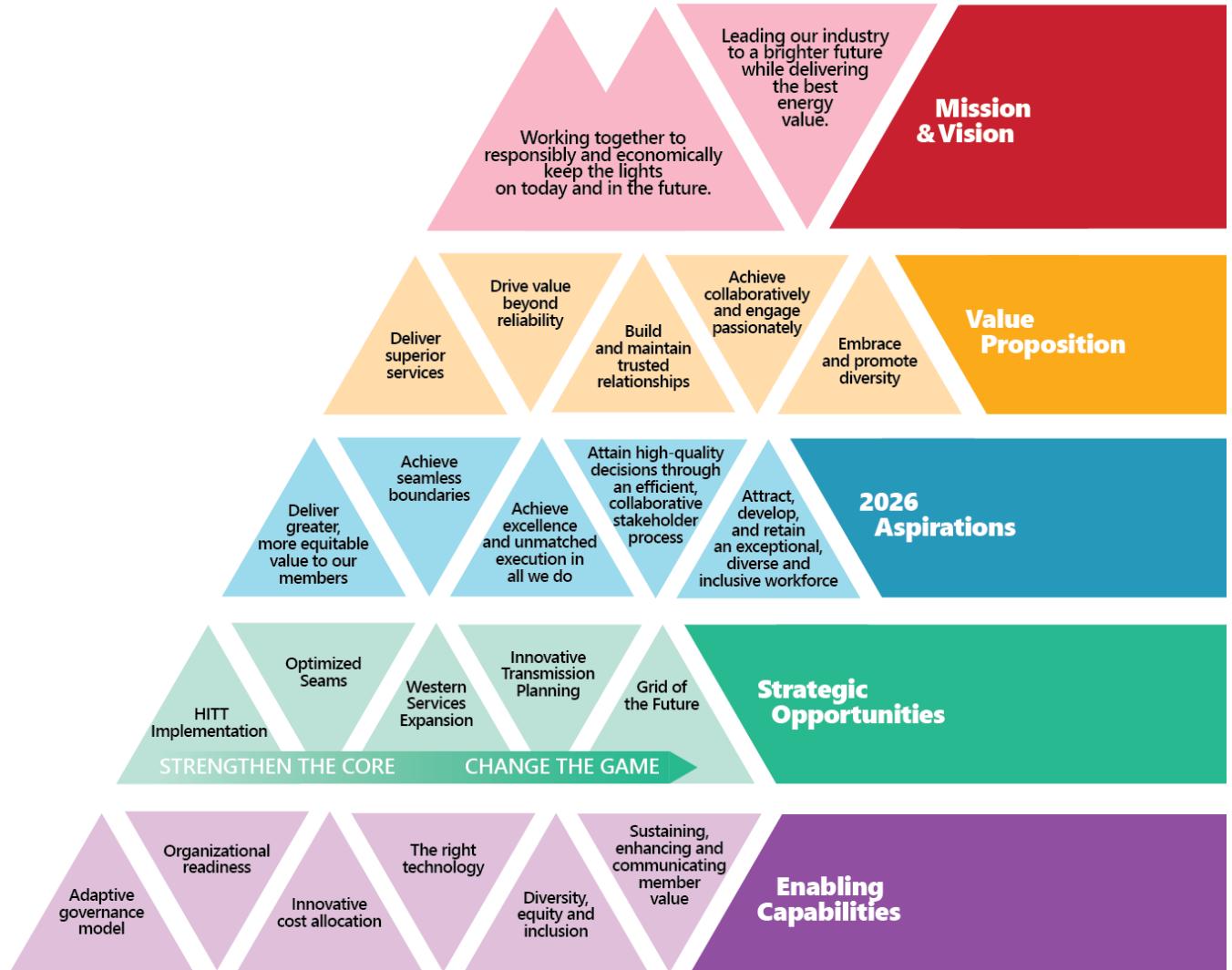
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SPP 2024 CORPORATE GOAL: MITIGATE RA RISKS

By the end of 2024, we will improve our resource adequacy risk position through developing policy improvements along with additional requirements for operating, planning, and markets that align with priorities established by the REAL team.



RA POLICY TARGETS

Resource and Energy Adequacy Leadership (REAL) Team

REAL Team: address strategic resource adequacy policies. The team developed a multi-year work plan and has already led the development of several resource adequacy improvements

Resource Adequacy Policy	Target
Winter Resource Adequacy Requirement	Complete
VOLL metric and usage policies*	Complete
Generation Outage Policy	Complete
Generator Availability	Complete
Fuel Assurance Policy/OMC	Complete
Winter Planning Reserve Margin	August 2024
Summer Planning Reserve Margin	August 2024
Expected Unserved Energy Policy	
Longer Term Projections of future PRM	
Demand Response Policy	
Ramping Policy	
Market Mechanism	

WHAT WE HAVE DONE ALREADY

Working together with our members, regulators, market participants, and other stakeholders, we have accomplished multiple milestones over the past few years.



Mitigated Adequacy Risk



Streamline GI Queue



Prepared for Extreme Weather



Transmission Policy Innovation



Planning for "Grid of the Future"



Coordinating with our Neighbors

WHAT DOES THIS MEAN FOR YOU?

This generational challenge is a mission-critical moment. SPP has a responsibility to work with its members and regulators to ensure adequate generation and transmission are being planned for the future. But we can't do it alone.

Regulators:

- Continued engagement in the stakeholder process
- Support the development of diverse energy resource portfolios, new transmission infrastructure, and investments in grid modernization

Policymakers

- Ensure policies promote energy portfolios with reliability attributes

SPP's Members

- Continue upgrading aging infrastructure, integrating grid-enhancing technology, and bringing new transmission and generation

RTO

- Collaborative investment & coordination to build interregional transmission, connect new generation, enhance real-time coordination during energy extremes, and advocate for interests supporting our shared missions

Consumers

- Stay informed & support utilities' effort to ensure a reliable grid

QUESTIONS?



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