

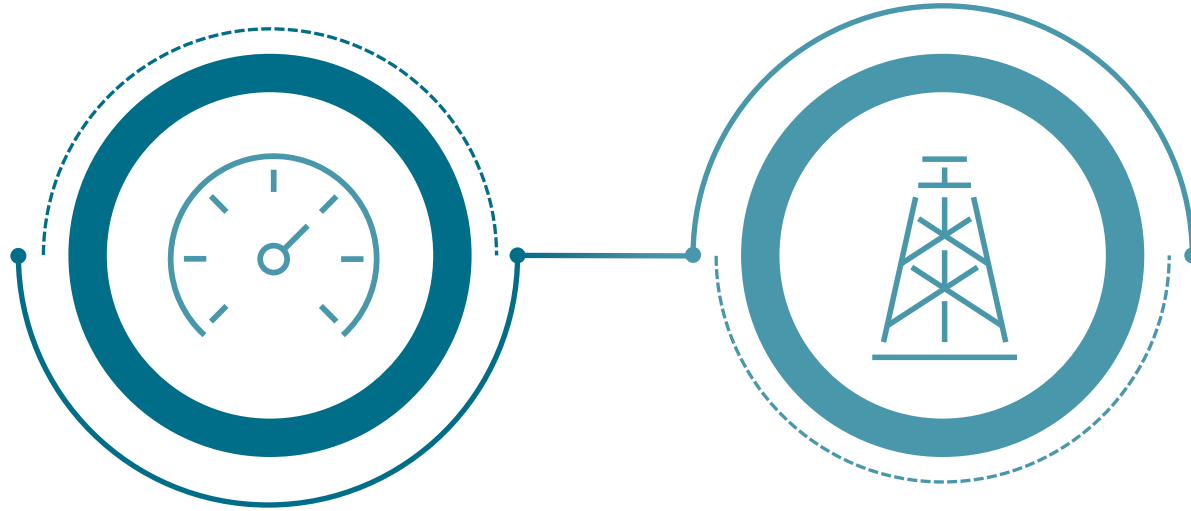
Datacenters and US Power

Ben Levitt / Associate Director / Americas Gas and Power

November 17, 2025



S&P Global Commodity Insights publishes two North American Power and Gas market outlooks



Integrated House View (IHV)

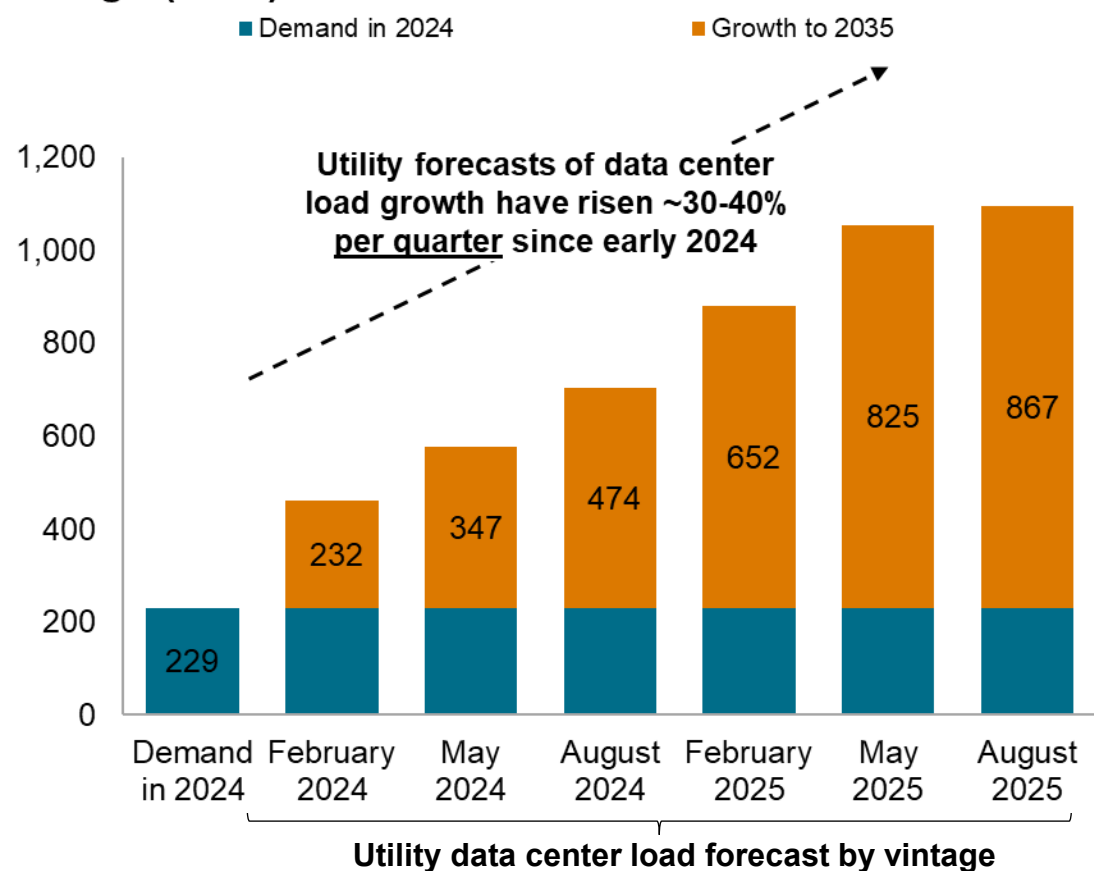
Our view of the most likely evolution of US and Canadian power markets. **Growth in large loads is *constrained* by grid capacity.**

Power Crunch

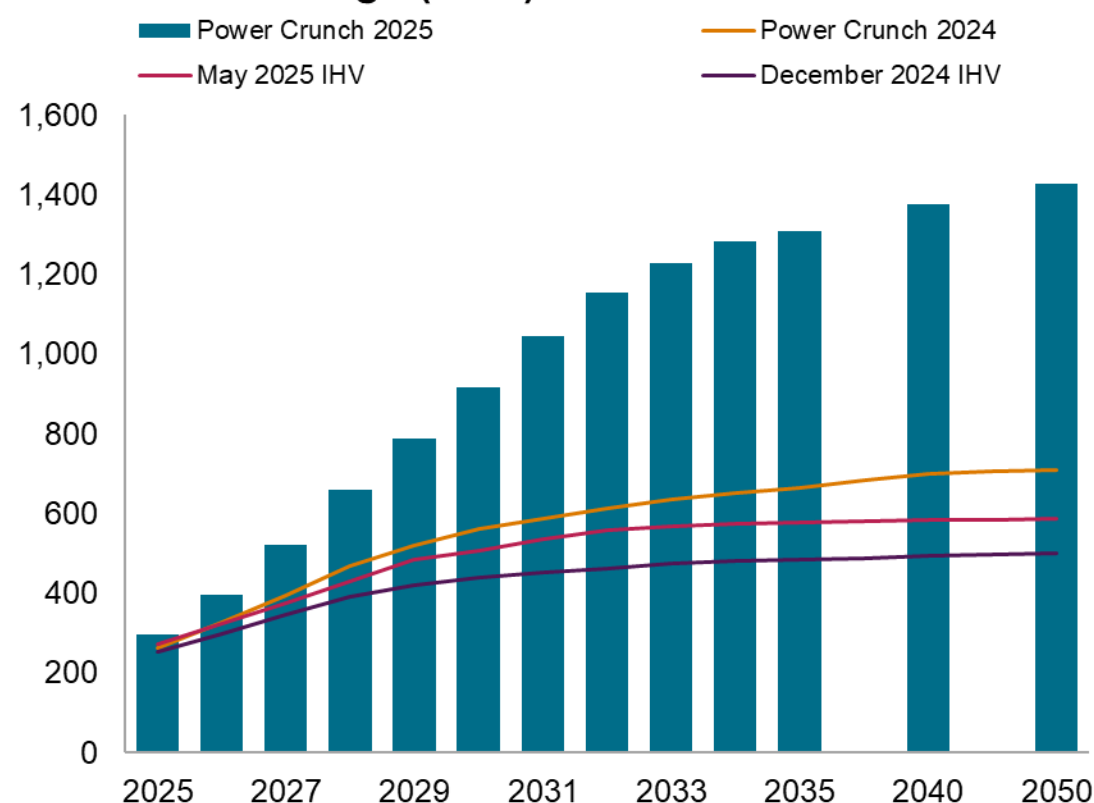
Examines three key uncertainties in the IHV, including a higher outlook for demand growth, renewable development costs, and the expansion of 'clean-firm' energy resources. **Growth in large loads is *unconstrained*.**

US power demand expectations are evolving rapidly due to datacenters

Utility forecast of data center load growth to 2035 by vintage (TWh)



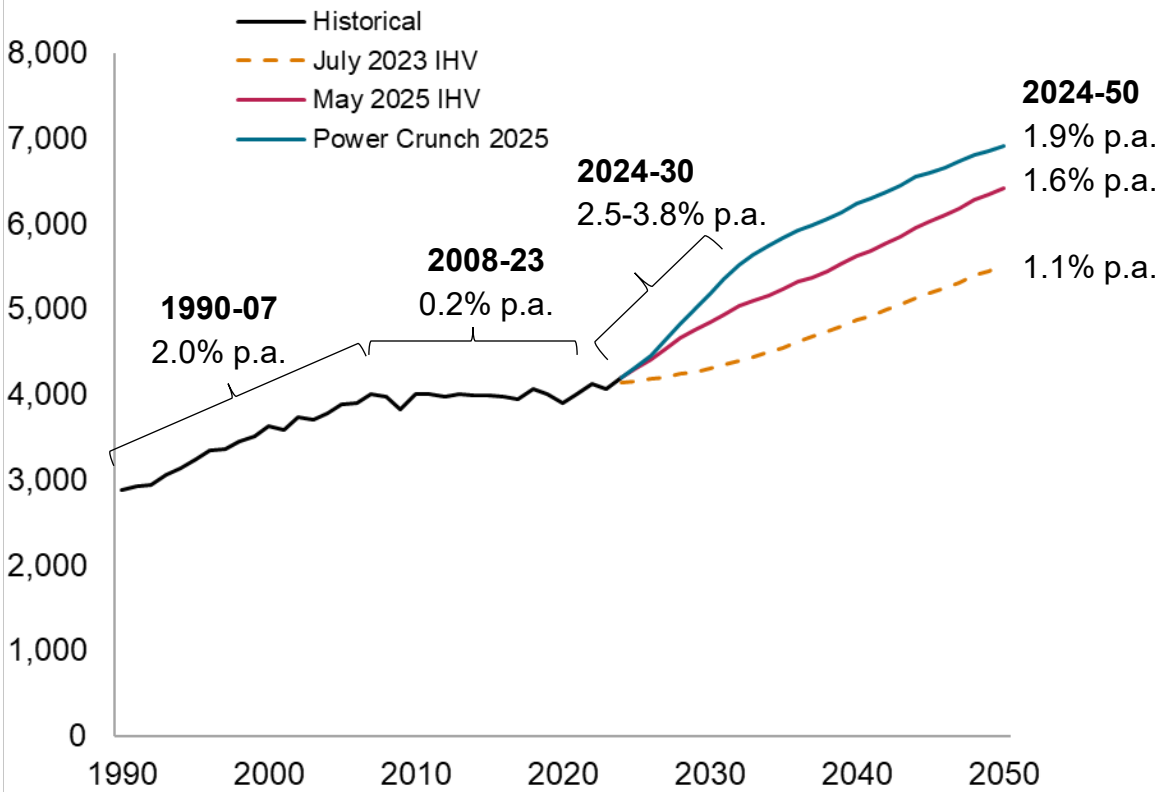
Cumulative electricity demand from data centers by outlook and vintage (TWh)



