UNITED STATES OF AMERICA
BEFORE THE
UNITED STATES DEPARTMENT OF ENERGY

Order No. 202-25-3

REQUEST FOR REHEARING BY MICHIGAN ATTORNEY GENERAL DANA NESSEL

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Pursuant to section 313*l* of the Federal Power Act ("the Act"), 16 U.S.C. § 825*l*, Michigan Attorney General Dana Nessel, on behalf of the people of the State of Michigan, requests that the Department of Energy (Department or DOE) grant rehearing of Order No. 202-25-3 (May 23, 2025) ("Order"). The Order invoked the Department's emergency authority under section 202(c) of the Act to prevent the scheduled retirement of the J.H. Campbell power plant (J.H. Campbell) in West Olive, Michigan.

The Order is an unlawful abuse of the Department's emergency authority. Until now, the Department has reserved section 202(c) for real emergencies like natural disasters and extreme weather and has typically acted at the behest of grid operators or governmental bodies. In the Order, acting on its own motion and without notice, the Department declares that the retirement of J.H. Campbell presents an emergency. But the Order's emergency determination cannot bear even the mildest scrutiny.

The scheduled retirement of J.H. Campbell was the culmination of a carefully planned process that unfolded over four years. Under the oversight of the Michigan Public Service Commission (MPSC), Consumers Energy (Consumers) executed a plan to retire an old and inefficient facility, J.H. Campbell, and replace it largely with newer resources that would both increase Consumers' available generation capacity and save its ratepayers money. J.H. Campbell's proposed retirement was also studied carefully by the Midcontinent Independent System Operator (MISO), the regional grid operator, which determined that the facility could retire without causing reliability issues.

In the Order, the Department uses its authority under section 202(c) in a manner untethered from the need to identify a real emergency and unhindered by the statutory requirement that the actions it orders go no further than necessary to address the emergency. The result of this overreach will be unnecessary costs imposed on already-overburdened ratepayers, needless pollution emitted into Michigan and its neighboring states, and an unprecedented intrusion into the authority of states and the Federal Energy Regulatory Commission to regulate the resource adequacy of our electric grid.

I. MOTION TO INTERVENE

The Michigan Attorney General,[1] on behalf of the people of the State of Michigan, moves to intervene in this proceeding and thereby to become a party for purposes of Section 313*l* of the Act, 16 U.S.C. § 825*l*. The People of the State of Michigan have an interest in and are aggrieved by the Order in several ways. First, households and businesses in Michigan will pay higher electricity bills as a result of the Order. The retirement of J.H. Campbell and its replacement with more cost-effective resources were elements of a careful plan expected to save Michigan

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[1] *See* MCL 14.28 ("The attorney general . . . may, when in [her] own judgment the interests of the state require it, intervene in and appear for the people of this state in any other court or tribunal, in any cause or matter, civil or criminal, in which the people of this state may be a party or interested."). *See also In re Certified Question*, 465 Mich 537, 543-545; 638 NW2d 409 (2002), *Gremore v Peoples Community Hospital Authority*, 8 Mich App 56; 153 NW2d 377 (1967), and *People v O'Hara*, 278 Mich 281; 270 NW2d 298 (1936).

ratepayers nearly $600 million.[2] By ordering the continued operation of J.H. Campbell, the Order ensures that Michigan ratepayers will pay higher costs. Although the precise amounts of costs are not yet known, it is certain that Michigan ratepayers will be stuck with substantial new costs in excess of what they would have paid absent the Order.

Second, the People of the State of Michigan will suffer environmental harms as a result of the Order. J.H. Campbell is a significant source of particulate matter, nitrogen oxides, sulfur oxides, and carbon dioxide,[3] among other pollutants. By prolonging the operations of J.H. Campbell beyond its planned retirement date, the Order will increase the amount of pollution emitted in the state of Michigan, causing harms to the public health and welfare.

Third, the retirement of J.H. Campbell on May 31, 2025, was a provision agreed to as part of a settlement agreement in Michigan Public Service Commission Case (MPSC) No. U-21090, to which the Michigan Attorney General was a party. Because the Order deprives the Michigan Attorney General of the benefit of her bargain under the settlement agreement, the Michigan Attorney General will suffer a discrete and separate harm as a result of the Order.

II. BACKGROUND

A. DOE's Historical Use of Section 202(c).

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[2] *See* Michigan Public Service Commission Case No. U-21090-0867, Reply Brief of Consumers at 1 – 2, available at https://mi-psc.my.site.com/sfc/servlet.shepherd/version/download/0688y0000032ZSXAA2.

[3] *See In the Matter of the Application of Consumers Energy Co. for Approval of Its Integrated Res. Plan Pursuant to Mcl 460.6t & for Other Relief.*, No. U-21090, 2022 WL 2915368, at *73 (June 23, 2022).

In the past, the Department has used section 202(c) sparingly. The Department has used this authority only in response to concrete, particularized emergencies, and subject to limitations to ensure that the Department's reach extends no further than necessary to address the emergency at hand.

Between enactment of the Department of Energy Organization Act in 1977, Pub. L. No. 95-91, and the end of last year, the Department appears to have used section 202(c) nineteen times, not counting amendments and extension orders. DOE's first usage of section 202(c) came in response to the California Energy Crisis in 2000.[4] That order was followed by two others directing the operation of the Cross-Sound Cable, a submarine transmission line connecting New York and Connecticut that was complete but that had been delayed from entering service due to environmental permitting issues.[5] But by far the most common usage – comprising 13 of 19 instances – has been in response to extreme weather events such as hurricanes,[6] extreme cold,[7] and extreme heat.[8] In each of these weather-driven cases, the exercise of emergency power was requested by the relevant system operator or responsible utility, or both.

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[4] DOE, *Order Pursuant to Section 202(c) of the Federal Power Act* (Dec. 14, 2000). Section 202(c) was used by the Federal Power Commission prior to the Department of Energy Organization Act's creation of DOE. Those uses were generally limited to orders directing interconnection as a result of discrete and sudden emergencies or war. *See* Benjamin Rolsma, *The New Reliability Override*, 57 U. Conn. L. Rev. 789, 822 (2025).

[5] *See* DOE Order No. 202-02-1 (Aug. 16, 2002); DOE Order No. 202-03-01 (Aug. 14, 2003).

[6] *See* DOE Order Nos. 202-05-1 & -2 (Sept. 28, 2005) (response to Hurricane Rita); DOE Order No. 202-08-1 (Sept. 14, 2008) (Hurricane Ike); DOE Order No. 202-20-1 (Aug. 27, 2020) (Hurricane Laura); DOE Order No. 202-24-1 (Oct. 9, 2024) (Hurricane Milton).

[7] *See* DOE Order No. 202-21-1 (Feb. 14, 2021); DOE Order No. 202-22-3 (Dec. 23, 2022); DOE Order No. 202-22-4 (Dec. 24, 2022).

[8] *See* DOE Order No. 202-20-2 (Sept. 6, 2020) (responding to extreme heat in California); DOE Order No. 202-21-2 (responding to extreme heat, wildfires and drought in California); DOE Order Nos. 202-22-1 & 2 and amendments (same).

And in each, DOE carefully limited its remedy to ensure that generation facilities were only ordered to run in circumstances necessary to address the emergency and in a manner so as to minimize any conflict with environmental requirements.[9] DOE also limited the duration of those orders to the minimum period necessary to address the emergency, often shorter than 10 days.[10]

Prior to the Order, DOE had used section 202(c) on three occasions to delay the retirement of generation facilities.[11] These cases had key features in common. In each: (i) the order was requested by a system operator or governmental body; (ii) the generation facility had ceased or would soon cease operation due to an inability to comply with environmental laws; (iii) the request aimed to address a concrete and particularized emergency threatening an imminent loss of load; and, (iv) DOE tailored its order to go no further than necessary to address the emergency.

The first such instance came in 2004, when the District of Columbia's Public Service Commission requested an order directing the continued operation of a power plant located in Alexandria, Virginia, owned by the Mirant Corporation (Mirant). After its state regulator found the plant to be out of compliance with its air permit, Mirant abruptly announced that the plant would close.[12] The D.C. Public Service Commission, supported by the local utility, PEPCO, explained that the Mirant facility

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[9] *See supra* notes 3 – 5.

[10] *Id.*

[11] Nor did the DOE's predecessor agency, the Federal Power Commission, use section 202(c) to delay retirement of any generation units between the section's enactment in 1935 and the formation of DOE in 1977. *See* Rolsma, 57 U. Conn. L. Rev. at 843-46.

[12] DOE Order No. 202-05-3 (Dec. 20, 2005) at 1 (explaining that Mirant provided emissions information to its state regulator on August 19, 2005, the regulator demanded immediate action that same day, and Mirant decided to cease operations on August 24).

directly powered downtown D.C. and that, without it, critical federal infrastructure faced an unacceptable risk of blackout.[13] Before acting on the request, the Department commissioned an analysis from the Oak Ridge National Laboratory that confirmed the threat that the plant's closure would pose to reliability in D.C.[14] Based on that study, and based on the severity of the harm that could result from a prolonged power outage to downtown D.C., the Department issued an order directing the continued operation of the Mirant facility.[15] The Department took pains, however, to limit its order to go no further than necessary to address the emergency. The Department directed Mirant to maintain the facility's capacity to respond when needed, but only ordered it to run when one or both of the 230 kV transmission lines serving downtown D.C. were out of service.[16]

Twelve years later, in 2017, the Department received a request from the Grand River Dam Authority (GRDA), an Oklahoma state agency, to direct the continued operation of Unit No. 1 at the Grand River Energy Center. GRDA explained that the Grand River Energy Center was needed to provide dynamic reactive power support to the local grid, a fact confirmed by the region's Reliability Coordinator, the Southwest Power Pool (SPP). GRDA explained, however, that it would be unable to provide reactive power without action from DOE. Unit No.1, the subject of the request, had been ordered to close by an Administrative Order of the Environmental Protection Agency. Unit No. 2 had been struck by lightning and was under repair.

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[13] *Id.* at 2.
[14] *Id.* at 3 – 4.
[15] *Id.* at 5 – 8.
[16] *Id.* at 10 – 11.

And, construction of the new Unit No. 3 had been delayed because flooding in Louisiana interfered with the fabrication of essential project materials.[17] The Department granted GRDA's request, ordering Unit No. 1 to remain in operation for 90 days or until Unit No. 2 or Unit No. 3 were brought online, whichever came first.[18] The Department strictly limited its remedy, directing GRDA only to provide "dynamic reactive power support and not real power generation, and only when called upon by SPP for reliability purposes."[19]

Later that year, the Department received a pair of requests from PJM and Dominion Virginia (Dominion) to direct the continued operation of Units 1 and 2 of the Yorktown Power Station. PJM and Dominion explained that, based on PJM load flow studies, these units were necessary to prevent uncontrolled power disruptions and shedding of critical loads in the North Hampton Roads area east of Richmond.[20] DOE issued an order directing Dominion to maintain operation at the two units, but to dispatch those units "only when called upon by PJM for reliability purposes."[21] DOE later extended the order several times due to the delayed completion of the transmission line needed to resolve the reliability issue. In doing so, DOE cited the "imminent" risk of load-shedding in the North Hampton Roads area absent extension of the order.[22] In its extension order, the Department continued to limit dispatch of

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[17] Letter Request of Grand River Dam Authority, April 11, 2017. Available at https://www.energy.gov/sites/default/files/2017/05/f34/GRDA%20public%20202%28c%29%20letter.pdf.

[18] DOE Order No. 202-17-1 at 2.

[19] *Id.*

[20] DOE Order No. 202-17-2, at 1.

[21] *Id.* at 2.

[22] DOE Order No. 202-17-4, Summary of Findings, Sept. 14, 2017.

the units only when called upon by PJM for reliability purposes and, further, directed PJM and Dominion to exhaust available resources, including demand response and behind-the-meter generation resources, prior to operating the units.[23]

B. Executive Order 14262 and the White House Strategy to Prop Up the Coal Industry.

Over the past several months, the White House and the Department have sought to radically transform how section 202(c) of the Federal Power Act is applied, departing in almost every material respect from the longstanding approach described above. As shown below, the Order cannot be understood intelligibly as a response to a discrete event or emergency akin to past orders under section 202(c). Rather, it can only be understood as part of a long-term and multi-part strategy to preserve coal and other fossil fuel generation under the guise of grid reliability concerns.

On April 8, 2025, President Trump issued Executive Order 14262, *Strengthening the Reliability and Security of the United States Electric Grid*.[24] The Executive Order was issued concurrently with three other executive actions aimed at supporting the coal industry that were announced at a White House political event explicitly focused on that objective.[25] This event, and the related Executive Order, are one of several in a series of public actions by the Administration aimed at reversing coal plant retirements and promoting fossil fuel generation.

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[23] DOE Order No. 202-17-4 at 2.

[24] Executive Order 14262, 90 Fed. Reg. 15521 (April 14, 2025).

[25] New York Times, *Trump Signs Orders Aimed at Reviving a Struggling Coal Industry* (April 8, 2025); Executive Order 14261, *Reinvigorating Americans Beautiful Clean Coal Industry and Amending Executive Order 14241*, 90 Fed. Reg. 15517 (April 14, 2025); Executive Order 14260, *Protecting American Energy from State Overreach*, 90 Fed. Reg. 15513 (April 14, 2025); *Regulatory Relief for Certain Stationary Sources To Promote American Energy*, 90 Fed. Reg. 16777 (April 21, 2025).

Executive Order 14262 directs DOE to, among other things, streamline and expedite the issuance of emergency orders under section 202(c), specifically in order to "safeguard the reliability and security of the United States' electric grid during periods when the relevant grid operator forecasts a temporary interruption of electricity supply [that] is necessary to prevent a complete grid failure."[26] It also directs DOE to take a subsequent series of actions related to national resource adequacy, including mandating:

- the development of a uniform methodology for assessing reserve margins and identifying "at-risk" regions;
- establishment of a process by which the developed methodology and any analysis results are regularly assessed; and,
- establishment of a protocol to identify generation resources within a region that are critical to system reliability, a mechanism under section 202(c) to ensure such generation resources are appropriately retained and, for resources over 50MW, are prevented from leaving the bulk-power system or converting their source of fuel.[27]

DOE has not yet published the analysis or protocols—the deadline provided in Executive Order 14262 is July 7.

Executive Order 14262 states that it is intended to help address the national energy emergency declared in the earlier-issued Executive Order 14,156, *Declaring a National Energy Emergency*.[28] In fact, this order is part of a broader pattern in which the Administration has expansively invoked emergency powers to achieve long-standing political objectives, rather than respond to genuine, unforeseen crises. The

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[26] Executive Order 14262 section 3(a).

[27] Executive Order 14262 section 3(b), (c).

[28] Executive Order 14262, section 2.

President has declared eight national emergencies in 2025 alone—more than any other President in the first 100 days of an administration.[29]

C. The Planned Retirement of JH Campbell.

i. Description of J.H. Campbell

J.H. Campbell is a three-unit coal-fired power plant with a total rated net generating capability of approximately 1,450 megawatts (MW).[30] (The Order incorrectly states that J.H. Campbell has a capacity of 1,560 MW). In its current degraded condition, however, J.H. Campbell has a maximum capacity of 920 MW.[31] Part of that difference comes from the fact that Unit 2 is not operational, nor was it operational when the Order was issued. When Unit 2 comes back on-line later this month, the maximum capacity of the facility will be 1,180 MW. J.H. Campbell Unit 1 is 63-years-old and has a rated net generating capability of 261 MW, but now has an effective maximum output of 220 MW.[32] Unit 2 is 58-years-old and has a rated net generating capability of 356 MW. Currently out of service, when Unit 2 comes back online it will have a maximum capacity of 260 MW.[33] Unit 3 is 45 years old and has a rated net generating capability of 843 MW. The current maximum capacity of Unit 3 is 700 MW.[34] Consumers operates the entire J.H. Campbell plant and is the sole

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[29] *See* https://www.brennancenter.org/our-work/research-reports/declared-national-emergencies-under-national-emergencies-act.

[30] Michigan Public Service Commission (MPSC) Case No. U-21585, Direct Testimony of Richard Blumenstock, p. 7, Table 1 (5 Tr 1394-95); see also, https://www.consumersenergy.com/about-us/electric-generation/campbell-complex-retirement, last checked June 11, 2025 (reporting 1,450 MW of capacity).

[31] Conversation between representatives of Consumers and the undersigned counsel, June 12, 2025.

[32] *Id.*

[33] *Id.*

[34] *Id.*

owner of Units 1 and 2. Consumers owns about 93% of Unit 3, the Michigan Public Power Agency owns 4.8% of Unit 3, and Wolverine Power Supply Cooperative owns less than 2% of Unit 3.[35]

J.H. Campbell and Consumers' service territory are located within MISO Local Resource Zone 7. Most of the lower peninsula of Michigan is in MISO Zone 7, except for a small area in the southwest portion of the State, which is in PJM.

ii. State proceeding approving the retirement of J.H. Campbell

In 2021, Consumers proposed to retire J.H. Campbell in 2025 for economic reasons. The MPSC thoroughly reviewed the proposed retirement for a year in an integrated resource plan (IRP) proceeding governed by Michigan statute.[36] No party in the case opposed the retirement of Units 1 and 2; and only a few opposed the retirement of Unit 3.[37] The MPSC ultimately approved Consumers' proposed retirement of J.H. Campbell in a settlement joined by most of the parties to the case. A single party appealed the MPSC's decision to approve the retirement of Unit 3, but the Michigan Court of Appeals affirmed that decision in 2023.[38] Both the MPSC and the appeals court found that Michigan would still have more than enough generating capacity to serve demand after J.H. Campbell retired.[39]

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[35] MPSC Case No. U-21090 (Kapala Direct, 7 Tr 1739); Ex. WPSC-1, p. 19 (Agreement, p. 11), section 2.1, available at https://mi-psc.my.site.com/sfc/servlet.shepherd/version/download/0688y000001QqldAAC.

[36] MCL 460.6t.

[37] MPSC Case No. U-21090, Order approving contested settlement, June 23, 2022, p. 8.

[38] *Wolverine Power Supply Coop., Inc. v Michigan Public Service Commission (In re Consumers Energy)*, 2023 Mich. App. LEXIS 2045; 2023 WL 2620437 (March 23, 2023).

[39] *Id.*

Michigan's IRP statute requires electric utilities whose rates are regulated by the MPSC to periodically file an integrated resource plan. The IRP is a projection of the utility's load obligations and a plan to meet those obligations.[40] The IRP statute directs the MPSC to approve a plan if the MPSC determines that it "represents the most reasonable and prudent means of meeting the electric utility's energy and capacity needs."[41] To make that decision, the statute instructs the MPSC to consider whether the IRP appropriately balances seven statutory factors: (i) resource adequacy and capacity to serve anticipated peak electric load, applicable planning reserve margin, and local clearing requirement; (ii) compliance with applicable state and federal environmental regulations; (iii) competitive pricing; (iv) reliability; (v) commodity price risks; (vi) diversity of generation supply; and (vii) whether proposed levels of peak load reduction and energy waste reduction are reasonable and cost effective.[42]

The IRP statute also directs the MPSC to establish – among other things – computer modeling scenarios that must be used to analyze the costs of possible plans in an IRP, including costs associated with plant retirement dates.[43] In the modeling used to prepare its 2021 IRP, Consumers determined that it would be most cost-effective to retire the entire J.H. Campbell plant in 2025.[44] Later in the proceeding, Consumers conducted more modeling that compared other possible retirement dates

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[40] MCL 460.6t(3).

[41] MCL 460.6t(8)(a).

[42] *Id.*

[43] MCL 460.6t(1).

[44] MPSC Case No. U-21090 (Blumenstock Direct, 3 Tr 99 and 147-49), available at https://mi-psc.my.site.com/sfc/servlet.shepherd/version/download/0688y000001OEXnAAO.

to a 2025 retirement and again concluded that the most cost-effective retirement date was 2025.[45] Among other things, parties to the IRP case noted that the 2025 retirement of J.H. Campbell would save ratepayers $150 million in avoidable capital expenditures.[46]

After months of litigation, most of the parties reached a settlement agreement, which Consumers filed with the MPSC on April 20, 2022.[47] The settlement agreement approved the retirement of J.H. Campbell – but it also approved the construction, procurement, and extension of other major generating resources. The net effect of these changes was to substantially increase the total generating resources available to MISO Zone 7.

iii. Effect of Consumers' overall plan on resource adequacy

MISO measures capacity for resource adequacy purposes in zonal resource credits (ZRCs). One ZRC is equal to one MW of deliverable seasonal accredited capacity, which is the net amount of capacity MISO calculates it can reasonably expect from a resource.[48]

Consumers' IRP projected that the entire J.H. Campbell plant would provide 1,346 ZRCs in 2024, its last full year of planned operation.[49] In recognition of the

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[45] *Id.* (Walz Rebuttal, 3 Tr 364-73 & Ex A-123; Blumenstock Rebuttal, 3 Tr 178-79).

[46] MPSC Case No. U-21090, Order approving contested settlement, June 23, 2022, pp. 48, 55.

[47] MPSC Case No. U-21090-0777 (Settlement Agreement), available at https://mi-psc.my.site.com/sfc/servlet.shepherd/version/download/0688y000002gLkGAAU.

[48] MISO Knowledge Base, KA-01402, available at https://help.misoenergy.org/knowledgebase/article/KA-01402/en-us#:~:text=Zonal%20Resource%20Credits%20(ZRC)%20are,Seasonal%20Accredited%20Capacity%20(SAC); MISO, Resource Adequacy, available at https://www.misoenergy.org/planning/resource-adequacy2/resource-adequacy/#t=10&p=0&s=FileName&sd=desc.

[49] MPSC Case No. U-21090, Order approving contested settlement, June 23, 2022, p. 33.

reduced capacity that would result from the retirement of J.H. Campbell, the settlement authorized Consumers to acquire the Covert gas plant, which Consumers has done.[50] At the time, the Covert plant was in the PJM regional transmission organization – but after acquiring it, Consumers redesignated the Covert plant as part of MISO Zone 7.[51] This action added 1,114 ZRCs to Zone 7 – almost enough by itself to offset the ZRCs removed by the Campbell retirement.[52]

The settlement also authorized Consumers to continue operating Units 3 and 4 of the Karn plant – peaking units that burn natural gas and oil – until 2031, rather than retire them in 2023 as originally planned.[53] This action maintained another 784 ZRCs in Zone 7 beyond what was in Consumers' original plan.[54] The settlement agreement also authorized Consumers to develop or acquire 250 ZRCs of new solar generation by mid-2025, increasing to 852 ZRCs by mid-2028; added 94 ZRCs of demand response and energy waste reduction by mid-2025; and added 71 ZRCs of new battery storage in 2024-2027.[55] The settlement also provided that Consumers would issue a solicitation for power purchase agreements (PPAs) that would provide capacity beginning in 2025/2026, right after J.H. Campbell's retirement.[56] The PPA solicitation would seek up to 500 MW of dispatchable generation, and up to 200 MW of clean energy resources.[57]

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[50] *Id*. at 5.
[51] *Id*. at 91.
[52] *Id*. at 50.
[53] *Id*. at 11.
[54] *Id*.
[55] *Id*. at 23.
[56] *Id*. at 6 – 7. In MISO, the planning year runs from June 1 through May 31.
[57] *Id*.

Overall, the plan approved in the settlement was projected to increase Zone 7's capacity by at least 127 ZRCs by June 2025 – an increase that will grow to at least 923 ZRCs by 2028, not including the 700 MW of additional capacity sought in the PPA solicitations.[58]

iv. MPSC approval of the settlement and affirmance on appeal

Consumers' IRP settlement agreement was supported by most parties in the case, including Consumers, Staff, the Attorney General, consumer advocates, a transmission company, commercial and industrial customers, businesses in the advanced energy sector, environmental groups, and third-party energy developers.[59] The MPSC approved the Settlement Agreement on June 23, 2022.[60] The state commission found that the plan embodied in the settlement "is the most reasonable and prudent means of meeting Consumers' energy and capacity needs."[61]

In reaching these conclusions, the MPSC specifically addressed resource adequacy.[62] After discussing the record evidence regarding the Covert plant, Karn units 3 and 4, new battery storage, and ongoing investments in solar, energy waste reduction, and demand response,[63] the MPSC concluded that "the approval of the settlement agreement will enhance resource adequacy in Zone 7 in both the near-term and long-term."[64] One party, Wolverine Power Supply Cooperative, appealed

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[58] *Id.* at 24.

[59] *Id.* at 30 – 31.

[60] *Id.* at 87-93.

[61] *Id.* at 95.

[62] *Id.* at 90-93.

[63] *Id.*

[64] *Id.* at 92.

the MPSC's decision to approve the Campbell plant retirement. The Michigan Court of Appeals affirmed the MPSC. The court specifically addressed resource adequacy, quoted the MPSC's findings about the generating resource additions, and found that the state commission's decision was based on substantial evidence.[65]

v. Subsequent proceedings before the MPSC show that both Consumers' service territory and Michigan as a whole will have sufficient capacity this summer and for years to come

Filings in MPSC proceedings regarding capacity supply and resource adequacy demonstrate that there is no capacity shortfall. To the contrary, the most current available information is that both Consumers and MISO Zone 7 will have sufficient capacity this summer and for years to come. On June 10, 2025, Consumers reported that it now has a surplus of 273 ZRCs for this summer.[66] Consumers further reported that it expects J.H. Campbell will not contribute any ZRCs to the Company's summer position.[67]

Consumers' ZRC projections compare Consumers' available resources not just to projected actual demand but to the planning reserve margin requirement (PRMR). MISO establishes the PRMR as the amount of reserve margin target necessary to meet NERC's Loss of Load Expectation (LOLE) standard of 1 day in 10 years.[68] NERC

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[65] *Wolverine Power Supply Coop., Inc. v Michigan Public Service Commission (In re Consumers Energy)*, 2023 Mich. App. LEXIS 2045; 2023 WL 2620437 (March 23, 2023).

[66] *See* Attachment D, Consumers' Responses from June 10, 2025.

[67] *Id.*

[68] MISO Resource Adequacy Business Practices Manual, BPM-011-r31, p. 27, Section 3.4.2 LOLE Analysis; MPSC Case No. U-21775, Capacity Demonstration Results Report, May 12, 2025, p. 9.

defines the LOLE as "the expected number of days per year for which the available generation capacity is insufficient to serve the daily peak demand."[69]

For Michigan as a whole, the MPSC Staff finds in its annual capacity demonstration report that – except for one small municipal utility – all Michigan load serving entities "were able to procure the necessary capacity to demonstrate compliance for the current planning year in all four seasons" in Planning Year 2025-26.[70] The Staff Report also finds that there are more than enough resources in Zone 7 to meet the MISO Local Clearing Requirement (LCR) – which is the minimum amount of resources that must be located within a MISO local resource zone to meet the reliability standard.[71] While Zone 7 did not have enough internal resources to meet its entire PRMR, it is not required to do so under MISO rules, and the zone is able to import 785.5 ZRCs of external resources to meet its PRMR for the current planning year.[72]

Looking ahead, the Staff Report projects that Zone 7 will have more than enough resources to meet both its LCR and the PRMR in each of planning years 2026, 2027, and 2028.[73] Zone 7's LCR surplus will increase each year to reach 4,975 ZRCs by Planning Year 2028, and its PRMR surplus will increase each year to reach 3,428 ZRCs by Planning Year 2028.[74]

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[69] NERC Probabilistic Assessment Technical Guideline, August 2016, p. 2.

[70] MPSC Case No. U-21775, Capacity Demonstration Results Report, May 12, 2025, p. 6.

[71] *Id*. at 16.

[72] *Id*.

[73] *Id*. at p. 26, Appendix C.

[74] *Id*.

vi. MISO approved the retirement of J.H. Campbell after a detailed study process governed by MISO's FERC-approved tariff

More than three years before the Secretary issued Order 202-25-3, MISO determined via a detailed technical study that retirement of J.H. Campbell would not materially impact reliability in MISO. That determination remains in effect.

Section 38.2.7 of MISO's Open Access Transmission, Energy, and Operating Reserve Markets Tariff requires that the owner of a Generation Resource that is planning to suspend operations of all or a portion of that resource must notify MISO at least 26 weeks in advance by submitting a completed Attachment Y Notice.[75] The Tariff states that MISO will perform an Attachment Y Reliability Study to determine whether the Generation Resource is necessary for the reliability of the Transmission System based on analyses described in the Tariff and criteria in the MISO Business Practices Manuals.[76]

On December 14, 2021, Consumers submitted to MISO an Attachment Y notice of intent to suspend J.H. Campbell Units 1, 2, and 3 effective June 1, 2025.[77] After more than a year of study, MISO approved the suspension on March 11, 2022.[78] MISO stated that after reviewing the J.H. Campbell suspension for power system reliability impacts, MISO had determined that "the suspension of Campbell Units 1, 2 & 3 would not result in violations of applicable reliability criteria. Therefore, Campbell Units 1,

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[75] MISO Tariff, Section 38.2.7(a)(i).

[76] MISO Tariff, Section 38.2.7(c).

[77] Attachment C (Letter dated December 14, 2021, from Timothy J. Sparks, Consumers Energy, to Andrew Witmeier, MISO, and Attachment Y Notification of Generating Resources Change of Status).

[78] Attachment C (Letter dated March 11, 2022, from Andrew Witmeier, MISO, to Timothy J. Sparks, Consumers Energy, re: Approval of Campbell Units 1, 2 & 3 Attachment Y Suspension Notice).

2 & 3 may suspend without the need for the generators to be designated as a System Support Resource ('SSR') units as defined in the Tariff."[79]

On May 27, 2025, MISO requested that Consumers submit a modified Attachment Y request with a new suspension start date of August 21, 2025, consistent with the date in Order 202-25-3.[80] Consumers submitted the modified Attachment Y notice with the new date on May 28, 2025.[81] On May 30, 2025, MISO notified Consumers that with the modification, "the Attachment Y remains as is, still approved, except with a new/different start date."[82]

D. The Order

On May 23, 2025, the Secretary of Energy issued the Order pursuant to section 202(c) of the Federal Power Act, determining that an emergency exists in the region of the country served by MISO "due to a shortage of electric energy, a shortage of facilities for the generation of electric energy, and other causes" and ordering Consumers and MISO to ensure the continued operation of J.H. Campbell for at least 90 days notwithstanding the longstanding plan to retire the facility on May 31, 2025. In issuing the Order, the Department issued a press release that, like Executive

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[79] *Id.*

[80] Attachment C (Email dated May 27, 2025, from Huaitao Zhang, MISO, to Kathy Wetzel, Consumers Energy).

[81] Attachment C (Email dated May 28, 2025, from Rachael Moore, Consumers Energy to Huaitao Zhang, MISO).

[82] Attachment C (Email dated May 30, 2025, from Marc Keyser, MISO, to Rachael Moore, Consumers Energy).

Order 14262, states the Order "is in accordance with President Trump's Executive Order: Declaring a National Energy Emergency."[83]

Over four short paragraphs, the Order outlines the "emergency situation" allegedly necessitating invocation of section 202(c) authority. It points primarily to "*potential* tight reserve margins during the summer 2025 period," citing to the North American Electric Reliability Corporation (NERC) 2025 Summer Reliability Assessment, including the statement that MISO is "at elevated risk of operational reserve shortfalls during periods of high demand or low resource output."[84] The Order then describes the retirement of thermal generation capacity including the retirement of approximately 2,700 MW of coal-fired capacity in Michigan since 2020 and the scheduled May 31, 2025, retirement of J.H. Campbell.[85] The Order acknowledges Consumers' acquisition of 1,200 MW of replacement natural gas capacity and MISO's April 2025 conclusion that its auction resulted in "demonstrated sufficient capacity,"[86] but does not reference, let alone consider, the extensive processes that MISO and the MPSC undertook to evaluate and mitigate any reliability or resource adequacy risk that would be caused by the retirement of J.H. Campbell.[87] Nor does the Order describe any actions that MISO or Consumers have taken or could take to mitigate any alleged emergency conditions short of ordering the continued operation of the plant. Rather, it relies almost exclusively on:

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[83] DOE Press Release (May 23, 2025) available at https://www.energy.gov/articles/energy-secretary-issues-emergency-order-secure-grid-reliability-ahead-summer-months.

[84] DOE Order 202-25-3 at 1 (emphasis added).

[85] *Id.* at 1.

[86] *Id.* at 2.

[87] *See* Section II.C *supra*.

- The general statement in NERC's 2025 Summer Reliability Assessment that there is anticipated to be "elevated risk of operating reserve shortfalls"
- Language in MISO's Planning Resource Auction Results for Planning Year 2025-26 that, "for the northern and central zones, which includes Michigan, 'new capacity additions were insufficient to offset the negative impacts of decreased accreditation, suspensions/retirements and external resources,'" and that the results "reinforce the need to increase capacity" and,
- Language from the MISO Auction Results that the summer months have, relative to other times, the "highest risk and tighter supply-demand balance."[88]

The Order concludes that "additional dispatch of the Campbell Plant," for the 90-day duration of the order and on conditions contained in the order, "is necessary to best meet the emergency and serve the public interest."[89] As a result, the Order mandates that:

- MISO and Consumers Energy take all necessary steps to ensure the Campbell Plant is available for dispatch;[90]
- MISO employ economic dispatch of the plant, and that Consumers comply with all such dispatch orders;[91]
- All operation of J.H. Campbell "must comply with applicable environmental requirements . . . to the maximum extent feasible while operating consistent with the emergency conditions."[92]
- MISO submit reports to DOE on plant operations, environmental impacts, and actions taken to comply with the Order.[93]
- "Relevant governmental authorities" take such action as necessary to enable MISO to effectuate the dispatch and operation of the units.[94]
- Consumers request any necessary revisions or waivers to effectuate the order with FERC.[95]

III. STATEMENT OF ISSUES AND SPECIFICATIONS OF ERROR

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[88] DOE Order 202-25-3 at 2.
[89] DOE Order 202-25-3 at 2.
[90] *Id.* at 2 (Ordering Paragraph A).
[91] *Id.* (Ordering Paragraph A).
[92] *Id.* at 3 (Ordering Paragraph C).
[93] *Id.* at 3 (Ordering Paragraph B, D).
[94] *Id.* at 3 (Ordering Paragraph E).
[95] *Id.* at 3 (Ordering Paragraph F).

As explained in Section IV below, the Michigan Department of Attorney General submits the following statement of issues and specifications of error:

1. The Order is contrary to law because it fails to establish the existence of an emergency under section 202(c) or the Department's regulations implementing section 202(c). The statutory text, legislative history, judicial construction and DOE's regulations all confirm that an "emergency" is an occurrence that is sudden, unexpected and requiring immediate action. The Order introduces no facts that would satisfy that definition. 16 U.S.C. § 824a(c); 10 C.F.R. § 205.371; *Richmond Power and Light v. FERC*, 574 F.2d 610, 615 (D.C. Cir. 1978); *Otter Tail Power Co. v. Fed. Power Comm.*, 429 F.2d 232, 233-34 (1970).

2. The Order is contrary to law because it exceeds the Department's statutory authority. Abusing a statute meant only for emergencies, the Order intrudes on authority reserved to States and to other federal regulators to regulate resource adequacy. Section 202(c) does not vest DOE with general regulatory authority over resource adequacy, or the authority to decide which power plants may retire except for so long as a true emergency exists. The Department may not "discover in a long-extant statute an unheralded power representing a transformative expansion in its regulatory authority." *W. Virginia v. Env't Prot. Agency*, 597 U.S. 697, 724–25, (2022) (quoting *Util. Air Regul. Grp. v. E.P.A.*, 573 U.S. 302, 324 (2014))(internal quotations omitted).

3. The Order fails to present substantial evidence for its emergency determination and fails to exercise reasoned decision-making by ignoring critical facts and shortcomings in its analysis. Specifically, the Order: (i) presents a discussion of the NERC 2025 Summer Reliability Assessment that is unreasoned, incomplete, and that fails to substantiate the existence of an emergency; (ii) the Order's apparent reliance on generator retirements in Michigan as evidence of an emergency is unreasonable; (iii) the Order acknowledges that the most recent MISO auction "demonstrated sufficient capacity" but fails to explain why an emergency exists nonetheless, (iv) the Order fails even to acknowledge that MISO approved the retirement of J.H. Campbell through the study process governed by its FERC-approved tariff; (v) the Order makes no effort to review the proceedings before the MPSC, or to note any consultation with Michigan officials as required by 42 U.S.C. § 7113; (vi) the Order fails to provide any specific evidence or reasoning why J.H. Campbell must remain in operation and why alternative measures are inadequate. *E.g. Emera Maine v. FERC*, 854 F.3d 9, 22 (D.C. Cir. 2017) (order under the Federal Power Act must reflect "a principled and reasoned decision supported by the evidentiary record" (quotation marks omitted)); *Motor Vehicle Mfrs. Ass'n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983) (agency must examine the relevant data and articulate a satisfactory

explanation for its action including a rational connection between the facts found and the choice made); *Burlington Truck Lines, Inc. v. United States*, 371 U.S. 156, 168 (1962) (an "agency must make findings that support its decision, and those findings must be supported by substantial evidence").

4. The Order is arbitrary and capricious and contrary to law because section 202(c) provides no authority for the Department to command a generator to engage in "economic dispatch." 16 U.S.C. § 824a(c); *Michigan v. EPA*, 268 F.3d 1075, 1081 (D.C. Cir. 2001) (absent statutory authorization, an agency's "action is plainly contrary to law and cannot stand").

5. The Order is arbitrary and capricious and contrary to law because the Department failed to limit its remedy as required by section 202(c)(2). The Order adheres to neither the temporal constraint nor the environmental constraints imposed by section 202(c)(2). 16 U.S.C. § 824a(c)(2).

6. The Order violates the National Environmental Policy Act because it fails to assess the environmental consequences of a major federal action significantly affecting the human environment. 42 U.S.C. § 4321; *et seq*.

IV. REQUEST FOR REHEARING

A. The Department Has Failed to Establish the Existence of an Emergency under Section 202(c) or the Department's Regulations Implementing Section 202(c).

i. Congress limited DOE's authority under section 202(c) to the unique circumstances of war or emergency

Section 202(c) confers an extraordinary power. Enacted in 1935, section 202(c) empowered the Federal Power Commission to command action from market participants and – crucially – to do so freed from most of the core procedural safeguards, jurisdictional boundaries, and substantive limitations that undergird the rest of the Federal Power Act. While the rest of the Act authorizes Commission action only after opportunity for hearing,[96] section 202(c) allows the Commission (now the Department) to act on its own motion and without prior notice. And in profound contrast to the rest the Federal Power Act and general utility law principles,[97] section 202(c) empowers the Department to require utilities to incur costs – through a command to provide generation or transmission service – without first considering the impact to ratepayers or whether the resulting rates will be just and reasonable.

It comes as no surprise, therefore, that when Congress granted the Commission this extraordinary power, Congress restricted its use to extraordinary circumstances. Section 202(c) authorizes action only "[d]uring the continuance of any war in which the United States is engaged, or whenever the Commission determines that an emergency exists by reason of a sudden increase in the demand for electric energy, or a shortage of electric energy or of facilities for the generation or transmission of electric energy, or of fuel or water for generating facilities, or other causes." The Act permits some measure of flexibility with respect to what type of events may cause the emergency, allowing for "other causes" beyond those enumerated. But the Act is clear that any such event, including a "shortage of electric energy," must be one that constitutes an "emergency."

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[96] *See e.g.*, 16 U.S.C. §§ 824a(b), 824a(e), 824a-1(a), 824a-3(f), 824a-4, 824b(a)(4), 824c(b), 824d, 824e, 824f, 824i(b), 824j, 824j-1, 824k, 824m, 824o & 824p.

[97] Two cornerstones of the law of regulated utilities are the filed rate doctrine and the rule against retroactive ratemaking. As FERC has explained, "a central purpose of the filed rate doctrine and the rule against retroactive ratemaking is to protect ratepayers from being subjected to an additional surcharge above the rate on file for service already performed." *Old Dominion Elec. Coop.*, 154 FERC ¶ 61,155 (2016). In its June 6, 2025, complaint filed in FERC Docket No. EL25-90, Consumers asserts that the filed rate doctrine and the rule against retroactive ratemaking are inapplicable in the context of an order under section 202(c).

Because the Act does not define "emergency," the Department must look first to the public meaning of that word at the time of enactment. Webster's New International Dictionary of the English Language (1930) defined "emergency" as a "sudden or unexpected appearance or occurrence . . . . An unforeseen occurrence or combination of circumstances which calls for immediate action or remedy; pressing necessity; exigency." Contemporary dictionaries likewise define "emergency" to refer to a circumstance that is "unexpectedly arising, and urgently demanding immediate attention."[98]

These definitions accord with the legislative history of the Federal Power Act, which characterized section 202(c) as an authority to be used in response to "crises":

> This is a temporary power designed to avoid a repetition of the conditions during the last war, when a serious power shortage arose. Drought and other natural emergencies have created similar crises in certain sections of the country; such conditions should find a federal agency ready to do all that can be done in order to prevent a break-down in electric supply.[99]

The few courts that have had occasion to opine on the meaning of "emergency" in section 202(c) have likewise emphasized that the provision applies in very limited circumstances, and not as a tool to address longer-term, structural concerns. In *Richmond Power and Light v. FERC*, the D.C. Circuit upheld the Commission's judgment that the dependence on foreign oil occasioned by the 1973 oil embargo was

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[98] *See Acuity Ins. Co. v. McDonald's Towing & Rescue, Inc.,* 747 F. App'x 377, 380–81 (6th Cir. 2018) (addressing a statute that leaves "emergency" undefined and quoting 7 Oxford English Dictionary 231 (2012) among others to supply a definition).

[99] S. Rep. No. 74-621 at 49 (1935).

not an “emergency” under the Act, noting that section 202(c) “speaks of ‘temporary’ emergencies, epitomized by wartime disturbances.”[100]

In *Otter Tail Power Co. v. Fed. Power Comm’n,* the U.S. Court of Appeals for the Eighth Circuit described section 202(c) as enabling the Commission to “react to a war or natural disaster.” The court also distinguished section 202(c) from section 202(b), under which the Commission may also order interconnections, but only after a hearing. The court explained that, in contrast to section 202(c), which “enables the Commission to proceed without notice or hearing” to address immediate crises, section 202(b) “applies to a crisis which is likely to develop in the foreseeable future but which does not necessitate immediate action on the part of the Commission.”[101]

Through its regulations, the Department has also interpreted “emergency” for purposes of section 202(c) to mean circumstances that arise suddenly and unexpectedly:

> “Emergency,” as used herein, is defined as an unexpected inadequate supply of electric energy which may result from the unexpected outage or breakdown of facilities for the generation, transmission or distribution of electric power. Such events may be the result of weather conditions, acts of God, or unforeseen occurrences not reasonably within the power of the affected “entity” to prevent. An emergency also can result from a sudden increase in customer demand, an inability to obtain adequate amounts of the necessary fuels to generate electricity, or a regulatory action which prohibits the use of certain electric power supply facilities.[102]

In summary, the plain meaning of the statutory text, its legislative history, judicial construction, and the Department’s own regulations all establish that an

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[100] 574 F.2d 610, 615 (D.C. Cir. 1978).
[101] 429 F.2d 232, 234 (8th Cir. 1970).
[102] 10 C.F.R. § 205.371.

"emergency," including one occasioned by a "shortage of electric energy," must be sudden, unexpected, and demanding of "immediate action."

ii. The Order fails to present facts establishing an emergency under section 202(c) or the Department's regulations

Even taken as complete and accurate claims (which they are not), the factual assertions made in the Order fail to describe an "emergency." The Order does not claim that the retirement of J.H. Campbell was sudden or unexpected. Nor could it. The retirement of J.H. Campbell was carefully planned over a period of years and was approved by the MPSC through a public proceeding. Further, Consumers' plan to retire J.H. Campbell included a commitment to procure replacement resources that improved its capacity position. And Consumers' proposal to retire J.H. Campbell was approved in advance by MISO after a thorough review of its impact on reliability.

Nor did the publication of NERC's 2025 Summer Reliability Assessment in May 2025 transform a long-planned retirement into an event with sudden or unexpected implications requiring immediate action. The Order notes that the 2025 NERC Summer Reliability Assessment characterizes MISO as being at an "elevated risk of operating reserve shortfalls." But NERC's "elevated risk" designation in no way signifies an emergency condition. "Elevated risk," it should be emphasized, falls *below* NERC's highest risk designation: that of "high" risk.[103] NERC's decision not to place MISO in the highest risk category in its Summer Reliability Assessment is

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[103] The "High" risk designation refers to a risk of shortfall during normal peak conditions, whereas the "Elevated" risk designation refers to a risk of shortfall during above-normal peak conditions. See Attachment A, NERC, 2025 Summer Reliability Assessment at 6.

in itself powerful evidence that there is no "emergency" stemming from a lack of operating reserves.

The "elevated risk" designation is also far from unusual. In the same report, NERC also designated the systems overseen by SPP, the Electric Reliability Council of Texas (ERCOT), and the New England Independent System Operator (ISO-NE) as at "elevated risk."[104] Except for 2022, when it was designated as "high" risk, MISO has been designated as "elevated" risk in every NERC Summer Reliability Assessment since NERC initiated the practice of designating regions as "high," elevated," or "normal" risk in 2021.[105] NERC has also designated MISO as "elevated" risk in every Winter Reliability Assessment since 2021.[106] In effect, what the Order implies through its reliance on the NERC report's "elevated" risk designation, is that the fifteen states of MISO – along with large swaths in the rest of the United States – have been in an uninterrupted state of emergency for many years on end. This interpretation, if credited, would effectively read the word "emergency" out of section 202(c).

The Order's hand-waving reference to "potential tight reserve margins" identified in the 2025 NERC Summer Reliability Assessment likewise fails to describe an emergency. The very fact that the Order attempts to rely on "potential" future conditions itself contradicts the notion that MISO is presently facing an

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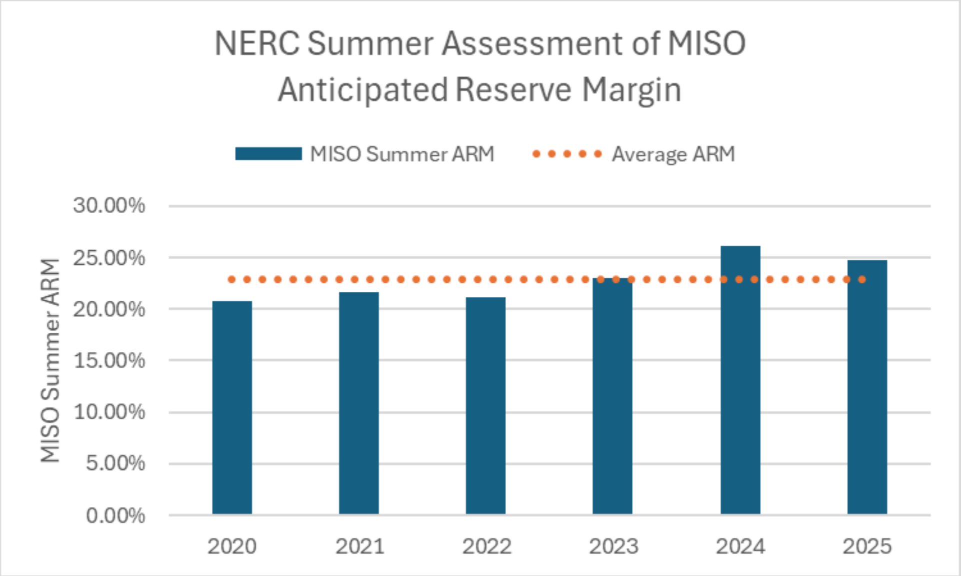
[104] *Id.*

[105] *See* NERC Summer Reliability Assessments years 2021 – 2025, available at https://www.nerc.com/pa/RAPA/ra/Pages/default.aspx.

[106] *See* NERC Winter Reliability Assessments years 2021 – 2025, available at https://www.nerc.com/pa/RAPA/ra/Pages/default.aspx.

emergency as conceived under section 202(c). Moreover, the actual reserve margins in MISO this summer do not support an emergency determination. The NERC report calculated MISO's anticipated reserve margin for Summer 2025 as 24.7%.[107] This figure substantially exceeds NERC's "Reference Margin Level" for MISO of 15.7%,[108] which is the level that NERC has "established for the areas to meet resource adequacy criteria."[109] MISO's anticipated reserve margin of 24.7% is also *higher* than its average of recent years. The chart below shows the anticipated reserve margin for MISO as calculated in the NERC Summer Reliability Assessment for each year.[110] The chart shows that the 2025 anticipated reserve margin of 24.7% exceeds the 2020-2025 average of 22.9%. Again, the Order has failed to describe a circumstance that is "unexpected," "sudden" or "demanding of immediate attention."



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[107] Attachment A, NERC, 2025 Summer Reliability Assessment at 10.

[108] *Id*. at 44.

[109] *Id*. at 15.

[110] *See* NERC Summer Reliability Assessments years 2020 – 2025, available at https://www.nerc.com/pa/RAPA/ra/Pages/default.aspx.

The other factual assertions in the Order likewise fail to describe an emergency. The Order devotes one of its few substantive paragraphs to explaining that various generation units have retired in Michigan, reaching back as far as 1997.[111] But generation units retire everywhere as part of the normal, continuous cycle through which old units are replaced with new ones. The unsurprising fact that generation units have retired in Michigan over the last 28 years says nothing about whether there is presently adequate generation in the State, and even less about whether an emergency exists in the region as a whole.

The Order then points to the results of the April 2025 MISO Planning Resource Auction. But these results explicitly contradict the claim that an emergency exists in MISO. The Order acknowledges MISO's conclusion that the auction "demonstrated sufficient capacity." In fact, the Order truncates this quote, which stated in full that: "The 2025 PRA demonstrated sufficient capacity at the regional, subregional and zonal levels, with the summer price reflecting the highest risk and a tighter supply-demand balance."[112] Remarkably, the Order attempts to brush aside the obvious import of this conclusion, preferring instead to focus on the second half of the sentence. But the second half of that sentence merely refers to the fact that the summer price for capacity in MISO, which separates the auction results by season, is high*er* and has a tight*er* supply/demand balance than those of the fall, winter and spring seasons (a fact illustrated by the chart below the header text).

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[111] Order at 1.
[112] Attachment B, MISO, Planning Resource Auction, Results for Planning Year 2025 – 2026 (April 2025) at 12.

This sentence does not indicate any kind of shortfall in the summer season, much less an emergency shortfall.

