

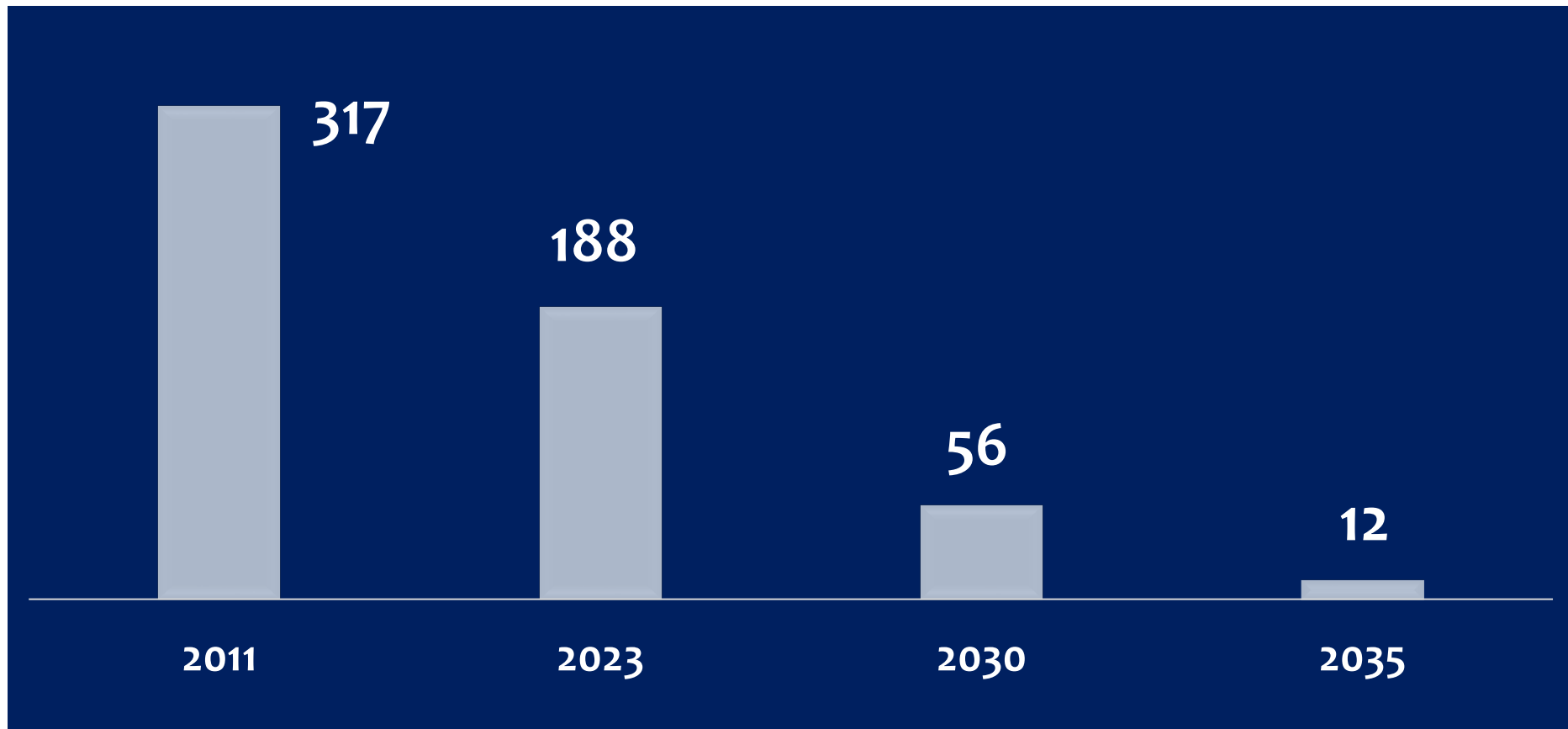
Six EPA rules that impact the coal fleet. Two also affect gas-fired generation.

- **Clean Power Plan 2.0** Proposed May 2023. Final April 2024.
- **Mercury and Air Toxics Standards** Proposed April 2023. Final March 2024.
- **Effluent Limitations Guidelines** Proposed March 2023. Final April 2024.
- **Ozone Transport Rule** Finalized March 2023
- **Coal Combustion Residuals** Being implemented
- **Regional haze** Being implemented