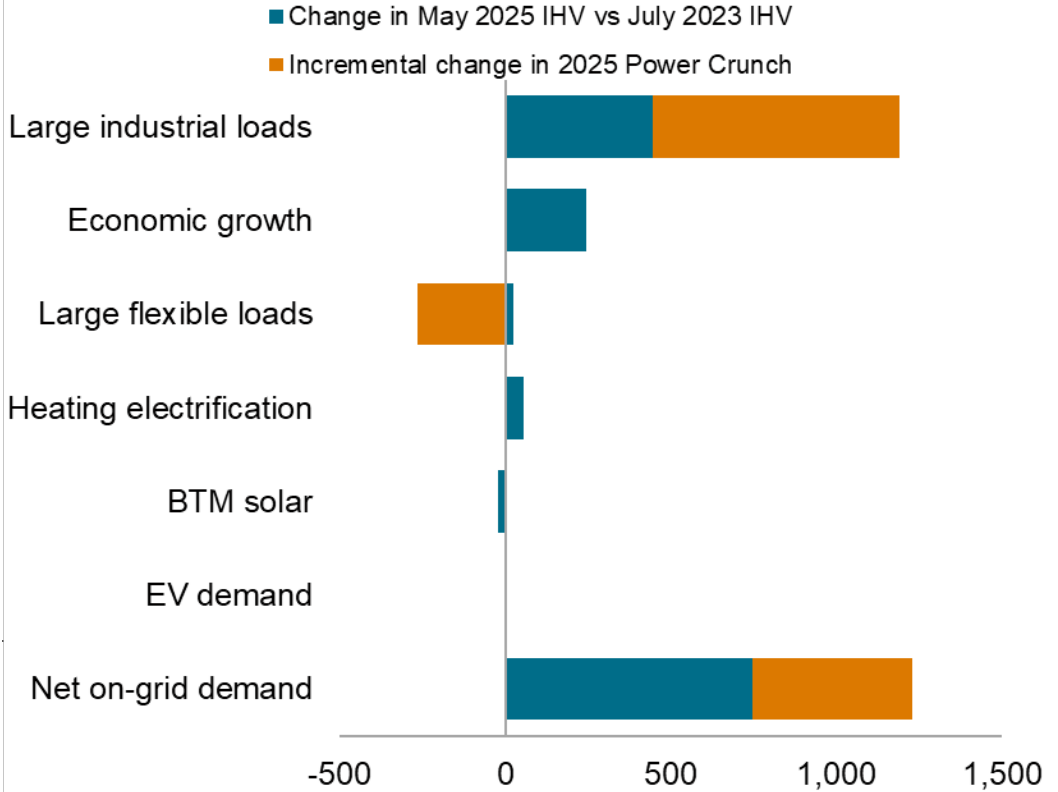
Data compiled October 2025.
Source: S&P Global Commodity Insights.
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Other industrial loads drive near-term load growth; the loss of tax credits lowers the long-term electricity demand outlook from green hydrogen

US Lower 48 net on-grid electricity demand by outlook vintage (TWh)



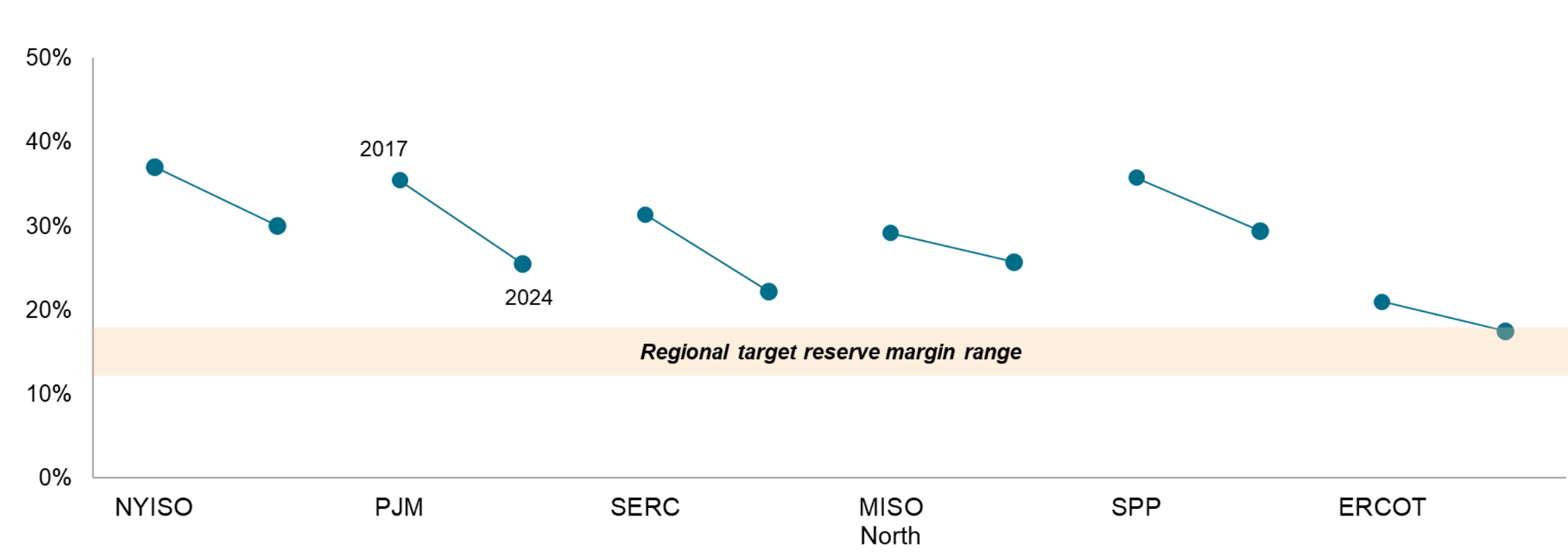
Change in US lower-48 electricity demand by outlook, relative to July 2023 IHV, 2050 (TWh)



Data compiled October 2025.
Source: S&P Global Commodity Insights.
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Surging load growth projections are adding pressure to markets that were already tightening

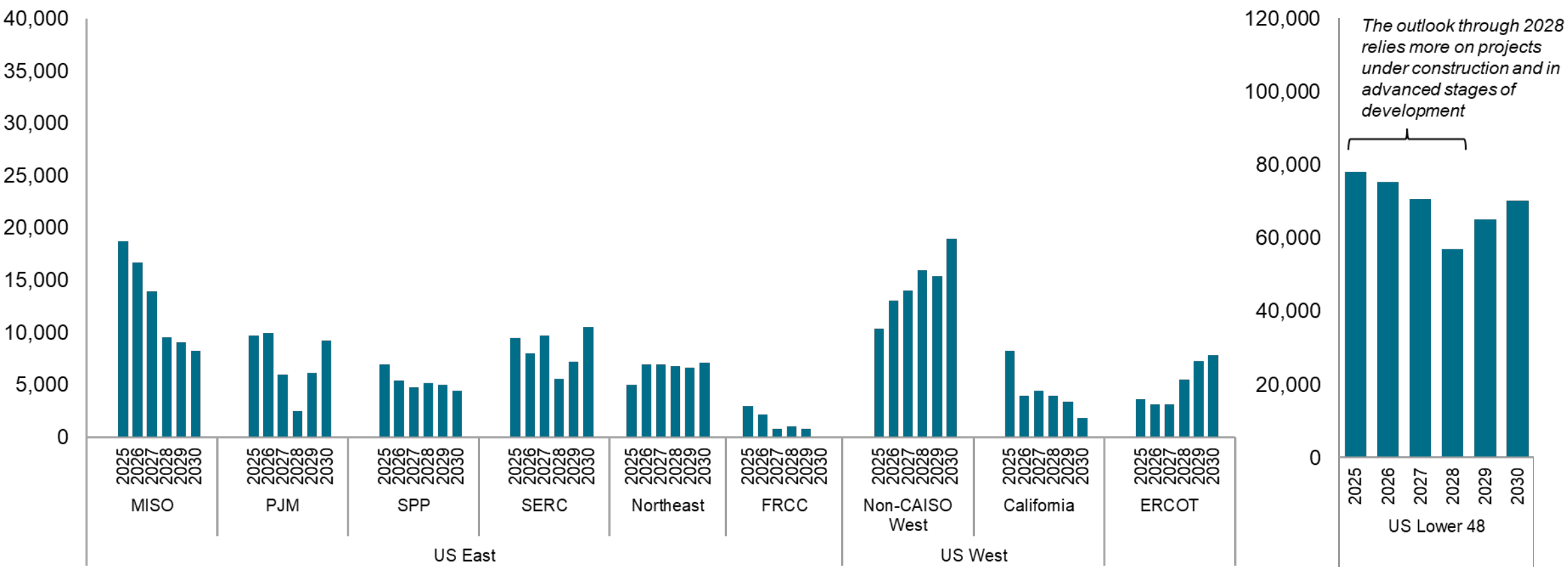
Reserve margins by select US power market, 2017 and 2024



Source: S&P Global Commodity Insights

Excluding forecast datacenter demand, excess generating capacity across the US is expected to remain at around 70 GW through 2030

IHV: Spare grid-based capacity by region, excluding datacenter demand (MW)



Data compiled October 2025.