The Order also quotes from a slide that states "for North/Central, new capacity additions were insufficient to offset the negative impacts of decreased accreditation, suspensions/retirements and external resources."[113] But this slide is simply noting that the total capacity of resources *offered* into the 2025 auction in the North/Central region was lower than what was offered into the 2024 auction. This slide does not say that the total amount of capacity *procured* in the North/Central region through the auction was inadequate. In other words, this slide is in no way inconsistent with the conclusion in the same report that the "2025 PRA demonstrated sufficient capacity at the regional, subregional and zonal levels."[114] Further, even as a characterization of the total capacity offered into the auction, the Order ignored a crucial fact in this slide. The slide shows that the reason for the decrease in capacity offered was not because of a decrease in physical generating capacity, but because of a change in the capacity accreditation of various resources—most notably, the very "dispatchable generation" that the order prioritizes. This change in MISO's capacity accreditation methodology occurred over the previous year.[115] The bar chart in Attachment B shows a reduction in accredited capacity for gas and coal of 3.4 GW, which is greater than the overall reduction in offered

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[113] *Id.* at 13.

[114] *Id.* at 12.

[115] *Midcontinent Independent System Operator, Inc.*, 189 FERC ¶ 61,065 (Oct. 25, 2024).

capacity.[116] In other words, MISO concluded that coal (and gas) resources, such as J.H. Campbell, should be deemed to contribute less to capacity requirements than it had previously assumed.

B. Abusing an Authority Meant for True Emergencies, the Order Intrudes on Authority Reserved to States and to Other Federal Regulators.

i. Resource adequacy is regulated by the states, and by FERC under other provisions of the Federal Power Act

Resource adequacy refers to the capacity of an electric power system to meet demand reliably at all times, including during system peaks and through potential outages. Resource adequacy is "measured at the system level to capture the overall impact of outages of individual components including generators and transmission."[117] Resource adequacy planning is the process by which utilities and system operators, under regulatory supervision, ensure resource adequacy. Resource adequacy planning involves technical and economic considerations that go into determining what resources are added to the grid and which resources should retire and when.

With respect to regulatory oversight for resource adequacy, section 201 of the FPA, 16 U.S.C. § 824(b)(1), reserves authority over generation facilities to the states. It states in pertinent part: "The Commission shall have jurisdiction over all facilities for such transmission or sale of electric energy, *but shall not have jurisdiction*, except as specifically provided in this subchapter and subchapter III of this chapter, *over*

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[116] Attachment B, MISO, Planning Resource Auction, Results for Planning Year 2025 – 2026 (April 2025) at 13.

[117] NREL, Resource Adequacy Basics, available at https://www.nrel.gov/research/resource-adequacy.

facilities used for the generation of electric energy or over facilities used in local distribution or only for the transmission of electric energy in intrastate commerce, or over facilities for the transmission of electric energy consumed wholly by the transmitter."[118]

Some states have retained this authority over resource adequacy in its entirety.[119] Others have directed their utilities to join RTO/ISOs that, through their tariffs, impose resource adequacy requirements. Those RTO/ISOs also generally establish markets that allow market participants to buy and sell capacity and thereby to facilitate market entry and exit decisions based on price signals. Resource adequacy requirements in RTO/ISO tariffs have been held to be practices affecting wholesale rates subject to the jurisdiction of FERC under sections 205 and 206 of the Federal Power Act, 16 U.S.C. §§ 824d & 824e.[120]

In Michigan, the regulation of resource adequacy planning has both a state and federal aspect. As a member of MISO, Consumers has a capacity obligation under the MISO tariff. MISO's resource adequacy requirements, however, are designed to be complementary to the primary role of the states in ensuring resource adequacy.[121]

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[118] *Id.* (emphasis added).

[119] *See Devon Power LLC et al.,* 109 FERC ¶ 61,154, P 47 (2004) ("Resource adequacy is a matter that has traditionally rested with the states, and it should continue to rest there. States have traditionally designated the entities that are responsible for procuring adequate capacity to serve loads within their respective jurisdictions.").

[120] *See Conn. Dep't of Pub. Util. Control v. FERC*, 569 F.3d 477, 483 (D.C. Cir. 2009).

[121] *Midcontinent Indep. Sys. Operator, Inc.*, 170 FERC ¶ 61,215, 62,606 at P 13 (2020) ("approximately 90% of the load in MISO is served by vertically integrated LSEs, the vast majority of which are subject to state integrated resource planning processes. To accommodate the make-up of the MISO's footprint, MISO's proposed Tariff provisions accepted in the February 2018 Order provide that its resource adequacy requirements "are complementary to the reliability mechanisms of the states and the Regional Entities ... within the [MISO] region."); *see also id.* ("MISO's proposed Tariff language

Consumers' investment decisions are regulated by the MPSC. Through the state IRP process (described in Section II.C above), the MPSC exercises regulatory authority over Consumers in order to ensure that the utility obtains the amount of capacity it needs to meet its obligations under the MISO tariff, and that it does so at the best value to ratepayers, and with a composition of resources that otherwise complies with state law, including state environmental requirements.

ii. Section 202(c) does not vest DOE with general regulatory authority over resource adequacy

The Order indicates that the Department believes it has the authority to decide which power plants may retire and when, not based on the kind of real emergency that has justified past action, but rather based on its own policy preferences. The Department appears to want to place its own judgment about operating reserve margins ahead of MISO's, and its own preference for which resources are employed to maintain resource adequacy ahead of Michigan's. In effect, the Department appears to read section 202(c) so as to give itself authority to regulate resource adequacy. Any ambiguity on this point was put to rest by the Department's June 13 letter referring cost recovery issues for J.H. Campbell to FERC. In that letter, the Department, through counsel, acknowledged that resource adequacy concerns

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explains that the resource adequacy requirements 'are not intended to and shall not in any way affect state actions over entities under the states' jurisdiction.' In other words, unlike the centralized capacity constructs used in the Eastern RTOs/ISOs, MISO's Auction is not—*and has never been*—the primary mechanism for its [Load Serving Entities] to procure capacity."); *Midwest Indep. Transmission Sys. Operator, Inc.*, 119 FERC ¶ 61,311, 62,722 at P 75 (2007) ("From the beginning . . . the Commission has recognized the role that state resource planning plays in managing the resource adequacy of [MISO]").

motivated the Order and went so far as to purport to dictate whether J.H. Campbell would be counted as a capacity resource pursuant to the MISO tariff.[122]

Section 202(c) does not provide the Department with the authority it claims. Had Congress intended to vest regulatory authority over resource adequacy in section 202(c), – displacing both state law and sections 205 and 206 of the Federal Power Act, – it would have stated so clearly. But of course it did not. The authorizing language says no more than that DOE may "require by order . . . such generation . . . of electric energy as in its judgment will best meet the emergency and serve the public interest." Indeed, it defies logic that, had Congress intended to empower DOE to be the general decider of which power plants may retire across every utility and independent power producer across the entire country – a function with profound implications for rates, state sovereignty, and a broad array of other stakeholder interests – that Congress would have done so through what may be the only provision in the Federal Power Act that empowers the regulator to act without first assessing the effect on ratepayers or seeking public input, and one of the only provisions that extends to otherwise non-jurisdictional utilities such as public power entities and those in ERCOT.

But even if the text of section 202(c) could, theoretically, be stretched to such an expansive reading (which it cannot), the United States Supreme Court has emphatically rejected statutory interpretations whereby an agency "claim[s] to discover in a long-extant statute an unheralded power representing a transformative

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[122] FERC Docket No. EL25-90, submission of Dep't of Energy, June 13, 2025 ("Because the May 23, 2025 Order is predicated on the shortage of facilities for the generation of electric energy and other causes, such as resource adequacy concerns, the Campbell plant shall not be counted as a capacity resource.").

expansion in its regulatory authority."[123] That is exactly what the Department seeks to do here. It seeks to discover in a 90-year-old statute a basis to exercise much broader regulatory authority than it ever has in the past. While it is true, as we explain above in section II.A, that the Department has used section 202(c) to delay power plant retirements on three occasions over the 90-year history, it has always done so at the request of a system operator or governmental body and in a manner narrowly tailored to prevent a concrete and particularized emergency. It has never done so simply to impose its policy preferences ahead of the judgment of those bodies responsible for resource adequacy.

C. The Order Fails to Present Substantial Evidence for its Emergency Determination and Fails to Exercise Reasoned Decision-making by Ignoring Critical Facts.

The Order relies on three sources of evidence for its emergency determination: the NERC 2025 Summer Reliability Assessment, generator retirements in Michigan, and the results of MISO's 2025 Planning Resource Auction. None of these three sources provide evidence that an emergency exists. By relying on these sources, and by misconstruing each of them, the Order fails to exercise reasoned decision-making.

The Order also entirely ignores several other critical facts and considerations. The Order ignores the fact that MISO approved the deactivation of J.H. Campbell. The Order ignores the conclusions of the MPSC proceeding that approved the retirement of J.H. Campbell. And even if it were correct that a capacity shortfall

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[123] *W. Virginia v. Env't Prot. Agency*, 597 U.S. 697, 724–25, (2022) (quoting *Util. Air Regul. Grp. v. E.P.A.*, 573 U.S. 302, 324 (2014))(internal quotations omitted).

exists in MISO, the Order fails to explain why preventing the retirement of J.H. Campbell through an emergency measure is necessary to address the shortfall.

i. *The Order's discussion of the NERC 2025 Summer Reliability Assessment is unreasoned and incomplete*

As explained above in Section IV.A, the Order's discussion of the NERC 2025 Summer Reliability Assessment is both incomplete and unreasoned. Specifically, the Order fails to explain (i) why the NERC report supports an emergency finding for MISO given that NERC did not put MISO in the "high" risk category, (ii) why NERC's designation of MISO as at "elevated" risk provides evidence of a "sudden" or "unexpected" circumstance given that MISO has been at this risk level or higher for years running, and (iii) why the "potential tight reserve margins" identified in the NERC report constitute an emergency given that MISO well exceeds the NERC reference margin level and even exceeds its own average Summer anticipated reserve margin over the 2020 – 2025 period.

ii. *The Order's apparent reliance on generator retirements in Michigan is unreasonable*

The Order attempts to support its emergency finding by recounting the fact that various power plants have retired in the state of Michigan.[124] As explained above, because power plant retirements are a regular occurrence in the electric power sector, the Order's discussion of this topic fails to present even *prima facie* evidence of an emergency. It also fails to exhibit reasoned decision-making in two key respects. First, it is unreasonable to point to capacity retirements in isolation

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[124] Order at 1.

without also considering all the other factors that contribute to resource adequacy. Such factors include capacity additions, changes in load, load shape and load flexibility, demand response, transmission access to external resources, etc. Of course, MISO *did* consider all those factors in the modeling that went into the Attachment Y process through which it approved the deactivation of J.H. Campbell.[125]

Second, the Order fails to explain how power plant retirements in Michigan are related to the emergency the Department purports to identify. In past orders where the Department has used section 202(c) to delay a power plant's retirement, the Department has acted on application of a utility or system operator to address a discrete, localized emergency that would be caused by the impending retirement.[126] The Department makes no such claim to geographic specificity here. Rather, the remainder of the "Emergency Situation" section of the Order appears to describe a purported emergency throughout MISO, insofar as it relies on NERC's general statements about MISO reserve margins and the results of the MISO Planning Resource Auction. Thus, the Order fails to explain why it is relying on power plant retirements in a single state—Michigan—to support its claim that an emergency exists in the region as a whole.

iii. The Order acknowledges that the most recent MISO auction "demonstrated sufficient capacity" but fails to explain why an emergency exists nonetheless

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[125] *See* MISO Transmission Planning Business Practices Manual, BPM-020-r32 Section 6.2 (Generator Retirement and Suspension Studies and System Support Resources), Section 6.2.3 (Study Scope Development).

[126] *See* Section II.A *supra*.

As explained in Section IV.A above, the Order cites to the MISO planning reserve auction report while ignoring the statement in that report that: "The 2025 PRA demonstrated sufficient capacity at the regional, subregional and zonal levels." It is entirely unreasonable for the Department to cite this report as evidence of an emergency when the report has concluded exactly the opposite. The Order's effort to focus on other aspects of the report are equally unreasonable. The unremarkable statement that summer prices are higher than prices in other seasons and therefore reflect a tighter supply/demand balance falls far short of providing evidence for an emergency. Likewise, the Order's reliance on the fact that less capacity was *offered* in the 2025 auction than was offered into the 2024 auction hardly describes an emergency. Further, the Order fails to note the information conveyed in the slide it quotes from, which shows that the only material change between 2024 and 2025 was a result in a change in capacity accreditation values rather than a change in physical resources available.

iv. The Order fails to acknowledge that MISO approved the retirement of J.H. Campbell

As explained in Section II.C above, after a robust, technical, and considered process, MISO approved the retirement of the three J.H. Campbell units pursuant to the study process governed by its tariff. MISO concluded that "the suspension of Campbell Units 1, 2 & 3 would not result in violations of applicable reliability criteria." As the system operator, MISO has more in-depth knowledge of its system than the Department does. The Department should have explained why it reached a different conclusion than MISO. Instead, the Order failed even to mention that MISO conducted this study and approved the retirement.

v. The Order makes no effort to review the findings of the MPSC or to demonstrate consultation with Michigan as required by 42 U.S.C. § 7113

The Order acknowledges that Consumers acquired the Covert gas plant, but in all other respects fails to acknowledge the MPSC proceeding that approved Consumers' IRP settlement entailing retirement of J.H. Campbell. As explained above in Section II.C, acquiring the Covert gas plant was not the only action Consumers took as part of that IRP. The IRP also delayed the retirement of the peaking units at the Karn facility and included the acquisition of other new resources, with the result that Consumers' capacity position was set to improve materially even after the retirement of J.H. Campbell. The Order also ignores the Michigan capacity demonstration proceedings that found both Consumers and MISO Zone 7 have sufficient capacity resources in 2025 and in the years to come.

Section 103 of the Department of Energy Organization Act, 42 U.S.C. § 7113, provides:

> Whenever any proposed action by the Department conflicts with the energy plan of any State, the Department shall give due consideration to the needs of such State, and where practicable, shall attempt to resolve such conflict through consultations with appropriate State officials.

The Order plainly conflicts with Michigan's energy plan, as reflected in the MPSC's approval of Consumers' IRP. Equally clearly, the Order does not give "due consideration" to the needs of Michigan. Nor does it appear that the Department made any attempt to resolve the conflict it created through consultation with the appropriate State officials. The Department, therefore, has failed to comply with Section 103 of the Department of Energy Organization Act. A practical consequence of the Department's apparent failure to consult with the State is that the Order lacks basic information related to its action, including the Order's inexplicable failure to accurately state the capacity of J.H. Campbell, the lack of awareness as to the operational status of Unit 2, the understatement of resources Consumers acquired to replace J.H. Campbell, and the omission of any reference to the reliability analysis undertaken by the State.

vi. The Order fails to provide any specific evidence or reasoning why J.H. Campbell must remain in operation and why alternative measures are inadequate

Even accepting the Order's contention that there exists a capacity shortfall in MISO, it does not follow that commanding the continued operation of J.H. Campbell is the best or even an appropriate means of alleviating the shortfall. The Order does not assert that there is a local problem on the grid that only J.H. Campbell can solve. In this respect, the Order departs markedly from past uses of section 202(c) and from the Department's regulations implementing section 202(c), which state that: "Actions under this authority are envisioned as meeting a specific inadequate power supply situation."[127]

Rather, the emergency that the Order purports to identify – "potential tight reserve margins" – is one that spans the entire fifteen-state MISO region and one

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[127] 10 C.F.R. § 205.371.

that could presumably be addressed by any number of actions across MISO. And, given that J.H. Campbell amounts to well less than 1% of generation capacity in MISO, there likely were options available that would have had a much greater impact on the overall balance of supply and demand. Further, because J.H. Campbell is an over 60-year-old facility in a largely degraded operational state, there presumably were alternative actions available that could have met the purported need with higher levels of reliability.

Yet the Order does not acknowledge any alternatives or explain whether less burdensome measures were exhausted before taking this action. The question of whether alternative measures could have been used to address the "emergency" is made more challenging by the fact that the Order never quantifies the extent of the emergency it purports to identify within MISO. But that omission merely highlights rather than excuses the deficiencies of the Order.

One possible alternative may have been demand-side measures. The Department's regulations require applicants seeking an order under section 202(c) to provide a "description of any conservation or load reduction actions that have been implemented . . . [and a] discussion of the achieved or expected results."[128] In the Yorktown case, the Department required Dominion to exhaust all demand response measures before dispatching the facility.[129] And yet here the Department failed to make any inquiry or even to consider whether demand-side measures could have

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[128] 10 C.F.R. § 205.373.

[129] *See* DOE Order No. 202-17-4 (Sept. 14, 2017) ("PJM and Dominion shall exhaust all reasonably and practically available resources, including demand response and behind-the-meter generation resources, prior to operating Yorktown Unit 1 or Yorktown Unit 2.")

addressed the purported emergency. Similarly, the Department's regulations require applicants to describe their efforts made to obtain additional power through third parties.[130] But again, the Department failed to consider whether MISO could alleviate the purported emergency through access to external resources.

D. The Department's Direction that MISO Operate J.H. Campbell Using "Economic" Dispatch Is Inconsistent with its Authority under Section 202(c).

The Department's Order directs MISO to "take every step to employ economic dispatch of the Campbell Plant."[131] The Order indicates that the use of economic dispatch is intended to "minimize cost to ratepayers."[132] However, this mandate to MISO exceeds the authority provided by section 202(c). Nor is the use of economic dispatch likely to serve the public interest.

The Order does not define "economic dispatch" or specify how it intends MISO to dispatch the units. In the Energy Policy Act of 2005, Congress adopted a definition of "economic dispatch" that generally conforms to accepted use: "the operation of generation facilities to produce energy at the lowest cost to reliably serve consumers, recognizing any operational limits of generation and transmission facilities."[133] Drawing on this statutory definition, FERC issued a 2006 report, *Security Constrained Economic Dispatch: Definitions, Practices, Issues, and Recommendations,* that provides a useful explanation of the 2-step process that

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[130] 10 C.F.R. § 205.373(h).

[131] Order at 2 (Ordering Paragraph A)

[132] *Id.*

[133] *See* section 1234(b) of the Energy Policy Act of 2005, 42 U.S.C. § 16432(b);

regions have, in practice, adopted to implement economic dispatch.[134] This process includes (1) *day ahead unit commitment*, in which grid operators commit generators to be online in the subsequent 24-hour period, determined based on which generators will be most economic, taking into account each unit's physical operating characteristics, and (2) *unit dispatch*, in which grid operators dispatch committed resources at specified levels, in real-time, determined based on what set of units will minimize total system costs, given actual load, generation, and transmission conditions and constraints.[135]

Section 202(c) authorizes DOE to direct certain actions during emergency conditions. As relevant here, section 202(c)(1) provides DOE with "authority . . . to require by order . . . such generation . . . of electric energy as in its judgment will *best meet the emergency* and serve the public interest." In other words, DOE's power extends only to ordering actions that meet the emergency that the Department has identified.

But economic dispatch is not a rational response to the types of emergencies that section 202(c) authorizes DOE to address. Nor would economic dispatch be a rational approach to addressing the circumstance that DOE is purporting to address with its order—a potential capacity shortfall—if that were within its authority under section 202(c). In fact, DOE has made no effort to explain why economic dispatch is a rational remedy here, — let alone the best means of meeting the "emergency" that it

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[134] FERC, *Security Constrained Economic Dispatch: Definitions, Practices, Issues, and Recommendations* (July 31, 2006), https://www.ferc.gov/sites/default/files/2020-05/final-cong-rpt.pdf.
[135] *Id.* at 5-6.

has identified. And, unlike prior Orders, here DOE acted on its own motion without a request or input of MISO and so cannot rely on the expertise of the cognizant grid operator or operating utility requesting a specific remedy to justify the appropriateness of economic dispatch.[136]

i. Economic dispatch is not a rational response to a shortage of electric energy

Economic dispatch is the standard procedure by which operators (such as MISO) operate the grid. However, outside of normal operations, including during emergency conditions, generation units may be selected "out of merit order" as necessary to ensure that generation and load are balanced. Operating a unit pursuant to economic dispatch is, necessarily, inconsistent with operating the unit in a manner designed to address an emergency, such as a shortage of electric energy. If a unit would be dispatched under purely economic conditions, but electric demand can alternatively be met with other existing supply (or demand response) resources, that unit is *not* necessary to meet the emergency. However, if the unit would, in fact, be needed to address a shortage, it should be dispatched regardless of whether its offer price is above or below the market-clearing price. In other words, economic dispatch is not a dispatch rule that is reasonably tailored to ensure that the unit addresses a shortage of electric energy.

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[136] *See* DOE Order No. 202-18-1 at 4 (The statute requires only that the Secretary use his or her best judgment to meet the emergency and serve the public interest. In this situation, the expertise of the applicant was an important factor. The Department received an application from PJM, which . . . holds the highest-level, federally-regulated reliability responsibilities for the system it manages.), https://www.energy.gov/sites/prod/files/2017/11/f46/Summary%20of%20Findings%20Order%20No.%20202-18-1.pdf.

Prior DOE orders have contained significant operating constraints to satisfy this statutory requirement. Orders have specified that units subject to a section 202(c) order should only run in specific emergency alert conditions — specific conditions in which grid operators have exhausted the capacity of other available generators, imports, and voluntary demand response, and failure to call on additional generation will risk involuntary load shed.[137] Similarly, in its order to delay retirement of the Yorktown plant, DOE recognized that dispatch of the units must be constrained, that continued operation of the units under the standard methodologies used by the local utility (Dominion Energy Virginia) and grid operator (PJM) would not be appropriate, and that Dominion and PJM must exhaust available resources, including demand response and behind-the-meter generation resources, prior to operating Yorktown Units 1 or 2.[138] Similarly, in the case of its 2005 District of Columbia Department of Public Service order, the Department directed Mirant to maintain its facility's capacity to respond when needed, but only ordered it to run when one or both of the 230 kV transmission lines serving downtown D.C. were out of service.[139] And in its 2017 order regarding GRDA's Grand River Energy Center

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[137] DOE Order No. 202-21-1 (authorizing operation only during Energy Emergency Alert Level 2 or Level 3); DOE Order No. 202-21-2 (authorizing operation only during Energy Emergency Alert Level 2 or higher); DOE Order 202-22-1 (same); DOE Order No. 202-22-3 (same); DOE Order No. 202-22-4 (same).

[138] DOE Order No. 202-17-2 (providing that Yorktown units 1 and 2 may be dispatched "only when called upon to address reliability needs" and directing PJM and Dominion Energy Virginia "to provide the dispatch methodology to the Department upon implementation, and to report all dates on which Yorktown Units 1 and 2 are operated"); DOE Order No. 202-18-1 at 3 (relying on the fact that DOE "require[d] PJM and Dominion to exhaust available resources, including demand response and behind-the-meter generation resources, prior to operating Yorktown Units 1 or 2").

[139] DOE Order No. 202-05-3 (Dec. 20, 2005), District of Columbia Public Service Commission at 10 – 11.

Unit 1, the Department strictly limited its remedy, directing GRDA only to provide "dynamic reactive power support and not real power generation, and only when called upon by SPP for reliability purposes."[140] DOE's Order contains no such constraints, and it fails to explain or justify such deviation from consistent past practice.

ii. Economic dispatch is an arbitrary response to any alleged capacity shortage

Indeed, even on DOE's own terms, the justification for the Order does not support ordering J.H. Campbell to operate whenever MISO's economic dispatch rules would select it to operate. The Order points specifically to questions about the sufficiency of electric *capacity* and the ability of MISO to meet load during periods of high demand and low resource output over the next 90 days as the basis for its emergency determination.[141] For example, the Order points to NERC's 2025 Summer Reliability Assessment, and specifically to the finding that "MISO is at elevated risk of operating reserve shortfalls *during periods of high demand and low resource output*."[142] The order repeatedly raises concern about the risk of "*capacity* shortfall for MISO," the extent to which *capacity* of certain generating resources have retired or may retire, and that MISOs' *capacity* market auction (the Planning Resource Auction Results for Planning Year 2025-26) "reinforce the need to increase *capacity*."[143] Dispatch of J.H. Campbell at any time other than a specifically identified operating reserve shortfall (e.g., a concrete expected supply/demand imbalance)—let

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[140] DOE Order No. 202-17-1 at 2.

[141] Order at 1-2

[142] Order at 1 (emphasis added).

[143] Order at 1-2.

alone dispatch whenever the plant would be called upon by MISO's economic dispatch algorithm—is *not* necessary to address the type of emergency that the DOE order identifies. Even if the order sufficiently justified retention of J.H. Campbell as a capacity resource (which it does not for the reasons outlined above), it would not follow that J.H. Campbell's electric *energy* is needed to address the identified emergency. Given the nature of the alleged emergency identified in the Order, no dispatch from J.H. Campbell should be necessary unless and until called upon by MISO expressly to address an emergency purpose.

iii. "Economic dispatch" is not in the public interest in this case

Section 202(c) also requires that DOE determine that a given remedy is in the public interest.[144] The public interest determination is not an independent or sufficient criteria to order any particular action. Rather, Congress's use of the conjunctive "and" in section 202(c)(1) clearly prohibits DOE from ordering actions that the Department believes will advance the public interest if those actions exceed what is needed to address the identified emergency. In fact, DOE acknowledged this limit on its authority in its order denying rehearing of its order directing the retention of the Yorktown power plant.[145] Therefore, for the reasons explained above, economic dispatch is not appropriate even *if* DOE determines that it would advance the public interest.

However, DOE's vague direction to MISO to operate Campbell using "economic dispatch" will not further the public interest. DOE's order does not explain why it

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[144] 16 USC § 824a (c)(1).

[145] DOE Order 202-18-1 at 4.

believes economic dispatch would be in the public interest, other than a general reference to "minimize[ing] cost to ratepayers." However, this justification fails for two reasons. First, the Order's reference to economic dispatch is ambiguous and leaves open the likelihood that Consumers will operate the facility even at times when its operation will have the effect of *increasing* costs to consumers. For example, Consumers is likely to commit J.H. Campbell into MISO's day ahead electricity market as a "must run" unit, rather than using Emergency commitment.[146] In other words, Consumers will operate the units at least at minimum load every day rather than when there is a forecasted shortfall (e.g., due to unexpected load, unit outage, or a natural disaster). In such circumstances, J.H. Campbell will run at its minimum operational level regardless of whether doing so is truly economic. As a result, DOE has not justified, and cannot be reasonably certain, that economic dispatch will "minimize cost to ratepayers" — its sole explanation for the operational profile it has directed MISO to adopt. In other words, DOE's ordering of economic dispatch in this case is arbitrary.

Moreover, by directing economic dispatch, rather than reserving J.H. Campbell for discrete supply shortages by committing it as Emergency status, DOE's order will result in the facility operating significantly more than necessary. Because J.H. Campbell is old, and because Consumers has been deferring maintenance in anticipation of its retirement, a significant step-up in operation caused by must-run commitment and economic dispatch will increase the likelihood that one or more

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[146] *See* MISO Tariff, Section 39.2.5.b.xxvi (discussing Emergency Commitment Status).

units break, requiring costly maintenance to continue operating. Such repairs would likely further increase costs to ratepayers—costs that would be less likely to occur under an operational order better tailored to the emergency that DOE has identified. For example, DOE could have minimized the risk of ratepayer costs had it directed Consumers and MISO to commit (and ultimately dispatch) the facility only after analysis showing a likely near-term supply/demand imbalance or short-term emergency conditions (such as a heatwave, or the forced outage of a large generator or transmission line). The Order is arbitrary and capricious by ordering operation that risks increasing costs to ratepayers, the very outcome DOE has said it is looking to avoid.

Second, the Order fails to consider, let alone explain away, the fact that the State of Michigan has made an independent judgment that it would be in the best interest of ratepayers, the state, and the environment, to accept Consumers' proposal to retire J.H. Campbell. As explained above, the State of Michigan and MISO each went through robust processes to assess the need for J.H. Campbell (or lack thereof), as well as the economic and environmental impacts of its continued operation. The State of Michigan appears not to have been consulted on DOE's Order, notwithstanding the extensive process that it underwent to evaluate whether retirement would be in the public interest. Here, the public interest is best effectuated by respecting the Michigan's considered decision to approve the closure of J.H. Campbell plant, rather than to allow its near continuous operation at ratepayer expense.

Finally, for the reasons explained more fully below, the Order fails to consider the increased air and water pollution that will be caused by J.H. Campbell operating pursuant to economic dispatch instructions. DOE fails to even consider these harms, let alone weigh them against the (alleged) benefits of increased operation, in its determination that economic dispatch of the J.H. Campbell plant will further the public interest.

E. The Department failed to limit its remedy as required by 202(c)(2).

Section 202(c) imposes strict substantive limits on the Department's authority to issue emergency orders that may result in conflicts with any Federal, State, or local environmental law or regulation. Congress deliberately included these limitations to prevent section 202(c) from becoming a de facto exemption from environmental regulation. Here, DOE failed to comply with either of the statute's two express constraints and therefore acted unlawfully.

i. Section 202(c)(2) contains two distinct and binding legal constraints

Congress imposed two critical limitations on the scope of a DOE emergency order under section 202(c):

Temporal Constraint. First, DOE must "ensure that such order requires generation . . . of electric energy only during hours necessary to meet the emergency and serve the public interest."[147] Again, this is a conjunctive requirement such that both conditions—operation in a given hour must be necessary to meet the emergency

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[147] 16 U.S.C. § 824a(c)(2).

and operation in a given hour must serve the public interest—must be satisfied.[148] Moreover, by referring to the "hours" necessary to meet the emergency, Congress placed a high burden on DOE to demonstrate that the remedy provided was narrowly tailored to the specifics of the emergency that the order is designed to address.

Environmental Constraint. Second, the Department must "ensure that such order . . ., to the maximum extent practicable, is consistent with any applicable Federal, State, or local environmental law or regulation and minimizes any adverse environmental impacts."[149]

The Department acknowledges that, "additional generation may result in a conflict with environmental standards and requirements" and so it is required to limit additional generation from J.H. Campbell. However, the Order then wholly fails to meet the acknowledged temporal and environmental constraints in the particular ordering conditions that it establishes.

ii. The Order violates Section 202(c)(2)'s temporal constraint

The Order states that its direction to Campbell is "limited in duration to align with the emergency circumstances."[150] But, in fact, DOE has directed the unit to operate for the entire statutory maximum of 90 days. And, as described in more detail *supra,* within that 90-day window, DOE has directed the use of "economic dispatch"—an operational direction that will likely result in Campbell operating at least at its

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[148] DOE Order No. 202-18-1, 4(Nov. 6, 2017).

[149] 16 U.S.C. § 824a(c)(2).

[150] Order at 2.

minimum output level, and more likely at the maximum output Consumers Energy can manage, taking into account the state of the facility, continuously for the 90-day period—without providing any other temporal limitation on operations. In other words, the Order appears to assume, without explanation, that an emergency will exist in every hour over the entire 90-day period of the Order that Consumers happens to submit a bid into MISO's energy auction that is lower than the market-clearing price.[151] There is no reason to expect that this will actually be the case.

For these and all the reasons explained in section IV.C, the Order's direction that MISO dispatch J.H. Campbell economically is flatly inconsistent with section 202(c)'s requirement that emergency orders be limited to "only" those "hours" in which operation is necessary to meet the emergency. DOE cannot transform an hour-by-hour limitation into a blanket summer-season waiver through hand-waving at "elevated risk" of tight operating reserves and "*potential* electricity shortfalls."

DOE's failure to limit dispatch to discrete periods when the generation is needed to address the purported emergency renders the Order unlawful under the plain terms of § 202(c).

iii. The Order violates section 202(c)(2)'s environmental constraint

Section 202(c)(2) also requires DOE to ensure, "to the maximum extent practicable," that its orders (1) are consistent with applicable environmental laws and

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[151] In fact, it is not clear that DOE will limit operation to 90 days. DOE is authorized to extend the Order beyond 90 days under section 202(c), 16 U.S.C. § 824a(c)(4)(A), and has made no representation that the "emergency" is likely to be resolved by the end of the 90-day period.

regulations and (2) "minimize any adverse environmental impacts." The Department makes no serious effort to comply with this mandate.

First, the Order contains no analysis of J.H. Campbell's environmental obligations. J.H. Campbell is subject to air pollution requirements limiting its emissions of SO_2, NO_x, particulate matter, and mercury, and mandates the use of pollution control equipment such as baghouses, dry sorbent injection, and activated carbon injection systems.[152] DOE does not reference these requirements, direct Consumers to optimize the use of pollution controls or avoid operation during air quality episodes (even if those episodes occur at a time when the marginal energy from J.H. Campbell is not needed to meet electric demand), or provide any guidance for how Consumers is to operate the facility in the event that these requirements would come in conflict with its ability to provide power at any given time. It does not clarify what steps Consumers Energy would have to take to ensure continued operation of pollution control equipment in the event such equipment malfunctioned during the 90-day period. Nor does it appear the Department consulted with the State of Michigan, including its environmental regulator, to identify mechanisms to allow J.H. Campbell to remain available in a way that would minimize conflicts with state environmental laws, which the State was uniquely positioned to advise on and which

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[152] *See* Michigan Department of Environment, Great Lakes, and Energy, Renewable Operating Permit Issued to Consumers Energy, J.H. Campbell Generating Complex [J.H. Campbell ROP] (July 2, 2021), accessible through the Michigan Department of Environment, Great Lakes, and Energy's "MiEnviro Portal," https://www.michigan.gov/egle/maps-data/mienviroportal, and also accessible at https://www.egle.state.mi.us/aps/downloads/rop/pub_ntce/B2835/B2835%20FINAL%2007-01-21.pdf.

is required by section 103 of the Department of Energy Organization Act.[153] Instead, the Order offers only generic language about "compliance with applicable requirements… to the maximum extent feasible."

Second, the Order does not establish any operational criteria to "minimize any adverse environmental impacts" as required by section 202(c)(2). This requirement is in addition to the direction to minimize conflicts between operations and environmental requirements. It makes clear that Congress intended DOE to go beyond just avoiding regulatory conflicts but to proactively consider the environmental impact of its emergency orders. But DOE did not design its order to minimize environmental impacts of continued operation of J.H. Campbell. In fact, DOE's order runs directly contrary to the objective of minimizing environmental impacts by expressly directing MISO to operate J.H. Campbell on an "economic dispatch" basis. That instruction prioritizes low-cost dispatch irrespective of environmental impact.

F. The Order Violates NEPA.

Orders issued under section 202(c) are major federal actions subject to NEPA.[154] Such orders direct federal interventions that may affect environmental conditions. The direction to continue operation of J.H. Campbell is unquestionably a major action that significantly affects the environment. Continued operation of J.H. Campbell will result in significant increases of air and water pollution compared to a

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[153] *See* 42 U.S.C. § 7113.

[154] 42 U.S.C. § 4336e(10) (defining a "major federal action" as one in which the agency carrying out such action determines subject to substantial Federal control and responsibility.").

scenario in which Campbell retired as planned.[155] In fact, the Order directly concedes this point, stating "the additional generation may result in a conflict with environmental standards and requirements."[156]

For any DOE action affecting the quality of the environment, DOE must comply with NEPA—including through issuance of an environmental impact statement, environmental assessment, categorical exclusion, or special environmental analysis.[157] DOE has not taken, or even initiated, any such action. As such, it is acting contrary to its own NEPA regulations and to its obligations under NEPA.

DOE has previously sought to comply with NEPA for section 202(c) orders through categorical exclusions or special environmental assessments. Neither have been undertaken in this instance. Moreover, neither would be applicable here.

DOE has previously pointed to categorical exclusion B4.4 for "power management activities." However, that categorical exclusion is applicable only "provided that the operations of generating projects would remain within normal operating limits." Here, the Order explicitly authorizes the J.H. Campbell plant to operate beyond its normal permitted limits. Consequently, neither categorical exclusion B4.4, nor any other available exclusion, applies.

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[155] *See* J.H. Campbell ROP, *supra* n. 152; State of Michigan Department of Environmental Quality, Authorization to Discharge Under the National Pollutant Discharge Elimination System, Permit No. MI0001422 (May 29, 2018), accessible through the Michigan Department of Environment, Great Lakes, and Energy's "MiEnviro Portal," https://www.michigan.gov/egle/maps-data/mienviroportal.

[156] Order at 2.

[157] *See* 10 C.F.R. § 1021.102(b).

More recently, DOE has, on certain occasions, relied on emergency provisions that can excuse agencies from preparing environmental documents before taking such actions,[158] and instead prepared after-the-fact Special Environmental Analyses in the event that an order results in a significant effect on the environment.[159] However, these instances involved sudden emergencies that provided DOE substantially less notice compared to the months or years of advance warning DOE received regarding J.H Campbell's scheduled retirement. In this case, DOE acted in response to circumstances known well in advance: the long-scheduled retirement of J.H. Campbell on May 31, 2025. Given considerable lead time, DOE had ample opportunity to prepare, at a minimum, an EA prior to issuing its Order. DOE's failure to initiate any environmental review thus lacks justification.

Moreover, there will be even less justification for a failure to initiate appropriate environmental review for any extension of the Order beyond the initial 90 days. Under section 202(c)(3), orders conflicting with environmental laws are strictly limited to 90 days but may be extended. However, such extension requires consultation with other federal agencies responsible for regulating or with expertise in such environmental impacts.[160] Any justification that NEPA can be sidestepped to

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[158] *See* 10 C.F.R. § 1021.343(a); 40 C.F.R. § 1506.12.

[159] *See* DOE, Air Quality and Environmental Justice Memorandum (2021), https://www.energy.gov/sites/default/files/2022-01/sea-05-ercot-air-quality-and-ej-analysis-2021-07-21.pdf; DOE, Special Environmental Analysis for Actions Taken Under U.S Department of Energy Emergency Orders Regarding Operation of the Potomac River Generating Station in Alexandria Virginia (2006), https://www.energy.gov/sites/default/files/nepapub/nepa_documents/RedDont/SEA-04-2006.pdf

[160] 16 U.S.C. § 824a(c)(4)(B).

address an emergency need fades as DOE's orders extend beyond the initial 90-day period.

V. CONCLUSION

For the foregoing reasons, the Michigan Attorney General's request for rehearing should be granted.

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Dated: June 18, 2025

Attachment A

2025 NERC Summer Reliability Assessment

NERC
NORTH AMERICAN ELECTRIC
RELIABILITY CORPORATION

2025 Summer Reliability Assessment

May 2025

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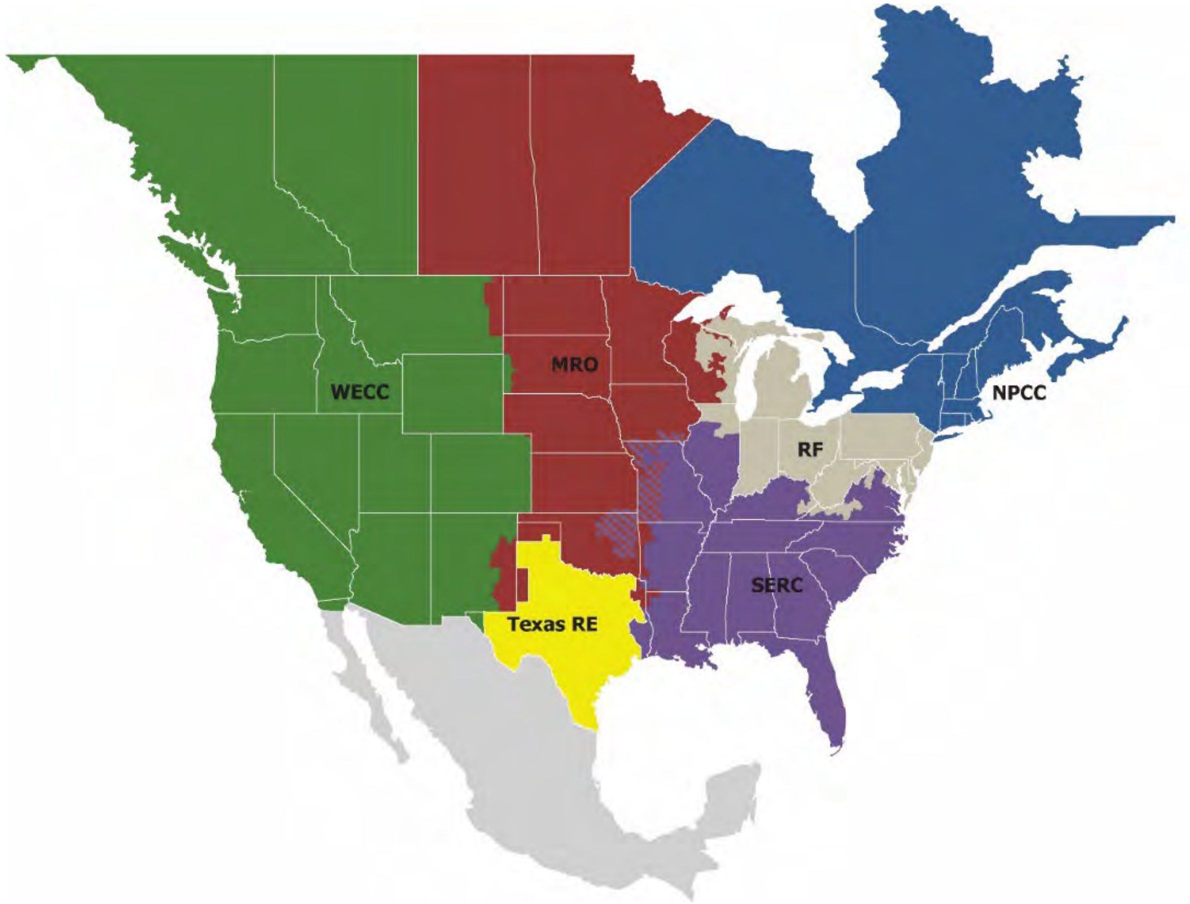
Preface

Electricity is a key component of the fabric of modern society and the Electric Reliability Organization (ERO) Enterprise serves to strengthen that fabric. The vision for the ERO Enterprise, which is comprised of NERC and the six Regional Entities, is a highly reliable, resilient, and secure North American bulk power system (BPS). Our mission is to assure the effective and efficient reduction of risks to the reliability and security of the grid.

Reliability | Resilience | Security
Because nearly 400 million citizens in North America are counting on us

The North American BPS is spans six Regional Entities as shown on the map and in the corresponding table below. The multicolored area denotes overlap as some load-serving entities participate in one Regional Entity while associated Transmission Owners/Operators participate in another.



MRO	Midwest Reliability Organization
NPCC	Northeast Power Coordinating Council
RF	ReliabilityFirst
SERC	SERC Reliability Corporation
Texas RE	Texas Reliability Entity
WECC	WECC

About this Assessment

NERC’s *2025 Summer Reliability Assessment* (*SRA*) identifies, assesses, and reports on areas of concern regarding the reliability of the North American BPS for the upcoming summer season. In addition, the *SRA* presents peak electricity demand and supply changes and highlights any unique regional challenges or expected conditions that might affect the reliability of the BPS. The reliability assessment process is a coordinated evaluation between the NERC Reliability Assessment Subcommittee, the Regional Entities, and NERC staff with demand and resource projections obtained from the assessment areas. This report reflects an independent assessment by NERC and the ERO Enterprise and is intended to inform industry leaders, planners, operators, and regulatory bodies so that they are better prepared to take necessary actions to ensure BPS reliability. This report also provides an opportunity for industry to discuss plans and preparations to ensure reliability for the upcoming summer period.

Key Findings

NERC's annual *SRA* covers the upcoming four-month (June–September) summer period. This assessment evaluates generation resource and transmission system adequacy as well as energy sufficiency to meet projected summer peak demands and operating reserves. This includes a deterministic evaluation of data submitted for peak demand hour and peak risk hour as well as results from recently updated probabilistic analyses. Additionally, this assessment identifies potential reliability issues of interest and regional topics of concern. While the scope of this seasonal assessment is focused on the upcoming summer, the key findings are consistent with risks and issues that NERC highlighted in the *2024 Long-Term Reliability Assessment (LTRA*), which covers a 10-year horizon, and other earlier reliability assessments and reports.[1]

Rising electricity demand forecasts, generation growth, and the increasing pace of change in the resource mix feature prominently in the summer risk profile. Since last summer, the aggregate of peak electricity demand for NERC's 23 assessment areas has risen by over 10 GW—more than double the year-to-year increase that occurred between the summers of 2023 and 2024. Over 7.4 GW of generator capacity (nameplate) has retired or become inactive for the upcoming summer, including 2.5 GW of natural-gas-fired and 2.1 GW of coal-fired generators.[2] Meanwhile, growth in solar photovoltaic (PV) and battery storage resources has accelerated with the addition of 30 GW of nameplate solar PV resources and 13 GW of new battery storage. The new solar and battery resource additions are expected to provide over 35 GW in summer on-peak capacity. New wind resources are expected to provide 5 GW on peak. Operators in many parts of the BPS face challenges in meeting higher demand this summer with a resource mix that, in general, has less flexibility and more variability.

The following findings are derived from NERC and the ERO Enterprise's independent evaluation of electricity generation and transmission capacity as well as potential operational concerns that may need to be addressed for Summer 2025.

Resource Adequacy Assessment and Energy Risk Analysis

All areas are assessed as having adequate anticipated resources for normal summer peak load conditions (see Figure 1). However, the following areas face risks of electricity supply shortfalls during periods of more extreme summer conditions. This determination of elevated risk is based on analysis of plausible scenarios, including 90/10 demand forecasts and historical high outage rates as well as low wind or solar PV energy conditions:

- **Midcontinent Independent System Operator (MISO):** MISO is expecting to have an existing certain capacity of 142,793 MW in the *2025 SRA*, which is a slight reduction from the 143,866 MW submitted for the *2024 SRA*. The retirement of 1,575 MW of natural gas and coal-fired generation since last summer, combined with a reduction in net firm capacity transfers due to some capacity outside the MISO market opting out of the MISO planning resource auction, is contributing to less dispatchable generation in MISO. With higher demand and less firm resources, MISO is at elevated risk of operating reserve shortfalls during periods of high demand or low resource output. MISO's most recent energy assessment reveals that the period of highest energy shortfall risk has shifted from July to August. This shift is driven by the decline in dispatchable generation and the increasing share that solar and wind resources have in meeting demand. The risk of supply shortfalls increases in late summer as solar output diminishes earlier in the day, leaving variable wind and a more limited amount of dispatchable resources to meet demand.
- **NPCC-New England:** The New England area expects to have sufficient resources to meet the 2025 summer peak demand forecast. As of April 1, the 50/50 peak summer demand is forecast to be 24,803 MW for the weeks beginning June 1, 2025, through September 14, 2025, with a lowest projected net margin of -1,473 MW (6.0%). The lowest projected net margin assumes a net interchange of 1,245 MW, which is capacity-backed; however, ISO New England (ISO-NE) has typically imported around 3,000 MW during summer peak load conditions. ISO-NE anticipates an increase of approximately 500 MW in forced outages from its generating fleet compared to Summer 2024. Based on NPCC's most recent energy assessment, some use of New England's operating procedures for mitigating resource shortages is anticipated during Summer 2025. Cumulative loss of load expectation (LOLE) of <0.031 days/period, loss of load hours (LOLH) of <0.120 hours/period, and expected unserved energy (EUE) of <94 MWh/period were estimated for the expected load with expected summer resources while the reduced resources and highest peak load scenario resulted in an estimated cumulative LOLE risk of 4.369 days/period, with associated LOLH of 19.554 hours/period and EUE of 19,847 MWh/period.
- **MRO-SaskPower:** For the upcoming summer months, no capacity constraints or reliability issues are expected under normal conditions. However, in the event of generator forced outages of more than 350 MW, combined with above-normal peak demand, SaskPower may need to rely on short-term imports from neighboring utilities. Other remedial actions could include quickly activating demand-response programs, adjusting maintenance schedules, and, if necessary, implementing temporary load interruptions. SaskPower's modeling projects

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[1] NERC's long-term, seasonal, and special reliability assessments are published on the Reliability Assessments webpage.

[2] Other retirements include 1.2 GW nuclear capacity following the retirement of some units at the Pickering Nuclear Generator Station in Ontario, and 1.6 GW of petroleum, hydro, and other generation. Source: NERC and EIA data.

the probability of experiencing a generation forced outage exceeding 350 MW to be 21.5%. Assuming maximum available imports, the same modeling projects the number of hours with an operating reserve shortfall this summer to be about 0.65 hours with the highest likelihood occurring in June, estimated at 0.43 hours.

- **MRO-SPP:** SPP's Anticipated Reserve Margin (28.5%) is similar to last summer, and resource shortfalls are not expected for the upcoming Summer 2025 season under normal conditions. However, SPP remains at risk for energy shortfalls if above-normal peak demand periods coincide with low wind output and high generator forced outages. Other known operational challenges for the upcoming season include managing wind energy fluctuations; SPP often experiences sharp ramps of its wind generation that can cause transmission system congestion as well as scarcity conditions.
- **Texas RE-ERCOT:** An additional 7 GW of installed solar PV resource capacity and nearly 7.5 GW in new battery storage is helping ERCOT meet rising summer peak demand. ERCOT is projected to have sufficient operating reserves for the August peak load hour given normal summer system conditions. Nevertheless, continued growth in both loads and intermittent renewable resources drives a risk of emergency conditions in the evening hours when solar generation ramps down and loads remain elevated. ERCOT's probabilistic risk assessment of energy emergency alert (EEA) likelihood for the highest risk periods associated with evening hours in the peak month of August is projected to fall to 3%, down from over 15% in 2024. Lower risk is attributed to a nearly doubling of battery energy storage capacity and improved energy availability from new battery storage and operational rules. The South Texas Interconnection reliability operating limit (IROL) continues to present a system constraint, which, under specific unlikely conditions, could ultimately require ERCOT system operators to direct firm load shedding to remain within IROL limits and prevent cascading load loss. For Summer 2025, this risk is being mitigated by updating transmission line dynamic ratings and switching actions to divert power away from the most limiting transmission circuits.
- **WECC-Mexico:** The WECC-Mexico assessment area in Baja California has a peak summer demand of 3,770 MW and is served by a resource mix that is mainly natural-gas-fired generation, with some geothermal, solar, wind, and oil-fired resources (5,636 MW total installed capacity, of which 4,125 MW are gas-fired generators). WECC-Mexico's 14% Anticipated Reserve Margin exceeds the Reference Margin Level for reliability (10%) calculated by WECC. For the upcoming summer, NERC assesses that historically average generator outage rates for peak demand periods can cause a supply shortfall within the WECC-Mexico assessment area and trigger the need for non-firm resources from neighboring areas. Note, in prior SRA reports, the Baja California portion of the BPS was included as part of the WECC-CA/MX assessment area. The *2025 SRA* includes a new assessment area map for the Western Interconnection. The new assessment area boundaries provide reliability risk information in more geographic detail for the United States and Mexico.