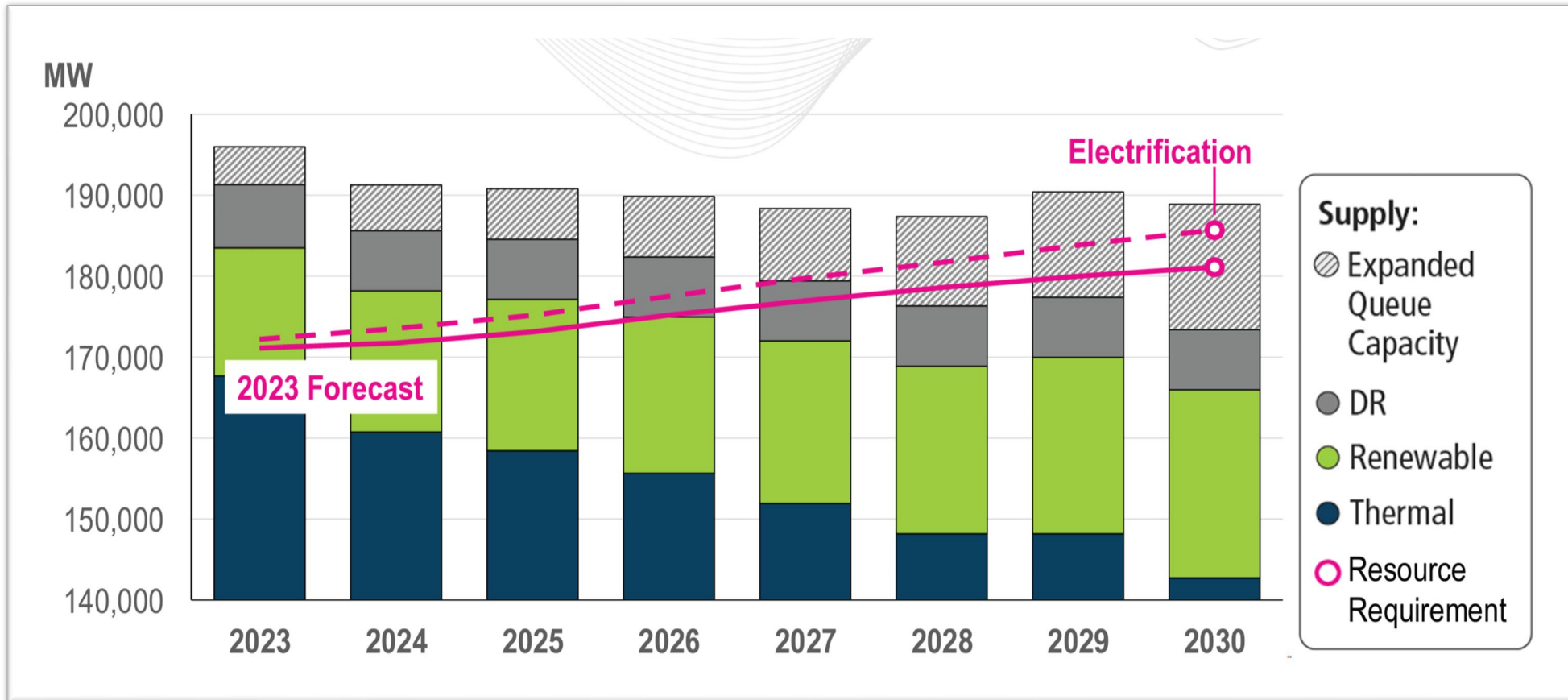
CPP 2.0 milestones

- Carbon rule finalized 2024
 EPA’s current schedule is to finalize the rule in April 2024.
- State implementation plans (SIPs) submitted to EPA 2026
 States must develop and submit plans within 2 years after the rule is finalized, which gives utilities a very short window of time to make retirement or compliance decisions.
- EPA approval or disapproval 2027
 EPA has 1 year to approve or disapprove SIPs. Disapproval followed by submission of another plan would mean utilities have even less time to comply and make decisions.
- Compliance deadline 1/1/2030
 Utilities have less than 3 years to comply.
- **Coal retirement categories (compliance begins 1/1/2030 for all four categories)**
 - Agree to routine Operations & Maintenance..... Retire by 2032**
 - Limit Capacity Factors to 20% Retire by 2035**
 - Co-fire with 40% natural gas Retire by 2040**
 - Install Carbon Capture No retirement**

U.S. coal capacity (GW). 2011 and 2023 capacities are from DOE/EIA. 2030 and 2035 capacities are EPA projections that reflect the proposed carbon rule.



PJM is losing its thermal (dispatchable) generation



Source: PJM Energy Transition: Resource Retirements, Replacements and Risks. 2/23/2023

Reliability attributes

Grid operators are concerned about maintaining reliability attributes as the grid transitions. MISO is considering six reliability attributes. The coal fleet is a “strong provider” of five.*

- Fuel assurance
- Availability
- Long duration at high output
- Rapid startup
- Ramping
- Voltage stability

*MISO “System Attributes Stakeholder Workshop,” September 21, 2022, and “Mind the Gap – OMS Resource Adequacy Summit,” August 8, 2022.

Increased electricity generated nationwide during Elliott

Increased electricity generation from natural gas was limited in some regions by lack of fuel. In PJM, for example, natural gas was able to provide only 2% of the additional electricity required because of Elliott, compared to 47% from coal.

38% from coal nationwide

Increased additional electricity generation from coal fleet by ISO region:

47%

13-State PJM
Interconnection

39%

14-State Southwest
Power Pool (SPP)

37%

15-State Midcontinent
Independent System
Operator (MISO)

PJM proposed capacity accreditation for 2026 / 2027

	Summer	Winter
Thermals (Overall)*	95%	78%
Nuclear*	98%	96%
Coal*	89%	86%
Natural Gas CC*	97%	76%
Natural Gas CT*	98%	63%
Onshore Wind	9%	36%
Offshore Wind	19%	2%
Solar Fixed Panel	19%	2%
Solar Tracking Panel	32%	2%

*Does not yet reflect the impact of planned & maintenance outages.

Solutions

- Support legal challenges by attorneys general and other parties to EPA regulations.
- Participate as a litigant in challenging EPA regulations that put grid reliability at risk.
- Build alliances to support sensible EPA policies and oppose those that are not.
- Promote and support congressional oversight of EPA regulations and grid reliability.
- Promote legislative fixes for EPA regulations and grid reliability.
- Develop and promote market reforms that value coal's reliability attributes, especially fuel security and proper accreditation. Advocate for same treatment as natural gas under the NAESB gas-electric coordination recommendations to FERC, NERC, and NARUC.
- Continue to educate grid operators, utility commissioners, FERC, and NERC about coal retirements, EPA regulations, threats to reliability, and the need for a gradual transition.