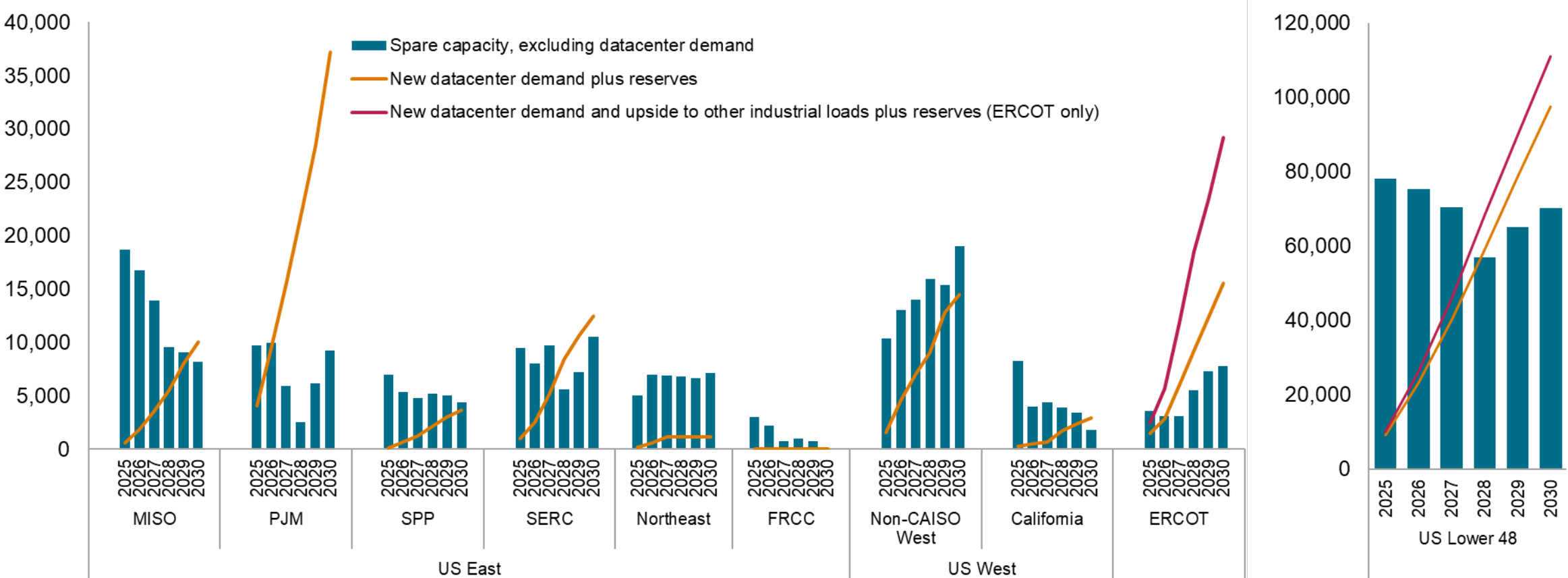
Notes: "Northeast" includes ISO New England and NYISO. In this figure, "Spare grid-based capacity" is the expected firm capacity available beyond the amount required to meet peak demand from all sectors, excluding data centers. Spare grid-based capacity reflects expectations for grid-based power supply and demand from our latest North American Power Market outlook (May 2025 Integrated House View).

Source: S&P Global Commodity Insights.

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Under an unconstrained outlook for large load growth, PJM and ERCOT face the most uncertainty around grid-based capacity availability

IHV: Spare grid-based capacity by region, excluding datacenter demand (MW)



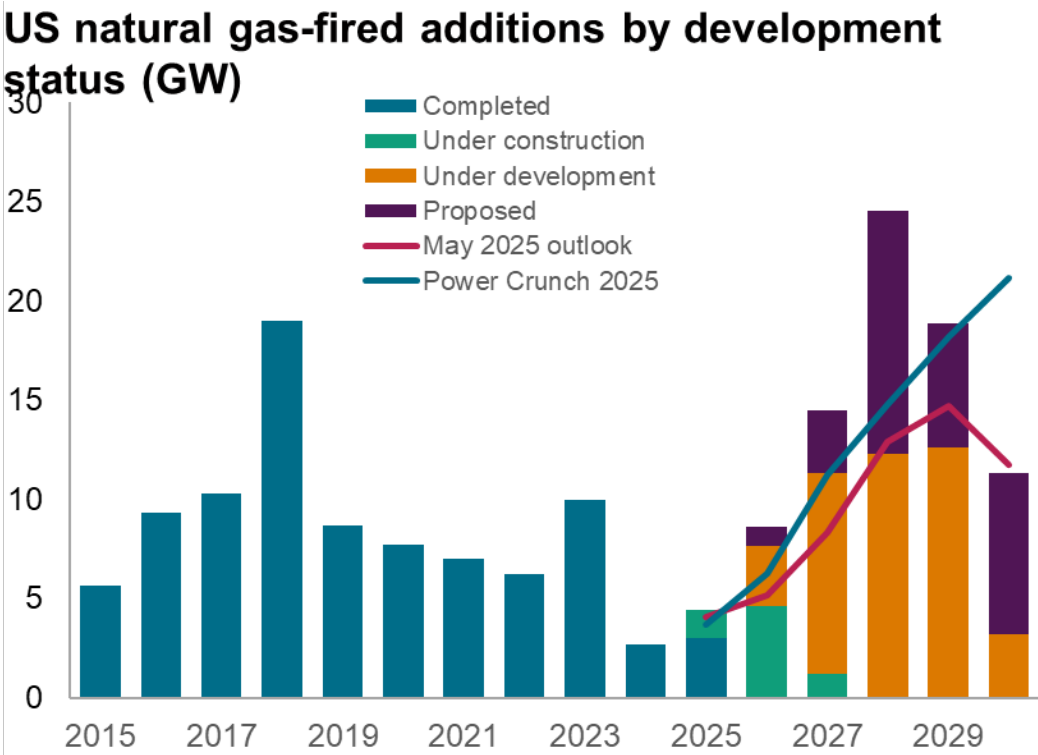
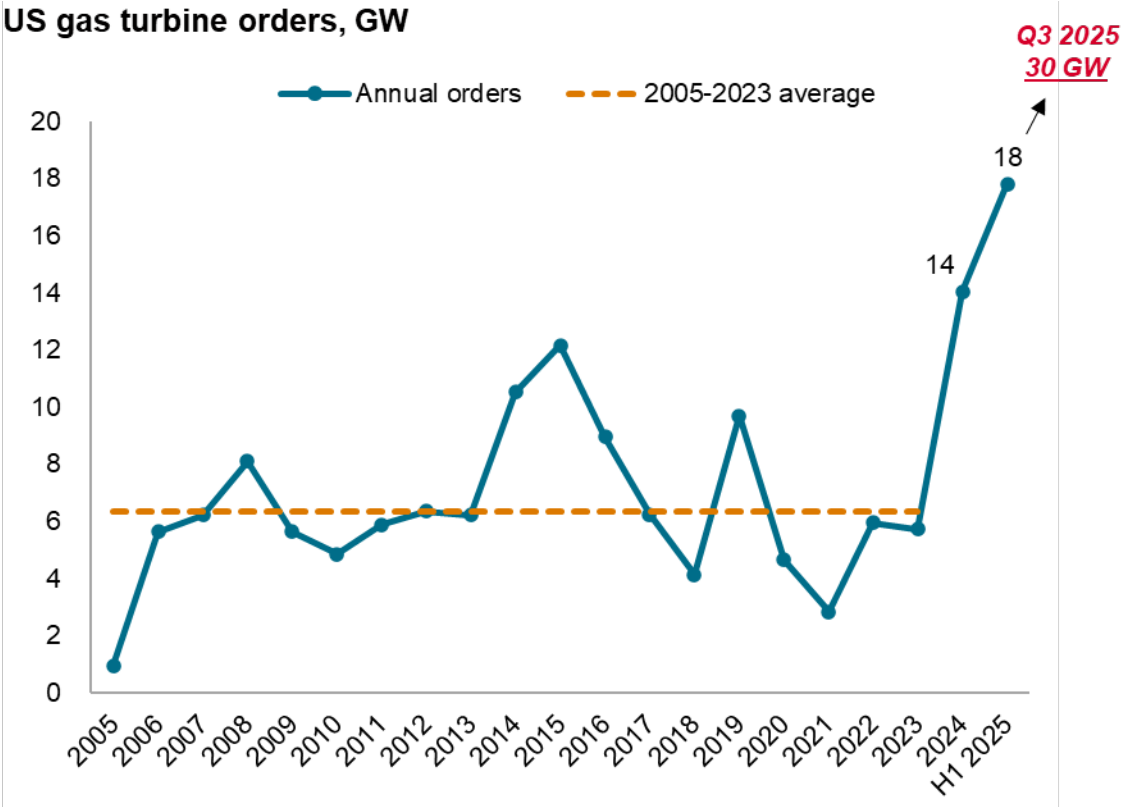
Data compiled October 2025.

Notes: "New data center demand" reflects the 451 Research outlook for US datacenter demand. "Northeast" includes ISO New England and NYISO. In this figure, "Spare grid-based capacity" is the expected firm capacity available beyond the amount required to meet peak demand from all sectors, excluding data centers. Spare grid-based capacity reflects expectations for grid-based power supply and demand from our latest North American Power Market outlook (May 2025 Integrated House View).

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Demand growth expectations have spurred a run up in orders for new gas turbines and a resurgent gas-fired project pipeline