Resource additions since last summer have helped lower the risk of energy shortfalls in several areas. Across the U.S. portion of the Western Interconnection, over 6.5 GW of installed solar capacity has been added, along with nearly 7 GW in battery storage. The resources are expected to provide close to 14 GW in on-peak capacity. In British Columbia, new hydroelectric generators were commissioned, contributing to an additional 500 MW in capacity for the summer. The resource additions have alleviated capacity and energy shortfall risks identified in these assessment areas prior to Summer 2024 and provide supplies across the Western Interconnection.

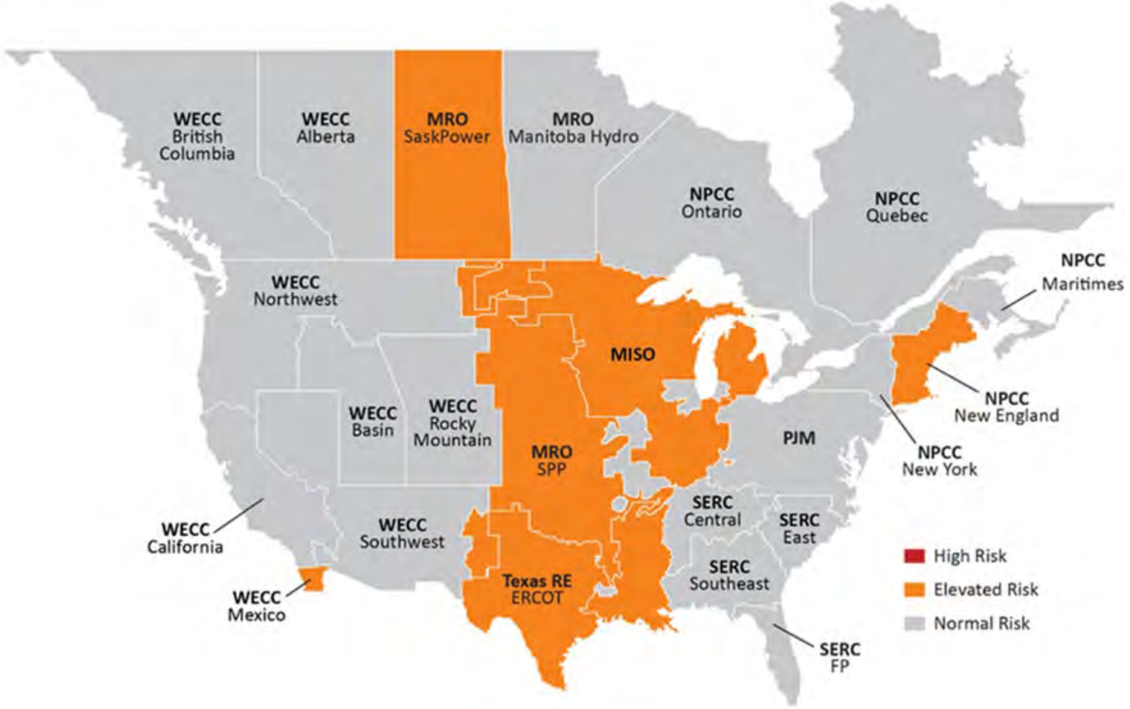

Figure 1: Summer Reliability Risk Area Summary

Seasonal Risk Assessment Summary	
High	Potential for insufficient operating reserves in normal peak conditions
Elevated	Potential for insufficient operating reserves in above-normal conditions
Normal	Sufficient operating reserves expected

Other Reliability Issues

- **Weather services are expecting above-average summer temperatures across much of North America and continued below-average precipitation in the Northwest and Midwest.** In summer-peaking areas, temperature is one of the main drivers of demand and can also contribute to forced outages for generation and other BPS equipment. Average temperatures last summer across the United States and Canada were not as hot as Summer 2023, but Summer 2024 still managed to rank in the top four hottest recorded summers with certain areas breaking records yet again. Few high-level EEAs were issued between June and September 2024, and there were no supply disruptions that resulted from inadequate resources as Balancing Authorities (BA), Transmission Operators (TOP), and Reliability Coordinators (RC) employed a variety of operational mitigations and demand-side management measures. Natural-gas-fired electricity generation broke records last year—highlighting the criticality of natural gas in meeting electric demand. This continuing trend will be key in operator preparations that help to ensure fuel availability for the coming summer. The **Review of 2024 Capacity and Energy Performance** section describes actual demand and resource levels in comparison with NERC's *2024 SRA* and summarizes 2024 resource adequacy events.

- **Load growth is driving higher peak demand forecasts and contributing to resource and transmission adequacy challenges in many areas.** Fifteen of the 23 assessment areas are expecting an increase in peak summer demand from Summer 2024. Aggregated peak demand across all assessment areas has increased by over 10 GW since 2024. This is more than double the increase in peak demand from 2023 to 2024. One of the largest increases is seen in the U.S. West (+5%), where a new peak demand record was set last summer. Extreme heat is reported as a main reliability concern this year among BAs in WECC. With precipitation expected to be lower than average in the Northwest, natural-gas-fired generation and demand-side management could be important in offsetting any lower-than-normal levels of hydroelectric generation availability. SERC Southeast is also projecting a sizable increase in peak demand of more than 2% from NERC's *2024 SRA.* Entities in the assessment area cite economic growth and increased industrial and data mining loads as the main drivers.

- **Aging generation facilities present increased challenges to maintaining generator readiness and resource adequacy.** Forced outage rates for conventional generators and wind resources have trended toward historically high levels in recent years.[3] System operators face increasing risk of resource shortfalls and operating challenges caused by forced generator outages, especially during periods of high demand or when relatively few conventional resources are dispatched to serve load. The threat to BPS reliability can be compounded in areas where aging resources are further depended upon to provide essential reliability services. In the Southwest, for example, a portion of capacity has been in operation for roughly 60 years. Electric utilities in SERC-Central have also described aging generation as a reliability challenge. Historical performance has demonstrated the need for planning assumptions that account for elevated forced outage rates for these generators. Older generators can also require extensive overhauls, such as generator rewinds, that take resources out of service for extended periods of time as discovery work can lead to additional unplanned maintenance.

- **Battery resource additions are helping reduce energy shortfall risks that can arise from resource variability and peaks in demand.** In Texas, California, and across the U.S. West, the influx of battery energy storage systems (BESS) in recent years has markedly improved the ability to manage energy risks during challenging summer periods. These areas can be exposed to energy shortfalls during hours of peak demand and into evening as solar PV output diminishes, but BESS resources that maintain their charge during the day can help meet peak demand and also overcome energy shortfalls on the system that might otherwise occur with solar down-ramps or variability. Natural-gas-fired generation also continues to play an important role in meeting peak demand and flexibly responding to fluctuations output from variable energy resources (VER).

- **Grid operators need to remain vigilant for the potential of inverter-based resources (IBR) to unexpectedly trip during grid disturbances.** While this near-term challenge persists, NERC continues to work diligently with industry to develop long-term solutions to this issue. In April, NERC published the *Aggregated Report on NERC Level 2 Recommendation to Industry: Findings from Inverter-Based Resource Model Quality Deficiencies Alert*.[4] In the report, NERC summarized the deficiencies identified in the Level 2 alert issued in June 2024. The report's findings were as follows:
  - Many grid operators indicated that they did not have the requested data readily available, supporting the previous finding that data acquisition and management was insufficient.
  - Interconnection process requirements are insufficient.
  - Two-thirds of the protection settings used by grid operators are not set to provide the maximum capability. This creates a significant artificial limitation of overall ride-through capability of BPS-connected solar photovoltaic (PV) facilities.
  - 20% of the surveyed facilities use a facility capability with a 0.95 power factor limit, which means that a significant amount of underused reactive capability exists on the BPS.
  - Dynamic model data is inconsistent.

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[3] See Key Findings in NERC's *2024 State of Reliability report*

[4] *Findings from Inverter-Based Resource Model Quality Deficiencies Alert*

As solar, wind, and battery resources remain the predominant types of resources being added to the BPS, it is imperative for industry, vendors, and manufacturers to take the recommended steps for system modeling and study practices and IBR performance.

- **Operators of natural-gas-fired generators should maintain lines of communication with natural gas system operators to support electric grid reliability.** The 2024 summer season was the fourth hottest on record,[5] and natural-gas-fired generation broke records with a peak monthly average in July of 208 TWh, up 4% from July 2023, per the latest data from the Energy Information Administration (EIA). The EIA projects that rising demand for natural gas exports this year in the wake of ramped up liquefied natural gas (LNG) production combined with lower field production levels could tighten natural gas supplies relative to last summer. Amid year-over-year increases in load projections in most assessment areas, this summer could see another record year for natural-gas-fired generation, thereby stretching supplies even further. Given that late spring and early summer are seasons when natural gas system owners and operators typically perform maintenance requiring system outages, vigilance is needed to ensure the reliability of fuel delivery to natural-gas-fired-generators.[6]
- **Supply chain issues continue to affect lead times for Bulk Electric System (BES) equipment maintenance, replacement, and construction.** While no specific reliability issues for the upcoming summer have been identified, Transmission Owners (TO) and Generator Owners (GO) face delays in parts, materials, and skilled technicians. When summer maintenance preparations or installations are delayed, effects on equipment availability can challenge system operators. Over the long term, supply chain issues and uncertainty continue to affect development. Lead times for transformers remain virtually unchanged, averaging 120 weeks in 2024. Large transformer lead times averaged 80–210 weeks.[7]
- **Wildfire risks in the areas that comprise the Western Interconnection remain ever present.** Wildfire conditions can affect transmission operations by prompting preemptive circuit outages to reduce the risk of fire ignition as well as through fire impacts to transmission infrastructure. Transmission system congestion and reduced import capacity can accompany wildfire conditions. Moreover, fires near wind generation result in curtailment for safety reasons, and solar facilities can be susceptible to range fires. Fire damage to transmission lines interconnected to remote hydro sites in the Pacific Northwest can be particularly problematic with restoration typically taking weeks to months to accomplish.

Recommendations

To reduce the risk of electricity shortfalls on the BPS this summer, NERC recommends the following:

- RCs, BAs, and TOPs in the elevated risk areas identified in the key findings should take the following actions:
  - Review seasonal operating plans and protocols for communicating and resolving potential supply shortfalls in anticipation of potentially extreme demand levels.
  - Consider the potential for higher-than-anticipated forced generator outage rates in operating plans due to plant age, operating patterns, or limited pre-seasonal maintenance availability.
  - Employ conservative generation and transmission outage coordination procedures and operate conservatively commensurate with long-range weather forecasts to ensure adequate resource availability. The review of system performance during the January 2025 cold weather event noted that early declaration of conservative operations in advance of extreme conditions helped reduce grid congestion and enhance transfer capability.[8]
  - Engage state or provincial regulators and policymakers to prepare for efficient implementation of demand-side management mechanisms called for in operating plans.
- GOs with solar PV resources should implement recommendations in the IBR performance issues alert that NERC issued in March 2023.[9]
- State regulators and industry should have protocols in place at the start of summer for managing emergent requests from generators for air-quality restriction waivers. If warranted, U.S. Department Energy (DOE) action to exercise emergency authority under the Federal Power Act (FPA) section 202(c) may be needed to ensure that sufficient generation is available during extreme weather conditions.

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[5] US sweltered through its 4th-hottest summer on record – National Oceanic and Atmospheric Administration

[6] Short-Term Energy Outlook - U.S. Energy Information Administration (EIA)

[7] Supply shortages and an inflexible market give rise to high power transformer lead times | Wood Mackenzie

[8] See notable operations practices in Appendix 2 of the *January 2025 Arctic Events System Performance Review | FERC, NERC, and its Regional Entities: A Joint Staff Report*, April 2025.

[9] See NERC Level 2 Alert: Inverter-Based Resource Performance Issues, March, 2023. Owners and operators of BPS-connected IBRs that are currently not registered with NERC should consult NERC's IBR Registration Initiative for information on the registration process.

Summer Temperature and Drought Forecasts

During the summer season, heat drives peak electricity demand as consumers use more electricity to cool their homes and businesses. Summer 2024 was the fourth hottest summer on record for the United States and Canada, and Summer 2025 is expected to bring similar intensity. Assessment area load forecasts account for many years of historical demand data, often up to 30 years, to predict summer peak demand and prepare for more extreme conditions. According to their probabilistic assessments of the coming summer season, late July and early August are the periods most frequently identified among the assessment areas as the expected period of peak demand. Peak demand hours may not coincide with the highest risk hours in the summer as the resource mix shifts during a 24-hour cycle, particularly when there are prolonged periods of above-normal temperatures. Coordinating pre-season preparations and maintenance remains critical to avoiding forced outages where possible and mitigating risks to BPS reliability.

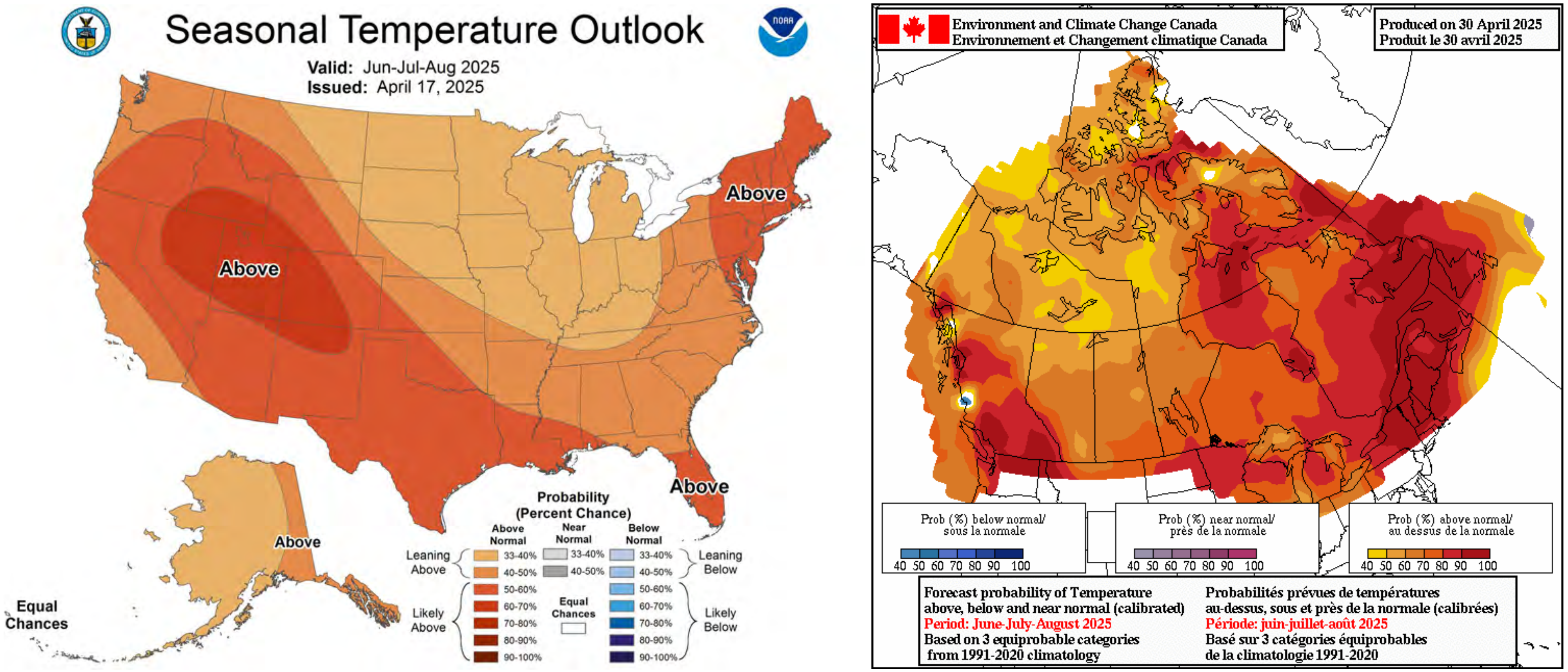

Figure 2: United States and Canada Summer Temperature Outlook[10]

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[10] Seasonal forecasts obtained from U.S. National Weather Service and Natural Resources Canada: https://www.cpc.ncep.noaa.gov/products/predictions/long_range/ and https://weather.gc.ca/saisons/prob_e.html

Risk Assessment Discussion

NERC assesses the risk of electricity supply shortfall in each assessment area for the upcoming season by considering Planning Reserve Margins, seasonal risk scenarios, probability-based risk assessments, and other available risk information. NERC provides an independent assessment of the potential for each assessment area to have sufficient operating reserves under normal conditions as well as above-normal demand and low-resource output conditions selected for the assessment. A summary of the assessment approach is provided in **Table 1**.

Table 1: Seasonal Risk Assessment Summary

Category	Criteria[1]
High Potential for insufficient operating reserves in normal peak conditions	• Planning Reserve Margins do not meet Reference Margin Levels • Probabilistic indices exceed benchmarks (e.g., LOLH of 2.4 hours over the season) • Analysis of the risk hour(s) indicates resources will not be sufficient to meet operating reserves under **normal peak-day demand and outage scenarios**[2]
Elevated Potential for insufficient operating reserves in above-normal conditions	• Probabilistic indices are low but not negligible (e.g., LOLH above 0.1 hours over the season) • Analysis of the risk hour(s) indicates resources will not be sufficient to meet operating reserves under **extreme peak-day demand with normal resource scenarios** (i.e., typical or expected outage and derate scenarios for conditions)[2] • Analysis of the risk hour(s) indicates resources will not be sufficient to meet operating reserves under **normal peak-day demand with reduced resources** (i.e., extreme outage and derate scenarios)[3]
Normal Sufficient operating reserves expected	• Probabilistic indices are negligible • Analysis of the risk hour(s) indicates resources will be sufficient to meet operating reserves under normal and extreme peak-day demand and outage scenarios[4]

Table Notes:

[1] The table provides general criteria. Other factors may influence a higher or lower risk assessment.

[2] **Normal resource scenarios** include planned and typical forced outages as well as outages and derates that are closely correlated to the extreme peak demand.

[3] **Reduced resource scenarios** include planned and typical forced outages and low-likelihood resource scenarios, such as extreme low-wind scenarios, low-hydro scenarios during drought years, or high thermal outages when such a scenario is warranted.

[4] Even in normal risk assessment areas, extreme demand and extreme outage scenarios that are not closely linked may indicate risk of operating reserve shortfall.

Assessment of Planning Reserve Margins and Operational Risk Analysis

Anticipated Reserve Margins, which provide the Planning Reserve Margins for normal peak conditions, as well as reserve margins for seasonal risk scenarios of more extreme conditions are provided in **Table 2**.

Table 2: Seasonal Risk Scenario On-Peak Reserve Margins

Assessment Area	Anticipated Reserve Margin	Anticipated Reserve Margin with Typical Outages	Anticipated Reserve Margin with Higher Demand, Outages, Derates in Extreme Conditions
MISO	24.7%	9.3%	-1.9%
MRO-Manitoba	14.6%	11.2%	3.8%
MRO-SaskPower	33.5%	28.3%	22.4%
MRO-SPP	28.5%	18.2%	3.4%
NPCC-Maritimes	42.2%	31.7%	18.6%
NPCC-New England	14.1%	3.9%	4.0%
NPCC-New York	31.6%	12.5%	5.2%
NPCC-Ontario	23.4%	23.4%	3.7%
NPCC-Québec	32.7%	28.2%	19.1%
PJM	24.7%	15.0%	5.3%
SERC-C	19.6%	12.7%	3.2%
SERC-E	29.1%	21.8%	13.0%
SERC-FP	20.2%	14.0%	11.8%
SERC-SE	41.3%	37.7%	12.5%
TRE-ERCOT	43.2%	33.0%	-5.1%
WECC-AB	42.6%	40.3%	20.5%
WECC-Basin	24.3%	15.9%	-27.2%
WECC-BC	24.3%	24.2%	-6.6%
WECC-CA	56.9%	51.0%	4.7%
WECC-Mex	14.1%	1.6%	-16.8%
WECC-NW	32.1%	29.4%	-13.0%
WECC-RM	25.7%	18.2%	-18.9%
WECC-SW	22.3%	14.0%	-13.0%

Seasonal risk scenarios for each assessment area are presented in the **Regional Assessments Dashboards** section. The on-peak reserve margin and seasonal risk scenario charts in each dashboard provide potential summer peak demand and resource condition information. The reserve margins on the right side of the dashboard pages provide a comparison to the previous year's assessment. The seasonal risk scenario charts present deterministic scenarios for further analysis of different demand and resource levels with adjustments for normal and extreme conditions. The assessment areas determined the adjustments to capacity and peak demand based on methods or assumptions that are summarized in the seasonal risk scenario charts; more information about these dashboard charts is provided in the **Data Concepts and Assumptions** section.

The seasonal risk scenario charts can be expressed in terms of reserve margins: In **Table 2**, each assessment area's Anticipated Reserve Margins are shown alongside the reserve margins for a typical generation outage scenario (where applicable) and the extreme demand and resource conditions in their seasonal risk scenario.

Highlighted in **orange** are the areas identified as having resource adequacy or energy risks for the summer in the **Key Findings** section. The typical outage reserve margin includes anticipated resources minus the capacity that is likely to be in maintenance or forced outage at peak demand. If the typical maintenance or forced outage margin is the same as the Anticipated Reserve Margin, it is because an assessment area has already factored typical outages into the anticipated resources. The extreme conditions margin includes all components of the scenario and represents the most severe operating conditions of an area's scenario. Note that any reserve margin below zero indicates that the resources fall below demand in the scenario.

In addition to the peak demand and seasonal risk hour scenario charts, the assessment areas provided a resource adequacy risk assessment that was probability-based for the summer season. Results are summarized in **Table 3**. The risk assessments account for the hour(s) of greatest risk of resource shortfall. For most areas, the hour(s) of risk coincides with the time of forecasted peak demand; however, some areas incur the greatest risk at other times based on the varying demand and resource profiles. Various risk metrics are provided and include LOLE, LOLH, EUE, and the probabilities of an EEA occurrence.

Energy Emergency Alerts

Extreme generation outages, low resource output, and peak loads similar to those experienced in wide-area heat events and the heat domes experienced in western parts of North America during the last three summers are ongoing reliability risks in certain areas for Summer 2025. When forecasted resources in an area fall below expected demand and operating reserve requirements, BAs may need to employ operating mitigations or EEAs to obtain the capacity and energy necessary for reliability. A description of each EEA level is provided below.

Energy Emergency Alert Levels

EEA Level	Description	Circumstances
EEA1	All available generation resources in use	• The BA is experiencing conditions in which all available generation resources are committed to meet firm load, firm transactions, and reserve commitments and is concerned about sustaining its required contingency reserves. • Non-firm wholesale energy sales (other than those that are recallable to meet reserve requirements) have been curtailed.
EEA2	Load management procedures in effect	• The BA is no longer able to provide its expected energy requirements and is an energy-deficient BA. • An energy-deficient BA has implemented its operating plan(s) to mitigate emergencies. • An energy-deficient BA is still able to maintain minimum contingency reserve requirements.
EEA3	Firm load interruption is imminent or in progress	• The energy-deficient BA is unable to meet minimum contingency reserve requirements.

Table 3: Probability-Based Risk Assessment		
Assessment Area	**Type of Assessment**	**Results and Insight from Assessment**
MISO	The Planning Year 2025–2026 LOLE Study Report, an annual LOLE probabilistic study[11]	The values for LOLH and EUE are taken from the assessment report noted, where the annual LOLE is set at 1 day in 10 years, or 0.1 LOLE for the summer season. For Summer 2025, LOLH is 0.252 hrs/year and EUE is 626.2 MWH/year for the Reference Margin Level. Expectations for load-loss and unserved energy are less than these amounts because MISO's resources are above the Reference Margin Level.
MRO-Manitoba	The 2024 LOLE Study	Manitoba Hydro's probability-based resource adequacy risk assessment for the summer (June–September) season is that there is a low risk of resource adequacy issues. The study indicated Annual Probabilistic Indices for the Manitoba Hydro system for 2026 of 5 MWh per year of EUE, considering a range of flow conditions, and that all of this risk would be in the higher load winter season. The increases in Manitoba load since the 2022 LOLE Study were more than offset by a reduction in long-term exports contract with the expiration of a major export sale in April 2025.
MRO-SaskPower	Probability-based capacity adequacy assessment Summer 2025	According to the study, SaskPower's expected number of hours with an operating reserve shortfall between June and September is about 0.65 hours, assuming maximum available imports. June has the highest likelihood of an EEA, estimated at 0.43 hours. For Summer 2025, the projected probability of experiencing a generation forced outage exceeding 350 MW stands at 21.5%. This number represents an approximation of the likelihood, during any given hour of the summer period, of encountering a generation forced outage surpassing the 350 MW threshold.
MRO-SPP	2024 NERC *LTRA* with Probabilistic Assessment (ProbA)	With the current SPP fleet, the ProbA base case Year 2 produced no LOLE.
NPCC	NPCC conducted an all-hour probabilistic assessment that consisted of a base case and several more severe scenarios examining low resources, reduced imports, and higher loads. The highest peak load scenario has a 7% probability of occurring.	NPCC Regional Entity assesses that there will be an adequate supply of electricity across the Regional Entity this summer. Necessary strategies and procedures are in place to deal with operational challenges and emergencies as they may develop. Preliminary results of the probabilistic analysis by assessment area are below. NPCC anticipates releasing the assessment in May.
NPCC-Maritimes		NPCC's assessment results indicate that Maritimes expects minimal LOLE, LOLH, and EUE over the May–September period, with the highest risk occurring in July and August. The assessment projected LOLE at less than 0.089 days per period, LOLH at less than 0.4 hours per period, and EUE at less than 16.5 MWh per period under the reduced resources and highest peak demand scenario.
NPCC-New England		Based on NPCC's assessment, cumulative LOLE (<0.031 days/period), LOLH (<0.120 hours/period), and EUE (<94 MWh/period) risks were estimated over the summer May to September period for the expected load with expected resources scenario. The highest peak load level conditions with reduced resources scenario resulted in an estimated cumulative LOLE risk (4.369 days/period), with associated LOLH (19.554 hours/period) and EUE (19,847 MWh/period) with the highest risk occurring in June, with some in July and August.
NPCC-New York		Negligible cumulative LOLE (<0.018 days/period), LOLH (<0.054 hours/period), and EUE (33 MWh/period) risks were estimated over the summer May–September period for the expected load with expected resources for the summer. For highest peak load level with low likelihood, reduced resource conditions resulted in an estimated cumulative LOLE risk (1.7 days/period), with associated LOLH (6.5 hours/period) and EUE (4,860 MWh/period) with the highest risk occurring in July and August.

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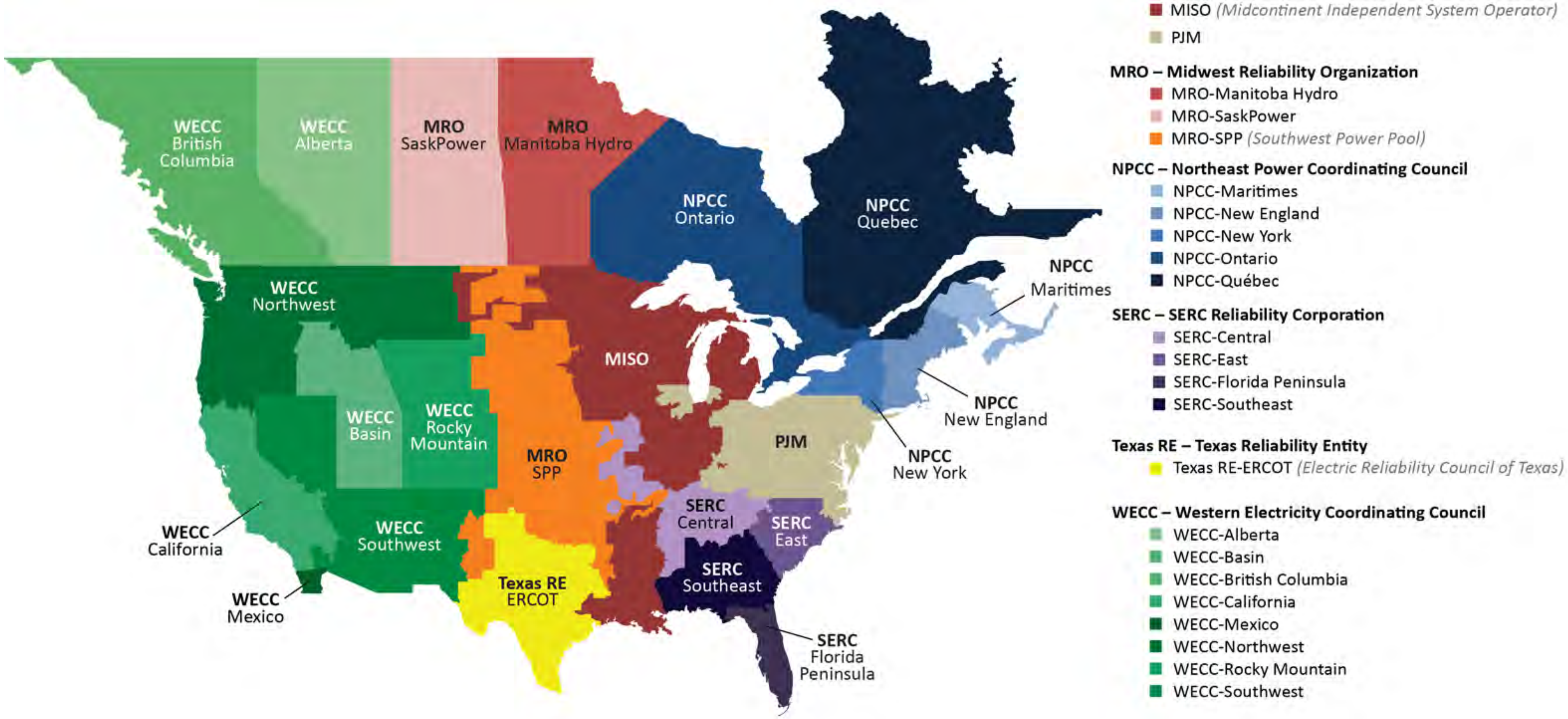
[11] PY 2025–2026 LOLE Study Report

Table 3: Probability-Based Risk Assessment		
Assessment Area	**Type of Assessment**	**Results and Insight from Assessment**
NPCC-Ontario		NPCC's preliminary result of this assessment indicates that the low-likelihood resource case, highest peak load level conditions resulted in a negligible cumulative LOLE (0.081 days/period), with associated cumulative LOLH (0.212 hours/period) and EUE (145.4 MWh/period) with the highest risks occurring predominantly in July, with some in August. Negligible cumulative LOLE, LOLH, and EUE risks were estimated over the May–September summer period for the other scenarios modeled.
NPCC-Québec		The Québec assessment area is not expected to require use of their operating procedures designed to mitigate resource shortages during Summer 2025. Québec did not demonstrate any measurable amounts of cumulative LOLE, LOLH, or EUE risks over the May–September summer period for all the scenarios modeled since the system is winter peaking.
PJM	2023 PJM Reserve Requirement Study (RRS)	PJM is expecting a low risk of resources falling below required operating reserves during Summer 2025. PJM is forecasting around 27% installed reserves (including expected committed demand resources), which is above the target installed reserve margin of 17.7% necessary to meet the 1-day-in-10-years LOLE criterion. The Reserve Requirement Study analyzed a wide range of load scenarios (low, regular, and extreme) as well as multiple scenarios for system-wide unavailable capacity due to forced outages, maintenance outages, and ambient derations. Due to the rather low penetration of limited and variable resources in PJM relative to PJM's peak load, the hour with the most loss-of-load risk remains the hour with the highest forecasted demand.
SERC-Central **SERC-East** **SERC-Florida Peninsula** **SERC-Southeast**	2024 NERC *LTRA* with ProbA. For the ProbA, SERC evaluates 8,760 hourly load and 1,900 sequential Monte Carlo simulations. The results are a probability weighted average of cases, including 38 historic weather-years that are applied to load forecasts for years 2026 and 2028. The model applies a range of economic load forecast errors from -4% to 4% and other noted assumptions.	The 2024 ProbA indicates some resource adequacy risk to SERC with the results for the year 2028 showing slightly higher risk than the year 2026. For the entire SERC footprint, Summer 2026 shows a low risk in summer afternoons into evenings, and for Summer 2028, that risk is still low but extends from summer evenings later into summer nights.
Texas RE-ERCOT	ERCOT probabilistic assessment using the Probabilistic Reserve Risk Model	The simulation indicates some risk of having to declare an EEA for hours ending 20 and 21 for the peak load day in August. These two hours have the highest EEA risk (reflecting corresponding high net load conditions) with probabilities of declaring an EEA 3.05% and 1.54%, respectively. This is categorized by ERCOT as "Low risk" per its criteria of hourly EEA probability that is equal to or less than 10%. For the *2024 SRA*, ERCOT reported EEA declaration probabilities for hours ending 20 and 21 of 18.4% and 9.2%, respectively. The large decrease in EEA probabilities is due to the addition of 7,414 MW of BESS capacity.
WECC	2024 Western Assessment on Resource Adequacy employs a probabilistic energy, area-wide assessment, using Multi Area Variable Resource Integration Convolution (MAVRIC) model	

Table 3: Probability-Based Risk Assessment		
Assessment Area	**Type of Assessment**	**Results and Insight from Assessment**
WECC-AB		Probabilistic analysis performed by WECC found no LOLH or EUE for this summer. All resource margins have increased since last summer with the addition of new capacity, including almost 2,700 MW of new natural gas capacity, 1,200 MW of new wind (+27%), 200 MW of new solar (+13%), and 54 MW of new energy storage systems (+27.5%) on-line. The peak hour has moved earlier, to 3:00 p.m. from 4:00 p.m., still in late July.
WECC-Basin		Probabilistic analysis performed by WECC found no LOLH or EUE for this summer. The reserve margins are not anticipated to fall below the reference margin (14%) for the upcoming summer—existing-certain is forecast at 19% with anticipated and prospective at 24%. The area is expected to peak in early July around 3:00 p.m.
WECC-BC		Probabilistic analysis performed by WECC found no LOLH or EUE for this summer. The reserve margins are not anticipated to fall below the reference margin for the upcoming summer. All reserve margins have increased since 2024 due to increased capacity and energy availability. The peak hour for summer is forecast for early August around 4 p.m.
WECC-CA		Probabilistic analysis performed by WECC found no LOLH or EUE for this summer. The reserve margins are not anticipated to fall below the reference margin for the upcoming summer. Reserve margins have increased since last summer with the increased existing-certain and Tier 1 planned capacity more than offsetting the decrease in available demand response.
WECC-Mex		Probabilistic analysis performed by WECC found no LOLH or EUE for this summer. The peak hour is expected to occur in early August around 4:00 p.m. The reserve margins (14%) are not anticipated to fall below the reference margin (10%) for the upcoming summer. An extreme summer peak load is anticipated to be 4,067 MW. Under extreme conditions, typical forced outages are expected to be 472 MW and derates for thermal generation resources are expected to be 330 MW, requiring imports from neighboring areas. The expected operating reserve requirement on peak is 226 MW.
WECC-RM		Probabilistic analysis performed by WECC found no LOLH or EUE for this summer. The peak hour is expected to occur in late July around 4:00 p.m. Summer 2025 reserve margins (existing-certain 25%, and anticipated and prospective 26%) are not anticipated to fall below the reference margin (17%). An extreme summer peak load may be around 15 GW, and the area has 17.3 GW of existing-certain capacity plus 104 MW of planned new resources. Typical forced outages could be 1,044 MW and derates under extreme conditions of 1,561 MW for thermal and 990 MW for wind. The expected operating reserve requirement on peak is 846 MW.
WECC-NW		Probabilistic analysis performed by WECC found no LOLH or EUE for this summer. Summer 2025 peak hour is expected to occur in early July around 5:00 p.m. Reserve margins (existing-certain 29% and anticipated and prospective 32%) are not anticipated to fall below the reference margin (23%). An extreme summer peak load may be around 32,740 MW. Typical forced outages are forecast to be 777 MW with derates for thermal under extreme conditions to be 1,584 MW and 2,649 MW for wind. The expected operating reserve requirement on peak is 1,750 MW.
WECC-SW		Probabilistic analysis performed by WECC found no LOLH or EUE for this summer. The peak hour is expected to occur in early July around 5:00 p.m. The existing-certain 17% reserve margin does not fall below the reference margin (13%) for the upcoming summer. The anticipated and prospective reserve margin rises to 22%. An extreme summer peak load could approach 40 GW during the riskiest hour, while the region is anticipated to have 40.3 GW of existing-certain energy available and an additional 2 GW of Tier 1 planned resources. Typical forced outages are estimated near 3 GW, and derates for thermal under extreme conditions can shave another 3 GW from available energy. The expected operating reserve requirement is 2,119 MW.

Regional Assessments Dashboards

The following assessment area dashboards and summaries were developed based on data and narrative information collected by NERC from the six Regional Entities on an assessment area basis. Guidelines and definitions are in the **Data Concepts and Assumptions** table. On-peak reserve margin bar charts show the Anticipated Reserve Margin compared to a Reference Margin Level that is established for the areas to meet resource adequacy criteria. Prospective Reserve Margins can give an indication of additional on-peak capacity but are not used for assessing adequacy. The operational risk analysis shown in the following regional assessments dashboard pages provides a deterministic scenario for understanding how various factors that affect resources and demand can combine to impact overall resource adequacy. For each assessment area, there is a risk-period scenario graphic; the left **blue** column shows anticipated resources (from the **Demand and Resource Tables**), and the **orange** column at the right shows the two demand scenarios of the normal peak net internal demand (from the **Demand and Resource Tables**) and the extreme summer peak demand determined by the assessment area. The middle **red** or **green** bars show adjustments that are applied cumulatively to the anticipated resources. Adjustments may include reductions for typical generation outages (maintenance and forced not already accounted for in anticipated resources) and additions that represent the quantified capacity from operational tools (if any) that are available during scarcity conditions but have not been accounted for in the *SRA* reserve margins. Resources throughout the scenario are compared against expected operating reserve requirements that are based on peak load and normal weather. The cumulative effects from extreme events are also factored in through additional resource derates or low-output scenarios. In addition, results from a probability-based resource adequacy assessment are shown in the Highlights section of each dashboard. Methods varied by assessment area and provided further insights into the risk conditions forecasted for the summer period.



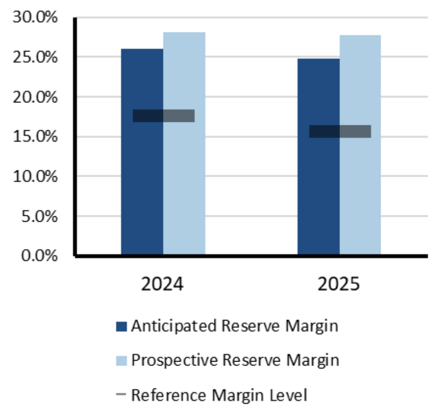
MISO

MISO is a not-for profit, member-based organization that administers wholesale electricity markets that provide customers with valued service; reliable, cost-effective systems and operations; dependable and transparent prices; open access to markets; and planning for long-term efficiency. MISO manages energy, reliability, and operating reserve markets that consist of 36 local BA and 394 market participants, serving approximately 42 million customers. Although parts of MISO fall in three Regional Entities, MRO is responsible for coordinating data and information submitted for NERC's reliability assessments.

Highlights

- Demand forecasts and resource data indicate that MISO is at elevated risk of operating reserve shortfalls during periods of high demand or low resource output.
- The performance of wind and solar generators during periods of high electricity demand is a key factor in determining whether system operators need to employ operating mitigations, such as maximum generation declarations and energy emergencies; MISO has over 31,000 MW of installed wind capacity and 18,245 MW of installed solar capacity; however, the historically based on-peak capacity contribution is 5,616 MW and 9,123 MW, respectively.
- Since last summer, over 1,400 MW of thermal generating capacity has been retired in MISO, and the new generation that has been added is predominantly solar (8,080 MW nameplate/4,140 MW on-peak).
- MISO's most recent energy assessment reveals that the period of highest energy shortfall risk has shifted from July to August.

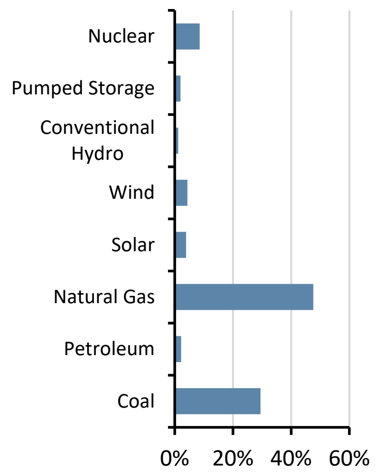
On-Peak Reserve Margin



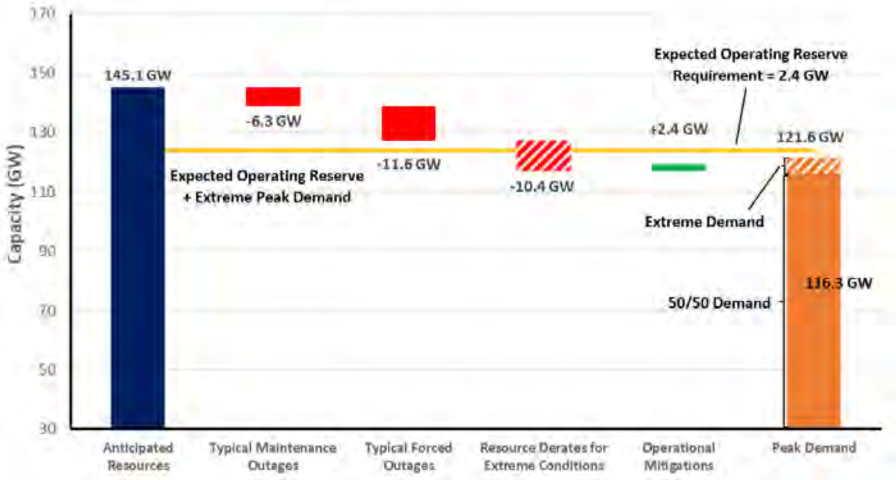
Risk Scenario Summary

Expected resources meet operating reserve requirements under normal peak-demand scenarios. Above-normal summer peak load and extreme generator outage conditions could result in the need to employ operating mitigations (e.g., load-modifying resources and energy transfers from neighboring systems) and EEAs. Emergency declarations that can only be called upon when available generation is at maximum capability are necessary to access load-modifying resources (demand response) when operating reserve shortfalls are projected.

On-Peak Fuel Mix



2025 Summer Risk Period Scenario



Scenario Description (See Data Concepts and Assumptions)

Risk Period: Highest risk for unserved energy at peak demand hour

Demand Scenarios: Net internal demand (50/50) and (90/10) demand forecast using 30 years of historical data

Maintenance Outages: Rolling five-year summer average of maintenance and planned outages

Forced Outages: Five-year average of all outages that were not planned

Extreme Derates: Maximum historical generation outages

Operational Mitigations: A total of 2.4 GW capacity resources available during extreme operating conditions

MRO-Manitoba Hydro

Manitoba Hydro is a provincial Crown corporation and one of the largest integrated electricity and natural gas distribution utilities in Canada. Manitoba Hydro is a leader in providing renewable energy and clean-burning natural gas. Manitoba Hydro provides electricity to approximately 608,500 electric customers in Manitoba and natural gas to approximately 293,000 customers in southern Manitoba. Its service area is the province of Manitoba, which is 251,000 square miles. Manitoba Hydro is winter peaking. Manitoba Hydro is its own Planning Coordinator (PC) and BA. Manitoba Hydro is a coordinating member of MISO, which is the RC for Manitoba Hydro.

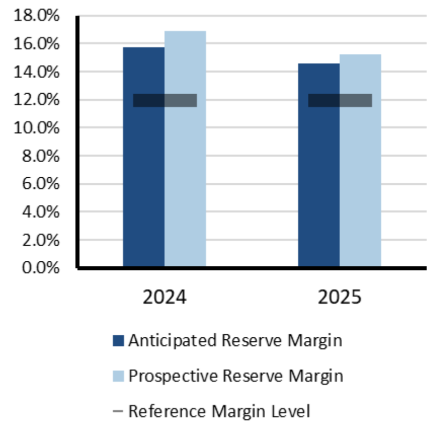
Highlights

- Manitoba Hydro is not anticipating any operational challenges and/or emerging reliability issues in its assessment area for Summer 2025; the Anticipated Reserve Margin for Summer 2025 exceeds the 12% Reference Margin Level.
- While Manitoba Hydro experienced demand growth in the past year, the growth is less than the recent reduction in firm export contracts.
- Manitoba Hydro water supply conditions are below average but improved from this time last year, and above-average winter snowfall will favorably impact spring runoff.
- Manitoba Hydro expects to reliably supply its internal demand and export obligations even if extreme drought develops throughout the year.

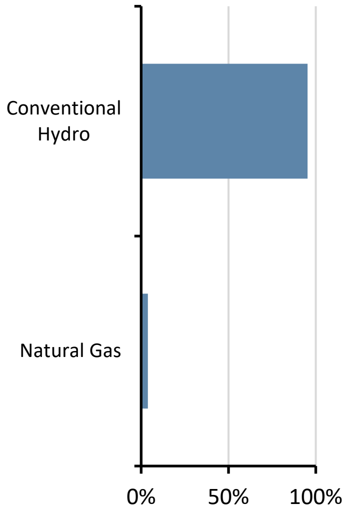
Risk Scenario Summary

Expected resources meet operating reserve requirements under the assessed scenarios.

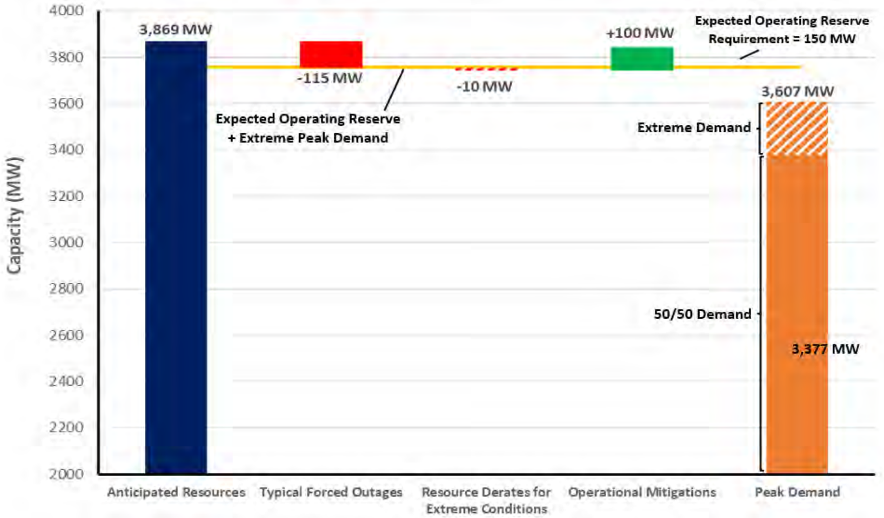
On-Peak Reserve Margin



On-Peak Fuel Mix



2025 Summer Risk Period Scenario



Scenario Description (See Data Concepts and Assumptions)

Risk Period: Highest risk for unserved energy at peak demand hour

Demand Scenarios: (50/50) Demand with allowance for extreme demand based on extreme summer weather scenario of 35.4 C (96 F)

Forced Outages: Typical forced outages

Extreme Derates: Summer wind capacity accreditation of 18.1% of nameplate rating based on MISO seasonal analysis

Normal hydro generation expected for this summer.

Operational Mitigations: Utilize Curtailable Rate Program to manage peak demand; utilize operating reserve if additional measures required

MRO-SaskPower

MRO-SaskPower is an assessment area in the Saskatchewan province of Canada. The province has a geographic area of 651,900 square kilometers (251,700 square miles) and a population of approximately 1.1 million. Peak demand is experienced in the winter. The Saskatchewan Power Corporation (SaskPower) is the PC and RC for the province of Saskatchewan and is the principal supplier of electricity in the province. SaskPower is a provincial Crown corporation and, under provincial legislation, is responsible for the reliability oversight of the Saskatchewan BES and its Interconnections.

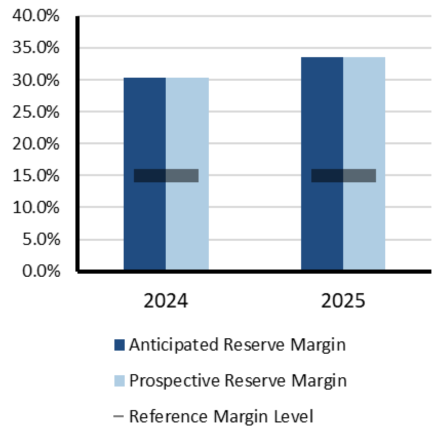
Highlights

- Although Saskatchewan is mainly a winter-peaking region, summer can also bring high electricity demand due to extreme heat.
- Each year, SaskPower works with Manitoba Hydro on a joint summer operating study with input from the Western Area Power Administration and Basin Electric to develop operational guidelines to address any potential challenges.
- The expected number of hours with an operating reserve shortfall between June and September is about 0.65 hours, assuming maximum available imports. The risk of shortfall increases if major unplanned generator outages coincide with scheduled maintenance during peak demand months (June to September). For Summer 2025, the projected probability of experiencing a generation forced outage exceeding 350 MW stands at 21.5%. This number represents an approximation of the likelihood of encountering a generation forced outage surpassing the 350 MW threshold during any given hour of the summer period.
- If extreme heat coincides with significant generation outages, SaskPower will act by activating demand-response programs, arranging short-term power imports from neighboring utilities, and, if necessary, implementing temporary load interruptions to maintain grid stability.

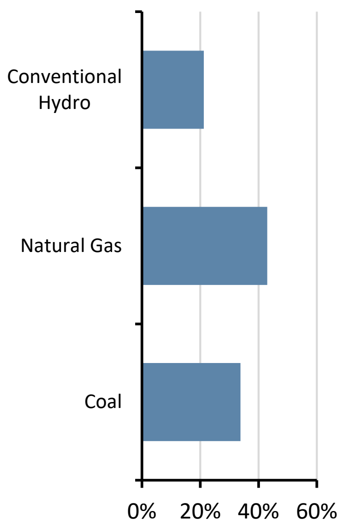
Risk Scenario Summary

Expected resources meet operating reserve requirements under normal peak demand and outage conditions. Above-normal summer peak load and outage conditions are likely to result in the need to employ operating mitigations (e.g., demand response and transfers) and EEAs.

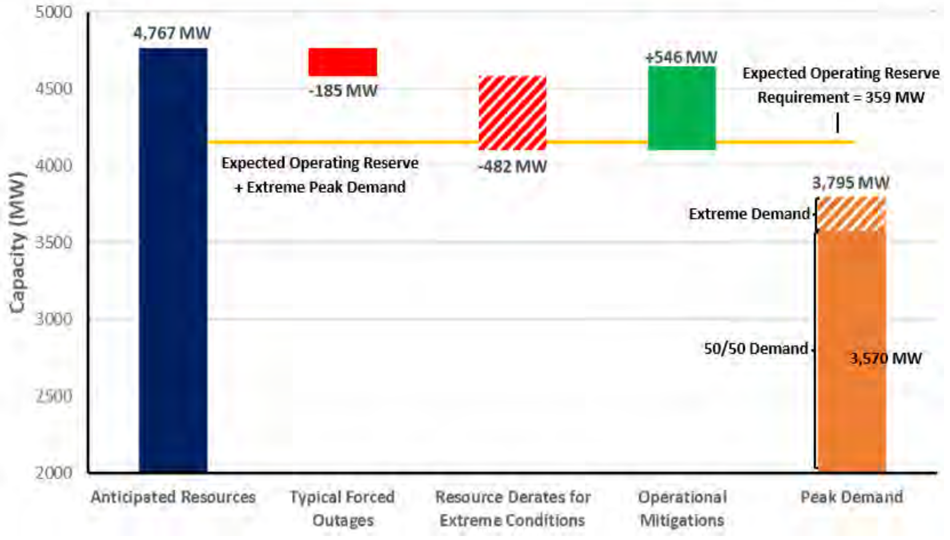
On-Peak Reserve Margin



On-Peak Fuel Mix



2025 Summer Risk Period Scenario



Scenario Description (See Data Concepts and Assumptions)

Risk Period: Highest risk for unserved energy at peak demand hour

Demand Scenarios: Net internal demand (50/50) and above-normal scenario based on peak demand with lighting and all consumer loads

Forced Outages: Estimated by using SaskPower forced outage model

Extreme Derates: Estimated resources unavailable in extreme conditions

Operational Mitigations: Estimated non-firm imports and standby generators on 2–7-day notice

MRO-SPP

SPP PC's footprint covers 546,000 square miles and encompasses all or parts of Arkansas, Iowa, Kansas, Louisiana, Minnesota, Missouri, Montana, Nebraska, New Mexico, North Dakota, Oklahoma, South Dakota, Texas, and Wyoming. The SPP long-term assessment is reported based on the PC footprint, which touches parts of the MRO Regional Entity and the WECC Regional Entity. The SPP assessment area footprint has approximately 61,000 miles of transmission lines, 756 generating plants, and 4,811 transmission-class substations, and it serves a population of more than 18 million.

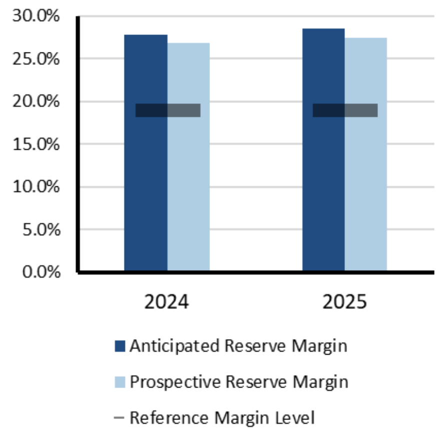
Highlights

- SPP projects a low likelihood of any emerging reliability issues impacting the area for the 2025 Summer season.
- Generation availability is not expected to be impacted by fuel shortages or river conditions this summer.
- BA generation capacity deficiency risks remain depending on wind generation output levels and unanticipated generation outages in combination with high load periods.
- Using the current operational processes and procedures, SPP will continue to assess the resource needs for the 2025 Summer season and will adjust generation and energy supply portfolios as needed to ensure that real-time energy sufficiency is maintained throughout the summer.

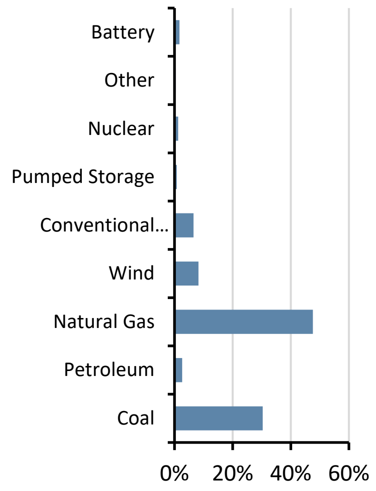
Risk Scenario Summary

Expected resources are sufficient to meet operating reserve requirements under normal peak-demand and outage scenarios. Above-normal summer peak load, low wind conditions, and higher-than-normal forced outages could result in the need for operating mitigations (e.g., demand response and transfers from neighboring systems) and EEAs.

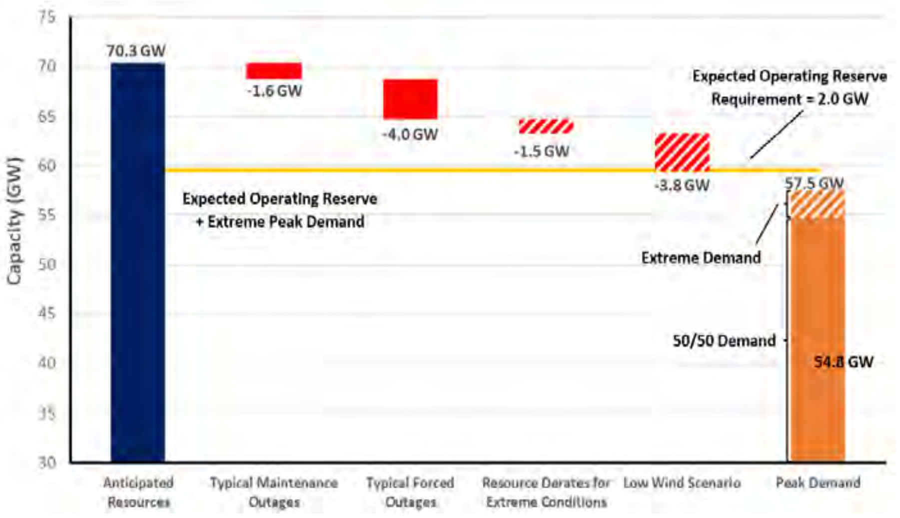
On-Peak Reserve Margin



On-Peak Fuel Mix



2025 Summer Risk Period Scenario



Scenario Description (See Data Concepts and Assumptions)

Risk Period: Highest risk for unserved energy at peak demand hour

Demand Scenarios: Net internal demand (50/50) and extreme demand is a 5% increase from net internal demand

Maintenance and Forced Outages: Represent five-year historical averages; calculated from SPP's generation assessment process

Extreme Derates: Additional unavailable capacity from operational data at high-demand periods

Low Wind Scenario: Derates reflecting a low-wind day in the summer

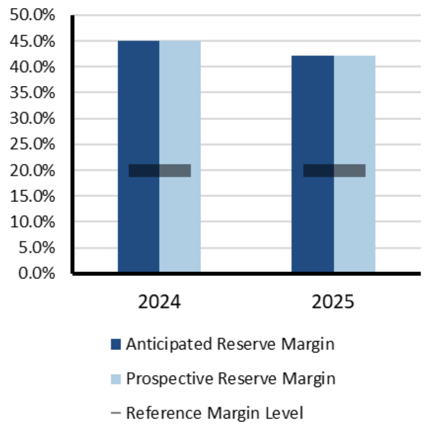
NPCC-Maritimes

The Maritimes assessment area is a winter-peaking NPCC area that contains two BAs. It is comprised of the Canadian provinces of New Brunswick, Nova Scotia, and Prince Edward Island and the northern portion of Maine, which is radially connected to the New Brunswick power system. The area covers 58,000 square miles with a total population of 1.9 million.

Highlights

- As Maritimes is a winter-peaking system, no issues are expected for the upcoming summer assessment period with sufficient firm capacity to meet forecast peak demand. If an event were to occur, emergency operations and planning procedures are in place.
- Probabilistic analysis performed by NPCC for the NPCC *Summer Reliability Assessment* found negligible LOLH and EUE for the expected load and resource levels this summer. A scenario with an extreme high load shape produced minimal amounts of cumulative LOLE (<0.089 days/period), LOLH (<0.4 hours/period), or EUE (< 16.5 MWh/period) over the May–September summer period with the highest risk occurring in July and August.
- Dual-fueled units will have sufficient supplies of heavy fuel oil (HFO) on site to sustain operations in the event of natural gas supply interruptions.

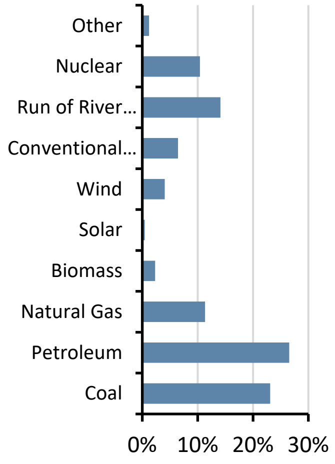
On-Peak Reserve Margin



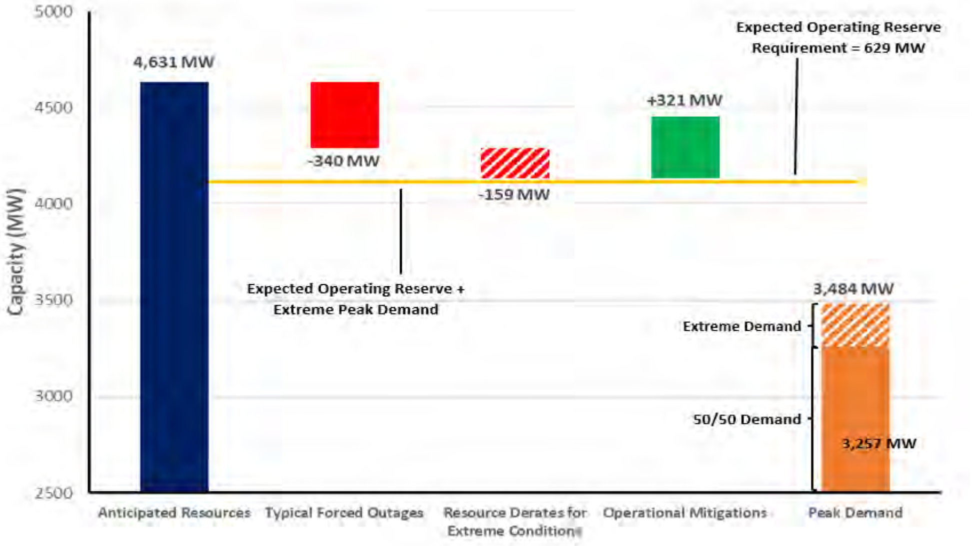
Risk Scenario Summary

Expected resources meet operating reserve requirements under normal peak-demand scenarios. Above-normal summer peak load or extreme outage conditions could necessitate operating mitigations (e.g., demand response and non-firm transfers) and EEAs.

On-Peak Fuel Mix



2025 Summer Risk Period Scenario



Scenario Description (See Data Concepts and Assumptions)

Risk Period: Highest risk for unserved energy at peak demand hour

Demand Scenarios: Net internal demand (50/50) and (above 90/10) extreme demand forecast

Forced Outages: Based on historical operating experience

Extreme Derates: A low-likelihood scenario resulting in an additional 50% derate in the remaining capacity of both natural gas and wind resources under extreme conditions

Operational Mitigations: Imports anticipated from neighbors during emergencies, (e.g. New Brunswick Power System Operator can increase import capability from 200 MW to 550 MW under emergency operations for up to 30 minutes)

NPCC-New England

NPCC-New England is an assessment area consisting of the states of Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont that is served by ISO New England (ISO-NE) Inc. ISO-NE is a regional transmission organization that is responsible for the reliable day-to-day operation of New England's bulk power generation and transmission system, administration of the area's wholesale electricity markets, and management of the comprehensive planning of the regional BPS.

The New England BPS serves approximately 14.5 million customers over 68,000 square miles.

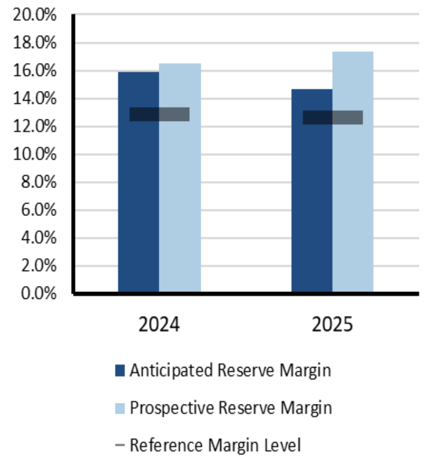
Highlights

- ISO-NE forecasts adequate transmission capability and manageable capacity margins to meet the expected peak demand.
- Probabilistic analysis performed by NPCC for the NPCC *Summer Reliability Assessment* identified small amounts of cumulative LOLE, LOLH, and EUE for the expected load with anticipated resources for the summer. A reduced resources and highest peak load level scenario resulted in an estimated cumulative LOLE risk of 4.369 days/period, with associated LOLH (19.554 hours/period) and EUE (19,847 MWh/period). The highest risk occurs in June, with some risk in July and August.
- The NPCC 2025 *Summer Reliability Assessment* will be approved on or about May 12, 2025, and posted on NPCC's website.

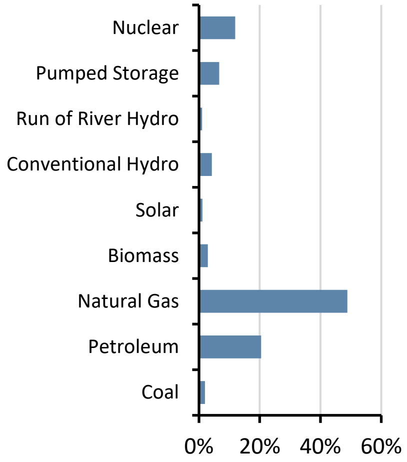
Risk Scenario Summary

Expected resources do not meet operating reserve requirements under normal peak-demand and outage scenarios. Additional non-firm transfers are likely to be needed and available from neighbors. More severe conditions (e.g., above-normal summer peak load and outage conditions) could result in an EEA.

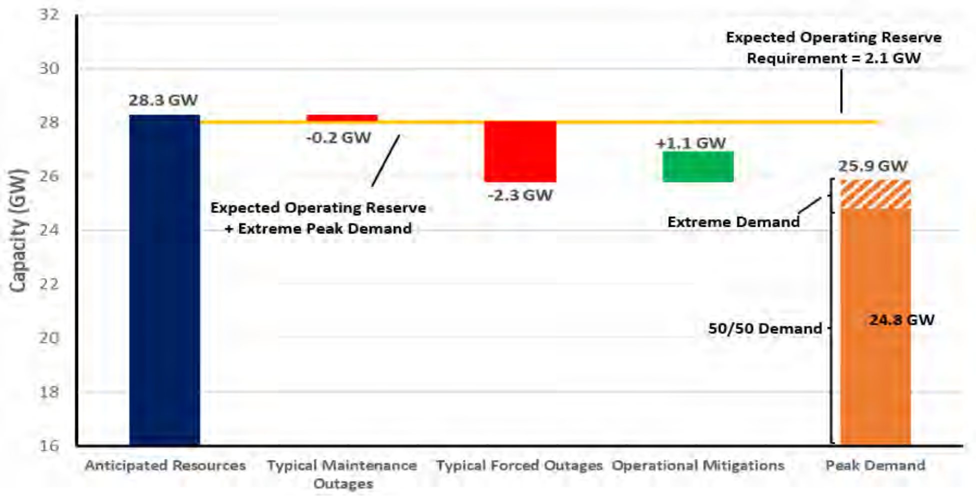
On-Peak Reserve Margin



On-Peak Fuel Mix



2025 Summer Risk Period Scenario



Scenario Description (See Data Concepts and Assumptions)

Risk Period: Highest risk for unserved energy at peak demand hour

Demand Scenarios: Peak net internal demand (50/50) and (90/10) extreme demand forecast

Maintenance Outages: Based on historical weekly averages

Typical Forced Outages: Based on seasonal capacity of each resource as determined by ISO-NE

Operational Mitigations: Based on load and capacity relief assumed available from invocation of ISO-NE operating procedures

NPCC-New York

NPCC-New York is an assessment area consisting of the New York ISO (NYISO) service territory. NYISO is responsible for operating New York's BPS, administering wholesale electricity markets, and conducting system planning. NYISO is the only BA within the state of New York. The BPS in New York encompasses over 11,000 miles of transmission lines and 760 power generation units and serves 20.2 million customers. For this *SRA*, the established Reference Margin Level is 15%. Wind, grid-connected solar PV, and run-of-river totals were derated for this calculation. However, New York requires load-serving entities to procure capacity for their loads equal to their peak demand plus an Installed Reserve Margin (IRM). The IRM requirement represents a percentage of capacity above peak load forecast and is approved annually by the New York State Reliability Council. The council approved the 2025–2026 IRM at 24.4%.

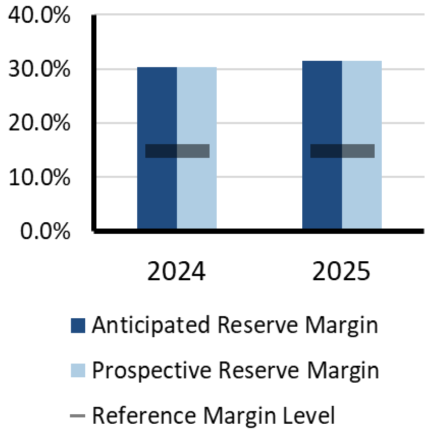
Highlights

- NYISO is not anticipating any operational issues for the upcoming summer operating period. Adequate reserve margins are anticipated.
- Probabilistic analysis performed by NPCC for the NPCC *Summer Reliability Assessment* found that use of New York's established operating procedures are sufficient to maintain a balance between electricity supply and expected 50/50 demand if needed to mitigate resource shortages during Summer 2025. Negligible cumulative LOLE (<0.018 days/period), LOLH (<0.054 hours/period), and EUE (33 MWh/period) risks were estimated over the summer May to September period for the expected load with expected resources for the summer. The highest peak load level with low likelihood reduced resource conditions resulted in an estimated cumulative LOLE risk (1.7 days/period), with associated LOLH (6.5 hours/period) and EUE (4860 MWh/period) with the highest risk occurring in July and August.
- The NPCC 2025 *Summer Reliability Assessment* will be approved on or about May 12, 2025, and posted on NPCC's website.

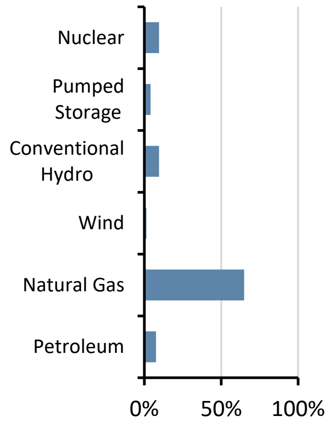
Risk Scenario Summary

Expected resources meet operating reserve requirements under the assessed scenarios. Operating mitigations (e.g., demand response and transfers) may be needed to meet above-normal summer peak load and outage conditions.

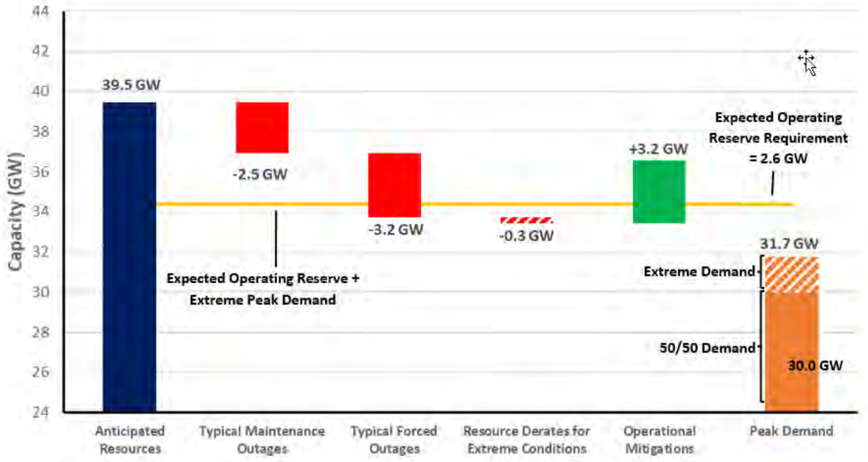
On-Peak Reserve Margin



On-Peak Fuel Mix



2025 Summer Risk Period Scenario



Scenario Description (See Data Concepts and Assumptions)

Risk Period: Highest risk for unserved energy at peak demand hour

Demand Scenarios: Net internal demand (50/50) and (90/10) extreme demand forecast

Maintenance Outages: Based on historical performance and the new NYISO capacity accreditation process

Forced Outages: Based on historical five-year averages

Extreme Derates: Estimated resources unavailable in extreme conditions

Operational Mitigations: A total of 3.2 GW based on operational/emergency procedures in area emergency operations manual

NPCC-Ontario

NPCC-Ontario is an assessment area in the Ontario province of Canada. The Independent Electricity System Operator (IESO) is the BA for the province of Ontario. The province of Ontario covers more than 1 million square kilometers (415,000 square miles) and has a population of m16 million. Ontario is interconnected electrically with Québec, MRO-Manitoba, states in MISO (Minnesota and Michigan), and NPCC-New York.

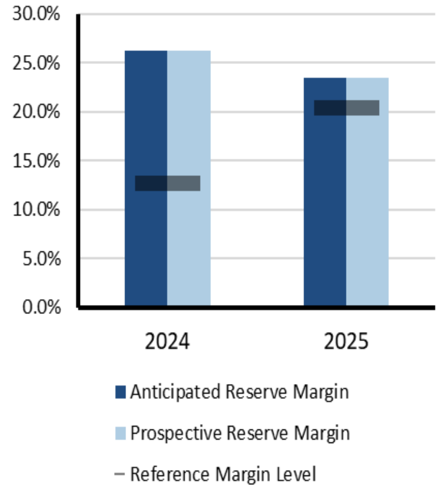
Highlights

- Overall, Ontario is operating within a period where generation and transmission outages are more challenging to accommodate. The IESO is prepared and expects to have adequate supply for Summer 2025.
- The IESO has been actively coordinating and planning with market participants to maintain reliability.
- This season, the grid will benefit from increased capacity secured through the capacity auction and more planned projects, including new storage, coming into service.
- The IESO is working throughout 2025 to better integrate storage solutions into the electricity markets.
- Starting with this seasonal assessment, demand is forecasted by using probabilistic weather modeling, comparable to the methodology used in the IESO 18-month *Reliability Outlook* as opposed to the previous approach of using weather scenarios."

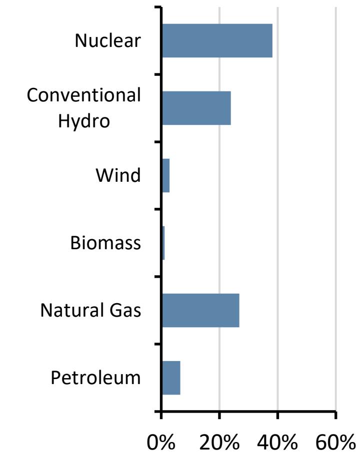
Risk Scenario Summary

Expected resources meet operating reserve requirements under the assessed scenarios.

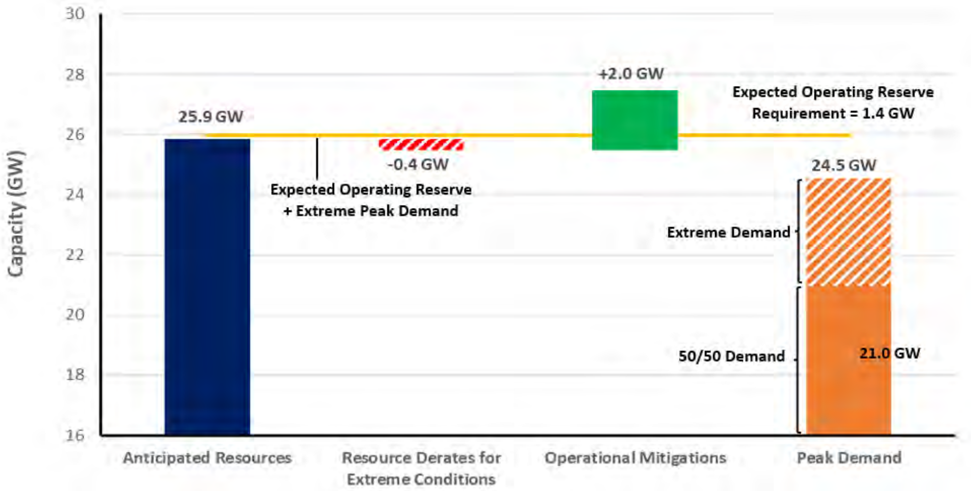
On-Peak Reserve Margin



On-Peak Fuel Mix



2025 Summer Risk Period Scenario



Scenario Description (See Data Concepts and Assumptions)

Risk Period: Highest risk for unserved energy at peak demand hour

Demand Scenarios: Net internal demand (50/50 forecast) and highest weather-adjusted daily demand based on 31 years of demand history, and extreme weather represents a 97/3 distribution of probabilistically modelled data

Extreme Derates: Derived from weather-adjusted temperature rating of thermal units and adjustments to expected hydro production for low water conditions

Operational Mitigations: The operational procedures used to mitigate extreme conditions total approximately 2,010 MW for the On-Peak Risk Scenario, consisting of imports, public appeals, and voltage reductions. Public appeals and voltage reductions were not included in the 2024 On-Peak Risk Scenario.

NPCC-Québec

The Québec assessment area (province of Québec) is a winter-peaking NPCC area that covers 595,391 square miles with a population of 8 million. Québec is one of the four Interconnections in North America; it has ties to Ontario, New York, New England, and the Maritimes consisting of either high-voltage direct current ties, radial generation, or load to and from neighboring systems.

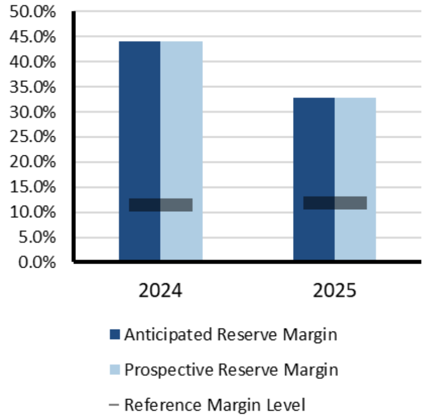
Highlights

- The Québec area forecasted summer peak demand is 23,283 MW during the week beginning August 3, 2025, with a forecasted net margin of 5,698 MW (24.5%).
- Resource adequacy issues are not expected this summer.
- The Québec area expects to be able to assist other areas.
- Modeling was made more precise this year with the inclusion of summer demand-response programs, dispatchable demand-side management (DSM), and weekly modeling of the reserve requirements and bottled generation.

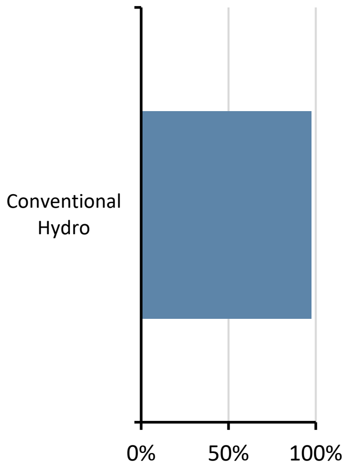
Risk Scenario Summary

Expected resources meet operating reserve requirements under the assessed scenarios.

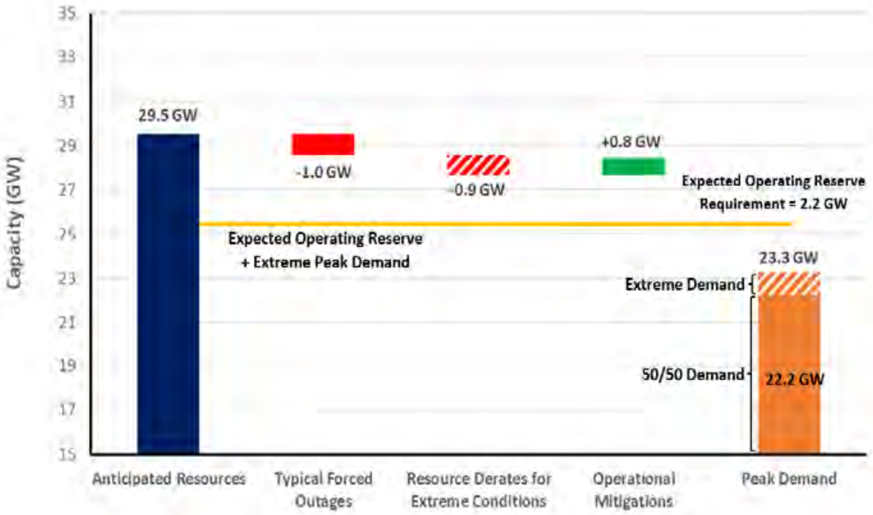
On-Peak Reserve Margin



On-Peak Fuel Mix



2025 Summer Risk Period Scenario



Scenario Description (See Data Concepts and Assumptions)

Risk Period: Highest risk for unserved energy at peak demand hour

Demand Scenario: Net internal demand (50/50) and (90/10) demand forecast

Operational mitigations: An operational procedure used to mitigate extreme conditions and not already included in margins is the depletion of some operating reserves by 750 MW.

PJM

PJM Interconnection is a regional transmission organization that coordinates the movement of wholesale electricity in all or parts of Delaware, Illinois, Indiana, Kentucky, Maryland, Michigan, New Jersey, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia, and the District of Columbia. PJM serves 65 million customers and covers 369,089 square miles. PJM is a BA, PC, Transmission Planner, Resource Planner, Interchange Authority, TOP, Transmission Service Provider, and RC.

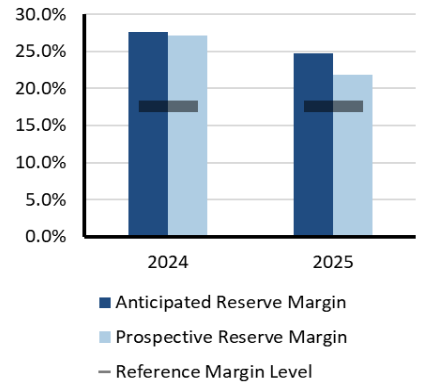
Highlights

- PJM is forecasting 27% installed reserves (including expected committed demand response), which is above the target installed reserve margin of 17.7% necessary to meet the 1-day-in-10-years LOLE criterion.
- During extreme high temperatures that can cause record demand, PJM anticipates the need for demand-response resources to help reduce load at times this summer.

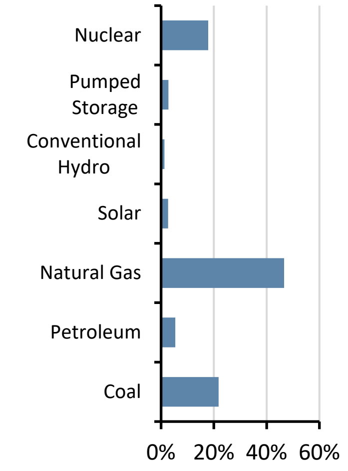
Risk Scenario Summary

Expected resources meet operating reserve requirements under the assessed scenarios.

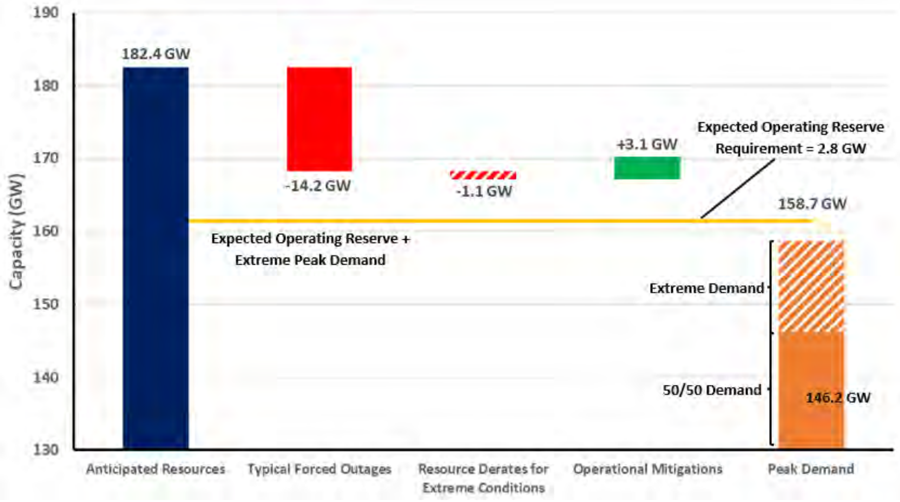
On-Peak Reserve Margin



On-Peak Fuel Mix



2025 Summer Risk Period Scenario



Scenario Description (See Data Concepts and Assumptions)

Risk Period: Highest risk for unserved energy at peak demand hour

Demand Scenarios: Net internal demand (50/50) and (90/10) demand forecast

Forced Outages: Based on historical data and trending

Extreme Derates: Accounts for reduced thermal capacity contributions due to performance in extreme conditions

Operational Mitigations: A total of 3 GW based on operational/emergency procedures

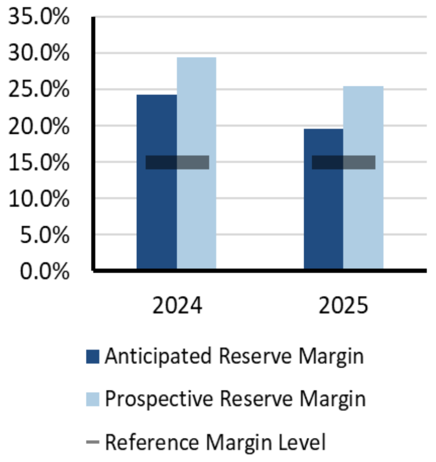
SERC-Central

SERC-Central is an assessment area within the SERC Regional Entity. SERC-Central includes all of Tennessee and portions of Georgia, Alabama, Mississippi, Missouri, and Kentucky. Historically a summer-peaking area, SERC-Central is beginning to have higher peak demand forecasts in winter. SERC is one of the six companies across North America that are responsible for the work under Federal Energy Regulatory Commission (FERC)-approved delegation agreements with NERC. SERC-Central is specifically responsible for the reliability and security of the electric grid across the Southeastern and Central areas of the United States. This area covers approximately 630,000 square miles and serves a population of more than 91 million. The SERC Regional Entity includes 36 BAs, 28 planning entities, and 6 RCs.

Highlights

- SERC-Central saw a sizable increase in its reserves last summer, but coal retirements this summer will result in SERC-Central having lower reserves.
- SERC-Central's anticipated resources meet operating reserve requirements under the expected conditions and under the summer risk period scenario.
- The probabilistic analysis metrics indicate adequate energy resources for the area.
- Entities perform resource studies to ensure resource adequacy to meet the summer peak demand and maintain the reliability of the system.
- Members of SERC-Central actively participate in the SERC working groups to perform coordinated studies and develop mitigating actions for any potential or emerging reliability impacts on transmission and resource adequacy.

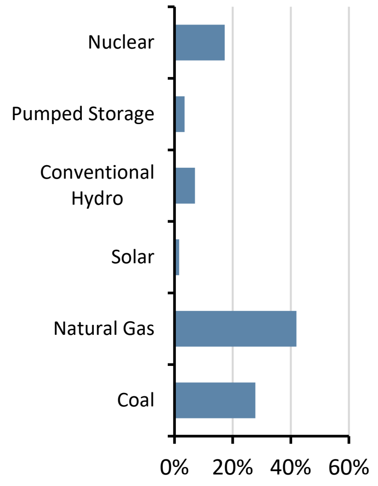
On-Peak Reserve Margin



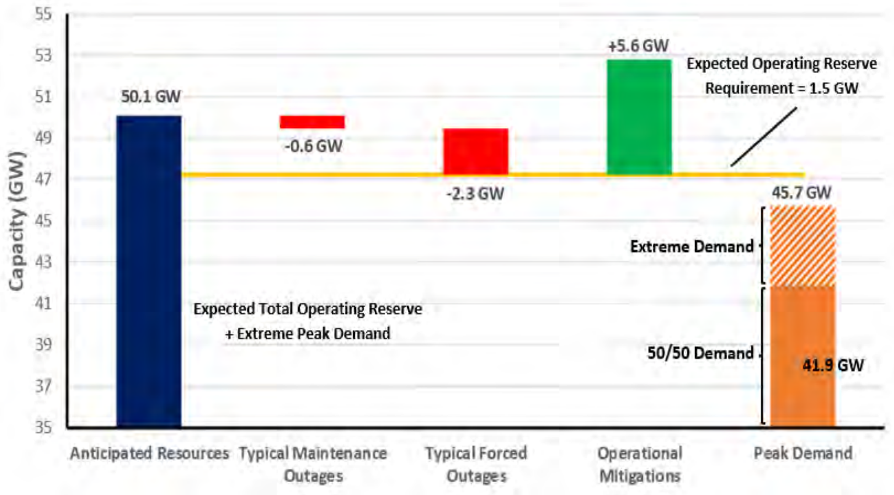
Risk Scenario Summary

Expected resources meet operating reserve requirements under assessed scenarios. More severe conditions (e.g., above-normal summer peak load and outage conditions) result in the need for additional non-firm transfers available from neighbors.

On-Peak Fuel Mix



2025 Summer Risk Period Scenario



Scenario Description (See Data Concepts and Assumptions)

Risk Period: Highest risk for unserved energy at peak demand hour

Demand Scenarios: Net internal demand (50/50) and extreme demand forecast based on extreme summer weather (equals or exceeds the (90/10) demand forecast)

Maintenance Outages: Adjusted for higher outages resulting from extreme summer temperatures and aggregated on a SERC subregional level

Forced Outages: Accounts for reduced thermal capacity contributions due to performance in extreme conditions

Operational Mitigations: 5.6 GW based on operational/emergency procedures

SERC-East

SERC-East is an assessment area within the SERC Regional Entity. SERC-East includes North Carolina and South Carolina. Historically a summer-peaking area, SERC-East is beginning to have higher peak demand forecasts in winter. SERC is one of the six companies across North America that are responsible for the work under FERC-approved delegation agreements with NERC. SERC is specifically responsible for the reliability and security of the electric grid across the Southeastern and Central areas of the United States. This area covers approximately 630,000 square miles and serves a population of more than 91 million. The SERC Regional Entity includes 36 BAs, 28 planning entities, and 6 RCs.

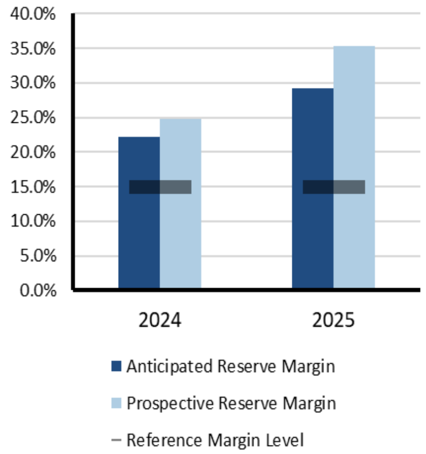
Highlights

- SERC-East’s reserves are largely unchanged compared to the reference margin as compared to last summer’s assessment.
- SERC-East’s anticipated resources meet operating reserve requirements under the expected conditions and under the summer risk period scenario.
- While the last probabilistic analysis indicated that SERC-East could face potential unserved energy in summer, the 2026 and 2028 probabilistic analysis found the SERC-East unserved energy risk has shifted to winter mornings.
- Members of SERC-East actively participate in the SERC working groups to perform coordinated studies and develop mitigating actions for any potential or emerging reliability impacts on transmission and resource adequacy.

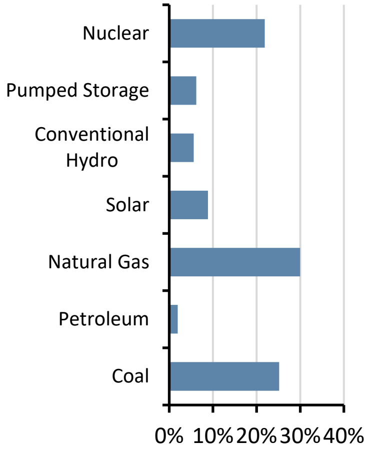
Risk Scenario Summary

Expected resources meet operating reserve requirements under the assessed scenarios.

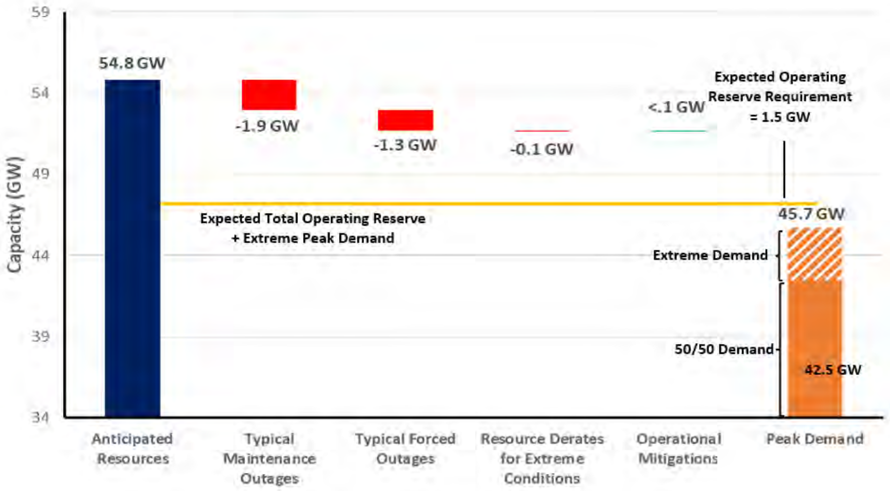
On-Peak Reserve Margin



On-Peak Fuel Mix



2025 Summer Risk Period Scenario



Scenario Description (See Data Concepts and Assumptions)

Risk Period: Highest risk for unserved energy at peak demand hour

Demand Scenarios: Net internal demand (50/50) and extreme demand forecast based on extreme summer weather (equals or exceeds the (90/10) demand forecast)

Maintenance Outages: Adjusted for higher outages resulting from extreme summer temperatures and aggregated on a SERC subregional level

Forced Outages: Accounts for reduced thermal capacity contributions due to performance in extreme conditions

Operational Mitigations: A total of 45 MW based on operational/emergency procedures

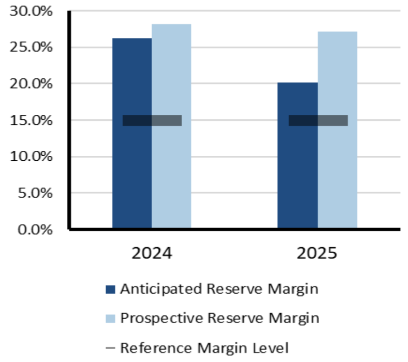
SERC-Florida Peninsula

SERC-Florida Peninsula is a summer-peaking assessment area within SERC. SERC is one of the six companies across North America that are responsible for the work under FERC-approved delegation agreements with NERC. SERC is specifically responsible for the reliability and security of the electric grid across the Southeastern and Central areas of the United States. This area covers approximately 630,000 square miles and serves a population of more than 91 million. The SERC Regional Entity includes 36 BAs, 28 planning entities, and 6 RCs.

Highlights

- SERC Florida-Peninsula's anticipated resources meet operating reserve requirements under the expected conditions and under the summer risk period scenario.
- The probabilistic analysis metrics indicate adequate energy resources for the subregion during the summer.
- Members of SERC-Florida Peninsula actively participate in the SERC working groups to perform coordinated studies and develop mitigating actions for any potential or emerging reliability impacts on transmission and resource adequacy.
- Entities have not identified any emerging reliability issues or operational concerns for the upcoming summer season.

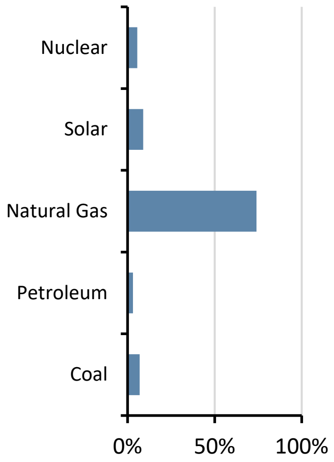
On-Peak Reserve Margin



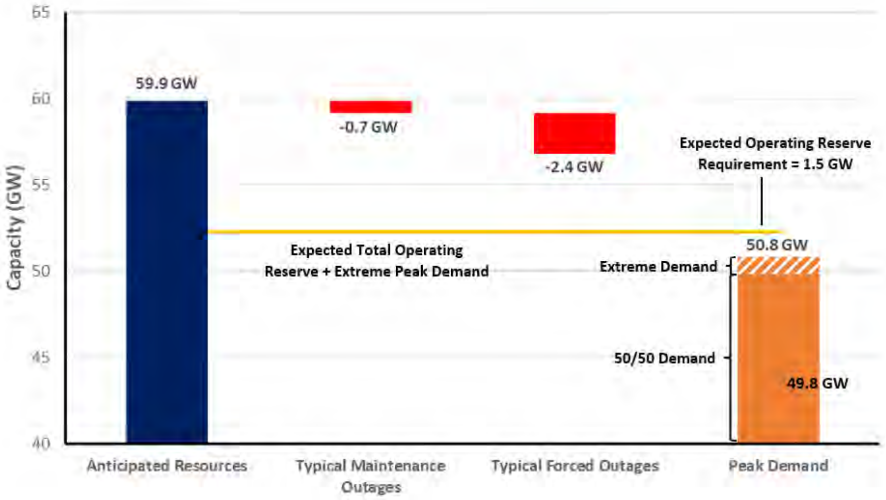
Risk Scenario Summary

Expected resources meet operating reserve requirements under the assessed scenarios.

On-Peak Fuel Mix



2025 Summer Risk Period Scenario



Scenario Description (See Data Concepts and Assumptions)

Risk Period: Highest risk for unserved energy at peak demand hour

Demand Scenarios: Net internal demand (50/50) and extreme demand forecast based on extreme summer weather (equals or exceeds the (90/10) demand forecast)

Maintenance Outages: Adjusted for higher outages resulting from extreme summer temperatures and aggregated on a SERC subregional level

Forced Outages: Accounts for reduced thermal capacity contributions due to performance in extreme conditions

SERC-Southeast

SERC-Southeast is a summer-peaking assessment area within the SERC Regional Entity. SERC-Southeast includes all or portions of Georgia, Alabama, and Mississippi. SERC is one of the six companies across North America that are responsible for the work under FERC-approved delegation agreements with NERC. SERC is specifically responsible for the reliability and security of the electric grid across the Southeastern and Central areas of the United States. This area covers approximately 630,000 square miles and serves a population of more than 91 million. The SERC Regional Entity includes 36 BAs, 28 planning entities, and 6 RCs.

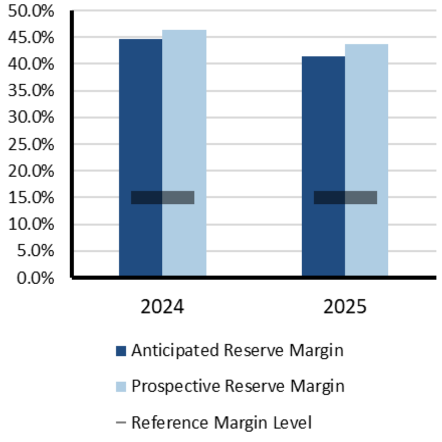
Highlights

- An area within SERC-Southeast notes that natural gas pipeline constraints could impact reliability in summer, but this is not expected to pose a significant summer operational challenge.
- SERC-Southeast's anticipated resources meet operating reserve requirements under the expected conditions and under the summer risk period scenario.
- The probabilistic analysis metrics indicate adequate energy resources for the subregion.
- Members of SERC-Southeast actively participate in the SERC working groups to perform coordinated studies and develop mitigating actions for any potential or emerging reliability impacts on transmission and resource adequacy.

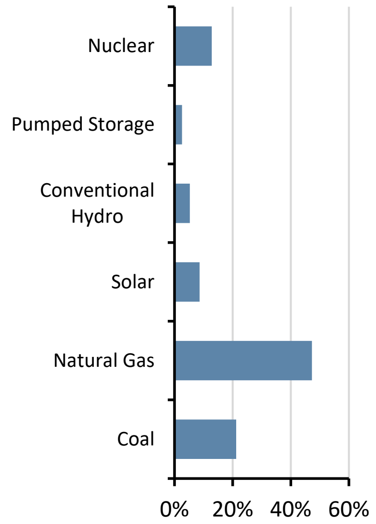
Risk Scenario Summary

Expected resources meet operating reserve requirements under the assessed scenarios.