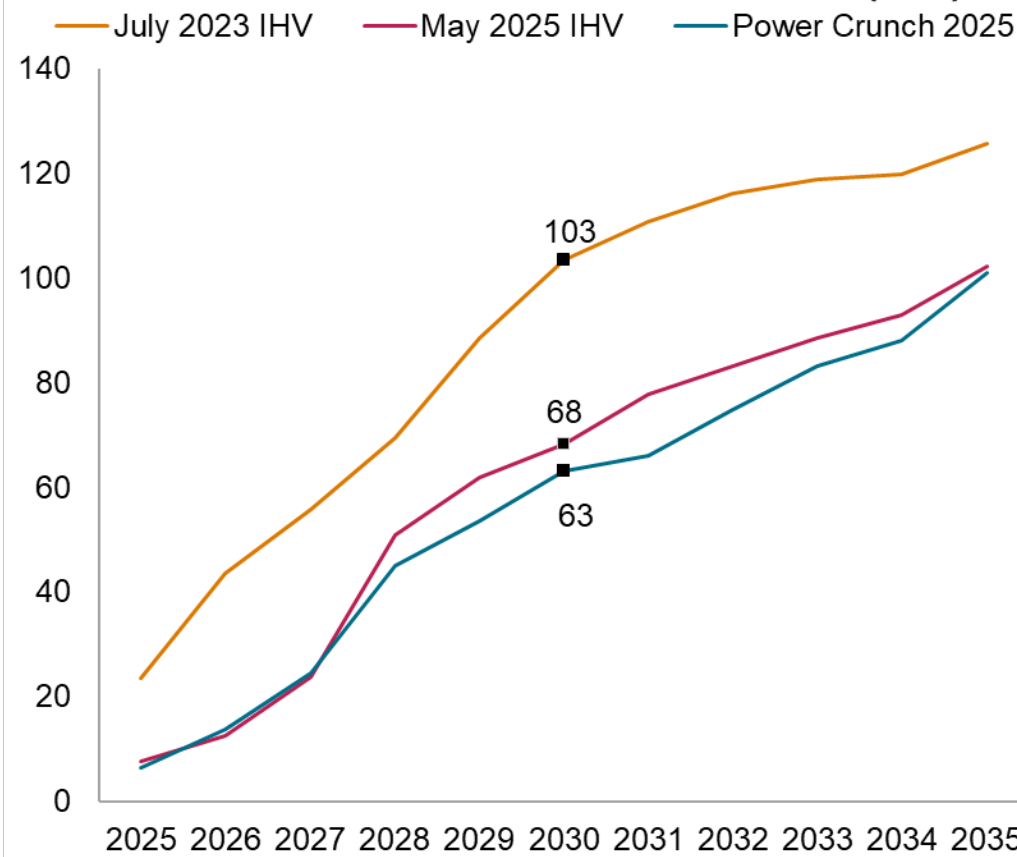


30 GW of gas turbines were ordered through Q3 2025 — 5x the annual average of the past two decades.

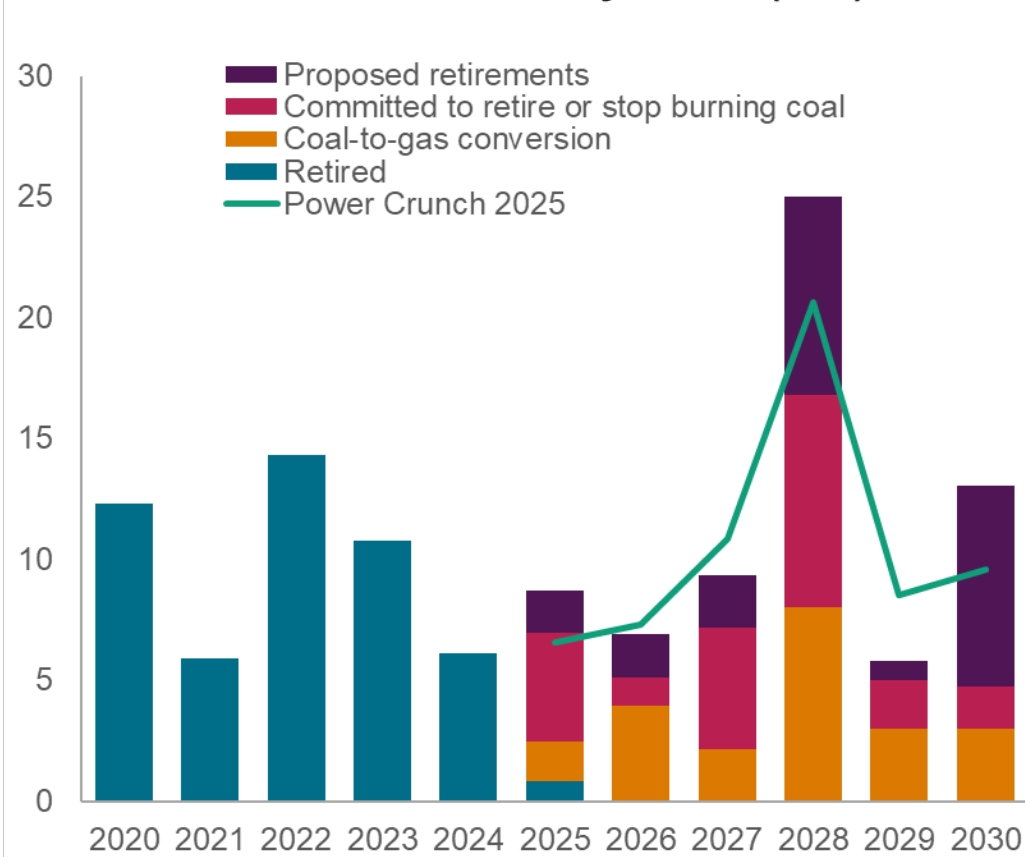
Data compiled September 2025
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In the near-term, the potential for incremental coal retirement delays beyond our base case are limited

US cumulative coal retirements from 2025 (GW)

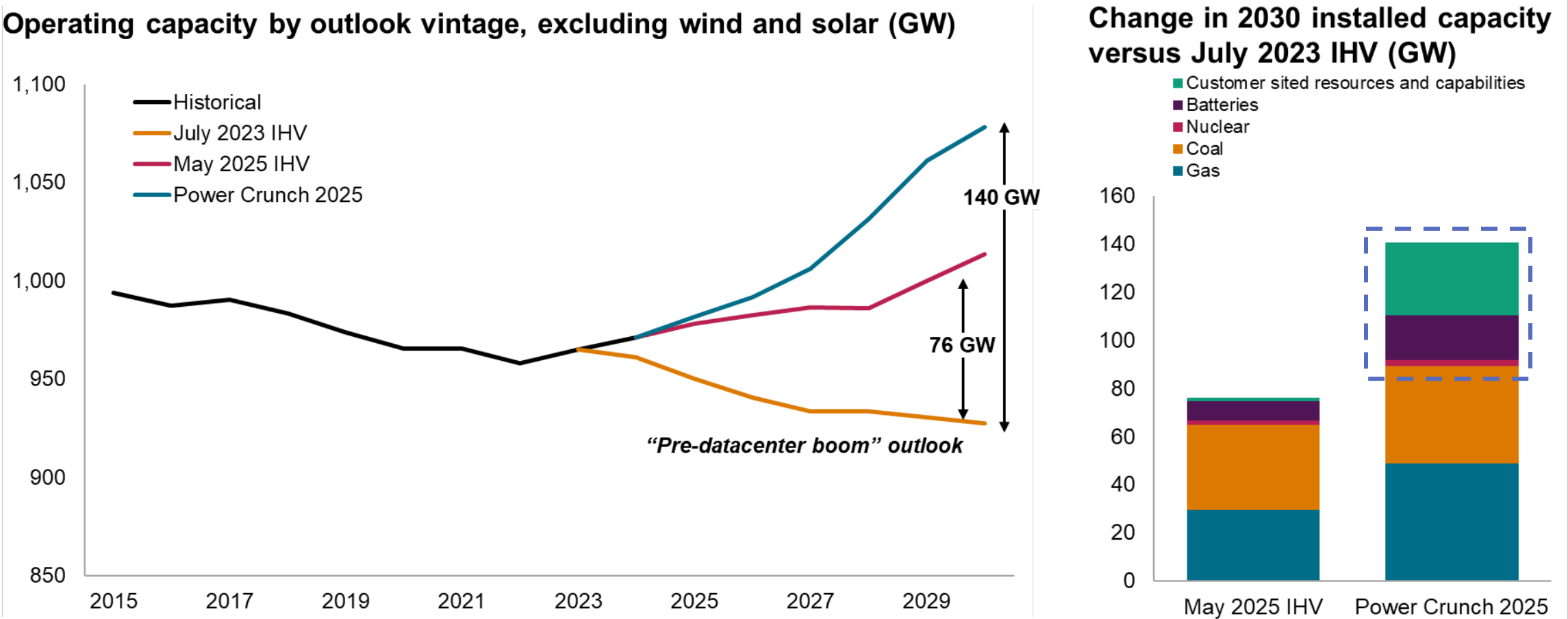


US coal retirements to 2030 by driver (GW)



Data compiled October 2025.
Source: S&P Global Commodity Insights.
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Meeting near-term load growth above our latest base case is expected to be met primarily by customer-sited resources and capabilities and batteries



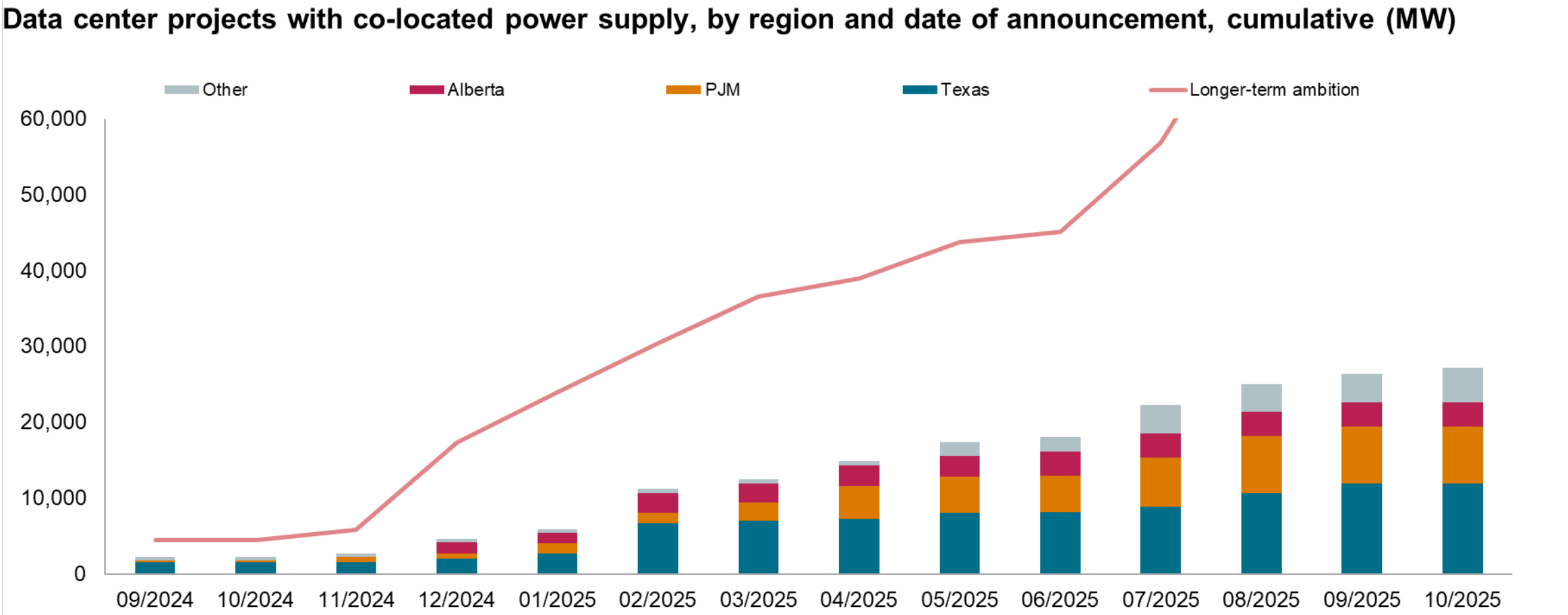
Data compiled October 2025.

Notes: "IHV" = Integrated House View. The figure compares the change in the outlook for installed capacity in GW by technology from 2024 to 2030 from the July 2023 to the May 2025 Integrated House View. Wind and solar are not included because drivers beyond demand growth, like recent federal actions and rising local opposition, have played an outsized role in shaping the near-term outlook for installed capacity since the AI boom.

Source: S&P Global Commodity Insights.