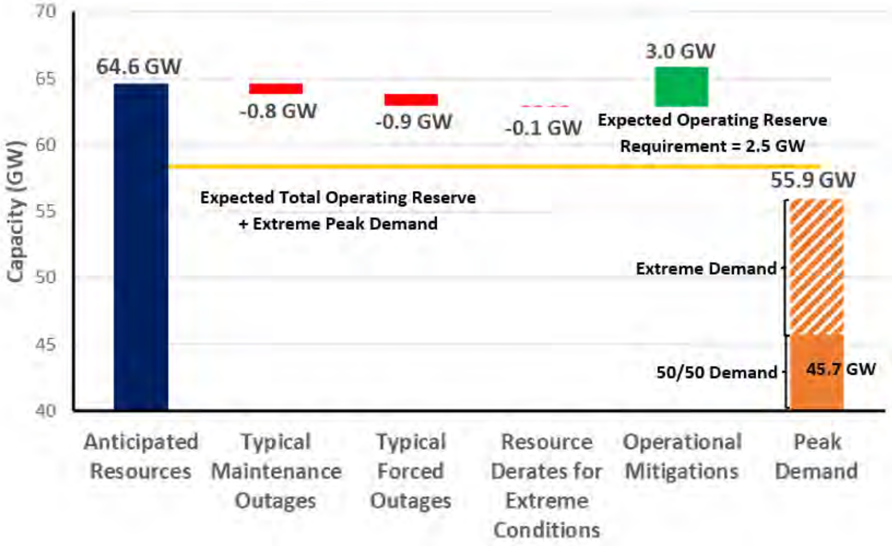
On-Peak Reserve Margin



On-Peak Fuel Mix



2025 Summer Risk Period Scenario



Scenario Description (See Data Concepts and Assumptions)

Risk Period: Highest risk for unserved energy at peak demand hour

Demand Scenarios: Net internal demand (50/50) and extreme demand forecast based on extreme summer weather (equals or exceeds the (90/10) demand forecast)

Maintenance Outages: Adjusted for higher outages resulting from extreme summer temperatures and aggregated on a SERC subregional level

Forced Outages: Accounts for reduced thermal capacity contributions due to performance in extreme conditions

Extreme Derates: Estimated resources unavailable in extreme conditions

Operational Mitigations: A total of 3 GW based on operational/emergency procedures

Texas RE-ERCOT

The Electric Reliability Council of Texas (ERCOT) is the independent system operator (ISO) for the ERCOT Interconnection and is located entirely in the state of Texas; it operates as a single BA. It also performs financial settlement for the competitive wholesale bulk-power market and administers retail switching for nearly 8 million premises in competitive choice areas. ERCOT is governed by a board of directors and subject to oversight by the Public Utility Commission of Texas and the Texas Legislature. ERCOT is summer-peaking, and the forecasted summer peak load month is August. It covers approximately 200,000 square miles, connects over 52,700 miles of transmission lines, has over 1,100 generation units, and serves more than 26 million customers. Texas RE is responsible for the Regional Entity functions described in the Energy Policy Act of 2005 for ERCOT. On November 3, 2022, the Public Utility Commission of Texas issued an order directing ERCOT to assume the duties and responsibilities of the reliability monitor for the Texas grid.

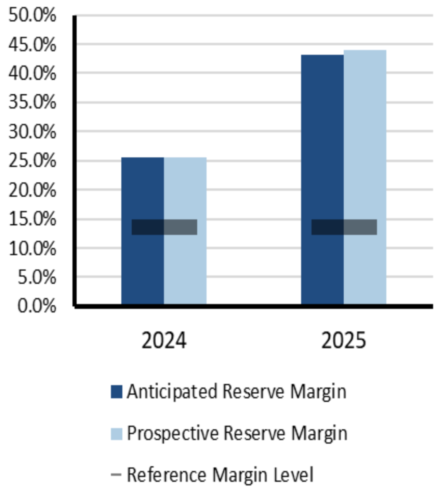
Highlights

- ERCOT expects to have sufficient operating reserves for the August peak load hour given normal summer system conditions.
- ERCOT's probabilistic risk assessment indicates a low risk of having to declare EEAs during the expected August (and summer) peak load day; the EEA probability for the highest-risk hour—hour ending 9:00 p.m.—is 3.6%. The likelihood of an EEA is down significantly from the 2024 SRA due to almost a doubling of battery energy storage capacity and improved energy availability reflecting new battery storage and operational rules.
- Continued robust growth in both loads and intermittent renewable resources drives a higher risk of emergency conditions in the evening hours when solar generation ramps down and loads remain elevated.
- The South Texas IROL continues to present a risk of ERCOT directing system-wide firm load shedding to remain within IROL limits. This risk has been mitigated by updating transmission line dynamic ratings and switching actions to divert power away from the most limiting transmission circuits. The South Texas transmission limits are expected to be needed at least until the San Antonio South Reliability Project is placed in service, which is anticipated to be in Summer 2027.
- ERCOT will release its own August 2025 Monthly Outlook for Resource Adequacy on June 6.

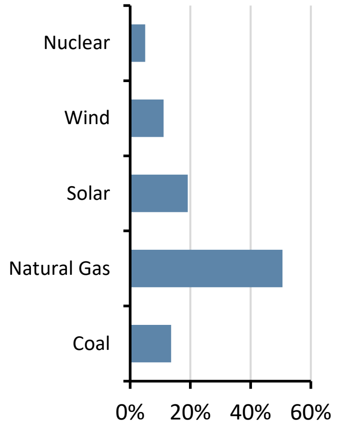
Risk Scenario Summary

Expected resources meet operating reserve requirements for the peak demand hour scenario. However, there is a risk of supply shortages during evening hours (when solar generation ramps down and demand remains high) if there are conventional generation forced outages or extreme low-wind conditions.

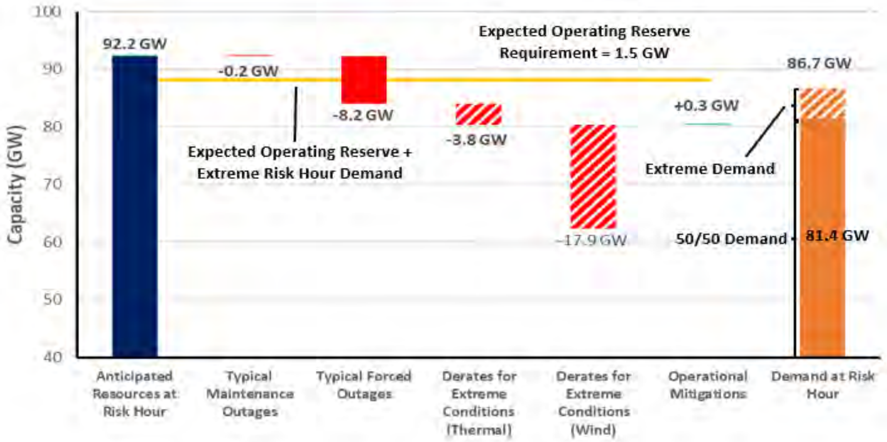
On-Peak Reserve Margin



On-Peak Fuel Mix



2025 Summer Risk Period Scenario (9:00 p.m. local time)



Scenario Description (See Data Concepts and Assumptions)

Risk Period: Highest risk for unserved energy at hour ending 9 p.m. local time as solar PV output is diminished and demand remains high

Demand Scenarios: Net internal demand (50/50) and extreme demand (95/5) based on August peak load

Forced Outages: Based on the 95th percentile of historical averages of forced outages for June through September weekdays, hours ending 3:00–8:00 p.m. local time for the last three summer seasons

Extreme Derates: Based on the 90th percentile of thermal forced outages for peak August load day

Low Wind Scenario: Based on the 10th percentile of historical averages of hourly wind for June through September, hours ending 1:00–9:00 p.m. local time

Operational Mitigations: Additional capacity from switchable generation and additional imports

WECC-Alberta

WECC-Alberta is a winter-peaking assessment area in the WECC Regional Entity that consists of the province of Alberta. It has 16,369 miles of transmission. WECC is responsible for coordinating and promoting BES reliability in the Western Interconnection. WECC's 329 members include 40 BAs, representing a wide spectrum of organizations with an interest in the BES. Serving an area of nearly 1.8 million square miles and more than 84.5 million customers, it is geographically the largest and most diverse Regional Entity.

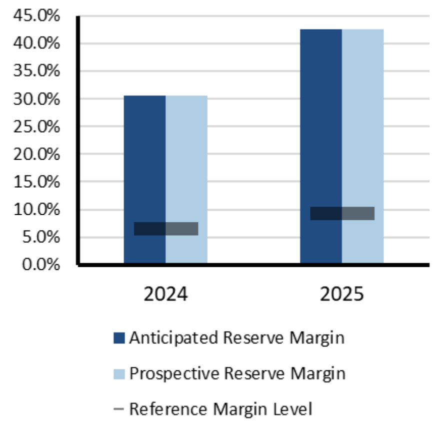
Highlights

- Anticipated and prospective reserve margins are projected to remain above the Reference Margin Level.
- All resource margins have increased by about 50% since last summer with the addition of 23.2% new capacity, including almost 2,700 MW of new natural gas capacity, 1,200 MW of new wind (+27%), 200 MW of new solar (+13%), and 54 MW of new energy storage systems (+27.5%).
- The peak hour has moved earlier, to 3:00 p.m. from 4:00 p.m., still in late July.
- High temperatures, import limitations, and low or declining renewable output during summer evenings can result in grid alerts.
- Wildfires can threaten generating assets and transmission infrastructure requiring invocation of Alberta Electric System Operator (AESO) protocols that include instructing available assets and long lead-time assets to deliver energy up to their maximum capability, calling upon demand response, and maximizing import capability.

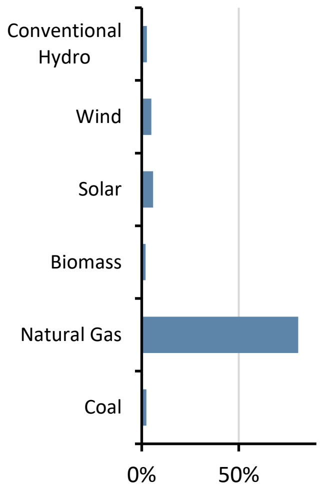
Risk Scenario Summary

Expected resources meet operating reserve requirements under the assessed scenarios.

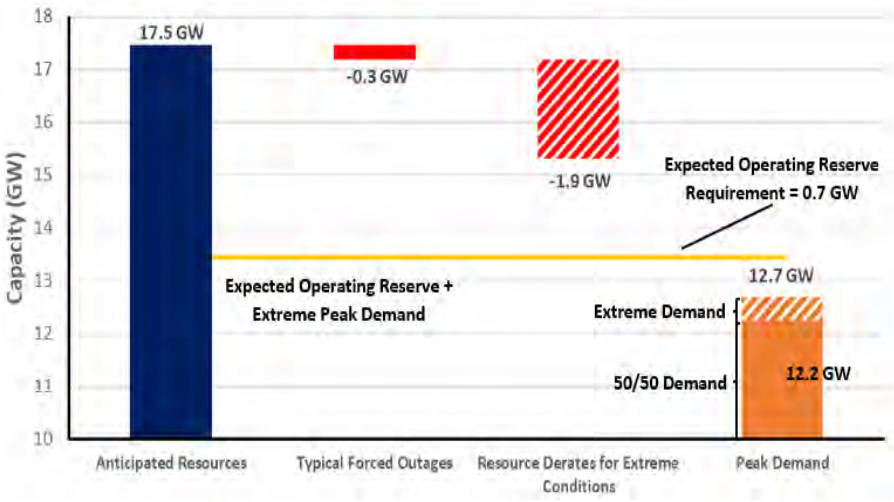
On-Peak Reserve Margin



On-Peak Fuel Mix



2025 Summer Risk Period Scenario



Scenario Description (See Data Concepts and Assumptions)

Risk Period: Highest risk for unserved energy at peak demand hour

Demand Scenarios: Net internal demand (50/50) and (90/10) demand forecast

Typical Forced Outages: Average seasonal outages

Extreme Derates: Using (90/10) point of resource performance distribution

WECC-Basin

WECC-Basin is a summer-peaking assessment area in the WECC Regional Entity that includes Utah, southern Idaho, and a portion of western Wyoming, covering Idaho Power and PacifiCorp's eastern Balancing Authority Area. The population of this area is approximately 5.4 million. It has 15,910 miles of transmission. WECC is responsible for coordinating and promoting BES reliability in the Western Interconnection. WECC's 329 members include 40 BAs, representing a wide spectrum of organizations with an interest in the BES. Serving an area of nearly 1.8 million square miles and more than 84.5 million customers, it is geographically the largest and most diverse Regional Entity. *Note: The 2025 SRA includes a new assessment area map for the U.S. Western Interconnection. The new assessment area boundaries provide more geographic detail of reliability risk information. WECC-Basin is a new assessment area in 2025 that was part of WECC-NW in the 2024 SRA.*

Highlights

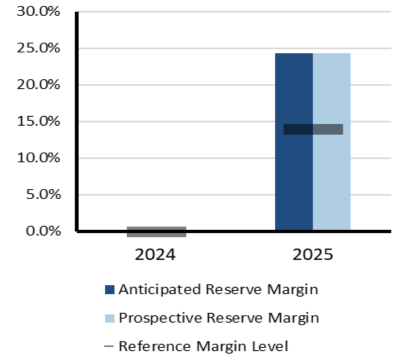
- Total internal expected demand has increased 8% and demand response has increased almost 28% for a net internal demand increase of 7.2%.
- Reserve margins are not anticipated to fall below the reference margin (14%) for the upcoming summer; an early July peak is expected at around 3:00 p.m.
- During periods of contingency reserve shortage, EEAs may be declared in the region to obtain reserves from the Northwest Power Pool.
- Seasonal fluctuations in hydro supply require monitoring and forecasting to have high certainty that these resources will meet anticipated capacity; the Summer 2025 drought outlook for the United States indicates minimal drought conditions in Idaho and some drought areas in Utah this summer.
- Wildfires near wind generation can result in safety curtailments, and fire damage to transmission lines interconnected to hydro sites can present restoration challenges.

Risk Scenario Summary

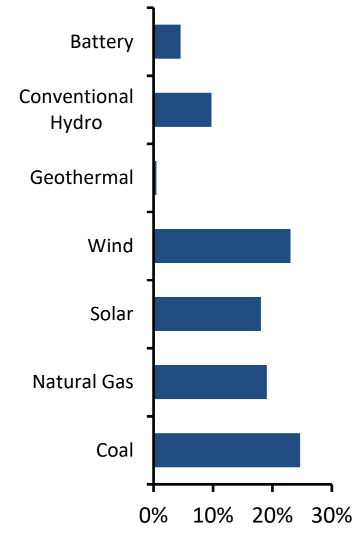
Expected resources meet operating reserve requirements under the assessed scenarios with imports.

On-Peak Reserve Margin

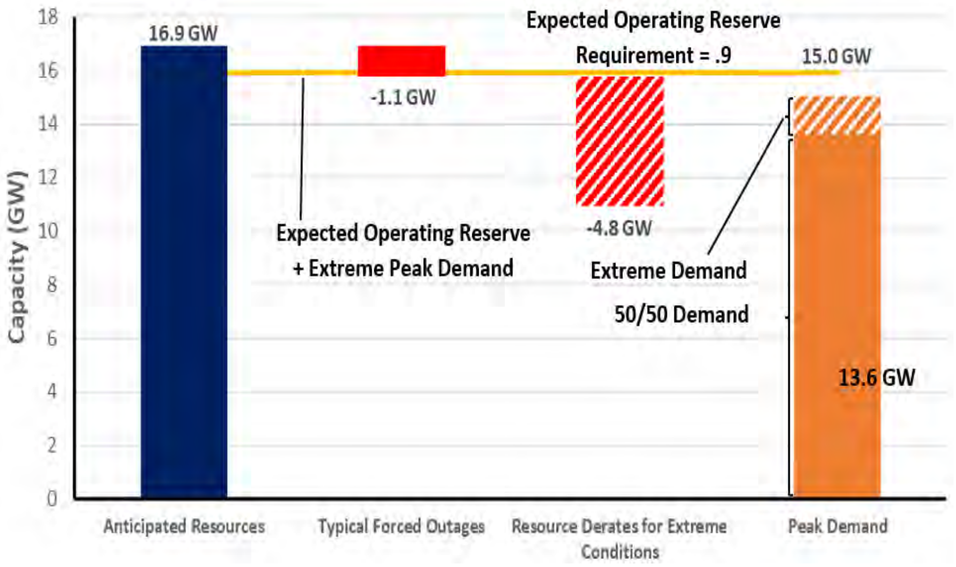
(Note: year comparison not available)



On-Peak Fuel Mix



2025 Summer Risk Period Scenario



Scenario Description (See Data Concepts and Assumptions)

Risk Period: Highest risk for unserved energy at peak demand hour

Demand Scenarios: Net internal demand (50/50) and (90/10) demand forecast

Forced Outages: Average seasonal outages

Extreme Derates: Using (90/10) resource performance distribution at peak hour

WECC-British Columbia

WECC-British Columbia (BC) is a winter-peaking assessment area in the WECC Regional Entity that consists of the province of British Columbia. It has 11,184 miles of transmission. WECC is responsible for coordinating and promoting BES reliability in the Western Interconnection. WECC's 329 members include 40 BAs, representing a wide spectrum of organizations with an interest in the BES. Serving an area of nearly 1.8 million square miles and more than 84.5 million customers, it is geographically the largest and most diverse Regional Entity.

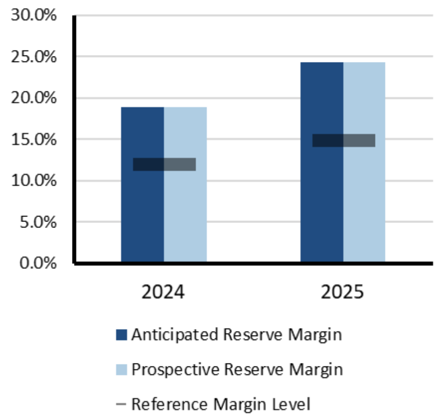
Highlights

- Existing capacity reserve margin has increased from 19% to 22%, and anticipated and prospective reserve margin from 19% to 24%.
- Reserve margins are not anticipated to fall below the reference margin for the upcoming summer.
- The peak hour is forecast for early August at 4:00 p.m., two hours earlier than last summer's outlook of 6:00 p.m.
- About 60% of hydro owned or contracted energy comes from the Columbia and Peace basins. Heavy precipitation in Fall 2024 mitigated the impact of below-average snowpack the previous winter, resulting in hydro storage tracking close to historical averages as of Spring 2025.
- Wildfires can affect the transmission network and generator availability and have caused energy emergencies on the electric system in the past.

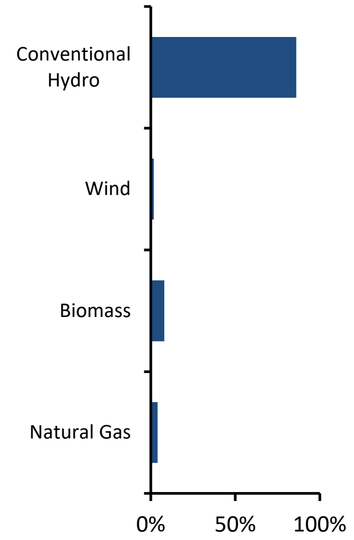
Risk Scenario Summary

Expected resources meet operating reserve requirements under the assessed scenarios.

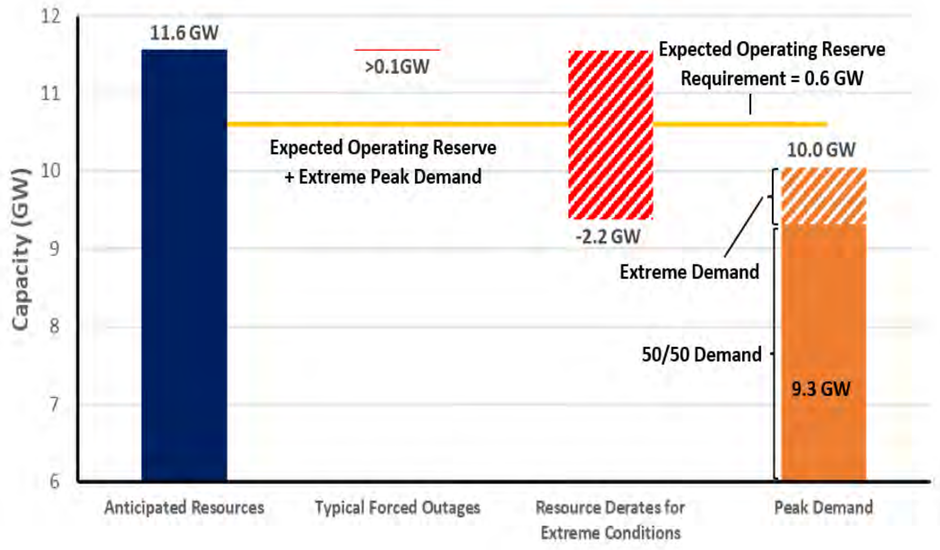
On-Peak Reserve Margin



On-Peak Fuel Mix



2025 Summer Risk Period Scenario



Scenario Description (See Data Concepts and Assumptions)

Risk Period: Highest risk for unserved energy at peak demand hour

Demand Scenarios: Net internal demand (50/50) and (90/10) demand forecast

Forced Outages: Average seasonal outages

Extreme Derates: Using (90/10) resource performance distribution at peak hour

WECC-California

WECC-California is a summer-peaking assessment area in the Western Interconnection that includes most of California and a small section of Nevada. The assessment area has a population of over 42.5 million people. The area includes the California ISO, Los Angeles Department of Water and Power, Turlock Irrigation District, and the Balancing Area of Northern California. It has 32,712 miles of transmission. WECC is responsible for coordinating and promoting BES reliability in the Western Interconnection. WECC's 329 members include 40 BAs, representing a wide spectrum of organizations with an interest in the BES. Serving an area of nearly 1.8 million square miles and more than 84.5 million customers, it is geographically the largest and most diverse Regional Entity. *Note: The 2025 SRA includes a new assessment area map for the U.S. Western Interconnection. The new assessment area boundaries provide more geographic detail of reliability risk information. WECC-California is a new assessment area in 2025 that was part of WECC-CA/MX in the 2024 SRA.*

Highlights

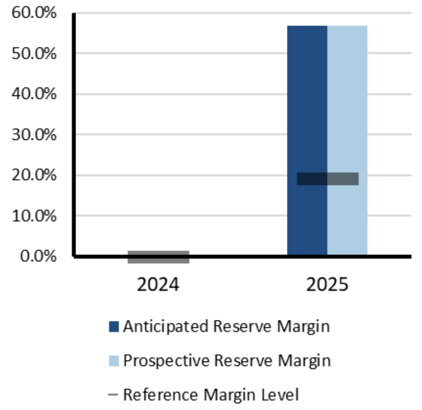
- Demand response is down 8.6% since last summer, existing-certain capacity is up 5.8%, and Tier 1 planned capacity is up 41.2% for a net increase in anticipated resources of 9%; anticipated and prospective reserve margins are up by 11.4%. The peak hour is still forecasted for early September around 4:00 p.m.
- Reserve margins are not anticipated to fall below the reference margin for the upcoming summer, and probabilistic assessment of normal and extreme resource/demand scenarios reveal no EUE or LOLH.
- Wildfires can and have threatened both the California Oregon Intertie line, resulting in import capability limitations.
- Prolonged elevated demand during heat waves in combination with thermal resource derates and forced outage rates present significant risk.
- An influx of IBRs and corresponding reduction in system inertia can potentially trigger system reliability issues and require additional regulation, flexible ramp, and future imbalance reserve requirements.
- Increased solar penetrations in this region along with changing load patterns from elevated temperatures and residential demand are shifting the hours with the most challenging resource adequacy needs later into the evening rather than traditional afternoon gross peak load periods.

Risk Scenario Summary

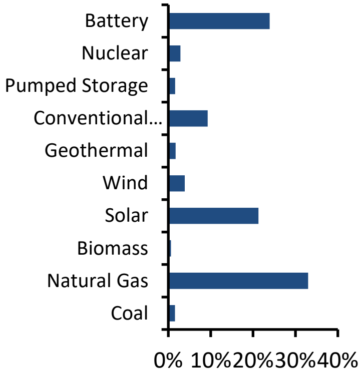
Expected resources meet operating reserve requirements under assessed scenarios, and a probabilistic assessment of normal and extreme resource/demand scenarios reveals neither EUE nor LOLH.

On-Peak Reserve Margin

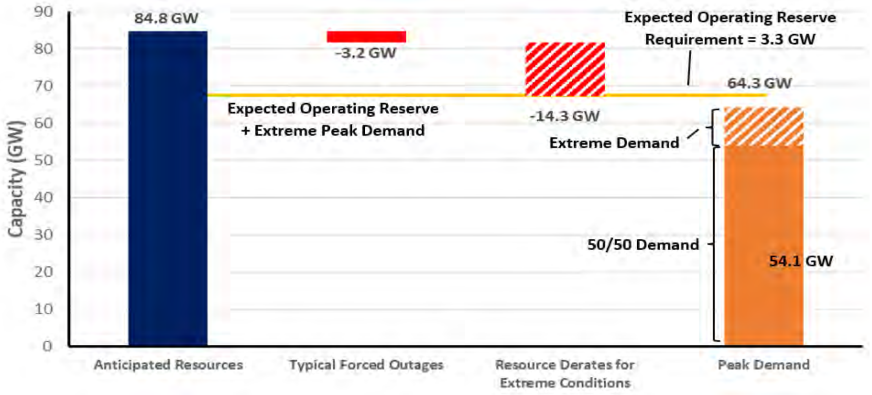
(Note: year comparison not available)



On-Peak Fuel Mix



2025 Summer Risk Period Scenario



Scenario Description (See Data Concepts and Assumptions)

Risk Period: Highest risk for unserved energy at peak demand hour

Demand Scenarios: Net internal demand (50/50) at risk hour and (90/10) demand forecast at risk hour

Forced Outages: Estimated using market forced outage model

Extreme Derates: On natural gas units based on historical data and manufacturer data for temperature performance and outages

WECC-Mexico

WECC-Mexico is a summer-peaking assessment area in the Western Interconnection that includes the northern portion of the Mexican state of Baja California, which has a population of 3.8 million people and includes CENACE. It has 1,568 miles of transmission. WECC is responsible for coordinating and promoting BES reliability in the Western Interconnection. WECC's 329 members include 40 BAs, representing a wide spectrum of organizations with an interest in the BES. Serving an area of nearly 1.8 million square miles and more than 84.5 million customers, it is geographically the largest and most diverse Regional Entity. *Note: The 2025 SRA includes a new assessment area map for the U.S. Western Interconnection. The new assessment area boundaries provide more geographic detail of reliability risk information. WECC-Mexico is a new assessment area in 2025 that was part of WECC-CA/MX in the 2024 SRA.*

Highlights

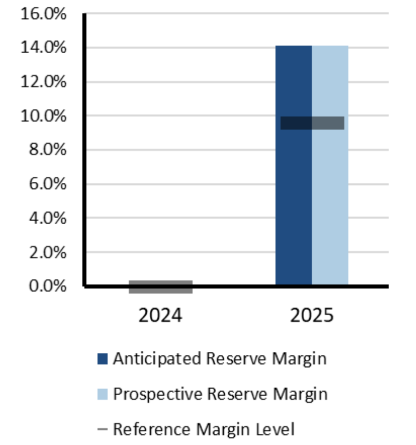
- Total and net internal expected (50/50) demand are up 6.8%, existing-certain capacity is up 29.8% or 989 MW, and Tier 1 planned capacity has fallen 100% to zero, leading to a decrease in the anticipated reserve margin from 22.9% down to 14.1%
- The peak hour is expected to occur in early August around 4:00 p.m.
- Operating reserves are a concern in this region during periods of extreme heat and elevated demand. High loading on Path 45 (See: WECC Path Rating Catalog) coupled with outages or derates to large thermal assets in this region can result in the declaration of an EAA and a request for assistance from RC West.

Risk Scenario Summary

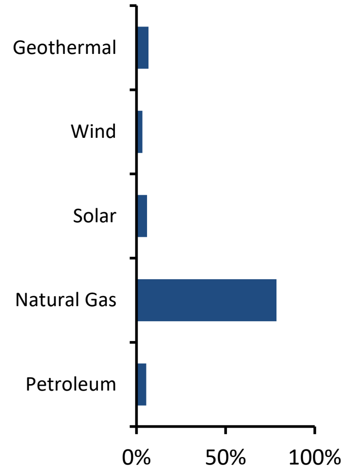
Expected resources at normal peak demand and outage conditions require some imports to maintain operating reserves. Thus, above-normal demand, high forced outage conditions, or transmission derates in the neighboring area could place WECC-Mexico in an energy emergency.

On-Peak Reserve Margin

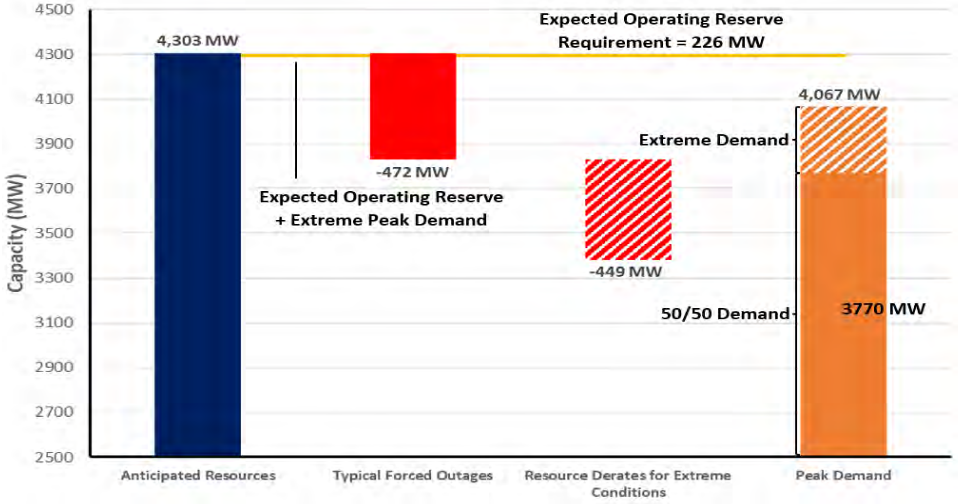
(Note: year comparison not available)



On-Peak Fuel Mix



2025 Summer Risk Period Scenario



Scenario Description (See Data Concepts and Assumptions)

Risk Period: Highest risk for unserved energy at peak demand hour

Demand Scenarios: Net internal demand (50/50) and (90/10) demand forecast

Forced Outages: Average seasonal outages

Extreme Derates: Using (90/10) resource performance distribution at peak hour

WECC-Rocky Mountain

WECC-Rocky Mountain is a summer-peaking assessment area in the Western Interconnection that includes Colorado, most of Wyoming, and parts of Nebraska and South Dakota. The population of the area is approximately 6.7 million. It covers the balancing areas of the Public Service Company of Colorado and the Western Area Power Administration's Rocky Mountain Region. It has 18,797 miles of transmission. WECC is responsible for coordinating and promoting BES reliability in the Western Interconnection. WECC's 329 members include 40 BAs, representing a wide spectrum of organizations with an interest in the BES. Serving an area of nearly 1.8 million square miles and more than 84.5 million customers, it is geographically the largest and most diverse Regional Entity. *Note: The 2025 SRA includes a new assessment area map for the U.S. Western Interconnection. The new assessment area boundaries provide more geographic detail of reliability risk information. WECC-Rocky Mountain is a new assessment area in 2025 that was part of WECC-NW in the 2024 SRA.*

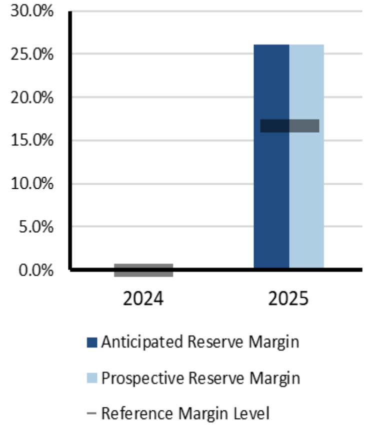
Highlights

- The reserve margins (existing-certain 25% and anticipated and prospective 26%) are not anticipated to fall below the reference margin (17%) for Summer 2025.
- Total and net internal demand (50/50) is up 25% or almost 2,800 MW, leading to a decline in the Anticipated Reserve Margin by almost a third.
- During the summer, there is increased load and decreased market purchase availability. Low wind availability and ramping scarcity events are a concern.
- Environmental and ecological factors have contributed to a rise in wildfire frequency and shortening of the fire return interval in the Rocky Mountain region, which, in addition to having caused generation outages, threatens rural co-ops disproportionately due to the extensive line buildout over remote regions.

Risk Scenario Summary

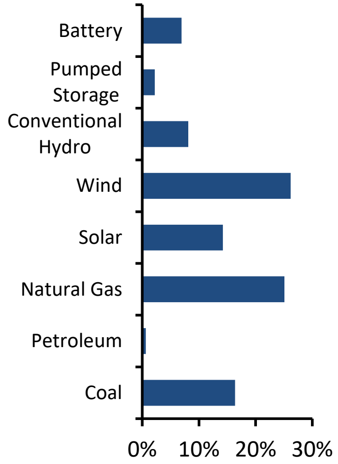
Expected resources meet operating reserve requirements under assessed scenarios with imports.

On-Peak Reserve Margin

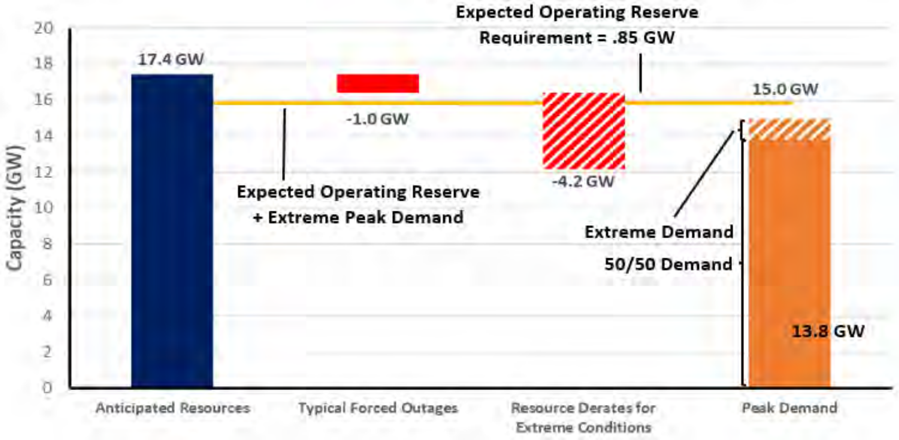


(Note: year comparison not available)

On-Peak Fuel Mix



2025 Summer Risk Period Scenario



Scenario Description (See Data Concepts and Assumptions)

Risk Period: Highest risk for unserved energy occurs at the hour of peak demand

Demand Scenarios: Net internal demand (50/50) at risk hour and (90/10) demand forecast at risk hour

Forced Outages: Average seasonal outages

Extreme Derates: Using (90/10) scenario

WECC-Northwest

WECC-Northwest is a winter-peaking assessment area in the WECC Regional Entity. The area includes Montana, Oregon, and Washington and parts of northern California and northern Idaho. The population of the area is approximately 13.6 million. It has 32,751 miles of transmission. WECC is responsible for coordinating and promoting BES reliability in the Western Interconnection. WECC's 329 members include 40 BAs, representing a wide spectrum of organizations with an interest in the BES. Serving an area of nearly 1.8 million square miles and more than 84.5 million customers, it is geographically the largest and most diverse Regional Entity. *Note: The 2025 SRA includes a new assessment area map for the U.S. Western Interconnection. The new assessment area boundaries provide more geographic detail of reliability risk information. WECC-Northwest is a new assessment area in 2025 that was part of a larger WECC-NW footprint in the 2024 SRA.*

Highlights

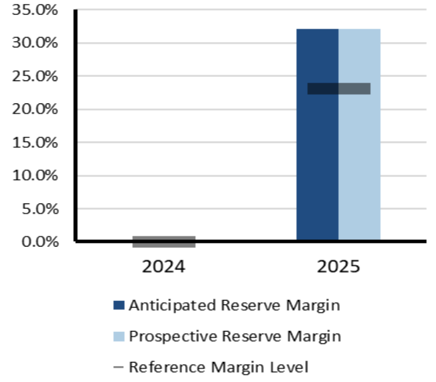
- The reserve margins (existing-certain 29% and anticipated and prospective 32%) are not anticipated to fall below the reference margin (23%) for the upcoming summer. An extreme summer peak load may be around 32,740 MW.
- Typical forced outages are forecast to be 771 MW, with derates for thermal under extreme conditions to be 1,584 MW and 2,649 MW for wind. The expected operating reserve requirement on peak is 1,750 MW.
- Extreme heat corresponds with elevated loads, reduced transmission ratings, and temperature derates of thermal resources, which can strain resource adequacy and grid reliability.
- Seasonal hydro variability is a risk.

Risk Scenario Summary

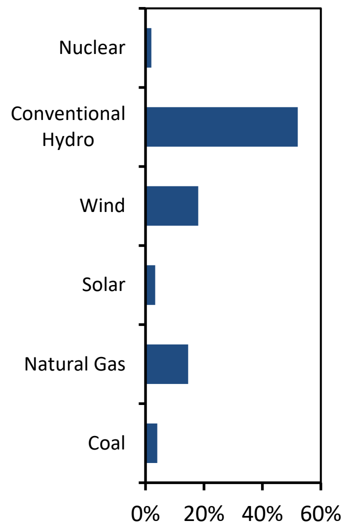
Expected resources meet operating reserve requirements under assessed scenarios with imports.

On-Peak Reserve Margin

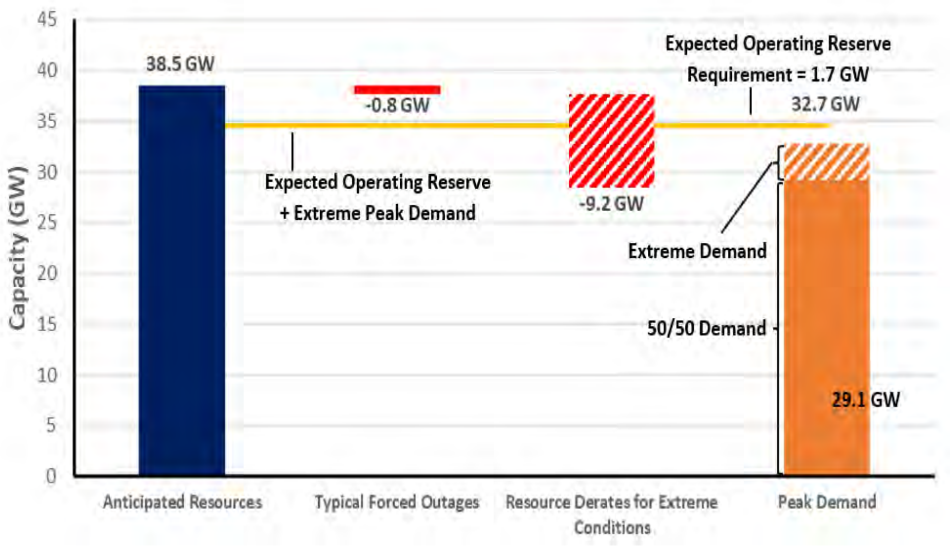
(Note: year comparison not available)



On-Peak Fuel Mix



2025 Summer Risk Period Scenario



Scenario Description (See Data Concepts and Assumptions)

Risk Period: Highest risk for unserved energy occurs at the hour of peak demand

Demand Scenarios: Net internal demand (50/50) at risk hour and (90/10) demand forecast at risk hour

Forced Outages: Average seasonal outages

Extreme Derates: Using (90/10) scenario

WECC-Southwest

WECC-Southwest is a summer-peaking assessment area in the Western Interconnection that includes all of Arizona and New Mexico, most of Nevada, and small parts of California and Texas. The area has a population of approximately 13.6 million. It has 23,084 miles of transmission. WECC is responsible for coordinating and promoting BES reliability in the Western Interconnection. WECC's 329 members include 40 BAs, representing a wide spectrum of organizations with an interest in the BES. Serving an area of nearly 1.8 million square miles and more than 84.5 million customers, it is geographically the largest and most diverse Regional Entity. *Note: The 2025 SRA includes a new assessment area map for the U.S. Western Interconnection. The new assessment area boundaries provide more geographic detail of reliability risk information. WECC-Southwest is a new, larger assessment area in 2025 that now includes a portion of WECC-NW in the 2024 SRA.*

Highlights

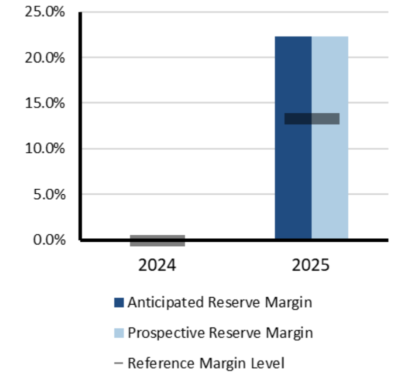
- Anticipated Reserve Margins for the summer are 22%, exceeding the Reference Margin Level for reliability calculated by WECC.
- WECC's probabilistic analysis indicates that the area is not expected to encounter LOLH or EUE under a range of demand and resource conditions.
- The peak hour is expected to occur in early July around 5:00 p.m., when solar generation output begins to diminish.
- Wide-area heat events or wildfires that affect resource and transmission availability across the western interconnection area a reliability concern for the Southwest. Firm imports may be limited at this time if neighboring areas are also experiencing peak loads, limiting energy availability to export to the Southwest.

Risk Scenario Summary

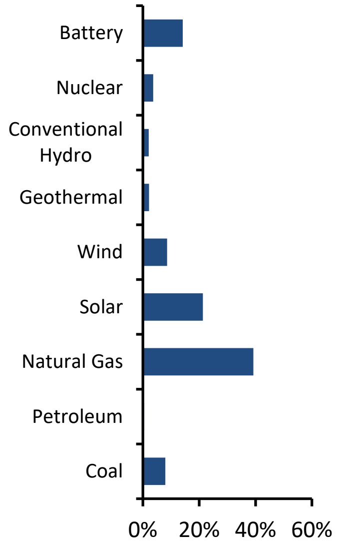
Expected resources meet operating reserve requirements under assessed scenarios with imports.

On-Peak Reserve Margin

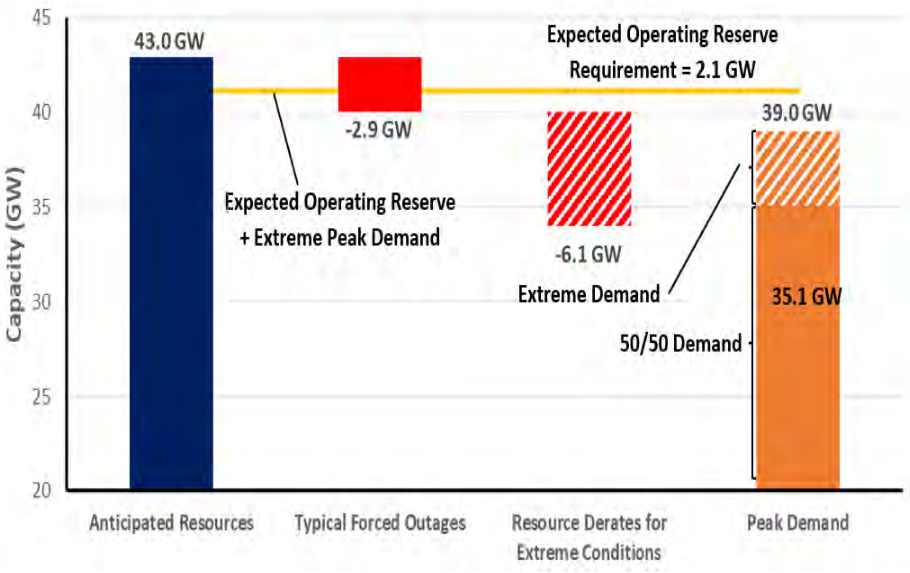
(Note: year comparison not available)



On-Peak Fuel Mix



2025 Summer Risk Period Scenario



Scenario Description (See Data Concepts and Assumptions)

Risk Period: Highest risk for unserved energy occurs at the hour of peak demand (5:00 p.m. local)

Demand Scenarios: Net internal demand (50/50) at risk hour and (90/10) demand forecast

Forced Outages: Average seasonal outages

Extreme Derates: Using (90/10) scenario

Data Concepts and Assumptions

The table below explains data concepts and important assumptions used throughout this assessment.

General Assumptions

- Reliability of the interconnected BPS is comprised of both adequacy and operating reliability:
    - Adequacy is the ability of the electric system to supply the aggregate electric power and energy requirements of the electricity consumers at all times while taking into account scheduled and reasonably expected unscheduled outages of system components.
    - Operating reliability is the ability of the electric system to withstand sudden disturbances, such as electric short-circuits or unanticipated loss of system components.
- The reserve margin calculation is an important industry planning metric used to examine future resource adequacy.
- All data in this assessment is based on existing federal, state, and provincial laws and regulations.
- Differences in data collection periods for each assessment area should be considered when comparing demand and capacity data between year-to-year seasonal assessments.
- A positive net transfer capability would indicate a net importing assessment area; a negative value would indicate a net exporter.

Demand Assumptions

- Electricity demand projections, or load forecasts, are provided by each assessment area.
- Load forecasts include peak hourly load[12] or total internal demand for the summer and winter of each year.[13]
- Total internal demand projections are based on normal weather (50/50 distribution)[14] and are provided on a coincident[15] basis for most assessment areas.
- Net internal demand is used in all reserve margin calculations, and it is equal to total internal demand then reduced by the amount of controllable and dispatchable demand response projected to be available during the peak hour.

Resource Assumptions

Resource planning methods vary throughout the North American BPS. NERC uses the categories below to provide a consistent approach for collecting and presenting resource adequacy. Because the electrical output of VERs (e.g., wind, solar PV) depends on weather conditions, their contribution to reserve margins and other on-peak resource adequacy analysis is less than their nameplate capacity.

Anticipated Resources:

- **Existing-Certain Capacity**: Included in this category are commercially operable generating units or portions of generating units that meet at least one of the following requirements when examining the period of peak demand for the summer season: unit must have a firm capability and have a power purchase agreement with firm transmission that must be in effect for the unit; unit must be classified as a designated network resource; and/or, where energy-only markets exist, unit must be a designated market resource eligible to bid into the market.
- **Tier 1 Capacity Additions**: This category includes capacity that either is under construction or has received approved planning requirements.
- **Net Firm Capacity Transfers (Imports minus Exports)**: This category includes transfers with firm contracts.

Prospective Resources: Includes all anticipated resources plus the following:

Existing-Other Capacity: Included in this category are commercially operable generating units or portions of generating units that could be available to serve load for the period of peak demand for the season but do not meet the requirements of existing-certain.

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[12] https://www.nerc.com/pa/Stand/Glossary%20of%20Terms/Glossary_of_Terms.pdf used in NERC Reliability Standards

[13] The summer season represents June–September and the winter season represents December–February.

[14] Essentially, this means that there is a 50% probability that actual demand will be higher and a 50% probability that actual demand will be lower than the value provided for a given season/year.

[15] Coincident: This is the sum of two or more peak loads that occur in the same hour. Noncoincident: This is the sum of two or more peak loads on individual systems that do not occur in the same time interval; this is meaningful only when considering loads within a limited period of time, such as a day, a week, a month, a heating or cooling season, and usually for not more than one year. SERC calculates total internal demand on a noncoincidental basis.

Reserve Margin Descriptions

Planning Reserve Margin: This is the primary metric used to measure resource adequacy; it is defined as the difference in resources (anticipated or prospective) and net internal demand then divided by net internal demand and shown as a percentage.

Reference Margin Level: The assumptions and naming convention of this metric vary by assessment area. The RML can be determined using both deterministic and probabilistic (based on a 0.1/year loss-of-load study) approaches. In both cases, this metric is used by system planners to quantify the amount of reserve capacity in the system above the forecasted peak demand that is needed to ensure sufficient supply to meet peak loads. Establishing an RML is necessary to account for long-term factors of uncertainty involved in system planning, such as unexpected generator outages and extreme weather impacts that could lead to increase demand beyond what was projected in the 50/50 load forecasted. In many assessment areas, an RML is established by a state, provincial authority, ISO/Regional Transmission Organization (RTO), or other regulatory body. In some cases, the RML is a requirement. RMLs may be different for the summer and winter seasons. If an RML is not provided by an assessment area, NERC applies 15% for predominantly thermal systems and 10% for predominantly hydro systems.

Seasonal Risk Scenario Chart Description

Each assessment area performed an operational risk analysis that was used to produce the seasonal risk scenario charts in the **Regional Assessments Dashboards**. The chart presents deterministic scenarios for further analysis of different resource and demand levels: The left **blue** column shows anticipated resources, and the two **orange** columns at the right show the two demand scenarios of the normal peak net internal demand and the extreme summer peak demand—both determined by the assessment area. The middle **red** or **green** bars show adjustments that are applied cumulatively to the anticipated resources, such as the following:

- Reductions for typical generation outages (i.e., maintenance and forced outages that are not already accounted for in anticipated resources)
- Reductions that represent additional outage or performance derating by resource type for extreme, low-probability conditions (e.g., drought condition impacts on hydroelectric generation, low-wind scenario affecting wind generation, fuel supply limitations, or extreme temperature conditions that result in reduced thermal generation output)
- Additional capacity resources that represent quantified capacity from operational procedures, if any, that are made available during scarcity conditions

Not all assessment areas have the same categories of adjustments to anticipated resources. Furthermore, each assessment area determined the adjustments to capacity based on methods or assumptions that are summarized below the chart. Methods and assumptions differ by assessment area and may not be comparable.

The chart enables evaluation of resource levels against levels of expected operating reserve requirement and the forecasted demand. Furthermore, the effects from extreme events can also be examined by comparing resource levels after applying extreme scenario derates and/or extreme summer peak demand.

Resource Adequacy

The Anticipated Reserve Margin (ARM), which is based on available resource capacity, is a metric used to evaluate resource adequacy by comparing the projected capability of anticipated resources to serve forecast peak demand.[16] Large year-to-year changes in anticipated resources or forecast peak demand (net internal demand) can greatly impact Planning Reserve Margin calculations. All assessment areas have sufficient ARMs to meet or exceed their RML for the summer 2025 as shown in **Figure 4**.

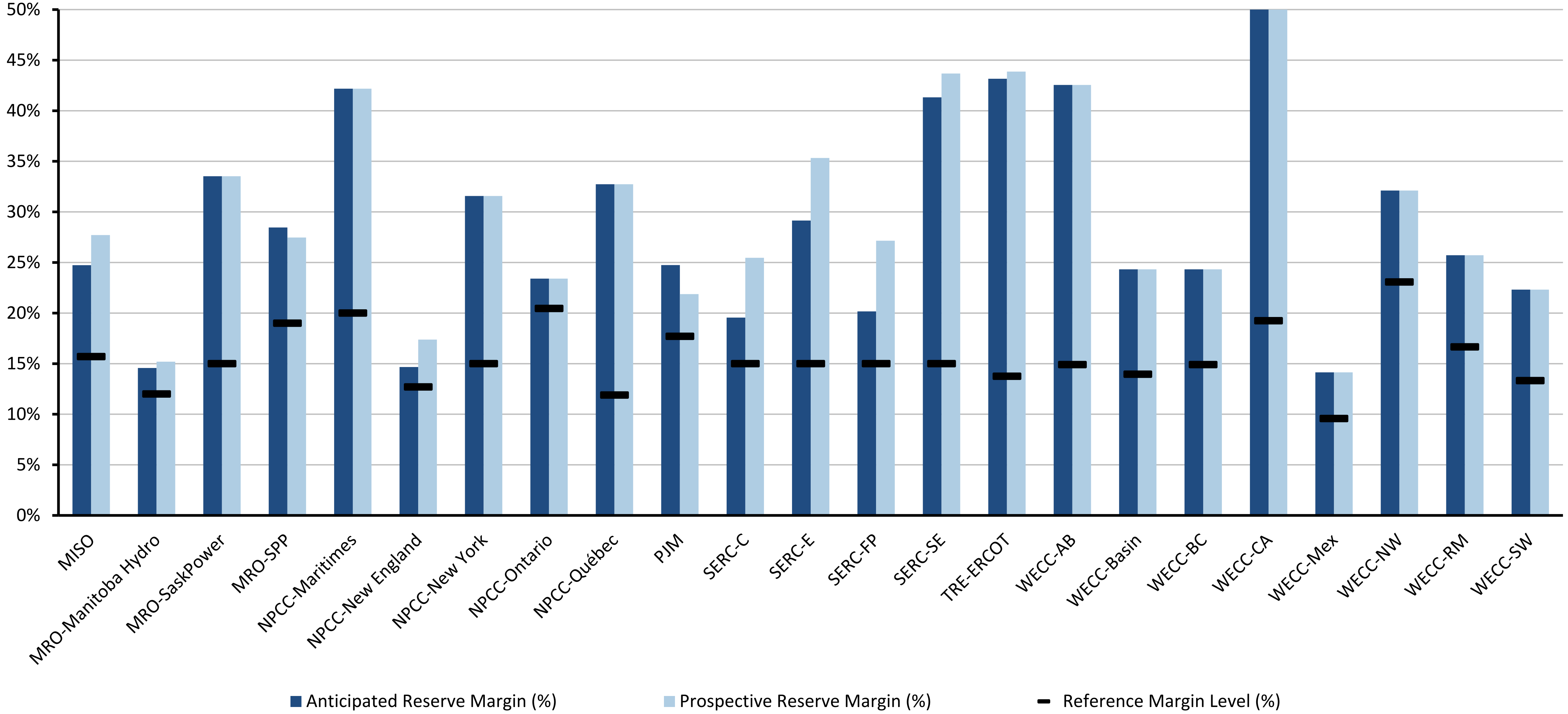

Figure 4: Summer 2025 Anticipated/Prospective Reserve Margins Compared to Reference Margin Level

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[16] Generally, anticipated resources include generators and firm capacity transfers that are expected to be available to serve load during electrical peak loads for the season. Prospective resources are those that could be available but do not meet criteria to be counted as anticipated resources. Refer to the **Data Concepts and Assumptions** section for additional information on Anticipated/Prospective Reserve Margins, anticipated/prospective resources, and RMLs.

Changes from Year to Year

Figure 5 provides the relative change in the forecast ARMs from the 2024 Summer to the 2025 Summer. A significant decline can signal potential operational issues for the upcoming season. Additional details for each assessment area are provided in the Data Concepts and Assumptions and Regional Assessments Dashboards sections.

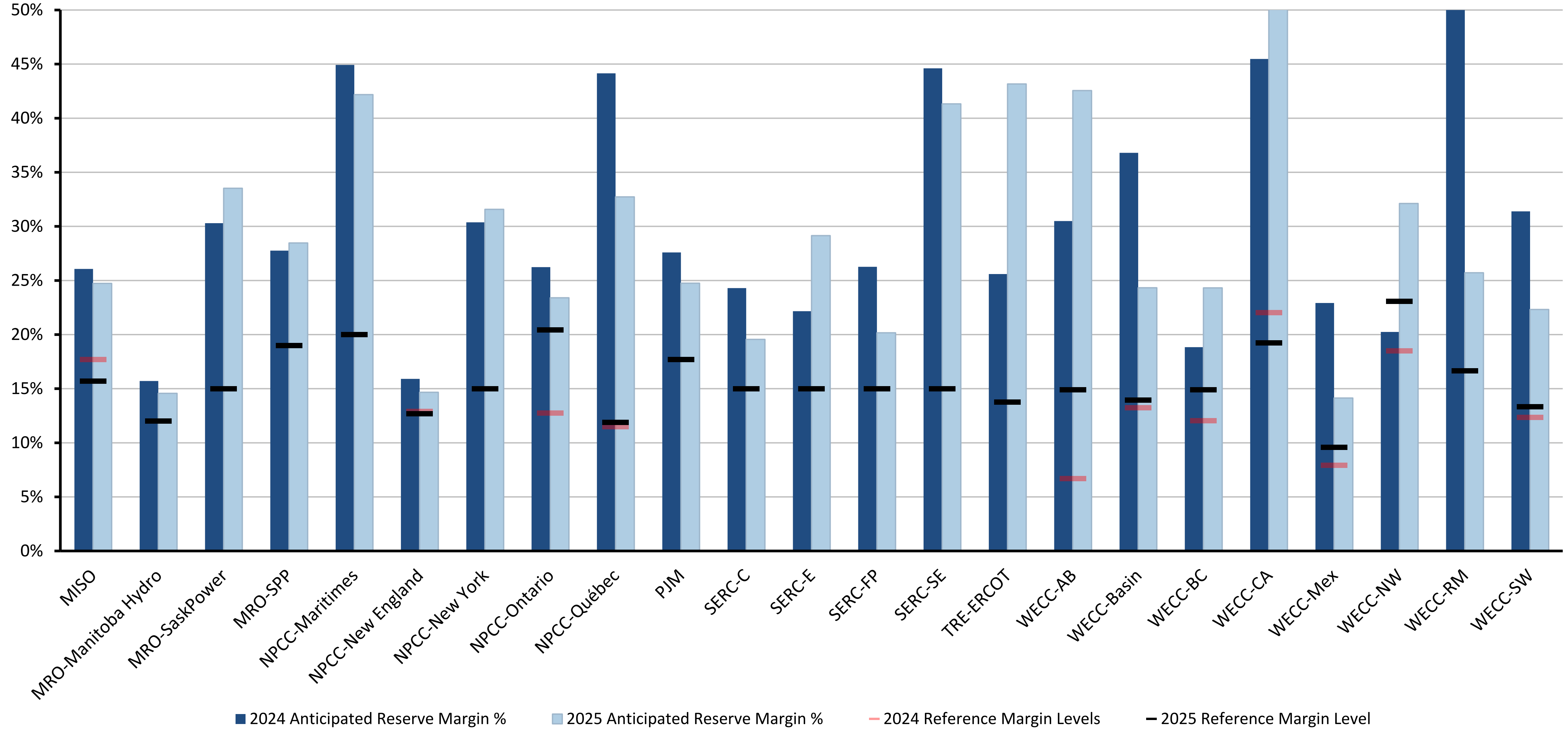

Figure 5: Summer 2024 and Summer 2025 Anticipated Reserve Margins Year-to-Year Change

Note: Yearly trends are not available for new WECC assessment areas in the United States and Baja California, Mexico.

Net Internal Demand

The changes in forecasted net internal demand for each assessment area are shown in **Figure 6**.[17] Assessment areas develop these forecasts based on historic load and weather information as well as other long-term projections.

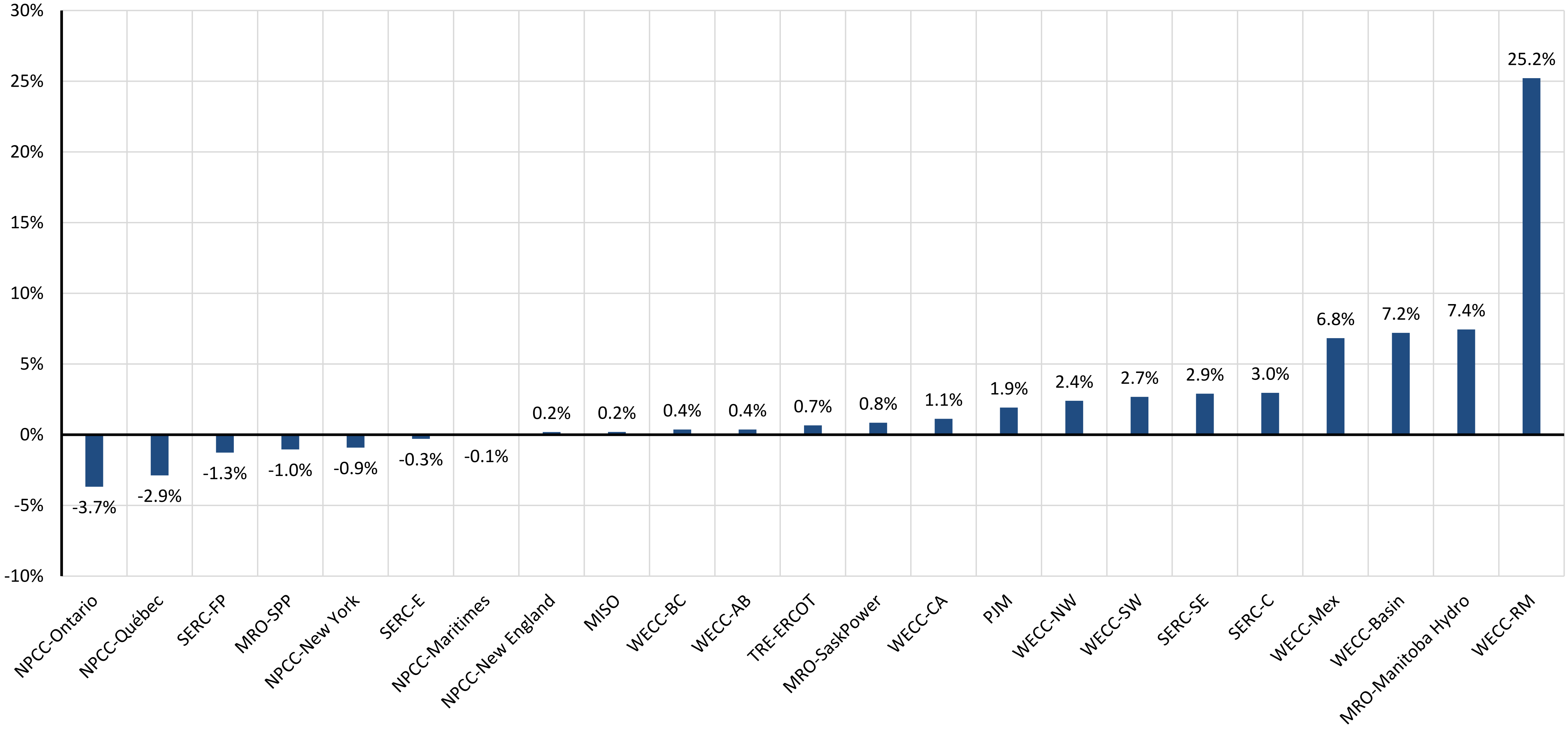

Figure 6: Changes in Net Internal Demand—Summer 2024 Forecast Compared to Summer 2025 Forecast

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[17] Changes in modeling and methods are contributing to year-to-year changes in forecasted net internal demand projections in NPCC Maritimes and NPCC Ontario. See assessment area dashboards.

Demand and Resource Tables

Peak demand and supply capacity data—resource adequacy data—for each assessment area are as follows in each table (in alphabetical order).

MISO

Demand, Resource, and Reserve Margins	2024 SRA	2025 SRA	2024 vs. 2025 SRA
Demand Projections	**MW**	**MW**	**Net Change (%)**
Total Internal Demand (50/50)	124,830	125,313	0.4%
Demand Response: Available	8,750	9,004	2.9%
Net Internal Demand	116,079	116,309	0.2%
Resource Projections	**MW**	**MW**	**Net Change (%)**
Existing-Certain Capacity	143,866	142,793	-0.7%
Tier 1 Planned Capacity	0	0	-
Net Firm Capacity Transfers	2,471	2,280	-7.7%
Anticipated Resources	146,337	145,073	-0.9%
Existing-Other Capacity	1,833	1,190	-35.1%
Prospective Resources	148,740	148,543	-0.1%
Reserve Margins	**Percent (%)**	**Percent (%)**	**Annual Difference**
Anticipated Reserve Margin	26.1%	24.7%	-1.3
Prospective Reserve Margin	28.1%	27.7%	-0.4
Reference Margin Level	17.7%	15.7%	-2.0

MRO-Manitoba Hydro

Demand, Resource, and Reserve Margins	2024 SRA	2025 SRA	2024 vs. 2025 SRA
Demand Projections	**MW**	**MW**	**Net Change (%)**
Total Internal Demand (50/50)	3,143	3,377	7.4%
Demand Response: Available	0	0	-
Net Internal Demand	3,143	3,377	7.4%
Resource Projections	**MW**	**MW**	**Net Change (%)**
Existing-Certain Capacity	5,615	5,583	-0.6%
Tier 1 Planned Capacity	0	0	-
Net Firm Capacity Transfers	-1,978	-1,714	-13.3%
Anticipated Resources	3,637	3,869	6.4%
Existing-Other Capacity	37	21	-42.9%
Prospective Resources	3,674	3,890	5.9%
Reserve Margins	**Percent (%)**	**Percent (%)**	**Annual Difference**
Anticipated Reserve Margin	15.7%	14.6%	-1.1
Prospective Reserve Margin	16.9%	15.2%	-1.7
Reference Margin Level	12.0%	12.0%	0.0

MRO-SaskPower

Demand, Resource, and Reserve Margins	2024 SRA	2025 SRA	2024 vs. 2025 SRA
Demand Projections	**MW**	**MW**	**Net Change (%)**
Total Internal Demand (50/50)	3,590	3,620	0.8%
Demand Response: Available	50	50	0.0%
Net Internal Demand	3,540	3,570	0.8%
Resource Projections	**MW**	**MW**	**Net Change (%)**
Existing-Certain Capacity	4,323	4,477	3.6%
Tier 1 Planned Capacity	0	0	-
Net Firm Capacity Transfers	290	290	0.0%
Anticipated Resources	4,613	4,767	3.3%
Existing-Other Capacity	0	0	-
Prospective Resources	4,613	4,767	3.3%
Reserve Margins	**Percent (%)**	**Percent (%)**	**Annual Difference**
Anticipated Reserve Margin	30.3%	33.5%	3.2
Prospective Reserve Margin	30.3%	33.5%	3.2
Reference Margin Level	15.0%	15.0%	0.0

MRO-SPP

Demand, Resource, and Reserve Margins	2024 SRA	2025 SRA	2024 vs. 2025 SRA
Demand Projections	**MW**	**MW**	**Net Change (%)**
Total Internal Demand (50/50)	56,316	56,168	-0.3%
Demand Response: Available	979	1,408	43.8%
Net Internal Demand	55,337	54,760	-1.0%
Resource Projections	**MW**	**MW**	**Net Change (%)**
Existing-Certain Capacity	70,855	70,549	-0.4%
Tier 1 Planned Capacity	0	0	-
Net Firm Capacity Transfers	-157	-201	27.5%
Anticipated Resources	70,698	70,348	-0.5%
Existing-Other Capacity	0	0	-
Prospective Resources	70,151	69,801	-0.5%
Reserve Margins	**Percent (%)**	**Percent (%)**	**Annual Difference**
Anticipated Reserve Margin	27.8%	28.5%	0.7
Prospective Reserve Margin	26.8%	27.5%	0.7
Reference Margin Level	19.0%	19.0%	0.0

NPCC-Maritimes

Demand, Resource, and Reserve Margins	2024 SRA	2025 SRA	2024 vs. 2025 SRA
Demand Projections	**MW**	**MW**	**Net Change (%)**
Total Internal Demand (50/50)	3,586	3,584	-0.1%
Demand Response: Available	327	327	0.0%
Net Internal Demand	3,259	3,257	-0.1%
Resource Projections	**MW**	**MW**	**Net Change (%)**
Existing-Certain Capacity	4,660	4,348	-6.7%
Tier 1 Planned Capacity	0	220	-
Net Firm Capacity Transfers	63	63	0.0%
Anticipated Resources	4,723	4,631	-1.9%
Existing-Other Capacity	0	0	-
Prospective Resources	4,723	4,631	-1.9%
Reserve Margins	**Percent (%)**	**Percent (%)**	**Annual Difference**
Anticipated Reserve Margin	44.9%	42.2%	-2.7
Prospective Reserve Margin	44.9%	42.2%	-2.7
Reference Margin Level	20.0%	20.0%	0.0

NPCC-New York

Demand, Resource, and Reserve Margins	2024 SRA	2025 SRA	2024 vs. 2025 SRA
Demand Projections	**MW**	**MW**	**Net Change (%)**
Total Internal Demand (50/50)	31,541	31,471	-0.2%
Demand Response: Available	1,281	1,487	16.1%
Net Internal Demand	30,260	29,984	-0.9%
Resource Projections	**MW**	**MW**	**Net Change (%)**
Existing-Certain Capacity	37,867	37,682	-0.5%
Tier 1 Planned Capacity	0	0	-
Net Firm Capacity Transfers	1,585	1,769	11.6%
Anticipated Resources	39,452	39,451	0.0%
Existing-Other Capacity	0	0	-
Prospective Resources	39,452	39,451	0.0%
Reserve Margins	**Percent (%)**	**Percent (%)**	**Annual Difference**
Anticipated Reserve Margin	30.4%	31.6%	1.2
Prospective Reserve Margin	30.4%	31.6%	1.2
Reference Margin Level	15.0%	15.0%	0.0

NPCC-New England

Demand, Resource, and Reserve Margins	2024 SRA	2025 SRA	2024 vs. 2025 SRA
Demand Projections	**MW**	**MW**	**Net Change (%)**
Total Internal Demand (50/50)	25,294	25,202	-0.4%
Demand Response: Available	661	399	-39.6%
Net Internal Demand	24,633	24,803	0.7%
Resource Projections	**MW**	**MW**	**Net Change (%)**
Existing-Certain Capacity	27,255	27,054	-0.7%
Tier 1 Planned Capacity	0	0	-
Net Firm Capacity Transfers	1,297	1,245	-4.0%
Anticipated Resources	28,552	28,299	-0.9%
Existing-Other Capacity	138	668	384.1%
Prospective Resources	28,690	28,967	1.0%
Reserve Margins	**Percent (%)**	**Percent (%)**	**Annual Difference**
Anticipated Reserve Margin	15.9%	14.1%	-1.8
Prospective Reserve Margin	16.5%	16.8%	0.3
Reference Margin Level	12.9%	12.7%	-0.2

NPCC-Ontario

Demand, Resource, and Reserve Margins	2024 SRA	2025 SRA	2024 vs. 2025 SRA
Demand Projections	**MW**	**MW**	**Net Change (%)**
Total Internal Demand (50/50)	22,753	21,955	-3.5%
Demand Response: Available	996	998	0.2%
Net Internal Demand	21,757	20,957	-3.7%
Resource Projections	**MW**	**MW**	**Net Change (%)**
Existing-Certain Capacity	26,856	24,760	-7.8%
Tier 1 Planned Capacity	9	413	4568.6%
Net Firm Capacity Transfers	600	689	14.8%
Anticipated Resources	27,465	25,862	-5.8%
Existing-Other Capacity	0	0	-
Prospective Resources	27,465	25,862	-5.8%
Reserve Margins	**Percent (%)**	**Percent (%)**	**Annual Difference**
Anticipated Reserve Margin	26.2%	23.4%	-2.8
Prospective Reserve Margin	26.2%	23.4%	-2.8
Reference Margin Level	12.8%	20.5%	7.7

NPCC-Québec

Demand, Resource, and Reserve Margins	2024 SRA	2025 SRA	2024 vs. 2025 SRA
Demand Projections	**MW**	**MW**	**Net Change (%)**
Total Internal Demand (50/50)	22,922	23,283	1.6%
Demand Response: Available	0	1,020	-
Net Internal Demand	22,922	22,263	-2.9%
Resource Projections	**MW**	**MW**	**Net Change (%)**
Existing-Certain Capacity	35,731	32,132	-10.1%
Tier 1 Planned Capacity	0	0	-
Net Firm Capacity Transfers	-2,689	-2,582	-4.0%
Anticipated Resources	33,042	29,550	-10.6%
Existing-Other Capacity	0	0	-
Prospective Resources	33,042	29,550	-10.6%
Reserve Margins	**Percent (%)**	**Percent (%)**	**Annual Difference**
Anticipated Reserve Margin	44.1%	32.7%	-11.4
Prospective Reserve Margin	44.1%	32.7%	-11.4
Reference Margin Level	11.5%	11.9%	0.4

PJM

Demand, Resource, and Reserve Margins	2024 SRA	2025 SRA	2024 vs. 2025 SRA
Demand Projections	**MW**	**MW**	**Net Change (%)**
Total Internal Demand (50/50)	151,247	154,144	1.9%
Demand Response: Available	7,756	7,898	1.8%
Net Internal Demand	143,491	146,246	1.9%
Resource Projections	**MW**	**MW**	**Net Change (%)**
Existing-Certain Capacity	183,690	186,638	1.6%
Tier 1 Planned Capacity	0	0	-
Net Firm Capacity Transfers	-607	-4,200	591.9%
Anticipated Resources	183,083	182,438	-0.4%
Existing-Other Capacity	0	0	-
Prospective Resources	182,476	178,238	-2.3%
Reserve Margins	**Percent (%)**	**Percent (%)**	**Annual Difference**
Anticipated Reserve Margin	27.6%	24.7%	-2.8
Prospective Reserve Margin	27.2%	21.9%	-5.3
Reference Margin Level	17.7%	17.7%	0.0

SERC-Central

Demand, Resource, and Reserve Margins	2024 SRA	2025 SRA	2024 vs. 2025 SRA
Demand Projections	**MW**	**MW**	**Net Change (%)**
Total Internal Demand (50/50)	42,636	42,765	0.3%
Demand Response: Available	1,941	864	-55.5%
Net Internal Demand	40,695	41,900	3.0%
Resource Projections	**MW**	**MW**	**Net Change (%)**
Existing-Certain Capacity	47,674	46,949	-1.5%
Tier 1 Planned Capacity	332	592	78.1%
Net Firm Capacity Transfers	2,578	2,554	-0.9%
Anticipated Resources	50,584	50,095	-1.0%
Existing-Other Capacity	2,075	2,475	19.2%
Prospective Resources	52,659	52,570	-0.2%
Reserve Margins	**Percent (%)**	**Percent (%)**	**Annual Difference**
Anticipated Reserve Margin	24.3%	19.6%	-4.7
Prospective Reserve Margin	29.4%	25.5%	-3.9
Reference Margin Level	15.0%	15.0%	0.0

SERC-East

Demand, Resource, and Reserve Margins	2024 SRA	2025 SRA	2024 vs. 2025 SRA
Demand Projections	**MW**	**MW**	**Net Change (%)**
Total Internal Demand (50/50)	43,567	44,015	1.0%
Demand Response: Available	985	1,558	58.2%
Net Internal Demand	42,582	42,457	-0.3%
Resource Projections	**MW**	**MW**	**Net Change (%)**
Existing-Certain Capacity	51,304	54,665	6.5%
Tier 1 Planned Capacity	122	17	-86.0%
Net Firm Capacity Transfers	593	150	-74.7%
Anticipated Resources	52,019	54,832	5.4%
Existing-Other Capacity	1,131	2,628	132.3%
Prospective Resources	53,150	57,459	8.1%
Reserve Margins	**Percent (%)**	**Percent (%)**	**Annual Difference**
Anticipated Reserve Margin	22.2%	29.1%	7.0
Prospective Reserve Margin	24.8%	35.3%	10.5
Reference Margin Level	15.0%	15.0%	0.0

SERC-Florida Peninsula

Demand, Resource, and Reserve Margins	2024 SRA	2025 SRA	2024 vs. 2025 SRA
Demand Projections	**MW**	**MW**	**Net Change (%)**
Total Internal Demand (50/50)	53,293	52,987	-0.6%
Demand Response: Available	2,824	3,158	11.8%
Net Internal Demand	50,469	49,829	-1.3%
Resource Projections	**MW**	**MW**	**Net Change (%)**
Existing-Certain Capacity	63,199	59,395	-6.0%
Tier 1 Planned Capacity	34	102	197.8%
Net Firm Capacity Transfers	491	381	-22.4%
Anticipated Resources	63,724	59,878	-6.0%
Existing-Other Capacity	972	3,482	258.2%
Prospective Resources	64,696	63,360	-2.1%
Reserve Margins	**Percent (%)**	**Percent (%)**	**Annual Difference**
Anticipated Reserve Margin	26.3%	20.2%	-6.1
Prospective Reserve Margin	28.2%	27.2%	-1.0
Reference Margin Level	15.0%	15.0%	0.0

Texas RE-ERCOT

Demand, Resource, and Reserve Margins	2024 SRA	2025 SRA	2024 vs. 2025 SRA
Demand Projections	**MW**	**MW**	**Net Change (%)**
Total Internal Demand (50/50)	84,818	85,151	0.4%
Demand Response: Available	3,496	3,292	-5.8%
Net Internal Demand	81,323	81,859	0.7%
Resource Projections	**MW**	**MW**	**Net Change (%)**
Existing-Certain Capacity	99,541	112,321	12.8%
Tier 1 Planned Capacity	2,578	4,854	88.3%
Net Firm Capacity Transfers	20	20	0.0%
Anticipated Resources	102,139	117,195	14.7%
Existing-Other Capacity	0	0	-
Prospective Resources	102,167	117,770	15.3%
Reserve Margins	**Percent (%)**	**Percent (%)**	**Annual Difference**
Anticipated Reserve Margin	25.6%	43.2%	17.6
Prospective Reserve Margin	25.6%	43.9%	18.2
Reference Margin Level	13.75%	13.75%	0.0

SERC-Southeast

Demand, Resource, and Reserve Margins	2024 SRA	2025 SRA	2024 vs. 2025 SRA
Demand Projections	**MW**	**MW**	**Net Change (%)**
Total Internal Demand (50/50)	46,021	47,049	2.2%
Demand Response: Available	1,599	1,338	-16.3%
Net Internal Demand	44,422	45,711	2.9%
Resource Projections	**MW**	**MW**	**Net Change (%)**
Existing-Certain Capacity	63,693	64,111	0.7%
Tier 1 Planned Capacity	1,738	0	-100.0%
Net Firm Capacity Transfers	-1,192	489	-141.0%
Anticipated Resources	64,238	64,600	0.6%
Existing-Other Capacity	785	1,077	37.1%
Prospective Resources	65,024	65,676	1.0%
Reserve Margins	**Percent (%)**	**Percent (%)**	**Annual Difference**
Anticipated Reserve Margin	44.6%	41.3%	-3.3
Prospective Reserve Margin	46.4%	43.7%	-2.7
Reference Margin Level	15.0%	15.0%	0.0

WECC-AB

Demand, Resource, and Reserve Margins	2024 SRA	2025 SRA	2024 vs. 2025 SRA
Demand Projections	**MW**	**MW**	**Net Change (%)**
Total Internal Demand (50/50)	12,201	12,246	0.4%
Demand Response: Available	0	0	-
Net Internal Demand	12,201	12,246	0.4%
Resource Projections	**MW**	**MW**	**Net Change (%)**
Existing-Certain Capacity	13,941	17,176	23.2%
Tier 1 Planned Capacity	1,981	281	-85.8%
Net Firm Capacity Transfers	0	0	-
Anticipated Resources	15,922	17,457	9.6%
Existing-Other Capacity	0	0	-
Prospective Resources	15,922	17,457	9.6%
Reserve Margins	**Percent (%)**	**Percent (%)**	**Annual Difference**
Anticipated Reserve Margin	30.5%	42.6%	12.1
Prospective Reserve Margin	30.5%	42.6%	12.1
Reference Margin Level	6.7%	9.0%	2.7

WECC-BC

Demand, Resource, and Reserve Margins	2024 SRA	2025 SRA	2024 vs. 2025 SRA
Demand Projections	**MW**	**MW**	**Net Change (%)**
Total Internal Demand (50/50)	9,275	9,309	0.4%
Demand Response: Available	0	0	-
Net Internal Demand	9,275	9,309	0.4%
Resource Projections	**MW**	**MW**	**Net Change (%)**
Existing-Certain Capacity	11,022	11,313	2.6%
Tier 1 Planned Capacity	0	260	-
Net Firm Capacity Transfers	0	0	-
Anticipated Resources	11,022	11,573	5.0%
Existing-Other Capacity	0	0	-
Prospective Resources	11,022	11,573	5.0%
Reserve Margins	**Percent (%)**	**Percent (%)**	**Annual Difference**
Anticipated Reserve Margin	18.8%	24.3%	5.5
Prospective Reserve Margin	18.8%	24.3%	5.5
Reference Margin Level	12.0%	14.9%	2.9

WECC-California

Demand, Resource, and Reserve Margins	2024 SRA	2025 SRA	2024 vs. 2025 SRA
Demand Projections	**MW**	**MW**	**Net Change (%)**
Total Internal Demand (50/50)	54,267	54,797	1.0%
Demand Response: Available	816	746	-8.6%
Net Internal Demand	53,451	54,051	1.1%
Resource Projections	**MW**	**MW**	**Net Change (%)**
Existing-Certain Capacity	71,564	75,726	5.8%
Tier 1 Planned Capacity	5,998	8,470	41.2%
Net Firm Capacity Transfers	197	598	203.6%
Anticipated Resources	77,759	84,794	9.0%
Existing-Other Capacity	0	0	-
Prospective Resources	77,759	84,794	9.0%
Reserve Margins	**Percent (%)**	**Percent (%)**	**Annual Difference**
Anticipated Reserve Margin	45.5%	56.9%	11.4
Prospective Reserve Margin	45.5%	56.9%	11.4
Reference Margin Level	22.0%	19.2%	-2.8

WECC-Southwest

Demand, Resource, and Reserve Margins	2024 SRA	2025 SRA	2024 vs. 2025 SRA
Demand Projections	**MW**	**MW**	**Net Change (%)**
Total Internal Demand (50/50)	34,629	35,321	2.0%
Demand Response: Available	422	199	-52.9%
Net Internal Demand	34,207	35,122	2.7%
Resource Projections	**MW**	**MW**	**Net Change (%)**
Existing-Certain Capacity	37,716	40,300	6.9%
Tier 1 Planned Capacity	4,272	1,966	-54.0%
Net Firm Capacity Transfers	2,957	695	-76.5%
Anticipated Resources	44,945	42,961	-4.4%
Existing-Other Capacity	0	0	-
Prospective Resources	44,945	42,961	-4.4%
Reserve Margins	**Percent (%)**	**Percent (%)**	**Annual Difference**
Anticipated Reserve Margin	31.4%	22.3%	-9.1
Prospective Reserve Margin	31.4%	22.3%	-9.1
Reference Margin Level	12.4%	13.3%	1.0

WECC-Northwest

Demand, Resource, and Reserve Margins	2024 SRA	2025 SRA	2024 vs. 2025 SRA
Demand Projections	**MW**	**MW**	**Net Change (%)**
Total Internal Demand (50/50)	28,475	29,157	2.4%
Demand Response: Available	30	30	0.0%
Net Internal Demand	28,445	29,127	2.4%
Resource Projections	**MW**	**MW**	**Net Change (%)**
Existing-Certain Capacity	33,164	36,388	9.7%
Tier 1 Planned Capacity	201	844	319.9%
Net Firm Capacity Transfers	838	1,249	49.0%
Anticipated Resources	34,203	38,481	12.5%
Existing-Other Capacity	0	0	-
Prospective Resources	34,203	38,481	12.5%
Reserve Margins	**Percent (%)**	**Percent (%)**	**Annual Difference**
Anticipated Reserve Margin	20.2%	32.1%	11.9
Prospective Reserve Margin	20.2%	32.1%	11.9
Reference Margin Level	18.5%	23.1%	4.6

WECC-Basin			
Demand, Resource, and Reserve Margins	**2024 SRA**	**2025 SRA**	**2024 vs. 2025 SRA**
Demand Projections	**MW**	**MW**	**Net Change (%)**
Total Internal Demand (50/50)	13,165	14,214	8.0%
Demand Response: Available	485	620	27.8%
Net Internal Demand	12,680	13,594	7.2%
Resource Projections	**MW**	**MW**	**Net Change (%)**
Existing-Certain Capacity	13,534	14,923	10.3%
Tier 1 Planned Capacity	2,436	704	-71.1%
Net Firm Capacity Transfers	1,376	1,274	-7.4%
Anticipated Resources	17,346	16,901	-2.6%
Existing-Other Capacity	0	0	-
Prospective Resources	17,346	16,901	-2.6%
Reserve Margins	**Percent (%)**	**Percent (%)**	**Annual Difference**
Anticipated Reserve Margin	36.8%	24.3%	-12.5
Prospective Reserve Margin	36.8%	24.3%	-12.5
Reference Margin Level	13.3%	14.0%	0.7

WECC-Rocky Mountain			
Demand, Resource, and Reserve Margins	**2024 SRA**	**2025 SRA**	**2024 vs. 2025 SRA**
Demand Projections	**MW**	**MW**	**Net Change (%)**
Total Internal Demand (50/50)	11,313	14,098	24.6%
Demand Response: Available	281	284	1.1%
Net Internal Demand	11,032	13,814	25.2%
Resource Projections	**MW**	**MW**	**Net Change (%)**
Existing-Certain Capacity	17,345	17,262	-0.5%
Tier 1 Planned Capacity	55	104	89.1%
Net Firm Capacity Transfers	0	0	-
Anticipated Resources	17,400	17,366	-0.2%
Existing-Other Capacity	0	0	-
Prospective Resources	17,400	17,366	-0.2%
Reserve Margins	**Percent (%)**	**Percent (%)**	**Annual Difference**
Anticipated Reserve Margin	57.7%	25.7%	-32.0
Prospective Reserve Margin	57.7%	25.7%	-32.0
Reference Margin Level	18.0%	16.7%	-1.3

WECC-Mexico			
Demand, Resource, and Reserve Margins	**2024 SRA**	**2025 SRA**	**2024 vs. 2025 SRA**
Demand Projections	**MW**	**MW**	**Net Change (%)**
Total Internal Demand (50/50)	3,529	3,770	6.8%
Demand Response: Available	0	0	-
Net Internal Demand	3,529	3,770	6.8%
Resource Projections	**MW**	**MW**	**Net Change (%)**
Existing-Certain Capacity	3,314	4,303	29.8%
Tier 1 Planned Capacity	874	0	-100.0%
Net Firm Capacity Transfers	150	0	-100.0%
Anticipated Resources	4,338	4,303	-0.8%
Existing-Other Capacity	0	0	-
Prospective Resources	4,338	4,303	-0.8%
Reserve Margins	**Percent (%)**	**Percent (%)**	**Annual Difference**
Anticipated Reserve Margin	22.9%	14.1%	-8.8
Prospective Reserve Margin	22.9%	14.1%	-8.8
Reference Margin Level	7.9%	9.6%	1.6

Variable Energy Resource Contributions

Because the electrical output of VERs (e.g., wind, solar PV) depends on weather conditions, on-peak capacity contributions are less than nameplate capacity. The following table shows the capacity contribution of existing wind and solar PV resources at the peak demand hour for each assessment area. Resource contributions are also aggregated by Interconnection and across the entire BPS. For NERC's analysis of risk periods after peak demand (e.g., U.S. assessment areas in WECC), lower contributions of solar PV resources are used because output is diminished during evening periods.

BPS Variable Energy Resources by Assessment Area

	Wind			Solar PV			Hydro			Energy Storage Systems (ESS)		
Assessment Area / Interconnection	Nameplate Wind	Expected Wind	Expected Share of Nameplate (%)	Nameplate Solar PV	Expected Solar PV	Expected Share of Nameplate (%)	Nameplate Hydro	Expected Hydro	Expected Share of Nameplate (%)	Nameplate ESS	Expected ESS	Expected Share of Nameplate (%)
MISO	30,992	6,039	19%	18,246	9,123	50%	1,572	1,467	93%	3,159	3,107	98%
MRO-Manitoba Hydro	259	48	19%	-	-	0%	202	60	30%	-	-	0%
MRO-SaskPower	816	310	38%	30	9	29%	848	686	81%	-	-	0%
NPCC-Maritimes	1,230	314	26%	147	-	0%	1,313	1,313	100%	12	6	50%
NPCC-New England	1,546	142	9%	3,266	1,412	43%	575	175	31%	192	110	57%
NPCC-New York	2,586	446	17%	609	243	40%	976	478	49%	32	17	53%
NPCC-Ontario	4,943	742	15%	478	66	14%	8,862	5,320	60%	-	-	0%
NPCC-Québec	4,024	885	22%	10	-	0%	444	444	100%	-	-	0%
PJM	12,465	1,855	15%	13,731	6,244	45%	2,505	2,505	100%	310	288	93%
SERC-Central	1,324	370	28%	1,810	1,053	58%	4,991	3,418	68%	100	100	100%
SERC-East	-	-	0%	7,097	5,022	71%	3,078	3,008	98%	19	8	41%
SERC-Florida Peninsula	-	-	0%	8,295	5,749	54%	-	-	0%	631	631	100%
SERC-Southeast	-	-	0%	8,507	7,728	91%	3,258	3,308	102%	115	105	92%
SPP	35,613	5,556	16%	1,159	492	42%	114	56	49%	182	41	23%
Texas RE-ERCOT	40,102	9,396	23%	31,473	22,962	73%	572	439	77%	15,291	12,190	80%
WECC-AB	5,712	796	14%	2,174	1,480	68%	894	456	51%	250	235	94%
WECC-BC	747	149	20%	2	-	0%	16,918	10,181	60%	-	-	0%
WECC-Basin	4,859	911	19%	2,648	2,231	84%	2,637	2,022	77%	120	118	98%
WECC-CA	7,836	1,207	15%	25,059	14,756	59%	14,565	6,518	45%	11,459	11,115	97%
WECC-Mexico	300	50	17%	350	227	65%	-	-	0%	-	-	0%
WECC-NW	9,199	3,107	34%	1,349	666	49%	33,068	20,145	61%	11	10	91%
WECC-RM	5,681	1,359	24%	2,523	1,669	66%	3,251	2,446	75%	242	235	97%
WECC-SW	4,848	1,091	23%	9,288	4,293	46%	1,316	845	64%	4,187	3,982	95%
EASTERN INTERCONNECTION	91,773	15,822	17%	67,138	37,886	56%	28,294	21,794	77%	4,752	4,413	93%
QUÉBEC INTERCONNECTION	4,024	885	22%	10	-	0%	444	444	100%	-	-	0%
TEXAS INTERCONNECTION	40,102	9,396	23%	31,473	22,962	73%	572	439	77%	15,291	12,190	80%
WECC INTERCONNECTION	39,182	8,670	22%	43,393	25,322	58%	72,649	42,613	59%	16,269	15,695	96%
All INTERCONNECTIONS	**175,081**	**34,774**	**20%**	**142,014**	**86,170**	**61%**	**101,959**	**65,290**	**64%**	**36,311**	**32,298**	**89%**

Review of 2024 Capacity and Energy Performance

The summer of 2024 was the fourth hottest on record for both the contiguous United States[18] and Canada,[19] with some areas experiencing their hottest summer ever. The result was record electricity demand in the United States as well as in Canada, which was particularly pronounced in the Western Interconnection. While peak demand exceeded normal summer forecasts in most areas, only one area experienced demand that met or exceeded a 90/10 demand scenario as defined in the prior year's *SRA*. In addition, Hurricane Helene, the deadliest Atlantic hurricane to strike the US mainland since 2005, made landfall in Florida in September and led to widespread flooding and power outages from Florida to North Carolina. Helene was one of five hurricanes to impact the US last summer, joining other extreme weather incidents such as drought across the West and wildfires in the Southwest. To manage the challenging grid conditions brought about by heat domes and these other extreme weather events, grid operators across North America used various operating mitigations up to, and including, the issuance of EEAs. No disruptions to the BPS occurred due to inadequate resources. The following section describes actual demand and resource levels in comparison with NERC's *2024 SRA* and summarizes 2024 resource adequacy events.

Eastern Interconnection–Canada and Québec Interconnection

During the June heat wave that extended across the eastern half of the United States and Canada, system operators in Ontario and the Maritimes provinces followed conservative operating protocols and issued energy emergencies. A late-summer heat wave resulted in an energy emergency in Maritimes.

Eastern Interconnection–United States

MISO experienced peak electricity demand during late August. Demand was between the normal and 90/10 summer peak forecast levels. Wind and solar resource output at the time of peak demand were near expectations for summer on-peak contributions. Forced outages of thermal units, however, were lower than expected. On the day prior to MISO's peak demand, operators issued advisories to maximize generation. Similar advisories were issued earlier in the summer, coinciding with above-normal temperatures and periods of high generator forced outages.

In SPP, summer electricity demand peaked in mid-July at a level below normal 50/50 forecasts. Above-normal wind performance and sufficient generator availability contributed to sufficient electricity supplies during peak conditions. In late August, however, SPP operators issued an EEA1 due to high load forecasts, generator outages, and forecasts for low wind output. The period coincided with MISO's peak demand period, making excess supplies for import uncertain. Also in August during a period of high demand and low resource availability, operators issued public appeals for conservation when a 345 kV line outage caused a transmission emergency. During other summer periods, SPP operators responded to forecasts for high demand and low resource conditions with resource advisories intended to maximize available generators.

Like SPP, PJM also experienced peak electricity demand in mid-July and issued an EEA in August. Peak demand in July was near 90/10 forecast levels. Generator outages were below normal at the time of peak demand. In late August, PJM operators issued an EEA1 in expectation of extreme demand.

A period of unseasonably high demand in early summer brought on by high temperatures in the Northeast contributed to an EEA1 in NPCC-New England when a large thermal generator encountered a forced outage. Peak demand in New England occurred in mid-July at a near-normal summer peak demand level. At the time of peak demand, generator outages were below historical averages.

Peak demand in the NPCC-New York area occurred in early July at a level below the normal summer peak demand forecast. Generator outages were below historical levels for peak summer conditions.

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[18] US sweltered through its 4th-hottest summer on record – National Oceanic and Atmospheric Administration

[19] Climate Trends and Variations Bulletin – Summer 2024 – Government of Canada

Systems in the U.S. Southeast saw successive heat waves beginning prior to the official start to summer and extending to early fall. Operators in the SERC region used conservative operations and resource advisories to maximize generation and transmission network availability and issued EEAs when warranted by conditions. In some instances, EEAs were issued when generator outages threatened supplies needed for high demand. Peak demand in all assessment areas within the SERC region exceeded normal summer peak demand levels and approached 90/10 demand forecasts.

Texas Interconnection–ERCOT

Peak demand in ERCOT was at or near record levels last summer, as load growth and extreme temperatures contributed to escalating summer electricity needs. Demand peaked in August well above the 90/10 demand forecast. At the time of peak demand, wind generation was below expected levels for peak demand periods, while output from solar generation was near forecasted levels. Forced generator outages were well below historical average levels for peak demand, helping to meet the extreme electricity demand. Unlike the prior summer, ERCOT did not issue any conservation appeals to customers to reduce demand during high-demand periods. New solar generation, battery resources, and some thermal generation additions since Summer 2023 boosted electricity supplies, enabling operators to meet demand records without demand-side management.

Western Interconnection

In July, the Western Interconnection set a new peak demand record of 167,988 MW. Operators in United States and Canada employed procedures throughout summer to manage challenging grid conditions from extended extreme heat and wildfires.

Western Interconnection–Canada

In the province of Alberta, the electric system operator issued an EEA3 in early July as high temperatures contributed to elevated demand that coincided with a forced generator outage. A new summer peak demand record was set in Alberta later in July at 12.2 MW (up from 11.5 GW in summer 2023). Alberta’s demand peak was slightly higher than the normal demand peak scenario projected in the spring of last year.

In British Columbia, peak demand reached 9.4 GW (up from 9.2 GW the previous year), also slightly above the normal peak demand that was projected last year.

In both Alberta and British Columbia, peak demand was still below the extreme peak demand scenarios previously projected, which lowered the risk profile of those provinces over Summer 2024.

Western Interconnection–United States

Demand peaked in July in the U.S. Northwest at a level below the normal summer peak demand. During a period of high demand in July, operators at a BA in the U.S. Northwest issued an EEA1 to address forecasted conditions.

The California-Mexico assessment area, which consists of the CAISO, Northern California, and CENACE BAs, experienced system peak electricity demand in early September at a level nearing the 90/10 peak demand forecast. The extreme demand contributed to localized supply concerns and led CAISO to declare a transmission emergency and use conservative operations protocols to posture the system. Despite the extreme demand, operators were able to maintain sufficient supply without resorting to public appeals, as was required in prior summers. New battery resources were instrumental in providing energy to meet high demand during late afternoon and early evenings. Natural-gas-fired generators also performed well and were important to meeting high demand during these same periods. Dry conditions from early summer prompted operators in CA/MX to frequently employ public safety power shutoff (PSPS) procedures beginning in June. Active wildfires led transmission operators to de-energize transmission lines in Northern California and declare transmission emergencies that affected operations across CAISO.

The U.S. Southwest experienced extended heat conditions and demand levels that exceeded 90/10 peak summer forecasts, with peak occurring in early August. Higher-than-expected wind and solar output and low generator outages helped maintain sufficient supplies.

2024 Summer Demand and Generation Summary at Peak Demand

Assessment Area	Actual Peak Demand[1] (GW)	SRA Peak Demand Scenarios[2] (GW)	Wind – Actual[1] (MW)	Wind – Expected[3] (MW)	Solar – Actual[1] (MW)	Solar – Expected[3] (MW)	Forced Outages Summary[4] (MW)
MISO	118.6	116.1 125.8	4,565	5,599	5,858	4,981	4,412
MRO-Manitoba Hydro	3.6	3.1 3.3	50	48	0	0	290
MRO-SaskPower	3.7	3.5 3.7	170	208	22	6	0
MRO-SPP	54.3	55.3 57.5	10,869	5,876	442	486	6,046
NPCC-Maritimes	3.5	3.3 3.6	428	262	21	-	777
NPCC-New England	24.3	24.6 26.5	174	122	167	1,111	1,496
NPCC-New York	29	30.3 32	130	340	0	53	1,451
NPCC-Ontario	23.9	21.8 23.7	915	720	260	66	1,174
NPCC-Québec	23	22.9 24	2,270	-	0	-	10,500*
PJM	153.1	143.5 156.9	3,366	1,703	2,709	5,694	6,402
SERC-C	42.3	40.7 43.9	312	172	813	996	959
SERC-E	44	42.6 44.7	0	-	3,009	2,405	1,878
SERC-FP	52.4	50.5 53.6	0	-	5,376	5,643	
SERC-SE	44.9	44.4 45.3	0	-	3,507	7,217	1,007
TRE-ERCOT	85.5	81.3 82.3	6,286	9,070	17,566	17,797	3,622
WECC-AB	12.2	12.2 12.7	1,091	666	1,114	786	-**
WECC-BC	9.4	9.3 9.8	257	140	0.94	0	-**

2024 Summer Demand and Generation Summary at Peak Demand

Assessment Area	Actual Peak Demand[1] (GW)	SRA Peak Demand Scenarios[2] (GW)	Wind – Actual[1] (MW)	Wind – Expected[3] (MW)	Solar – Actual[1] (MW)	Solar – Expected[3] (MW)	Forced Outages Summary[4] (MW)
WECC-CA/MX	58.9	53.2 61.6	1,633	1,124	10,112	13,147	921
WECC-NW	59.7	63 69.7	4,694	2,964	6,339	2,595	3,655
WECC-SW	30.8	26.4 28.8	1,179	542	3,357	1,294	2,042
Highlighting Notes	Actual peak demand in the highlighted areas met or exceeded extreme scenario levels.		Actual wind output in highlighted areas was significantly below seasonal forecast.		Actual solar output in highlighted areas was significantly below seasonal forecast.		Actual forced outages above or below forecast by factor of two

Table Notes:

[1] Actual demand, wind, and solar values for the hour of peak demand in U.S. areas were obtained from EIA From 930 data. For areas in Canada, this data was provided to NERC by system operators and utilities.

[2] See NERC *2024 SRA* demand scenarios for each assessment area (pp. 14–33). Values represent the normal summer peak demand forecast and an extreme peak demand forecast that represents a 90/10, or once-per-decade, peak demand. Some areas use other basis for extreme peak demand.

[3] Expected values of wind and solar resources from the *2024 SRA*.

[4] Values from NERC Generator Availability Data System for the 2024 summer hour of peak demand in each assessment area. Highlighted areas had actual forced outages that were more than twice the value for typical forced outage rates used in the 2024 summer risk period scenarios in the *2024 SRA*.

*Values include both maintenance and forced outages.

**Canadian assessment areas report to the NERC Generator Availability Data System on a voluntary basis, which can contribute to the absence of some values in certain assessment areas.