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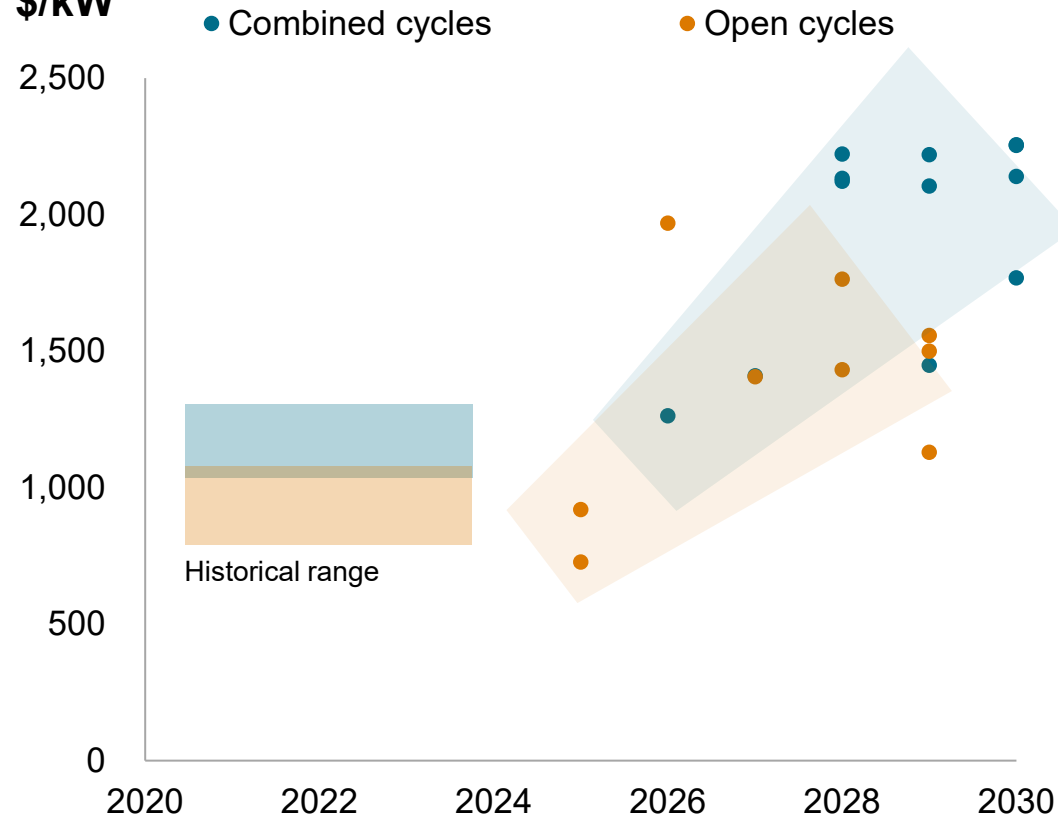
Plans to co-locate power supply with datacenters have surged in recent months



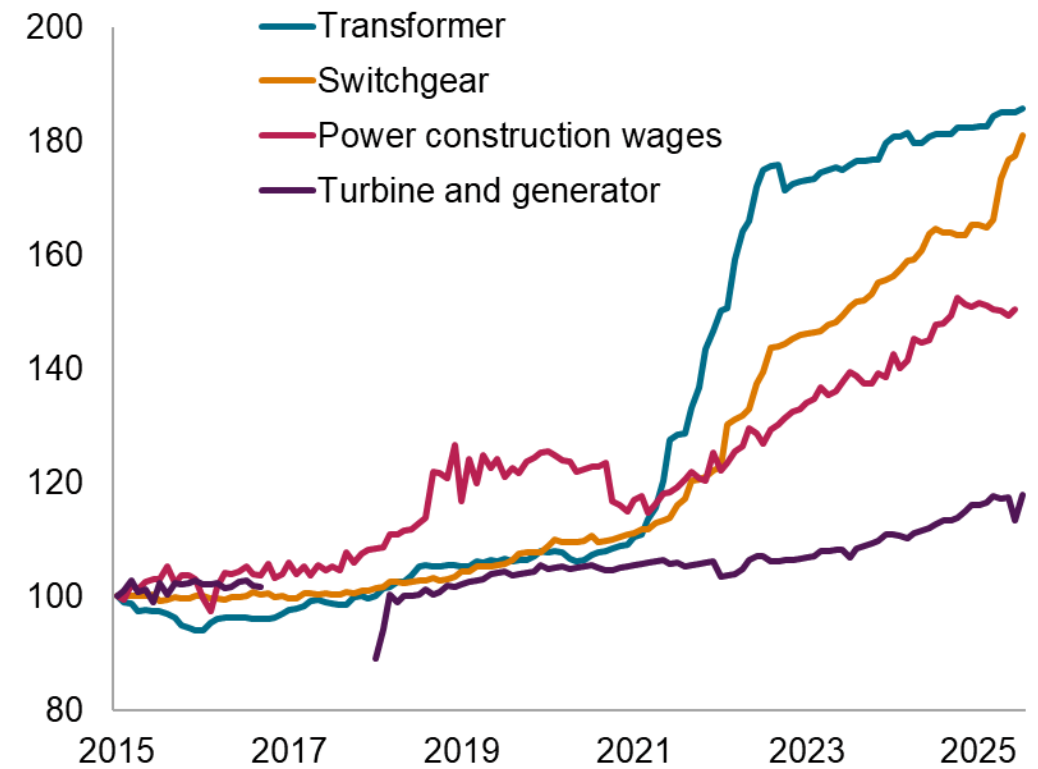
Data compiled October 2025.
Notes: "Long-term ambition" reflects the maximum data center capacity that a site could eventually support as indicated by the developer.
Source: S&P Global Commodity Insights.

The demand for new supply is already pushing costs higher with new gas plants being quoted at roughly double their prices from a few years ago

Reported costs of new gas plants by online year, \$/kW



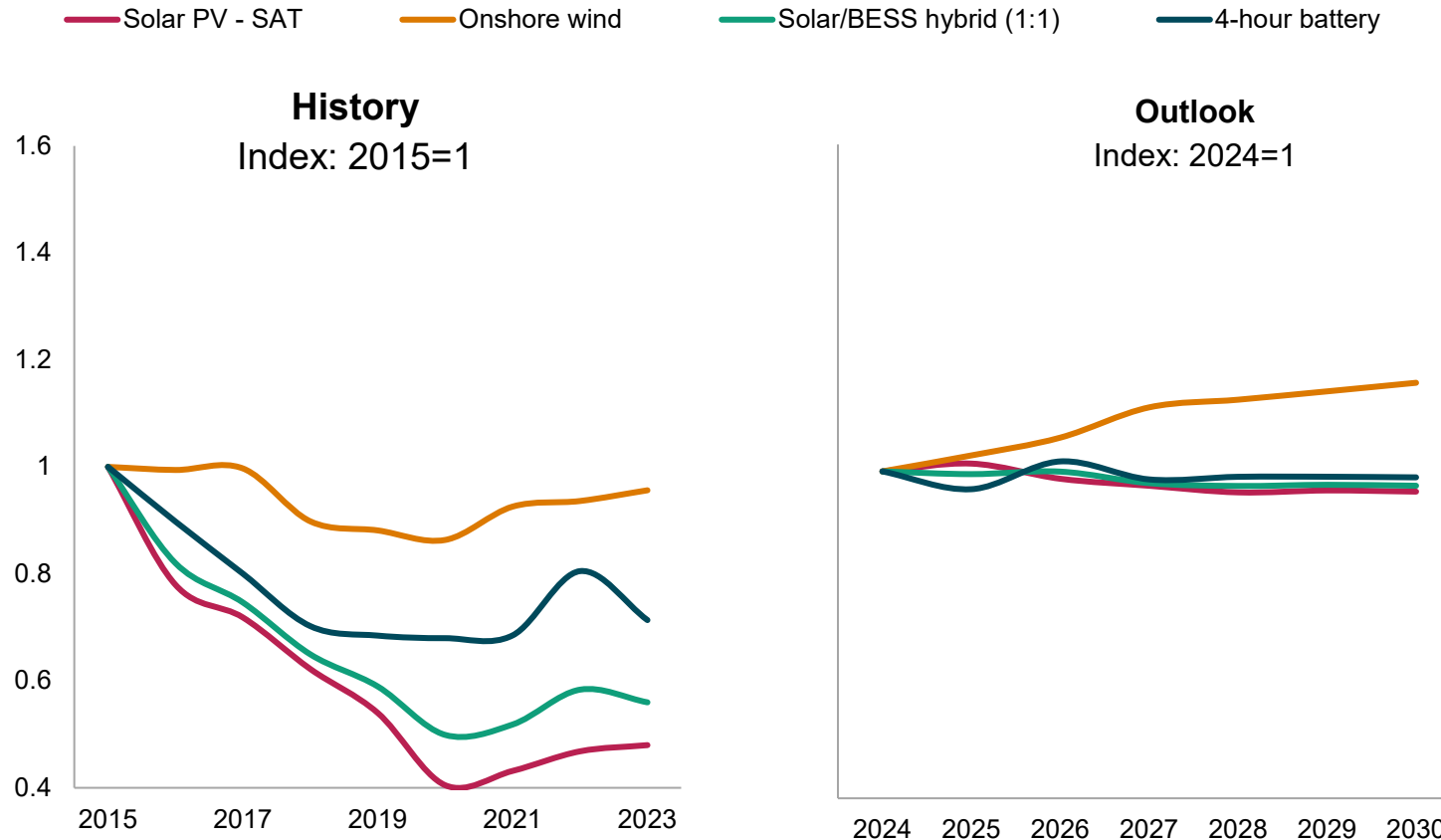
Price index for gas power plant components (2015=100)



Data compiled September 2025
Source: S&P Global Commodity Insights, US Bureau of Labor Statistics.
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Capital cost declines for renewables and storage are expected to slow or reverse in the face of tariffs and rising soft costs

New resource capital cost index, real dollars, 2015-2023 versus 2024-2030

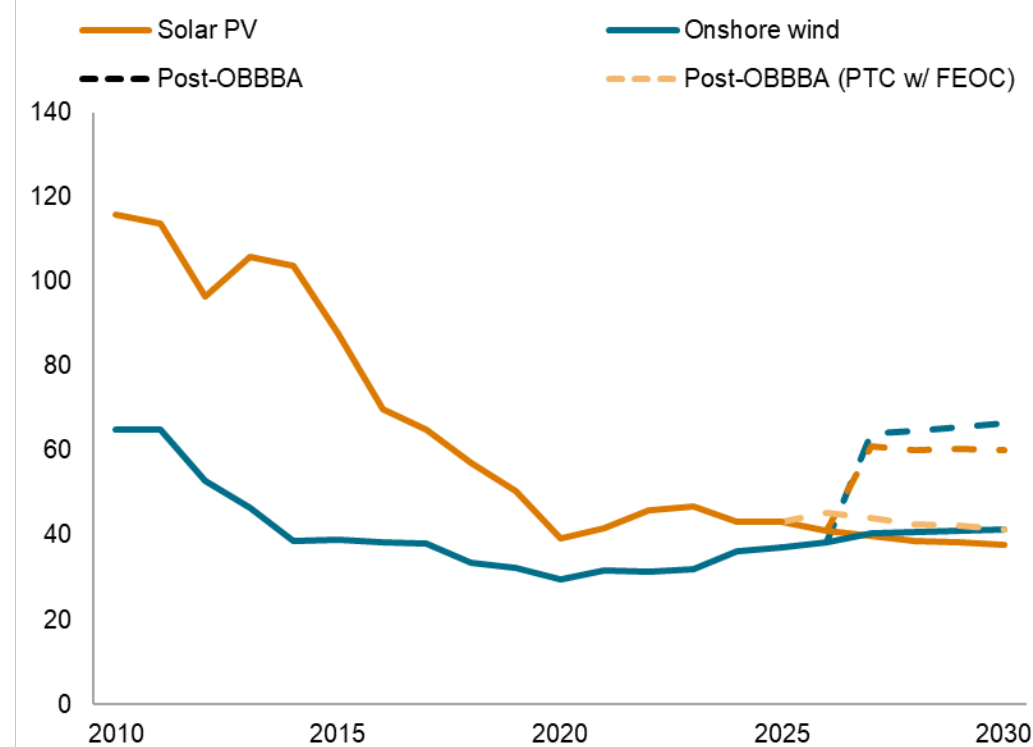


- Falling module prices have driven much of **solar PV's** overall capital cost declines over the past decade but now face headwinds in the form of tariffs on imports and a shift to premium-priced domestically manufactured components. Moreover, the historical decline in solar hardware costs have raised the relative share of soft costs, which also face inflationary pressure from rising labor costs and increasing project development risk associated with queue delays and local opposition. The combination of these trends is expected to keep solar PV capex flat in real terms through the end of the decade.
- Much like solar, declining **battery storage** capital costs have been driven by falling battery module prices—largely imported from China—which now face inflationary cost pressure from tariffs. While there is potential for continued cost improvements, efforts to reshore US manufacturing mean those gains may be slow to materialize for US developers. Soft costs are also on the rise, partially outweighing module cost declines.
- Onshore wind** turbine prices drive up capex through 2027 reflecting limited competition and a focus on manufacturer profitability, while costs for construction and project development are also rising.

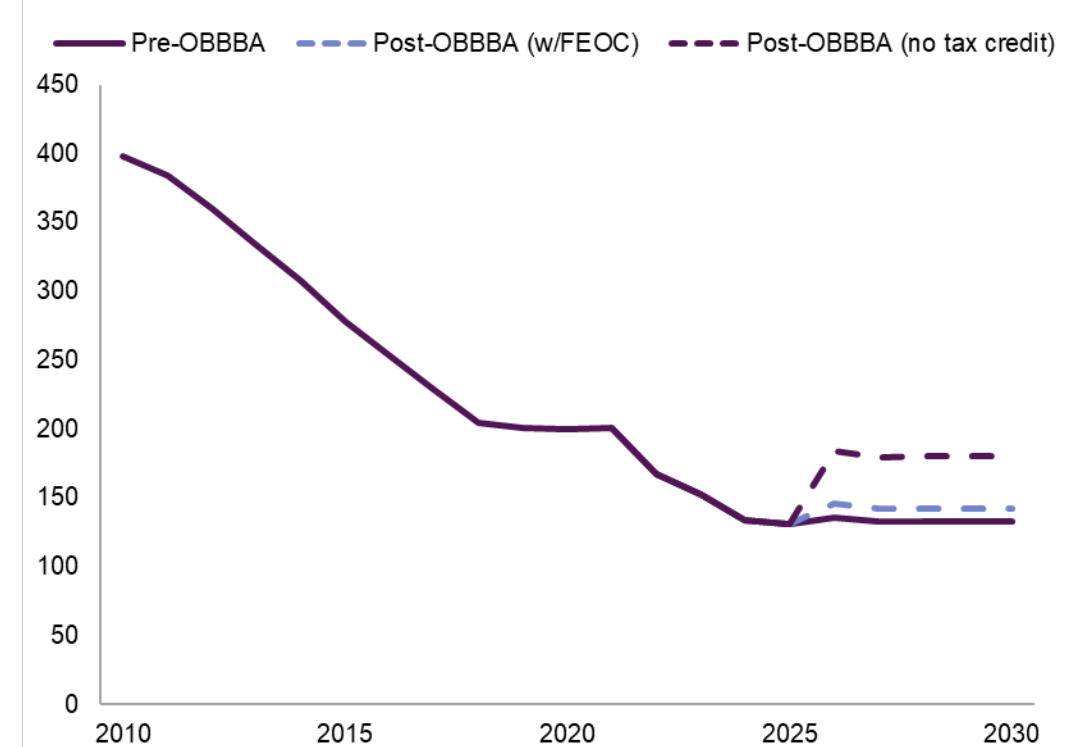
Data compiled September 2025
Source: S&P Global Commodity Insights. US Bureau of Labor Statistics.
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The loss of tax credits further compounds upward cost pressure on renewables and storage

LCOE outlook by technology (nominal \$/MWh)



Four-hour BESS LCOC outlook (nominal \$/kW-yr)



Wind and solar levelized costs rise up to 60% without tax credits. While batteries retain tax credit eligibility through 2030, there is significant uncertainty about their ability to meet new foreign entity of concern (FEOC) requirements.

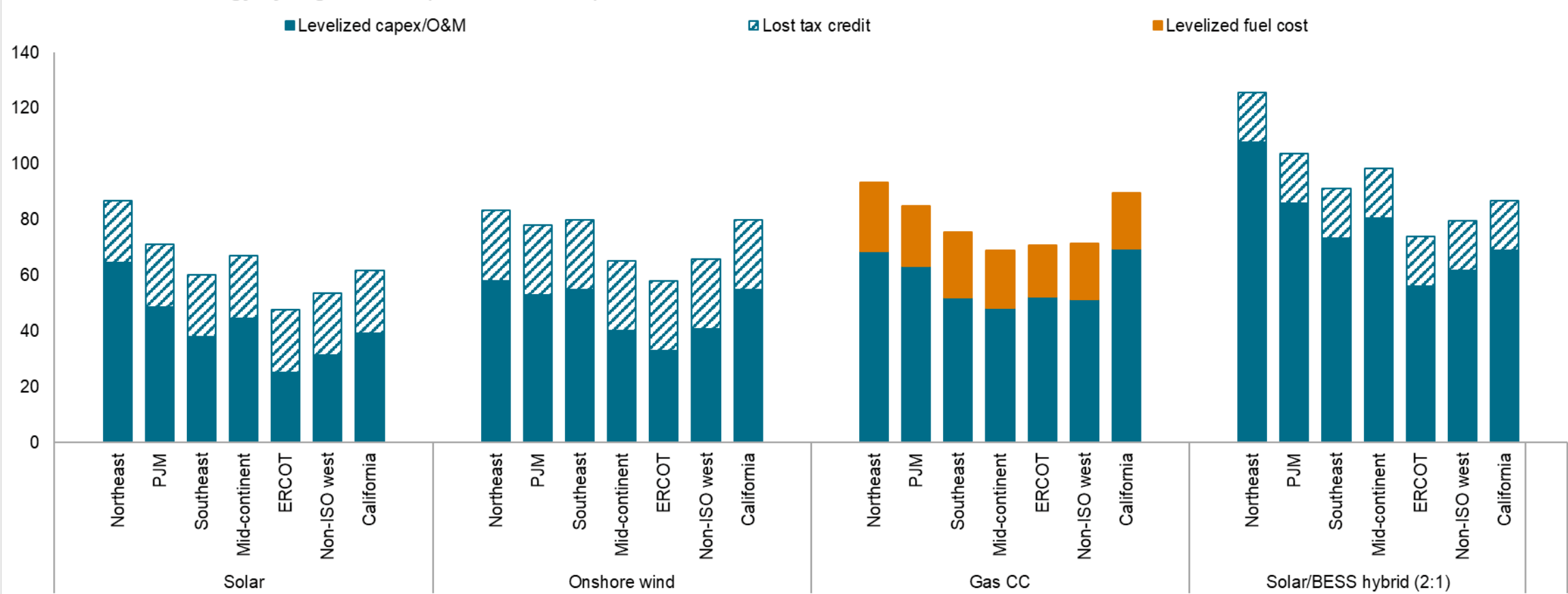
Data compiled October 2025

Notes: capacity factors: 65% gas, 25% solar, 39% wind. Dashed lines reflect the rise in LCOE if base ITC/PTC are removed

Source: S&P Global Commodity Insights.

Despite cost pressures, standalone renewables remain competitive with gas on an LCOE basis owing to gas plant cost inflation

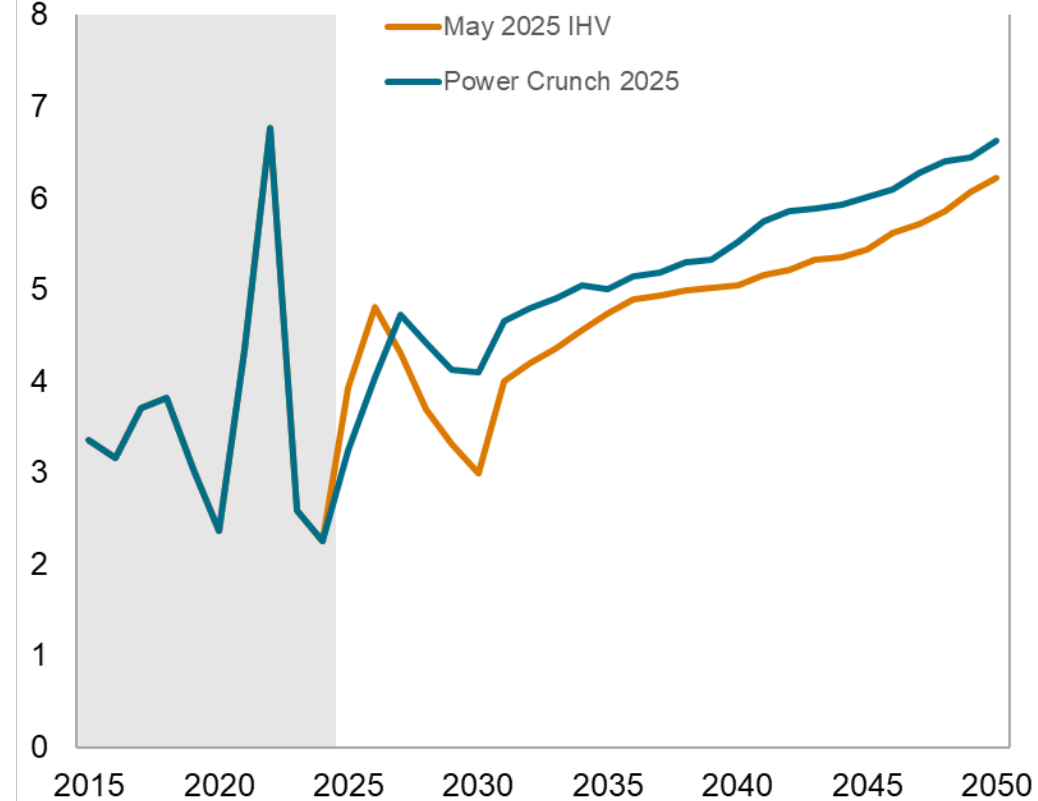
Levelized cost of energy by region, 2030 (nominal \$/MWh)