Attachment B

MISO 2025 PRA Report

Planning Resource Auction

Results for Planning Year 2025-26

April 2025

CORRECTIONS

Reposted 05/29/25

Slides Updated: 7, 11, 18-20, 23, 32-34

MISO met the planning year 2025/26 resource adequacy requirements, but pressure persists with reduced capacity surplus across the region and is reflected through improved price signals in this year's auction

Summer
$666.50
–
Fall
$91.60 (North/Central)
$74.09 (South)
–
Winter
$33.20
–
Spring
$69.88
–
Annualized
$217 (North/Central)
$212 (South)

- MISO's Reliability-Based Demand Curve (RBDC) improves price signals, reflecting the increased value of accredited capacity beyond the seasonal Planning Reserve Margin (PRM) target
  - For example, the auction cleared 1.9% above the 7.9% summer PRM target
- Summer price reflects the lowest available surplus capacity
  - Fall price varied slightly due to transfer limitations between the North and South
- Consistent with past years, most Load Service Entities (LSEs) self-supplied or secured capacity in advance and are hedged with respect to auction prices
- Surplus above the target PRM dropped 43% compared to last summer, despite the slightly lower PRM target (7.9% vs. 9.0% last year)
  - New capacity additions did not keep pace with reduced accreditation, suspensions/retirements and slightly reduced imports
- The results reinforce the need to increase capacity, as demand is expected to grow with new large load additions

Auction outcomes are consistent with the design intent of the Reliability-Based Demand Curve (RBDC), and MISO and its members can expect more stable and predictable capacity pricing, especially in surplus situations

In the 2025 PRA, the RBDC…

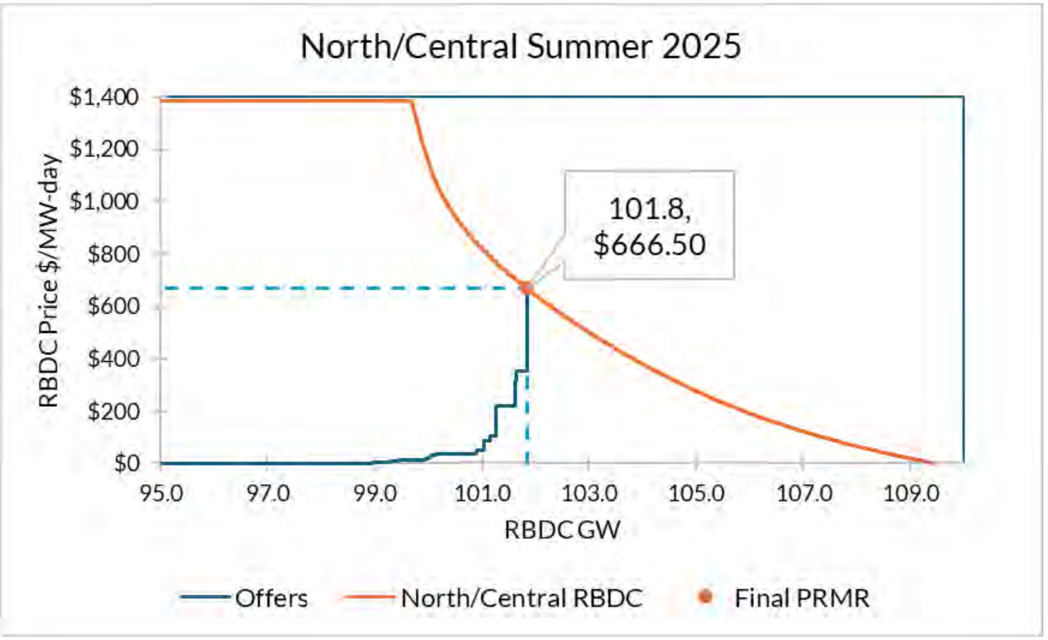
- Delivers competitive prices aligned with seasonal risks and tightening surplus
    - Prioritizes summer availability, the system's highest-risk season (based on 1-in-10 LOLE)
- Values incremental capacity above and below the LOLE target based on its reliability
    - Clears capacity above target Planning Reserve Margin based on its reliability value in each season
- Stabilizes prices in non-summer seasons, avoiding extreme volatility

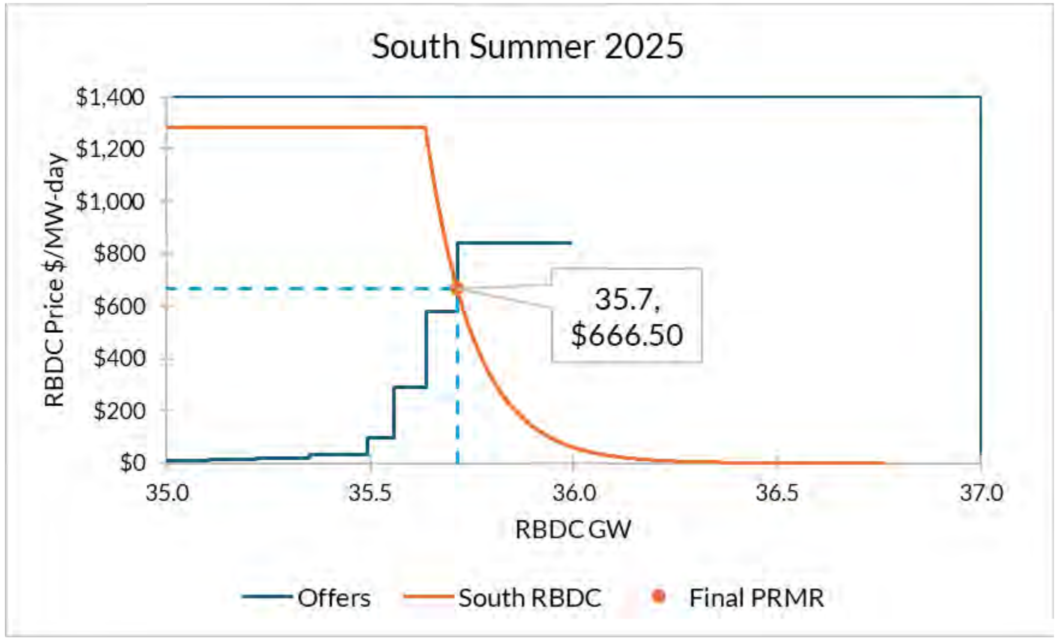
Why it Matters

- Sends clear and stable investment signals across the system, including to external resources
- Provides transparent value for capacity that exceeds the Planning Reserve Margin target
- Reflects subregional capacity needs and clears accordingly across all seasons

LOLE: Loss of Load Expectation

Auction pricing outcomes with the Reliability-Based Demand Curve (RBDC) better reflect value of capacity and resource adequacy risk across seasons



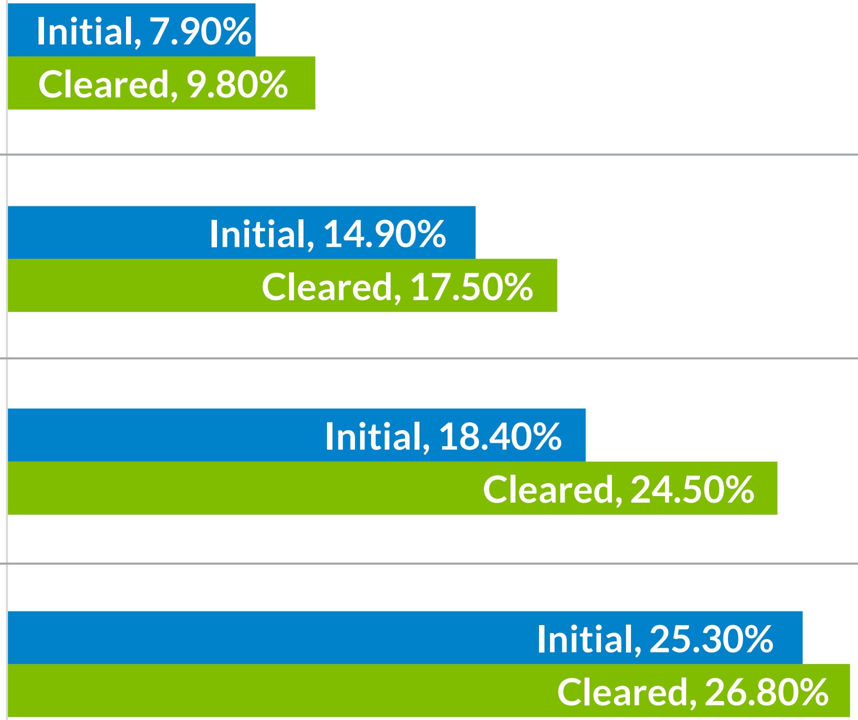


- Summer clearing of $666.50 reflects highest reliability risk and reducing surplus capacity year-over-year
  - Surplus capacity in the summer has reduced from approximately 6.5 GW in 2023, to 4.6 GW in 2024, to 2.6 GW in 2025
- Incremental capacity cleared beyond the target Planning Reserve Margin based on the value it adds to reliability (e.g., North/Central “effective” summer margin at 10.1% and South at 8.7% vs. target 7.9%)
  - A small quantity of capacity, that was offered at a price higher than the reliability value indicated through the demand curve, did not clear

LOLE: Loss of Load Expectation

MISO's Reliability-Based Demand Curve (RBDC) improves price signals, reflecting the increased value of accredited capacity beyond seasonal reliability targets

- Under RBDC, each season has an initial reliability target (PRM%)
- Auction cleared above seasonal final reliability target, representing additional reliability value at cost-competitive prices



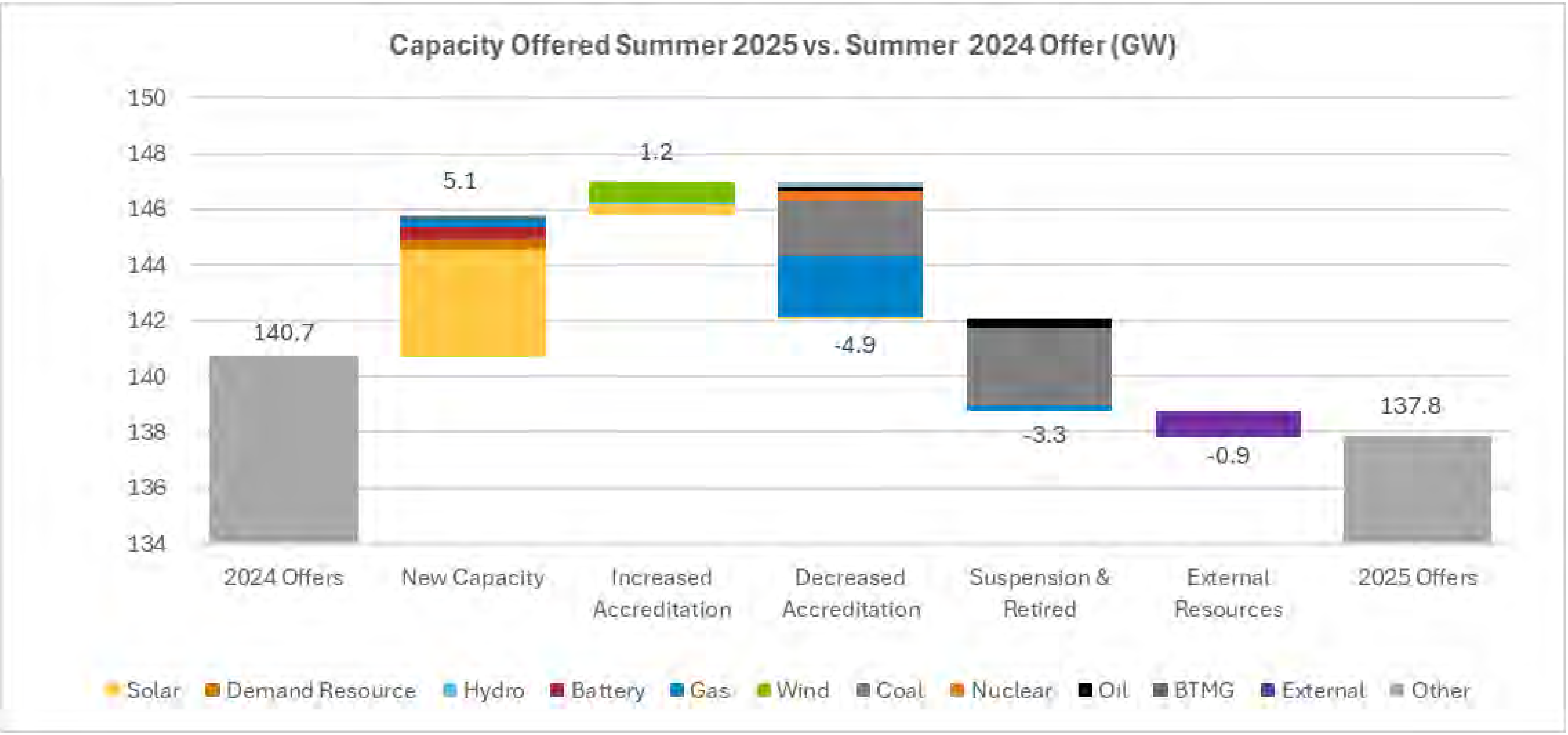
	2025 Planning Resource Auction Initial Target vs. Final Cleared	Additional Reliability	Auction Clearing Price
Summer	Initial, 7.90% Cleared, 9.80%	+1.9%	$666.50
Fall	Initial, 14.90% Cleared, 17.50%	+2.6%	$91.60 N/C $74.09 S
Winter	Initial, 18.40% Cleared, 24.50%	+6.1%	$33.20
Spring	Initial, 25.30% Cleared, 26.80%	+1.5%	$69.88

Annualized
$217 (North/Central)
$212 (South)

PRM: Planning Reserve Margin

05/29/2025: MISO Planning Resource Auction for Planning Year 2025/26 Results Posting

New capacity additions did not keep pace with decreased accreditation, suspensions/ retirements and external resources



BTMG: Behind the Meter Generation | Capacity indicated is offered accredited value

MISO has taken action on many Reliability Imperative initiatives to address resource adequacy challenges, but there's more to be done

Ongoing Challenges

- Accelerating demand for electricity
- Rapid pace of generation retirements continue
- Loss of accredited capacity and reliability attributes
- Majority of new resources with variable, intermittent output and high weather correlation
- Delays of new resource additions
- More frequent extreme weather

Completed Initiatives

✓ Implemented Reliability-Based Demand Curve in 2025 PRA

✓ Non-emergency resource accreditation *(effective PY 2028/29)*

✓ Generation interconnection queue cap

✓ Improved generator interconnection queue process (*New application portal coming June 2025)*

✓ Approved over $30 billion in new transmission lines

Initiatives In Progress

☐ Implement Direct Loss of Load (DLOL)-based accreditation

☐ Enhance resource adequacy risk modeling

☐ Reduce queue cycle times through automation

☐ Implement interim Expedited Resource Addition Study (ERAS) process *(June 2025)*

☐ Demand Response and Emergency Resource reforms

☐ Enhance allocation of resource adequacy requirements

Next Steps

April 28

2025 PRA Results Posted

May 21

Zonal deliverability benefits available at the May RASC

—

MISO publishes cleared Load Modifying Resources to Operations tools

May 28

Posting of PRA masked offer data per Module E-1 69 A.7.4

June 1

2025 PRA prices go into affect

—

New Planning Year starts

Appendix

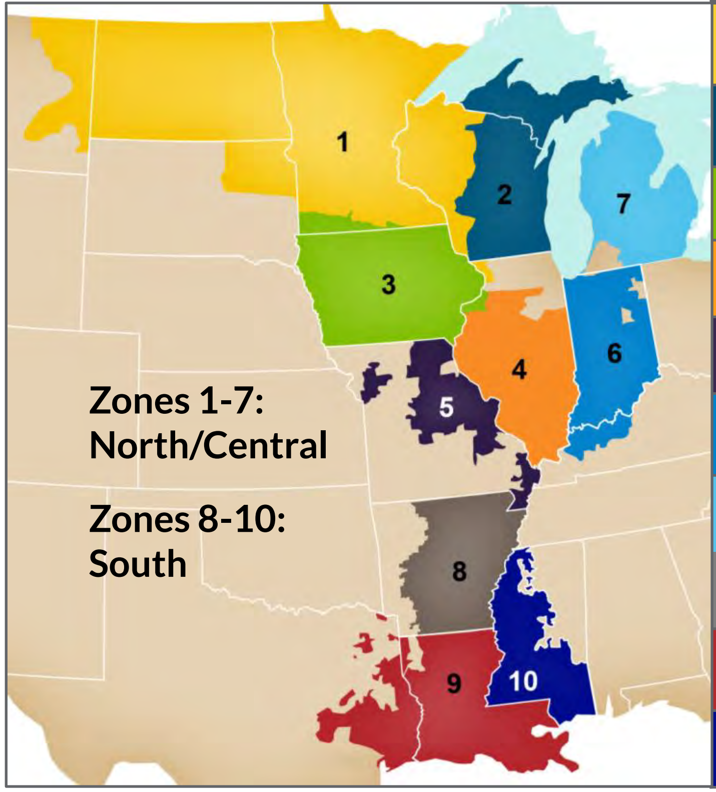
Table of Contents

Acronyms

ACP: Auction Clearing Price
ARC: Aggregator of Retail Customers
BTMG: Behind the Meter Generator
CIL: Capacity Import Limit
CEL: Capacity Export Limit
CONE: Cost of New Entry
CPF: Coincident Peak Forecast
DLOL: Direct Loss-of-Load
DR: Demand Resource
ELCC: Effective Load Carrying Capability
EE: Energy Efficiency
ER: External Resource
ERAS: Expedited Resource Addition Study
ERZ: External Resource Zones
FRAP: Fixed Resource Adequacy Plan
ICAP: Installed Capacity
IMM: Independent Market Monitor
LBA: Load Balancing Authority
LCR: Local Clearing Requirement
LOLE: Loss of Load Expectation
LMR: Load Modifying Resource
LRR: Local Reliability Requirement
LRZ: Local Resource Zone
LSE: Load Serving Entity
OMS: Organization of MISO States
PO: Planned Outage
PRA: Planning Resource Auction
PRM: Planning Reserve Margin
PRMR: Planning Reserve Margin Requirement
RASC: Resource Adequacy Sub-Committee
RBDC: Reliability-Based Demand Curve
SAC: Seasonal Accredited Capacity
SREC: Sub-Regional Export Constraint
SRIC: Sub-Regional Import Constraint
SRPBC: Sub-Regional Power Balance Constraint
SS: Self Schedule
UCAP: Unforced Capacity
ZIA: Zonal Import Ability
ZRC: Zonal Resource Credit

The 2025 PRA demonstrated sufficient capacity at the regional, subregional and zonal levels, with the summer price reflecting the highest risk and a tighter supply-demand balance

MISO Resource Adequacy Zones



Zones 1-7:
North/Central

Zones 8-10:
South

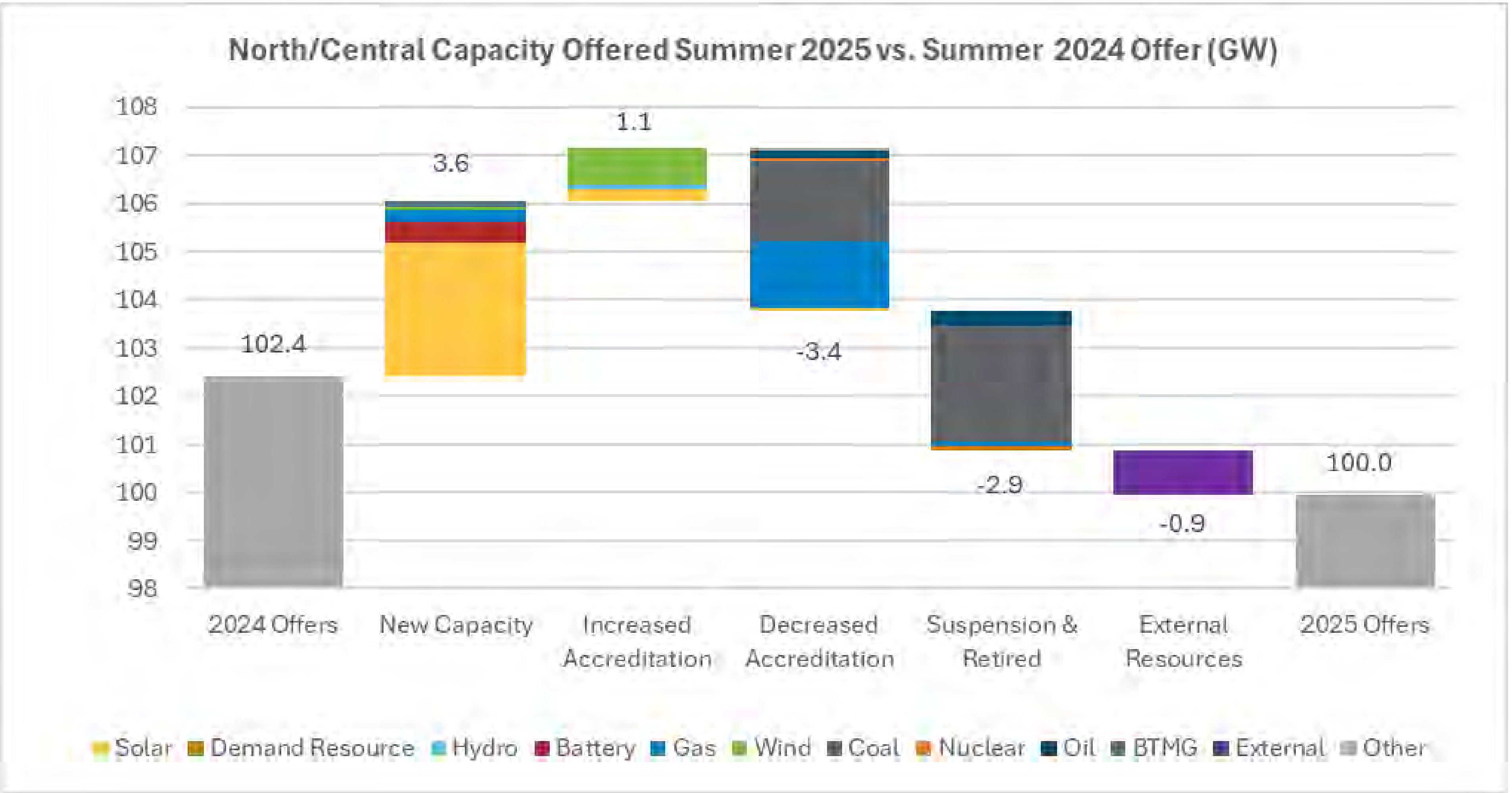
2025 PRA Results

	Price/MW-Day			
	Summer	Fall	Winter	Spring
1	$666.50	$91.60	$33.20	$69.88
2				
3				
4				
5				
6				
7				
8		$74.09		
9				
10				

Annualized
$217 (North/Central)
$212 (South)

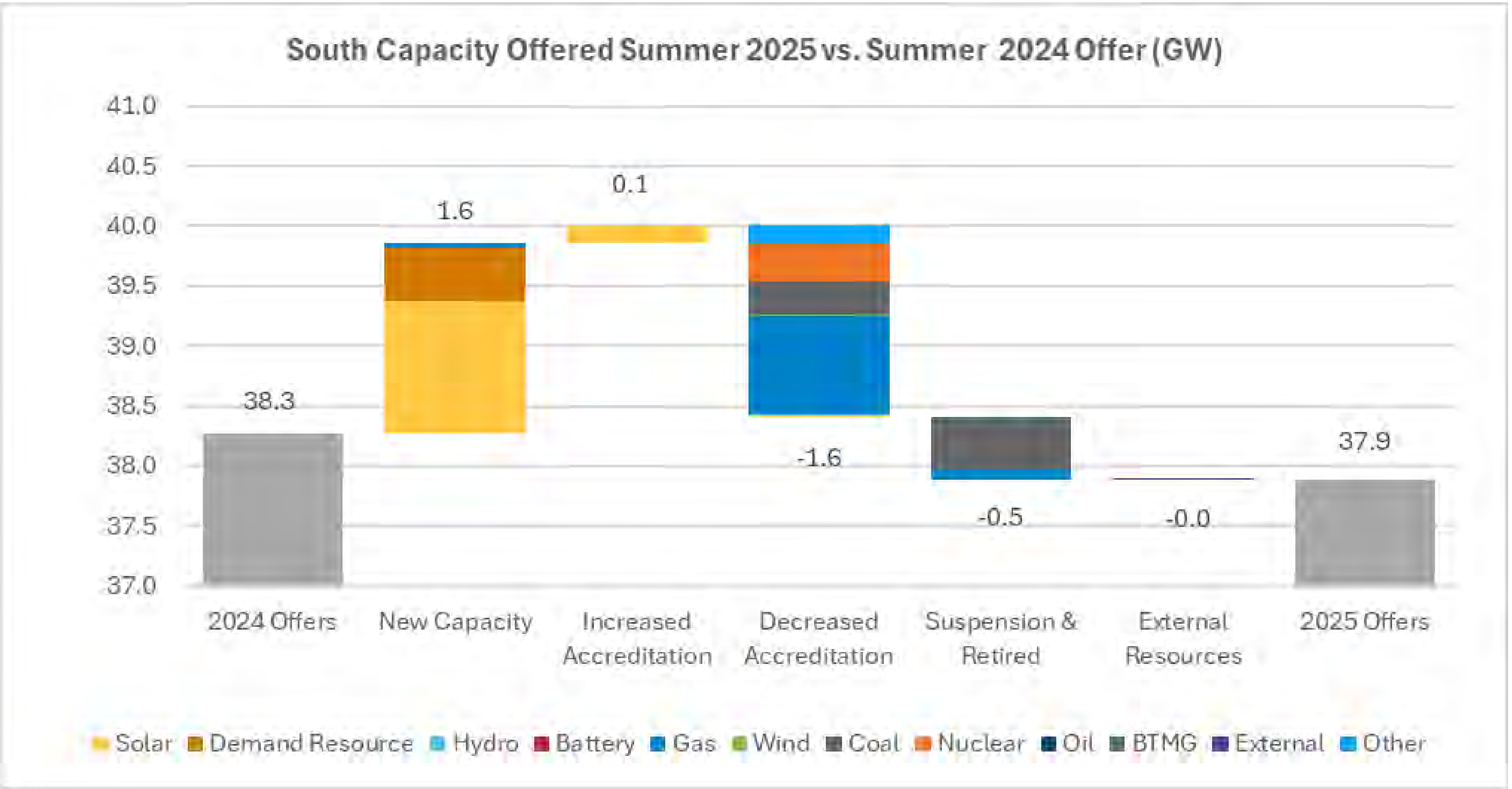
05/29/2025: MISO Planning Resource Auction for Planning Year 2025/26 Results Posting

For North/Central, new capacity additions were insufficient to offset the negative impacts of decreased accreditation, suspensions/retirements and external resources



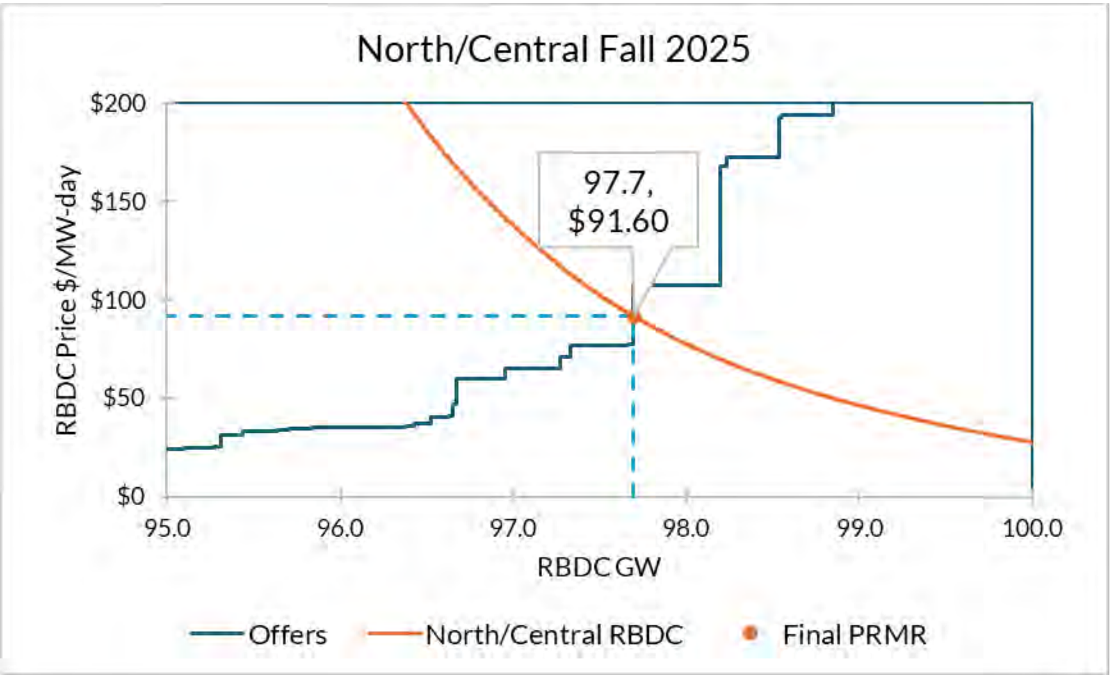
BTMG: Behind the Meter Generation | *Capacity indicated is offered accredited value*

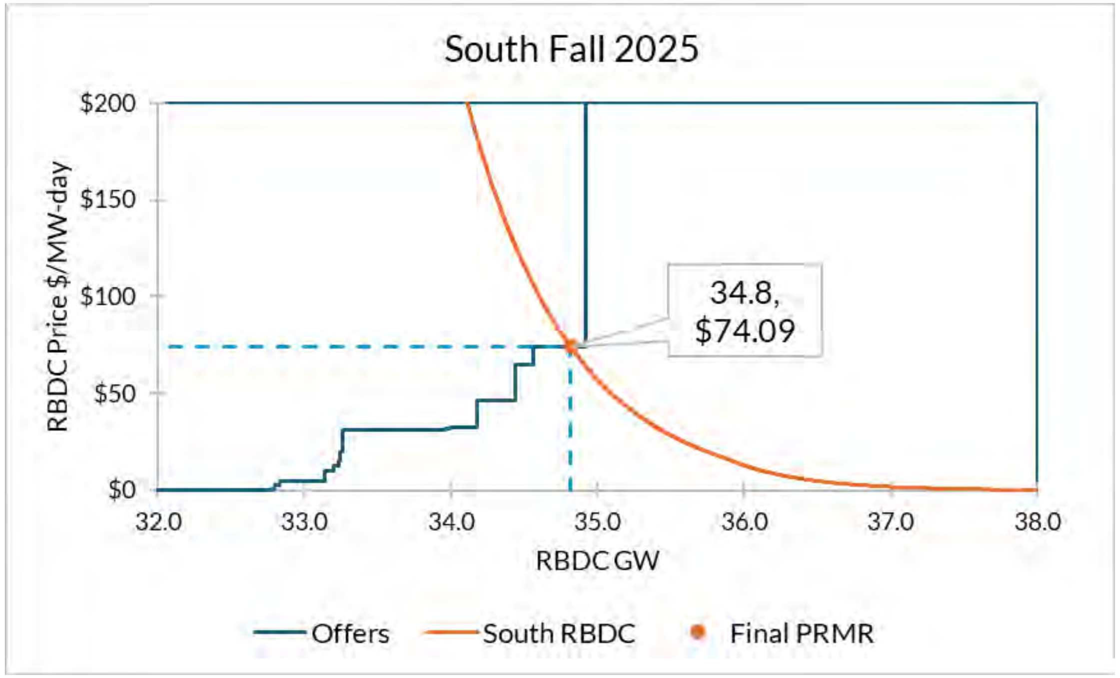
For the South, new capacity additions nearly offset the negative impacts of decreased accreditation, suspensions/retirements



BTMG: Behind the Meter Generation | Capacity indicated is offered accredited value

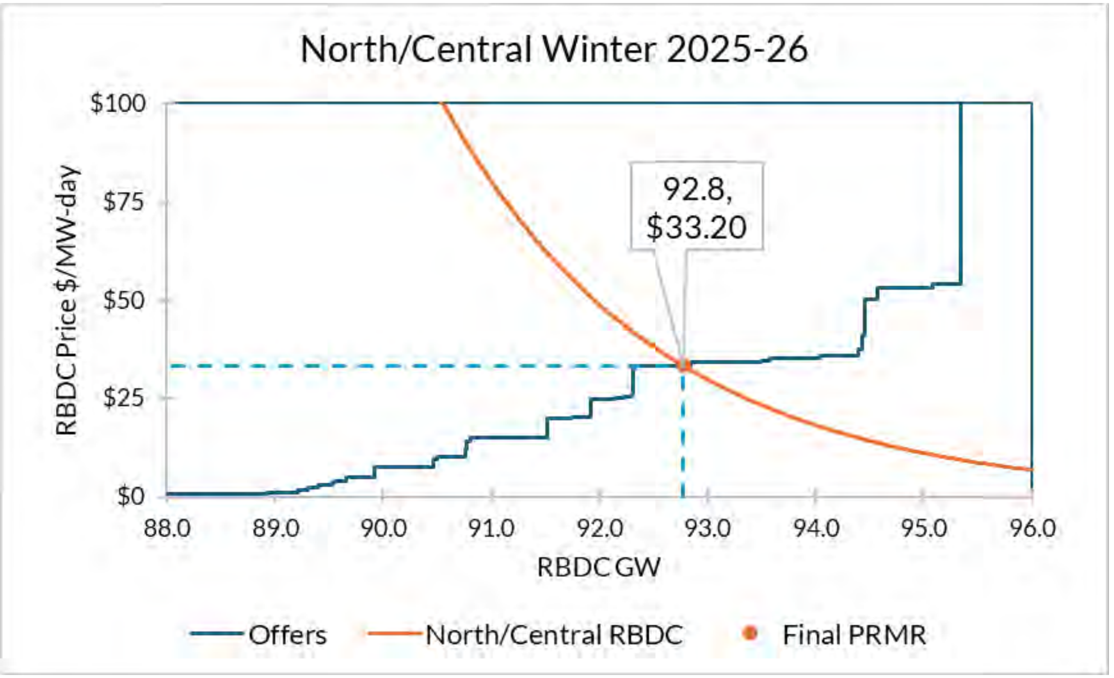
Fall 2025 Reliability-Based Demand Curve, Offer Curves and Auction Clearing Prices

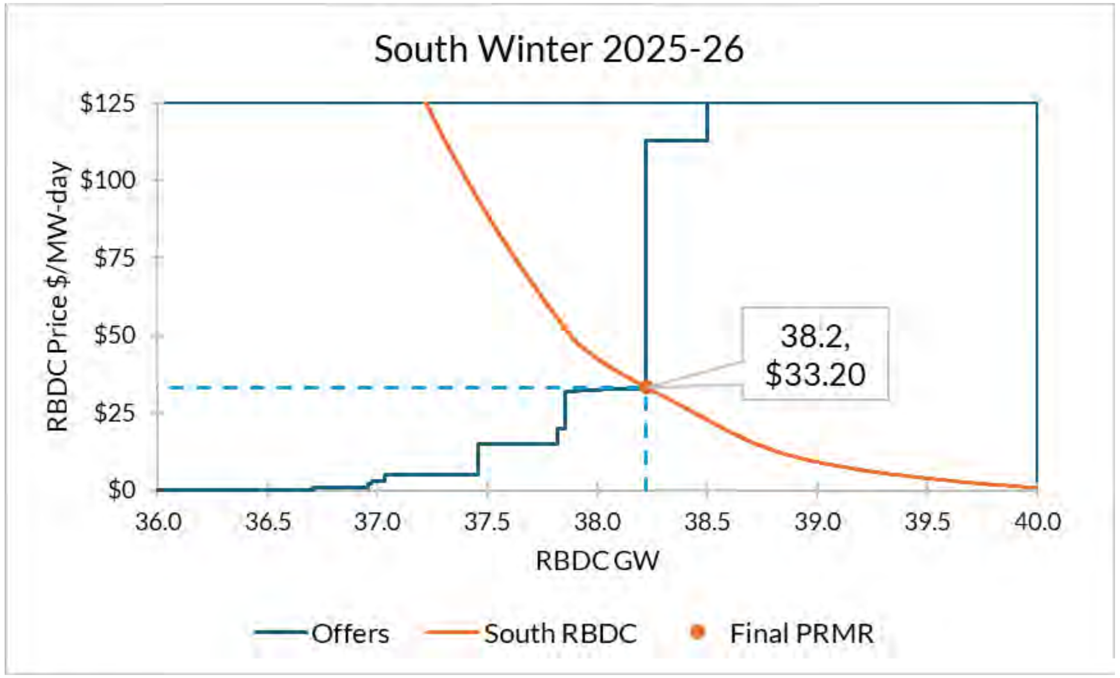




- Subregional RBDCs are determining clearing for both subregions
- Subregional Power Balance Constraint (SRPBC), South to North, is binding resulting in price separation between North/Central and South subregions in Fall season
  - ACP for North subregion is $91.60, and $74.09 South subregion
  - A marginal resource in the South sets the price in that subregion
- In fall season, “effective” margin for North/Central subregion is at 18.4% and 15.2 % for South subregion vs. target of 14.9%

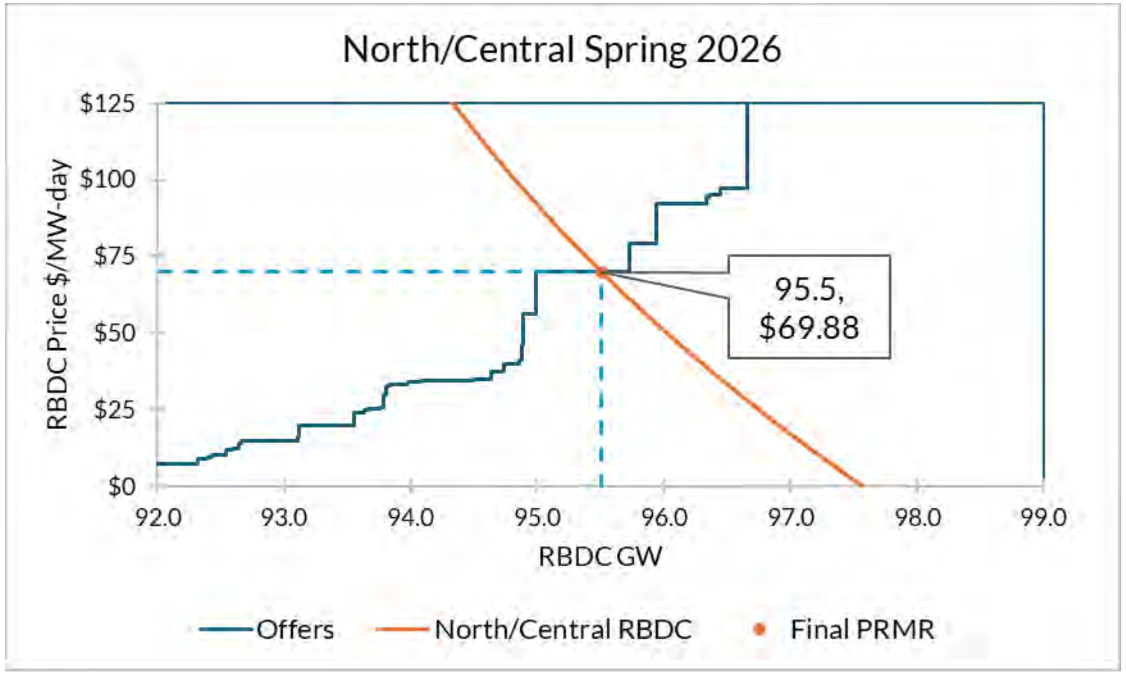
Winter 2025/26 Reliability-Based Demand Curve, Offer Curves and Auction Clearing Prices

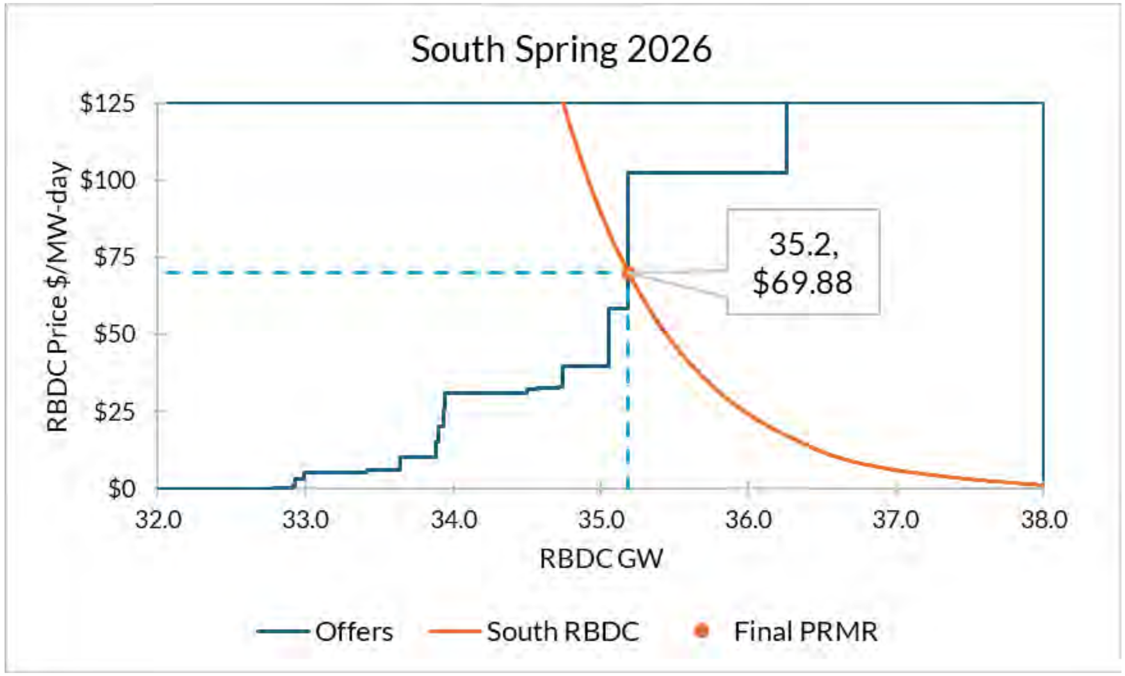




- Subregional RBDCs are determining clearing for both subregions
- No price separation between North/Central and South subregions in winter
  - ACP for both subregions is $33.20
  - Multiple marginal resources, cleared *pro rata*, sets the price
- In winter, “effective” margin for North/Central subregion is at 23.3% and $27.3% for South subregion vs. target of 18.4%

Spring 2026 Reliability-Based Demand Curve, Offer Curves and Auction Clearing





- Subregional RBDCs are determining clearing for both subregions
- No price separation between North/Central and South subregions in spring
  - ACP for both subregions is $69.88
  - A marginal resource sets the price
- In spring, “effective” margin for North/Central subregion is at 27.5% and 25% for South subregion vs. target of 25.3%

Summer 2025 PRA Results by Zone

	Z1	Z2	Z3	Z4	Z5	Z6	Z7	Z8	Z9	Z10	ERZ	North	South	System
Initial PRMR	18,459.4	13,190.2	10,889.2	9,237.6	8,281.3	18,484.8	21,228.0	8,487.8	21,812.2	5,142.9	N/A	99,770.5	35,442.9	135,213.4
Final PRMR	18,843.5	13,464.4	11,116.0	9,430.10	8,453.5	18,868.9	21,669.2	8,552.6	21,978.8	5,182.3	N/A	101,845.6	35,713.7	137,559.3
Offer Submitted (Including FRAP)	19,732.4	14,569.7	11,321.4	9,328.1	6,737.9	16,123.6	20,883.9	11,517.3	20,498.6	5,543.3	1580.1	99,952.6	37,883.7	137,836.3
FRAP	4,619.2	10,252.6	456.9	789.4	0.0	1,080.7	541.3	494.9	157.5	1,507.7	46.8	17,779.2	2,167.8	19,947.0
RBDC Opt-Out	-	-	-	-	-	-	-	-	-	-	-	0.0	0.0	0.0
Self Scheduled (SS)	4,985.3	3,344.1	10,450.2	7,677.2	6,647.8	11,080.3	20,305.5	10,260.6	17,870.6	3,831.3	1,358.8	65,567.6	32,244,1	97,811.7
Non-SS Offer Cleared	10,127.9	973.0	414.3	861.5	90.1	3,962.6	37.1	761.8	2,193.5	204.3	174.5	16,605.8	3,194.8	19,800.6
Committed (Offer Cleared + FRAP)	19,732.4	14,569.7	11,321.4	9,328.1	6,737.9	16,123.6	20,883.9	11,517.3	20,221.6	5,543.3	1,580.1	99,952.6	37,606.7	137,559.3
LCR	15,696.9	9,719.3	8,049.3	2,577.8	6,071.1	13,051.7	19,681.4	8,487.0	19,615.0	2,523.8	-	N/A	N/A	N/A
CIL	6,025	4,370	5,555	8,525	4,117	8,651	3,569	2,568	4,361	4,474	-	N/A	N/A	N/A
ZIA	6,023	4,370	5,460	7,757	4,117	8,366	3,569	2,358	4,361	4,474	-	N/A	N/A	N/A
Import	0.0	0.0	0.0	101.7	1,715.5	2,745.5	785.5	0.0	1,757.1	0.0	-	1,893.0	0.0	1,580.1
CEL	3,991	4,614	4,618	4,584	3,939	6,881	5,726	6,299	4,286	2,097	-	N/A	N/A	N/A
Export	888.8	1105.2	205.5	0.0	0.0	0.0	0.0	2964.7	0.0	360.9	1,580.1	0.0	1,893.0	-
ACP ($/MW-Day)	666.50	666.50	666.50	666.50	666.50	666.50	666.50	666.50	666.50	666.50	666.50			N/A

Values displayed in MW SAC; ERZ: External Resource Zones | Final PRMR values provided at Zonal level given lack of RBDC Opt-Out.

Fall 2025 PRA Results by Zone

	Z1	Z2	Z3	Z4	Z5	Z6	Z7	Z8	Z9	Z10	ERZ	North	South	System
Initial PRMR	17,290.4	12,086.4	10,179.1	8,950.4	7,898.3	17,939.5	20,493.9	8,019.3	21,578.1	5,142.6	N/A	94,838.0	34,740.0	129,578.0
Final PRMR	17,811.9	12,450.7	10,486.0	9,220.4	8,136.0	18,480.2	21,111.9	8,037.4	21,627.1	5,154.2	N/A	97,697.1	34,818.7	132,515.8
Offer Submitted (Including FRAP)	18,893.1	14,291.7	13,615.9	8,887.5	6,839.6	15,518.1	19,517.6	11,000.8	21,112.5	5,516.6	1,582.1	98,835.3	37,940.2	136,775.5
FRAP	4,233.2	9,259.1	582.7	773.3	0.0	983.1	533.1	459.4	153.4	1,518.3	44.6	16,402.6	2,137.6	18,540.2
RBDC Opt-Out	-	-	-	-	-	-	-	-	-	-	-	0.0	0.0	0.0
Self Scheduled (SS)	4,646.8	3,423.5	10,580.4	7,036.0	6,706.5	10,590.4	16,911.4	9,029.4	17,788.1	3,286.3	1,208.0	60,831.1	30,375.7	91,206.8
Non-SS Offer Cleared	9,019.0	834.8	2,452.8	1,078.2	133.1	3,728.7	1,089.1	1,512.0	2,406.6	254.9	259.6	18,563.3	4,205.5	22,768.8
Committed (Offer Cleared + FRAP)	17,899.0	13,517.4	13,615.9	8,887.5	6,839.6	15,302.2	18,533.6	11,000.8	20,348.1	5,059.5	1,512.2	95,797.1	36,718.7	132,515.8
LCR	14,691.0	6,591.1	6,331.4	2,588.7	4,857.2	11,725.4	18,196.1	5,006.3	18,963.6	2,577.6	-	N/A	N/A	N/A
CIL	5,740	6,537	7,797	7,773	4,679	8,952	5,115	5,839	4,741	4,508	-	N/A	N/A	N/A
ZIA	5,688	6,537	7,704	7,013	4,679	8,672	5,115	5,675	4,741	4,508	-	N/A	N/A	N/A
Import	0.0	0.0	0.0	332.8	1,296.8	3,178.0	2,578.2	0.0	1,278.9	94.7	-	1,900.0	0.0	1,512.2
CEL	6,115	4,259	5,831	4,309	5,816	5,191	5,168	4,055	4,173	3,164	-	N/A	N/A	N/A
Export	87.2	1,066.8	3,129.9	0.0	0.0	0.0	0.0	2,963.3	0.0	0.0	1,512.2	0.0	1,900.0	-
ACP ($/MW-Day)	91.60	91.60	91.60	91.60	91.60	91.60	91.60	74.09	74.09	74.10	83.24-91.60			N/A

Values displayed in MW SAC; ERZ: External Resource Zones | Final PRMR values provided at Zonal level given lack of RBDC Opt-Out.

Winter 2025/26 PRA Results by Zone

	Z1	Z2	Z3	Z4	Z5	Z6	Z7	Z8	Z9	Z10	ERZ	North	South	System
Initial PRMR	17,823.8	10,789.8	9,889.1	8,549.5	7,954.8	17,939.1	16,123.6	8,545.6	21,864.3	5,136.1	N/A	89,069.7	35,546.0	124,615.7
Final PRMR	18,565.8	11,238.7	10,300.9	8,905.1	8,285.9	18,685.7	16,794.7	9,189.0	23,511.0	5,522.7	N/A	92,776.8	38,222.7	130,999.5
Offer Submitted (Including FRAP)	19,750.7	13,217.2	12,059.1	7,547.1	6,339.9	14,679.5	19,957.3	10,751.9	22,273.0	5,939.7	1,746.5	94,964.8	39,297.1	134,261.9
FRAP	4,683.9	8,342.7	479.4	513.4	0.0	1,176.6	566.3	441.6	130.9	1,822.6	16.1	15,771.2	2,402.3	18,173.5
RBDC Opt-Out	-	-	-	-	-	-	-	-	-	-	-	0.0	0.0	0.0
Self Scheduled (SS)	5,835.8	3,156.0	10,468.3	6,685.7	6,188.7	9,146.2	18,640.6	10,018.6	18,579.3	4,046.0	1,550.8	61,380.9	32,935.1	94,316.0
Non-SS Offer Cleared	7,977.9	1,062.6	1,044.5	271.5	99.9	4,008.7	397.0	291.7	3,105.5	71.1	179.6	15,007.6	3,502.4	18,510.0
Committed (Offer Cleared + FRAP)	18,497.6	12,561.3	11,992.2	7,470.6	6,288.6	14,331.5	19,603.9	10,751.9	21,815.7	5,939.7	1,746.5	92,159.7	38,839.8	130,999.5
LCR	13,462.0	5,951.6	8,008.4	1,371.4	3,644.7	11,074.8	15,500.2	8,014.7	20,593.7	3,534.1	-	N/A	N/A	N/A
CIL	6,177	6,522	5,877	7,232	4,922	7,927	4,762	3,613	4,418	3,458	-	N/A	N/A	N/A
ZIA	5,575	6,435	5,785	6,457	4,922	7,690	4,762	3,432	4,418	3,458	-	N/A	N/A	N/A
Import	68.0	0.0	0.0	1,434.8	1,997.3	4,354.1	0.0	0.0	1,695.2	0.0	-	617.1	0.0	1,746.5
CEL	2,991	4,706	7,388	4,756	4,814	1,674	5,712	3,602	3,618	2,028	-	N/A	N/A	N/A
Export	0.0	1,322.6	1,691.5	0.0	0.0	0.0	2,809.2	1,562.8	0.0	416.9	1,746.5	0.0	617.1	0.0
ACP ($/MW-Day)	33.20	33.20	33.20	33.20	33.20	33.20	33.20	33.20	33.20	33.20	33.20			N/A

Values displayed in MW SAC; ERZ: External Resource Zones | Final PRMR values provided at Zonal level given lack of RBDC Opt-Out.