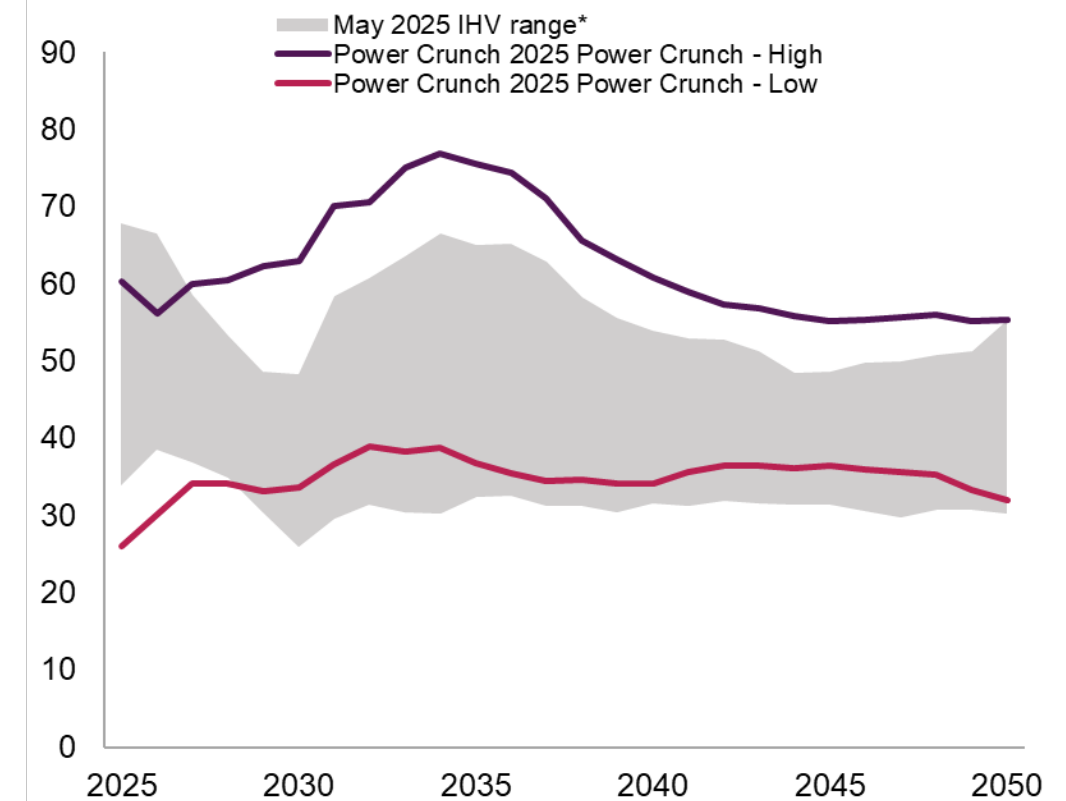
Notes: \$3.41/MMBtu gas (US average), capacity factors: 65% gas, 25% solar (US average), 39% wind (US average); Lost tax credits reflect the rise in LCOE if base ITC/PTC are removed. Solar/BESS hybrid still receives the ITC for the battery portion.
Source: S&P Global Commodity Insights.
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Rising power sector gas demand coincides with an already tightening gas market, leading to higher gas and power prices

Annual Henry Hub natural gas prices (2024 Dollars per MMBtu)



Around-the-clock power prices by outlook (2024 Dollars per MWh)



Data compiled October 2025.

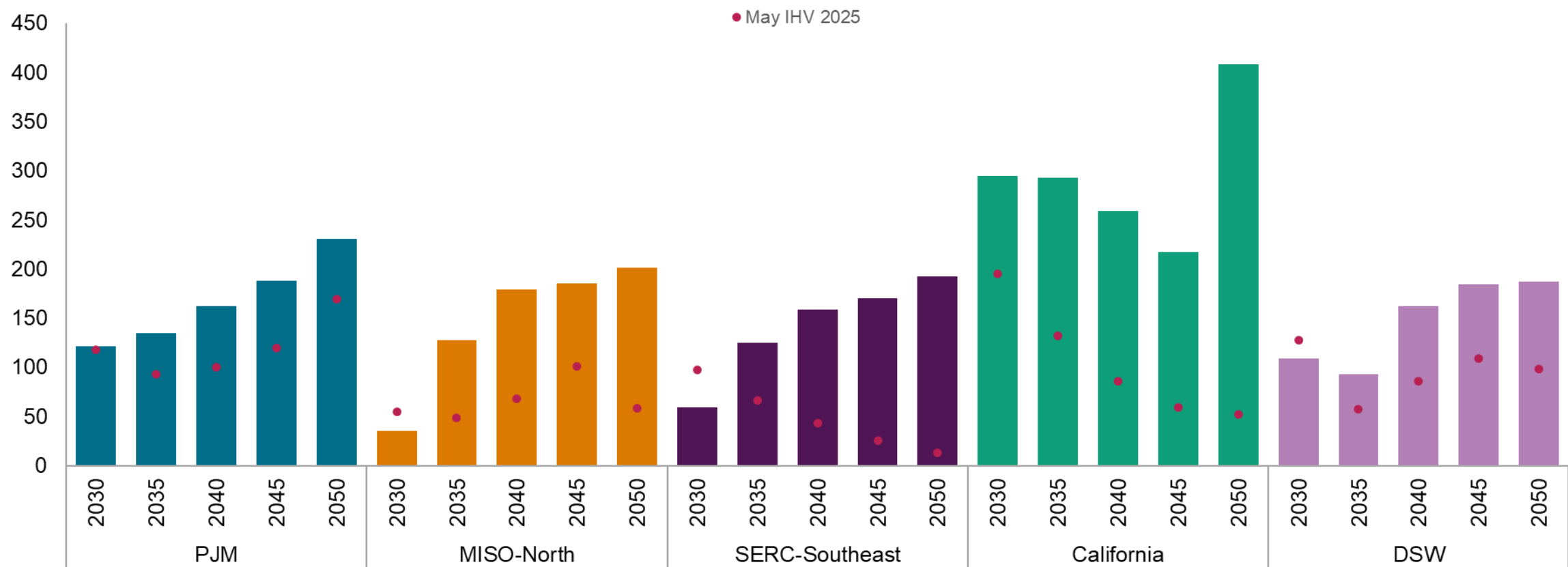
Notes: May 2025 IHV and Power Crunch ranges exclude Northern California and ERCOT West.

Source: S&P Global Commodity Insights.

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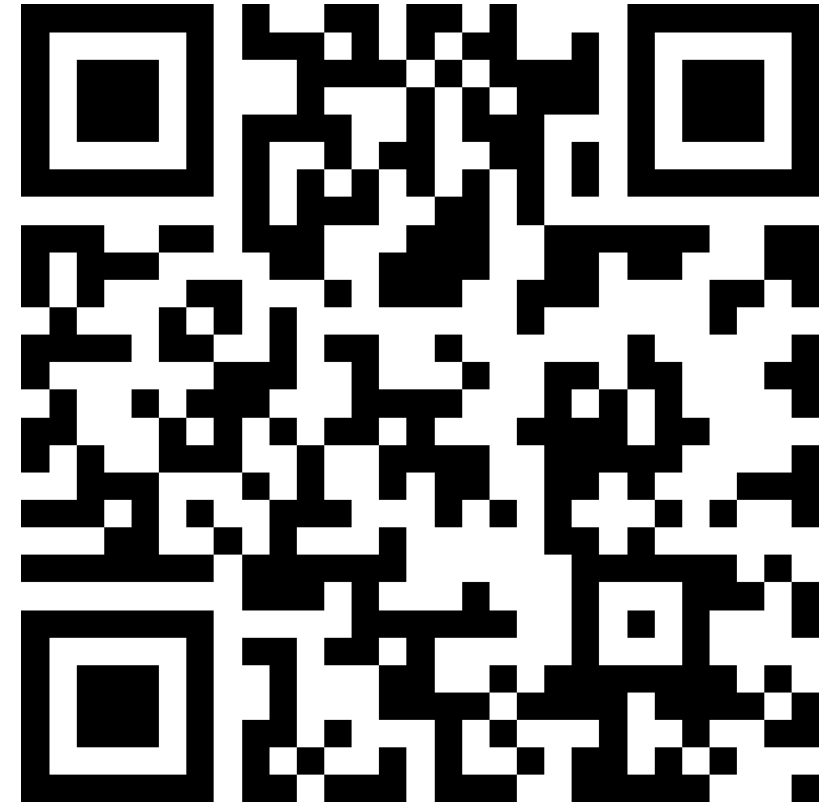
Upside risk to the capacity price outlook driven by higher load growth, higher resource costs, and loss of tax credits

Power Crunch: Capacity prices of select US markets (2024 Dollars per kW-year)



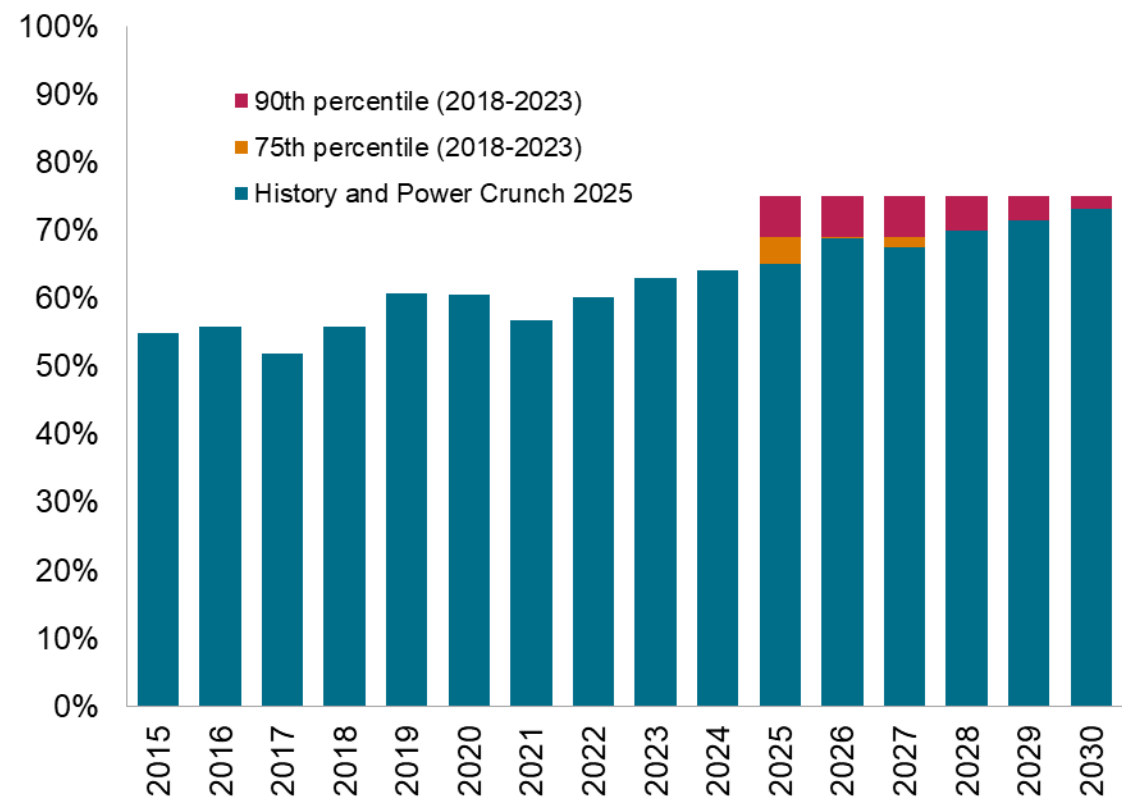
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Q&A

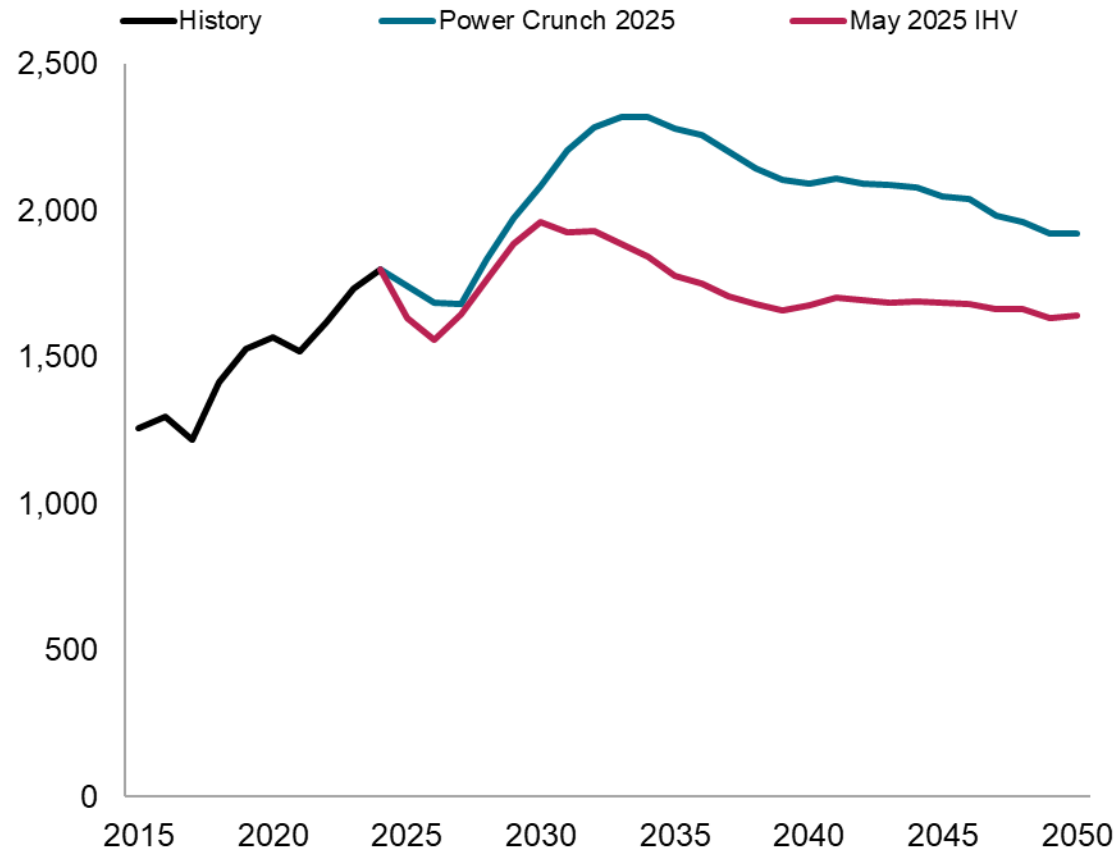


Through 2030, grid-based gas generation is constrained by available headroom in the combined cycle fleet

Power Crunch: Average gas combined-cycle capacity factor in PJM, ERCOT, SERC, and MISO: history and forecast to 2030



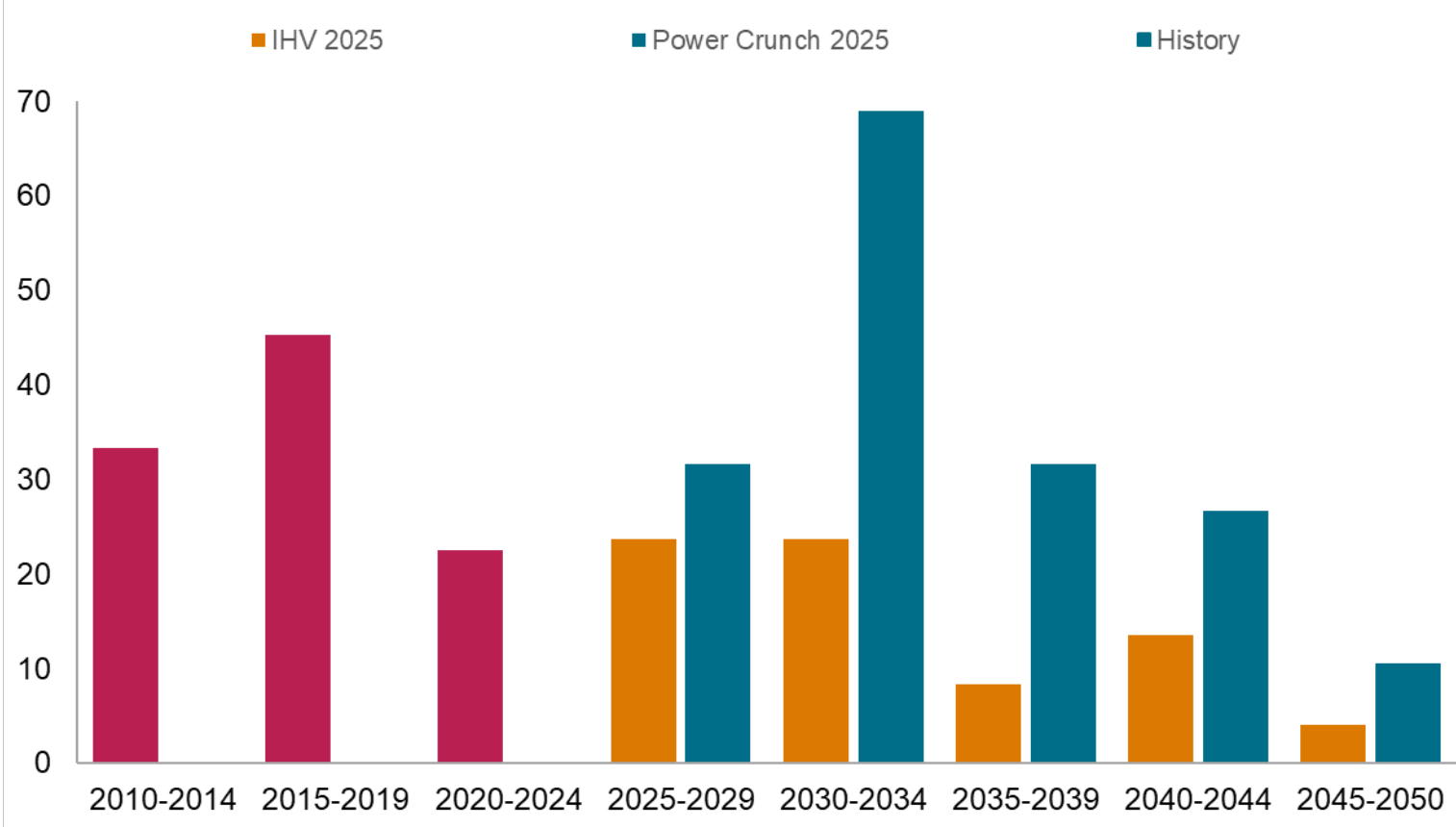
US Lower 48 natural gas generation by outlook (TWh)



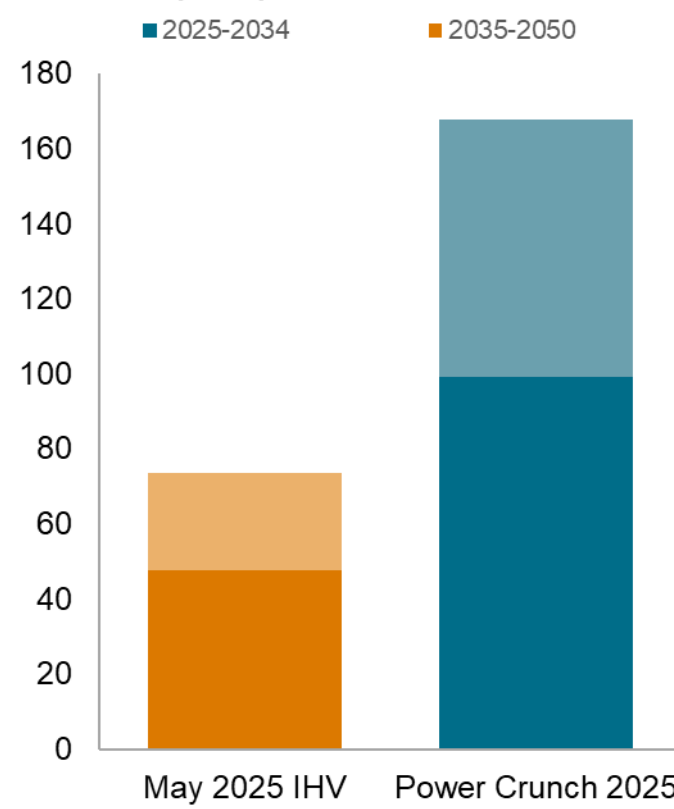
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Gas combined-cycle additions rebound starting in the late 2020s in Power Crunch

US Lower 48 gas combined-cycle capacity additions, 2010-2050 (GW)



US L48 CCGT additions by outlook (GW)



Data compiled October 2025.
Source: S&P Global Commodity Insights.
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