Spring 2026 PRA Results by Zone

	Z1	Z2	Z3	Z4	Z5	Z6	Z7	Z8	Z9	Z10	ERZ	North	South	System
Initial PRMR	17,866.7	12,149.2	10,152.2	8,304.0	7,707.9	17,858.6	19,853.2	7,977.8	22,139.8	5,167.9	N/A	93,891.8	35,285.5	129,177.3
Final PRMR	18,174.5	12,358.6	10,327.0	8,447.2	7,841.0	18,166.7	20,195.5	7,955.2	22,076.1	5,157.7	N/A	95,510.5	35,189.0	130,699.5
Offer Submitted (Including FRAP)	18,662.6	14,525.3	12,333.3	9,178.5	6,118.7	15,824.7	19,451.0	11,495.2	21,064.7	5,864.0	1,542.6	97,313.7	38,746.9	136,060.6
FRAP	4,560.6	9,393.4	529.5	629.6	0.0	1,212.4	512.5	475.3	142.1	1,464.3	45.9	16,877.1	2,088.5	18,965.6
RBDC Opt-Out	-	-	-	-	-	-	-	-	-	-	-	0.0	0.0	0.0
Self Scheduled (SS)	4,600.8	3,602.8	10,816.2	7,415.0	5,968.5	9,967.6	17,621.9	8,476.0	16,778.9	4,073.9	1,260.8	60,972.6	29,609.8	90,582.4
Non-SS Offer Cleared	8,578.5	1,069.5	589.6	1,133.9	150.2	4,001.0	719.2	1,470.2	2,947.5	325.8	166.1	16,372.9	4,778.6	21,151.5
Committed (Offer Cleared + FRAP)	17,739.9	14,065.7	11,935.3	9,178.5	6,118.7	15,181.0	18,853.6	10,421.5	19,868.5	5,864.0	1,472.8	94,222.5	36,477.0	130,699.5
LCR	12,239.1	6,737.5	5,014.7	1,823.8	4,700.3	10,377.1	16,453.6	4,243.1	19,790.5	3,178.8	-	N/A	N/A	N/A
CIL	6,598	6,439	7,829	8,142	4,453	9,457	5,166	6,289	4,855	4,365	-	N/A	N/A	N/A
ZIA	6,396	6,439	7,726	7,373	4,453	9,176	5,166	6,085	4,855	4,365	-	N/A	N/A	N/A
Import	434.5	0.0	0.0	0.0	1,722.2	2,985.6	1,341.9	0.0	2,210.8	0.0	-	1,288.0	0.0	1,472.8
CEL	5,083	6,119	5,936	5,111	5,797	6,425	5,499	3,520	4,146	3,072	-	N/A	N/A	N/A
Export	0.0	1,707.2	1,608.0	731.2	0.0	0.0	0.0	2,465.6	0.0	710.3	1,472.8	0.0	1,288.0	-
ACP ($/MW-Day)	69.88	69.88	69.88	69.88	69.88	69.88	69.88	69.88	69.88	69.88	69.88			N/A

Values displayed in MW SAC; ERZ: External Resource Zones | Final PRMR values provided at Zonal level given lack of RBDC Opt-Out.

Summer Supply Offered and Cleared Comparison Trend

	Offered (ZRC)			Cleared (ZRC)		
Planning Resource	Summer 2023	Summer 2024	Summer 2025	Summer 2023	Summer 2024	Summer 2025
Generation	122,375.6	123,395.6	121,015.6	116,989.7	119,479.2	120,738.6
External Resources	4,514.6	4,430.4	3,505.9	4,072.5	4,309.8	3,505.9
Behind the Meter Generation	4,175.2	4,180.2	4,282.8	4,129.4	4,143.5	4,282.8
Demand Resources	8,303.5	8,660.2	9,004.4	7,694.6	8,109.4	9,004.4
Energy Efficiency	5.0	22.5	27.6	5.0	22.5	27.6
Total	**139,373.9**	**140,688.9**	**137,836.3**	**132,891.2**	**136,064.4**	**137,559.3**

ZRC: Zonal Resource Credit

Fall Supply Offered and Cleared Comparison Trend

	Offered (ZRC)			Cleared (ZRC)		
Planning Resource	**Fall 2023**	**Fall 2024**	**Fall 2025**	**Fall 2023**	**Fall 2024**	**Fall 2025**
Generation	121,403.5	119,745.3	122,283.4	111,713.8	111,791.5	118,309.5
External Resources	4,095.4	4,366.8	2,833.5	3,979.6	3,990.2	2,763.6
Behind the Meter Generation	3,874.2	3,877.9	3,646.8	3,842.8	3,789.7	3,646.8
Demand Resources	6,999.2	6,866.1	7,983.7	6,254.4	5,957.5	7,767.8
Energy Efficiency	4.9	22.5	28.1	4.8	22.5	28.1
Total	**136,377.2**	**134,878.6**	**136,775.5**	**125,795.4**	**125,551.4**	**132,515.8**

ZRC: Zonal Resource Credit

Winter Supply Offered and Cleared Comparison Trend

	Offered (ZRC)			Cleared (ZRC)		
Planning Resource	**Winter 2023-2024**	**Winter 2024-2025**	**Winter 2025-2026**	**Winter 2023-2024**	**Winter 2024-2025**	**Winter 2025-2026**
Generation	124,632.7	133,457.4	120,225.1	114,886.6	118,253.8	117,392.0
External Resources	3,937.1	3,973.0	2,808.7	3,334.6	3,313.3	2,793.7
Behind the Meter Generation	3,257.8	3,111.5	3,082.9	3,173.9	2,957.3	3,082.6
Demand Resources	7,644.4	7,866.4	8,112.3	6,702.4	6,822.7	7,698.3
Energy Efficiency	6.7	29.7	32.9	6.7	29.7	32.9
Total	**139,478.7**	**148,438.0**	**134,261.9**	**128,104.2**	**131,376.8**	**130,999.5**

ZRC: Zonal Resource Credit

Spring Supply Offered and Cleared Comparison Trend

	Offered (ZRC)			Cleared (ZRC)		
Planning Resource	**Spring 2024**	**Spring 2025**	**Spring 2026**	**Spring 2024**	**Spring 2025**	**Spring 2026**
Generation	119,254.7	121,303.8	120,780.6	110,195.8	113,091.4	115,724.7
External Resources	3,794.1	3,481.8	2,640.1	3,409.1	3,406.5	2,570.3
Behind the Meter Generation	4,096.4	4,201.6	4,133.5	4,058.9	4,180.5	4,133.5
Demand Resources	7,282.9	7602.9	8,475.9	6,720.0	7,087.2	8,240.5
Energy Efficiency	5.3	25.0	30.5	5.3	25.0	30.5
Total	**134,433.4**	**136,615.1**	**136,060.6**	**124,389.1**	**127,790.6**	**130,699.5**

ZRC: Zonal Resource Credit

2025 PRA pricing compared with Independent Market Monitor (IMM) Conduct Threshold and Cost of New Entry (CONE)

PY	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6	Zone 7	Zone 8	Zone 9	Zone 10	ERZs	System CONE (Seasonal)	North/Central CONE (Seasonal)	South CONE (Seasonal)
Summer 2025	$666.50											$1,353.84	$1,384.36	$1,282.61
Fall 2025	$91.60							$74.09			$83.24-$91.60	$1,368.71	$1,399.58	$1,296.70
Winter 2025-26	$33.20											$1,383.92	$1,415.13	$1,311.11
Spring 2026	$69.88											$1,353.84	$1,384.36	$1,282.61
Cost of New Entry (Annual)	$127,720	$125,090	$121,220	$126,040	$136,170	$124,360	$130,930	$118,960	$117,710	$117,330	$136,170			
IMM Conduct Threshold*	$34.99	$34.27	$33.21	$34.53	$37.31	$34.07	$35.87	$32.59	$32.25	$32.15	-			

- *Zonal Auction Clearing Prices (ACP) shown in $/MW-day*

**Zonal Resource Credit (ZRC) offers that impact pricing should generally stay below the IMM Conduct Threshold and applies to all seasons.*

ERZ: External Resource Zones

Historical Summer Auction Clearing Price Comparison

<table>
<tr><th>PY</th><th>Zone 1</th><th>Zone 2</th><th>Zone 3</th><th>Zone 4</th><th>Zone 5</th><th>Zone 6</th><th>Zone 7</th><th>Zone 8</th><th>Zone 9</th><th>Zone 10</th><th>ERZs</th></tr>
<tr><td>2015-2016</td><td colspan="3">$3.48</td><td>$150.00</td><td colspan="3">$3.48</td><td colspan="2">$3.29</td><td>N/A</td><td>N/A</td></tr>
<tr><td>2016-2017</td><td>$19.72</td><td colspan="6">$72.00</td><td colspan="3">$2.99</td><td>N/A</td></tr>
<tr><td>2017-2018</td><td colspan="10">$1.50</td><td>N/A</td></tr>
<tr><td>2018-2019</td><td>$1.00</td><td colspan="9">$10.00</td><td>N/A</td></tr>
<tr><td>2019-2020</td><td colspan="6">$2.99</td><td>$24.30</td><td colspan="4">$2.99</td></tr>
<tr><td>2020-2021</td><td colspan="6">$5.00</td><td>$257.53</td><td>$4.75</td><td>$6.88</td><td>$4.75</td><td>$4.89-$5.00</td></tr>
<tr><td>2021-2022</td><td colspan="7">$5.00</td><td colspan="3">$0.01</td><td>$2.78-$5.00</td></tr>
<tr><td>2022-2023</td><td colspan="7">$236.66</td><td colspan="3">$2.88</td><td>$2.88-236.66</td></tr>
<tr><td>Summer 2023</td><td colspan="11">$10.00</td></tr>
<tr><td>Summer 2024</td><td colspan="11">$30.00</td></tr>
<tr><td>Summer 2025</td><td colspan="11">$666.50</td></tr>
</table>

- Auction Clearing Prices shown in $/MW-Day

ERZ: External Resource Zones

Fall Auction Clearing Price Comparison

<table>
<tr><th>PY</th><th>Zone 1</th><th>Zone 2</th><th>Zone 3</th><th>Zone 4</th><th>Zone 5</th><th>Zone 6</th><th>Zone 7</th><th>Zone 8</th><th>Zone 9</th><th>Zone 10</th><th>ERZs</th></tr>
<tr><td>Fall 2023</td><td colspan="8">$15.00</td><td>$59.21</td><td colspan="2">$15.00</td></tr>
<tr><td>Fall 2024</td><td colspan="4">$15.00</td><td>$719.81</td><td colspan="6">$15.00</td></tr>
<tr><td>Fall 2025</td><td colspan="7">$91.60</td><td colspan="3">$74.09</td><td>$83.24-$91.60</td></tr>
</table>

- Auction Clearing Prices shown in $/MW-Day
- Price separation present in Fall 2025 between the North and South subregions since the Sub-Regional Import Constraint (SRIC) / Sub-Regional Export Constraint (SREC) bound

ERZ: External Resource Zones

Winter Auction Clearing Price Comparison

PY	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6	Zone 7	Zone 8	Zone 9	Zone 10	ERZs
Winter 2023-24	$2.00								$18.88	$2.00	
Winter 2024-25	$0.75										
Winter 2025-26	$33.20										

- Auction Clearing Prices shown in $/MW-Day

ERZ: External Resource Zones

Spring Auction Clearing Price Comparison

<table>
<tr><th>PY</th><th>Zone 1</th><th>Zone 2</th><th>Zone 3</th><th>Zone 4</th><th>Zone 5</th><th>Zone 6</th><th>Zone 7</th><th>Zone 8</th><th>Zone 9</th><th>Zone 10</th><th>ERZs</th></tr>
<tr><td>Spring 2024</td><td colspan="11">$10.00</td></tr>
<tr><td>Spring 2025</td><td colspan="4">$34.10</td><td>$719.81</td><td colspan="6">$34.10</td></tr>
<tr><td>Spring 2026</td><td colspan="11">$69.88</td></tr>
</table>

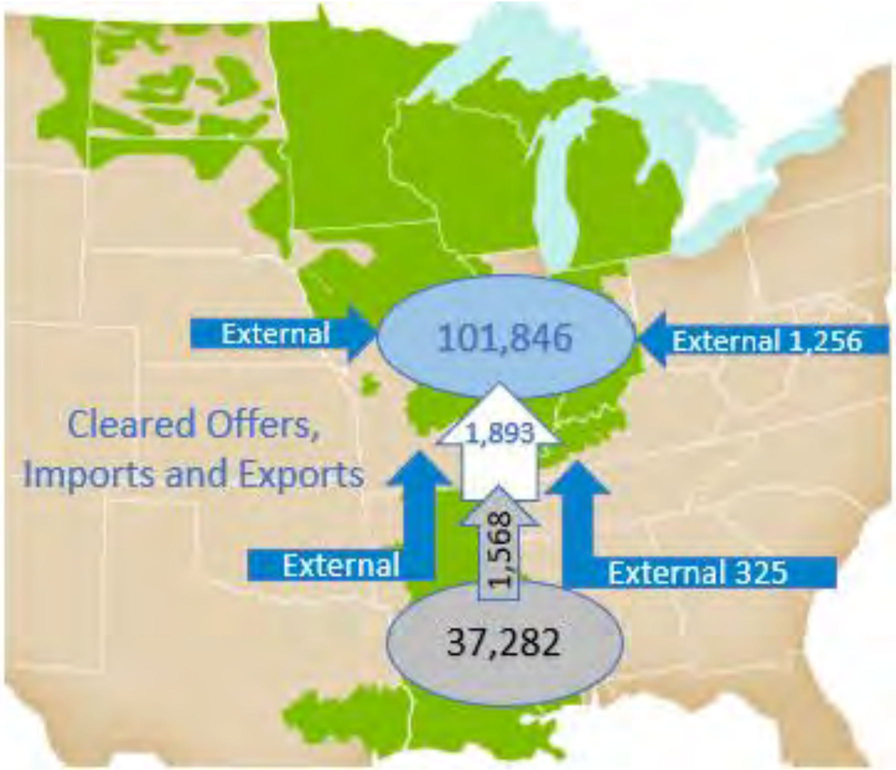
- Auction Clearing Prices shown in $/MW-Day

ERZ: External Resource Zones

Summer 2025 Capacity

Offered Capacity & Final PRMR (MW)

Cleared Capacity, Imports & Exports (MW)



PRMR: *Planning Reserve Margin Requirement*

Offers includes Fixed Resource Adequacy Plan (FRAP), Self-scheduled and price sensitive offers

05/29/2025: MISO Planning Resource Auction for Planning Year 2025/26 Results Posting

Fall 2025 Capacity

Offered Capacity & Final PRMR (MW)

Cleared Capacity, Imports & Exports (MW)

PRMR: Planning Reserve Margin Requirement

Offers includes Fixed Resource Adequacy Plan (FRAP), Self-scheduled and price sensitive offers

05/29/2025: MISO Planning Resource Auction for Planning Year 2025/26 Results Posting

Winter 2025/26 Capacity

Offered Capacity & Final PRMR (MW)

Cleared Capacity, Imports & Exports (MW)

PRMR: Planning Reserve Margin Requirement
Offers includes Fixed Resource Adequacy Plan (FRAP), Self-scheduled and price sensitive offers

05/29/2025: MISO Planning Resource Auction for Planning Year 2025/26 Results Posting

Spring 2026 Capacity

Offered Capacity & Final PRMR (MW)

Cleared Capacity, Imports & Exports (MW)

PRMR: Planning Reserve Margin Requirement

Offers includes Fixed Resource Adequacy Plan (FRAP), Self-scheduled and price sensitive offers

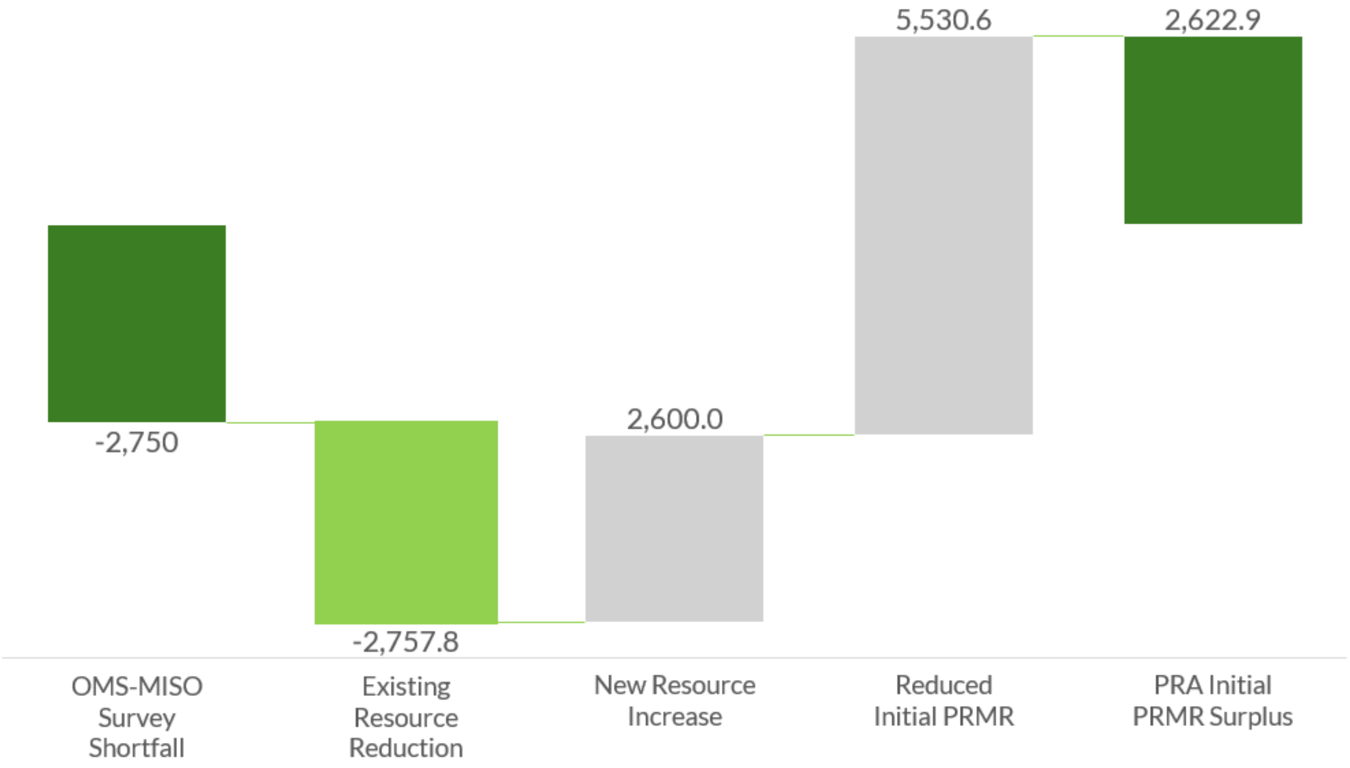
05/29/2025: MISO Planning Resource Auction for Planning Year 2025/26 Results Posting

The 2025 auction resulted in a surplus compared to the PRMR target, in contrast to the 2024 OMS-MISO Survey projection of a shortfall

Summer 2025 auction outcomes vs. 2024 OMS-MISO Survey projection for 2025

- Resource offers in the auction were comparable to "High Certainty" values projected in the OMS-MISO Survey
- Incremental accreditation reductions in the auction were offset by incremental increases in new resource additions
- Notably, initial PRMR was lower (5.5 GW) than projected in the OMS-MISO Survey

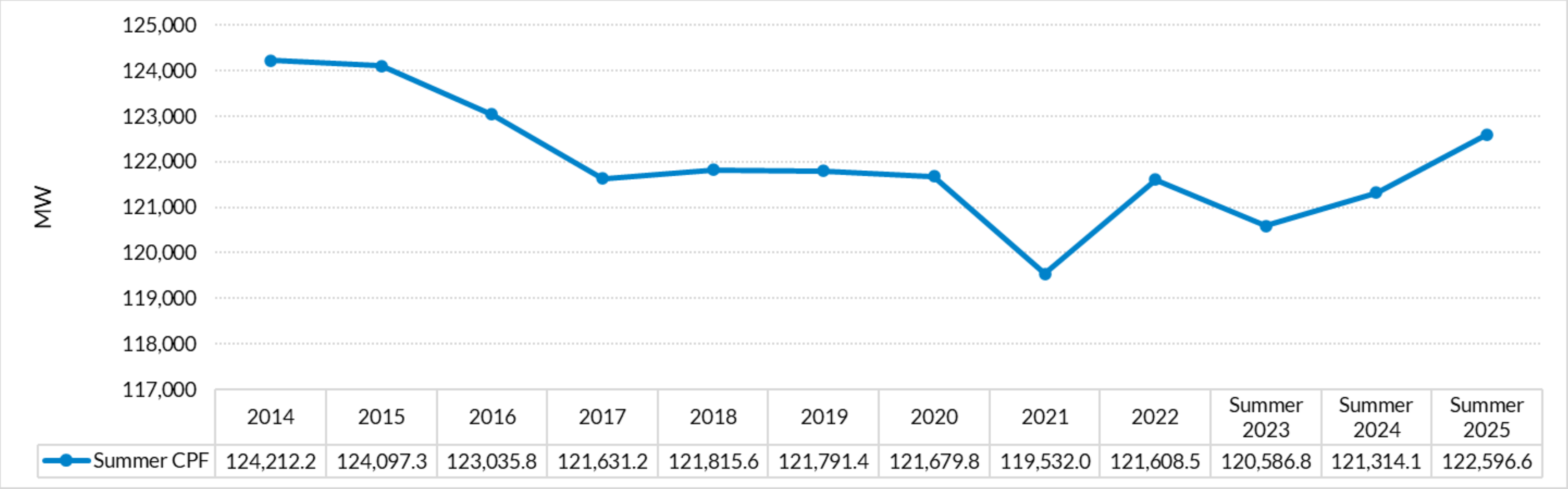
2024 OMS-MISO Survey Projection vs. 2025 PRA Actual PRMR Surplus (MW)



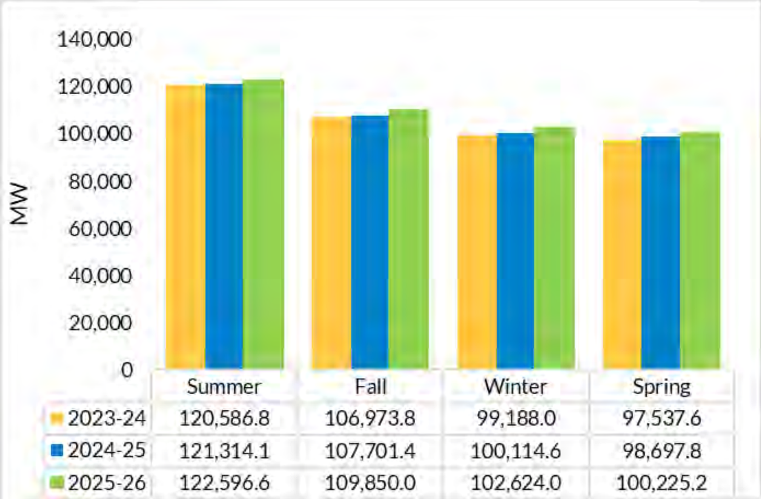
*PRA Shortfall/Surplus relative to Initial PRMR | PRMR: Planning Reserve Margin Requirement

Coincident Peak Forecast

Year over year the Summer CPF (+1.3 GW), PRM (-1.1%) and Final PRMR (+1.5 GW) are higher.



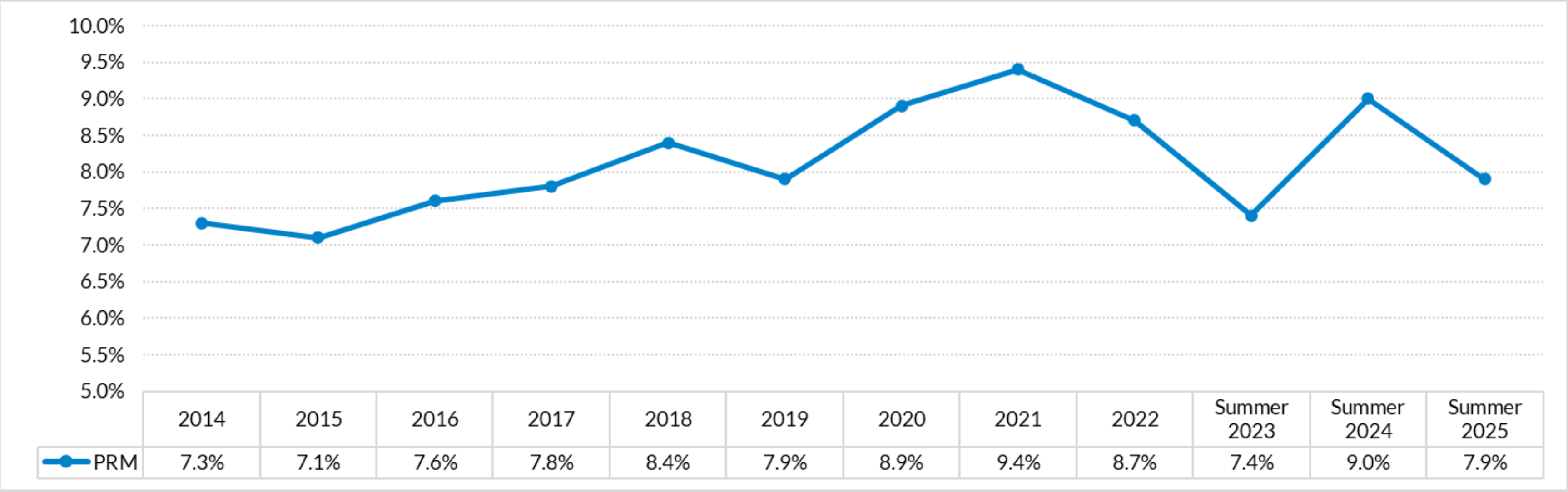
	2014	2015	2016	2017	2018	2019	2020	2021	2022	Summer 2023	Summer 2024	Summer 2025
Summer CPF	124,212.2	124,097.3	123,035.8	121,631.2	121,815.6	121,791.4	121,679.8	119,532.0	121,608.5	120,586.8	121,314.1	122,596.6



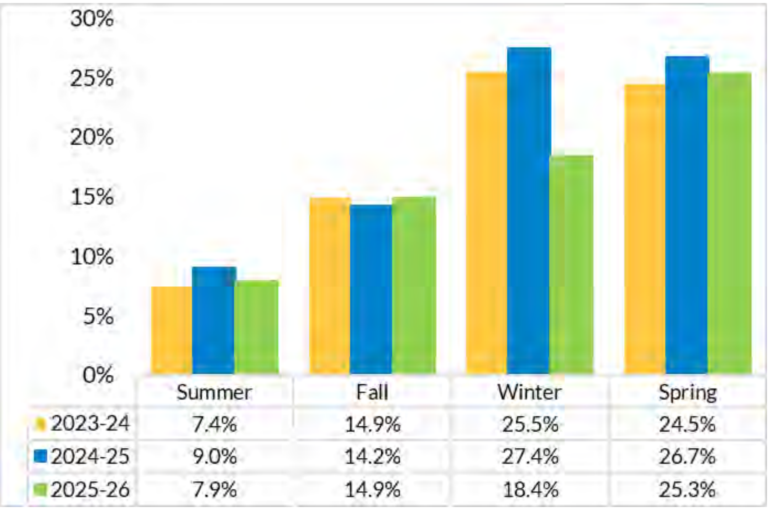
	Summer	Fall	Winter	Spring
2023-24	120,586.8	106,973.8	99,188.0	97,537.6
2024-25	121,314.1	107,701.4	100,114.6	98,697.8
2025-26	122,596.6	109,850.0	102,624.0	100,225.2

PRMR: Planning Reserve Margin Requirement

Planning Reserve Margin (%)

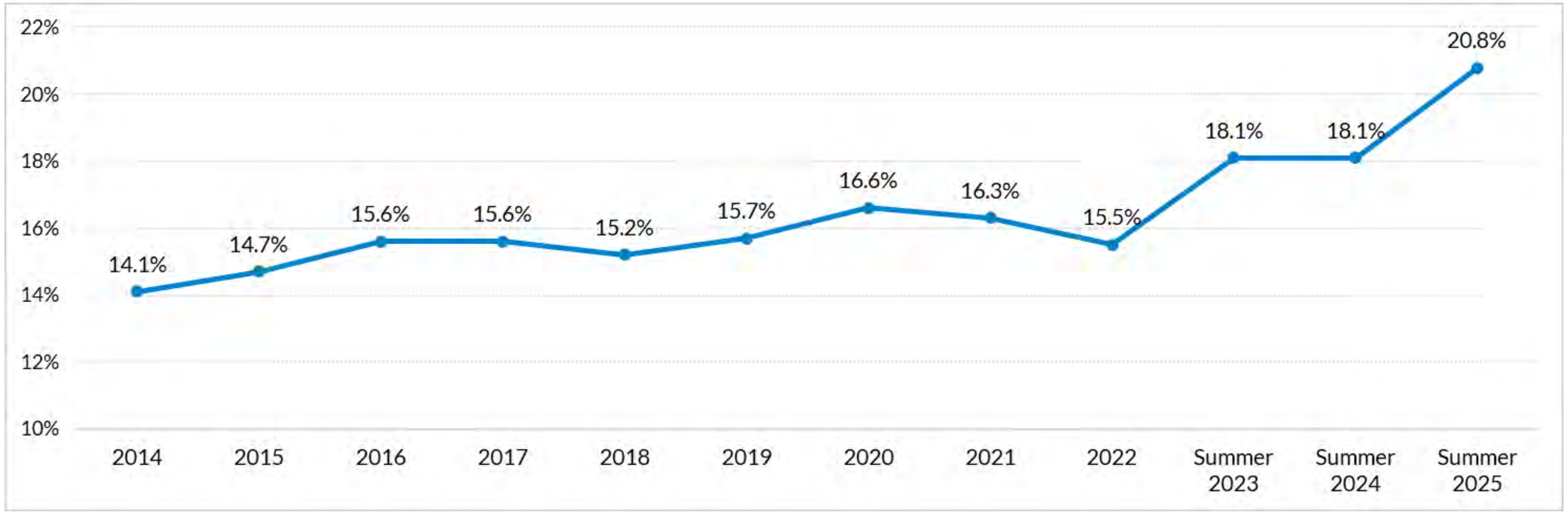


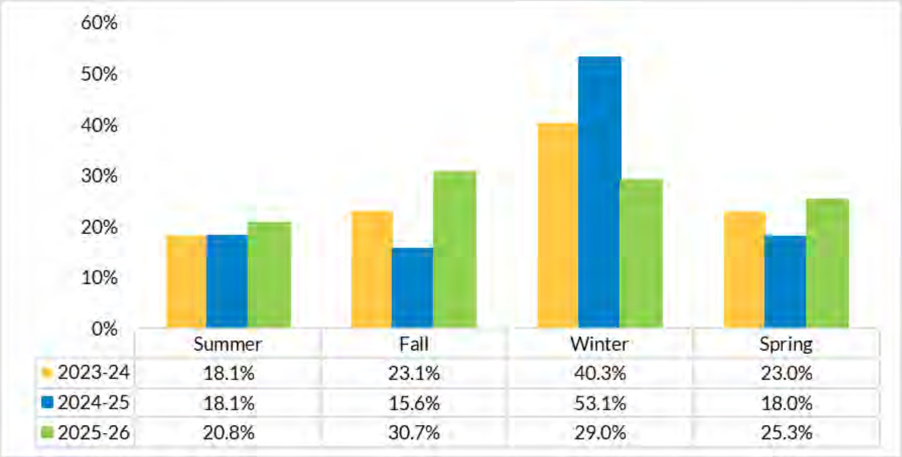
	2014	2015	2016	2017	2018	2019	2020	2021	2022	Summer 2023	Summer 2024	Summer 2025
PRM	7.3%	7.1%	7.6%	7.8%	8.4%	7.9%	8.9%	9.4%	8.7%	7.4%	9.0%	7.9%



	Summer	Fall	Winter	Spring
2023-24	7.4%	14.9%	25.5%	24.5%
2024-25	9.0%	14.2%	27.4%	26.7%
2025-26	7.9%	14.9%	18.4%	25.3%

Wind Effective Load Carrying Capacity (%)



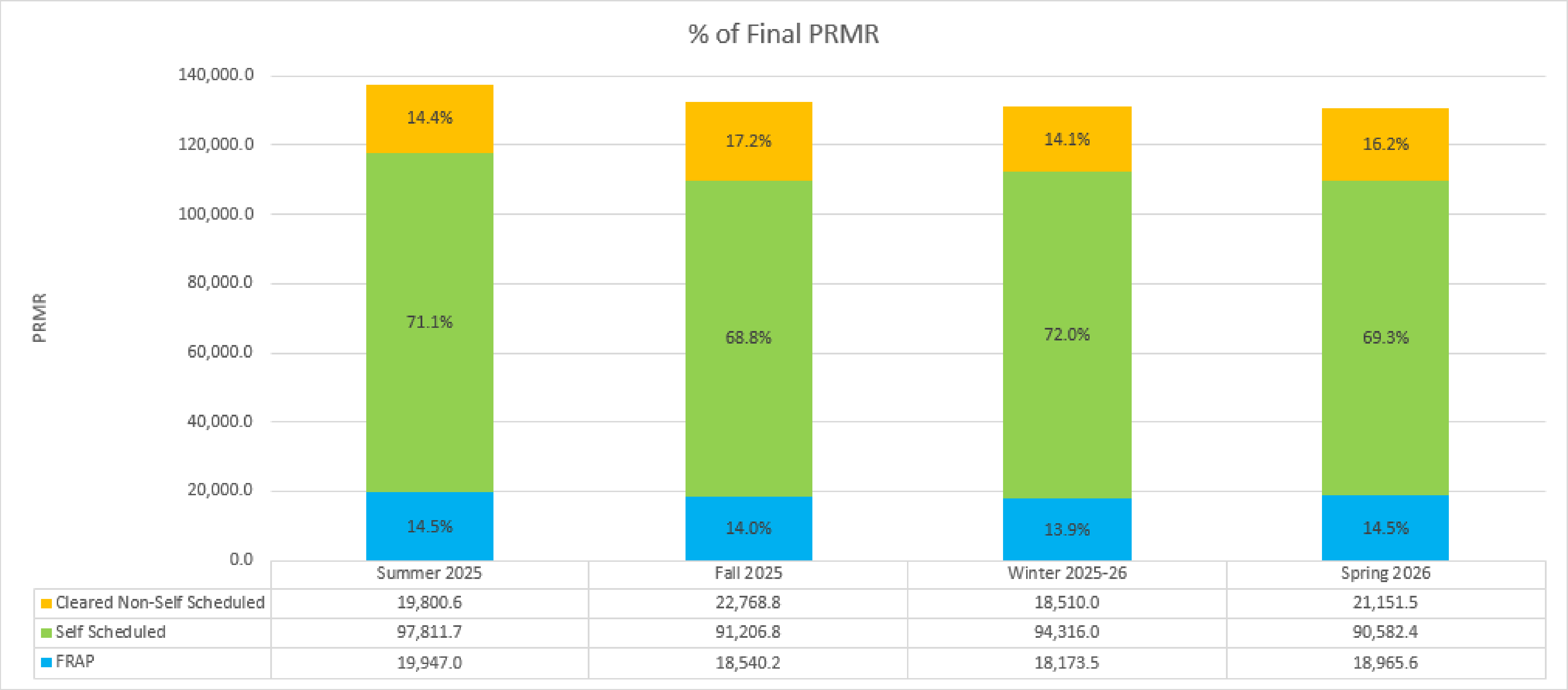


	Summer	Fall	Winter	Spring
🟨 2023-24	18.1%	23.1%	40.3%	23.0%
🟦 2024-25	18.1%	15.6%	53.1%	18.0%
🟩 2025-26	20.8%	30.7%	29.0%	25.3%

- No change to wind or solar accreditation methodology from previous years.
- Methodology applied on a seasonal basis.
- Wind ELCC and new solar capacity is established in the LOLE Study
- New solar class average
  - Summer, fall, spring 50%
  - Winter 5%

ELCC: Effective Load Carrying Capability LOLE: Loss of Load Expectation

2025/26 Seasonal Resource Adequacy Requirements are fulfilled similarly across all four seasons


% of Final PRMR

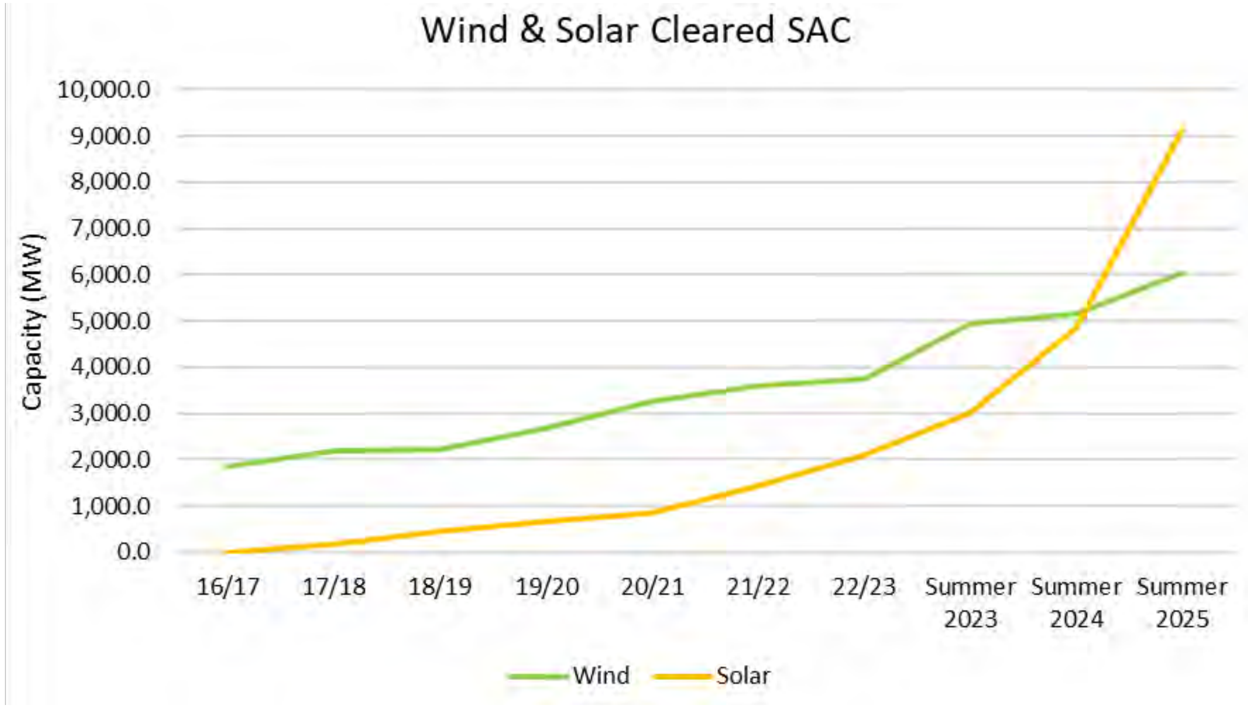
	Summer 2025	Fall 2025	Winter 2025-26	Spring 2026
🟨 Cleared Non-Self Scheduled	19,800.6	22,768.8	18,510.0	21,151.5
🟩 Self Scheduled	97,811.7	91,206.8	94,316.0	90,582.4
🟦 FRAP	19,947.0	18,540.2	18,173.5	18,965.6

PRMR: Planning Reserve Margin Requirement

Although conventional generation still comprises most of the capacity, wind and solar continue to grow

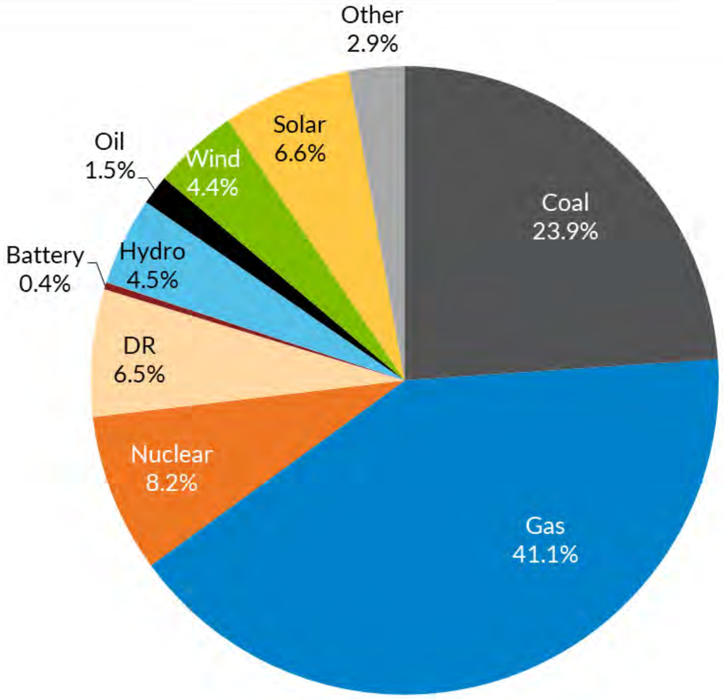
- 9.1 GW of solar cleared this year’s auction, an increase of 88% from Planning Year 2024/25 (4.9 GW)

- 6 GW of wind cleared this year, an increase of 17% compared to last year (5.2 GW)



Winter final PRMR is 6.6 GW (4.8%) lower than the summer with fewer solar resources to meet final PRMR in the winter versus the summer

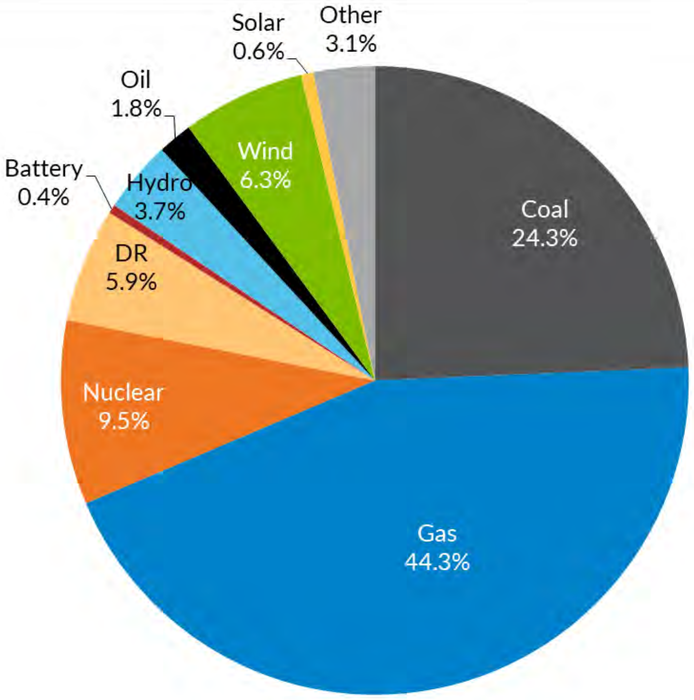
Summer 2025



MISO-wide

Cleared ZRC	Summer 2025	Winter 2025/26	Difference
Coal	32,909.6	31,887.2	1,022.4
Gas	56,470.0	57,990.5	-1,520.5
Nuclear	11,232.1	12,416.7	-1,184.6
DR	9,004.4	7,698.3	1,306.1
Battery	499.2	588.5	-89.3
EE	27.6	32.9	-5.3
Hydro	6,231.3	4,823.7	1,407.6
Oil	2,088.8	2,315.7	-226.9
Wind	6,039.1	8,282.9	-2,243.8
Solar	9,122.8	847.3	8,275.5
Misc	3,934.4	4,115.8	-181.4
PRMR	137,559.3	130,999.5	6,559.8

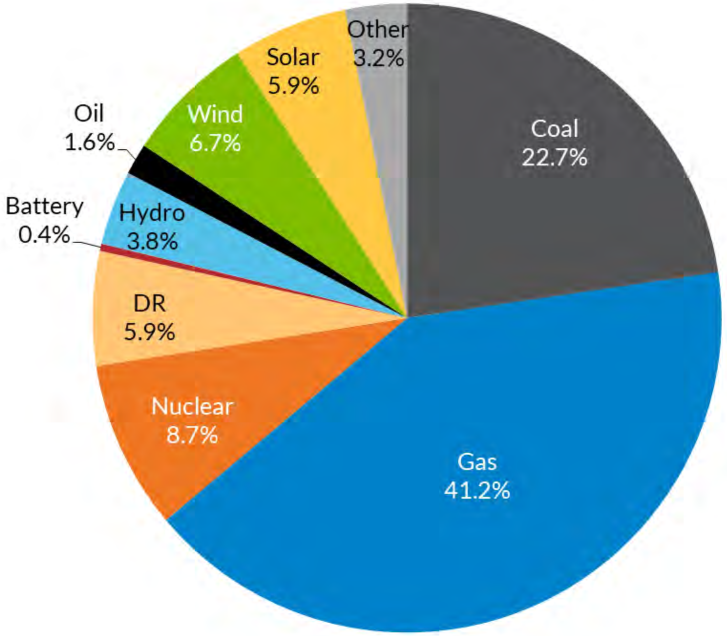
Winter 2025/26



PRMR: Planning Reserve Margin Requirement

Fall 2025 and Spring 2026 - Cleared ZRCs and Final PRMR

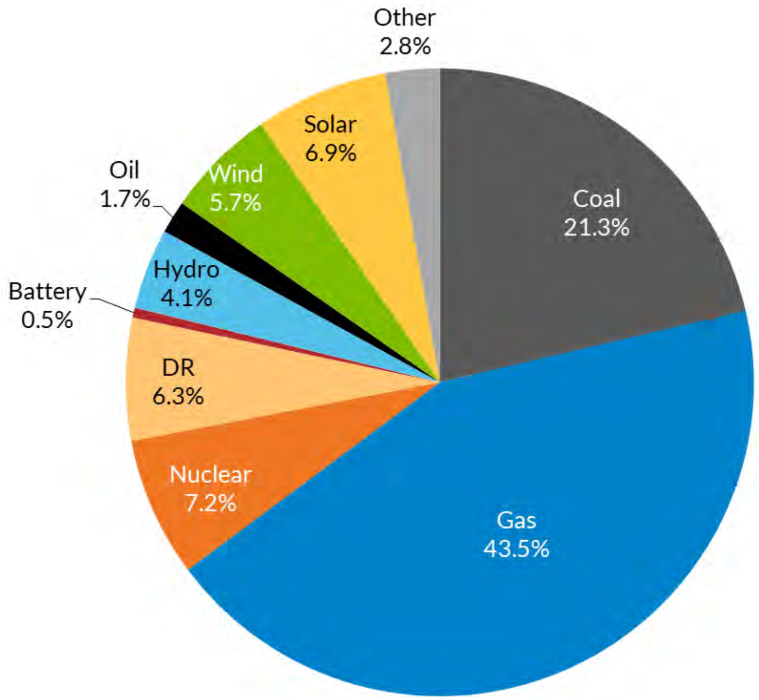
Fall 2025



MISO-Wide

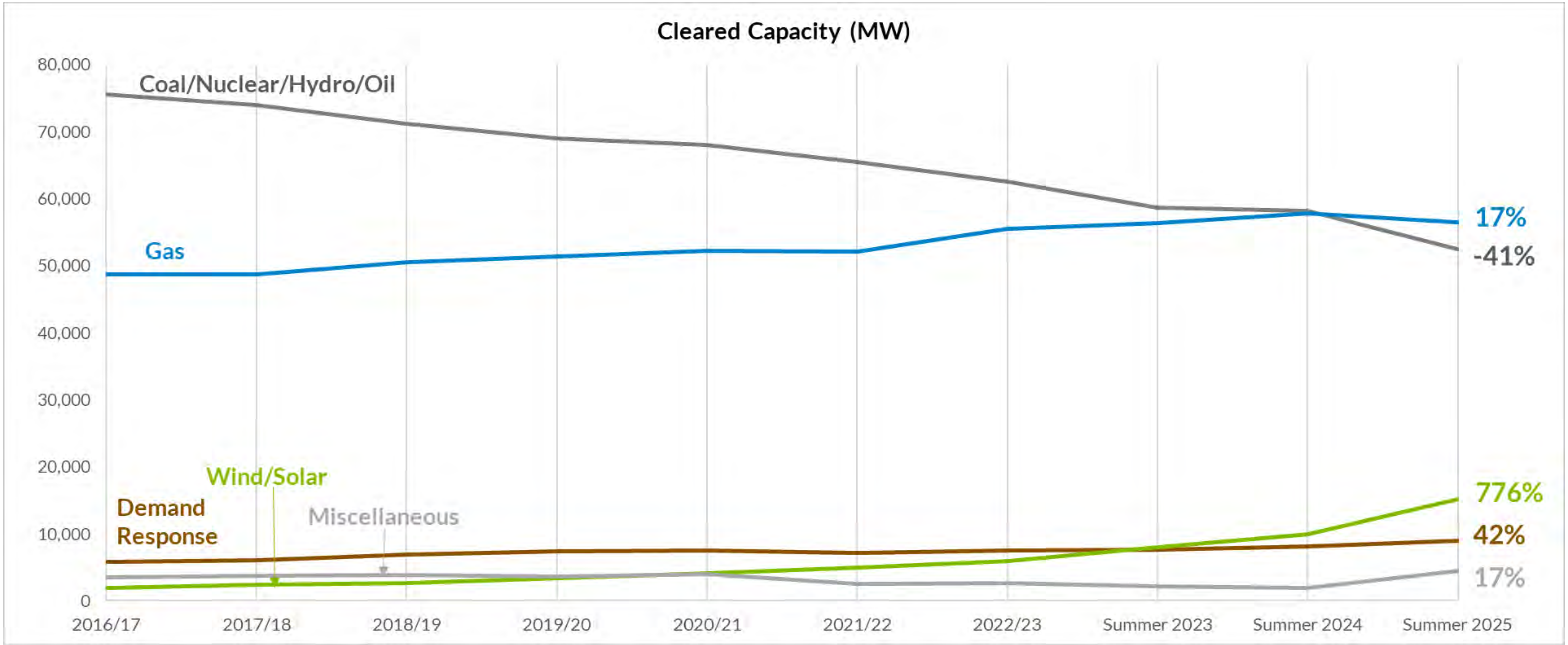
Cleared ZRC	Fall 2025	Spring 2026
Coal	30,038.9	27,886.8
Gas	54,636.4	56,820.7
Nuclear	11,482.1	9,405.4
DR	7,767.8	8,240.5
Battery	497.9	663.3
EE	28.1	30.5
Hydro	5,047.4	5,415.8
Oil	2,123.8	2,190.4
Wind	8,864.8	7,438.0
Solar	7,843.8	8,975.1
Misc	4,184.8	3,633.0
PRMR	132,515.8	130,699.5

Spring 2026

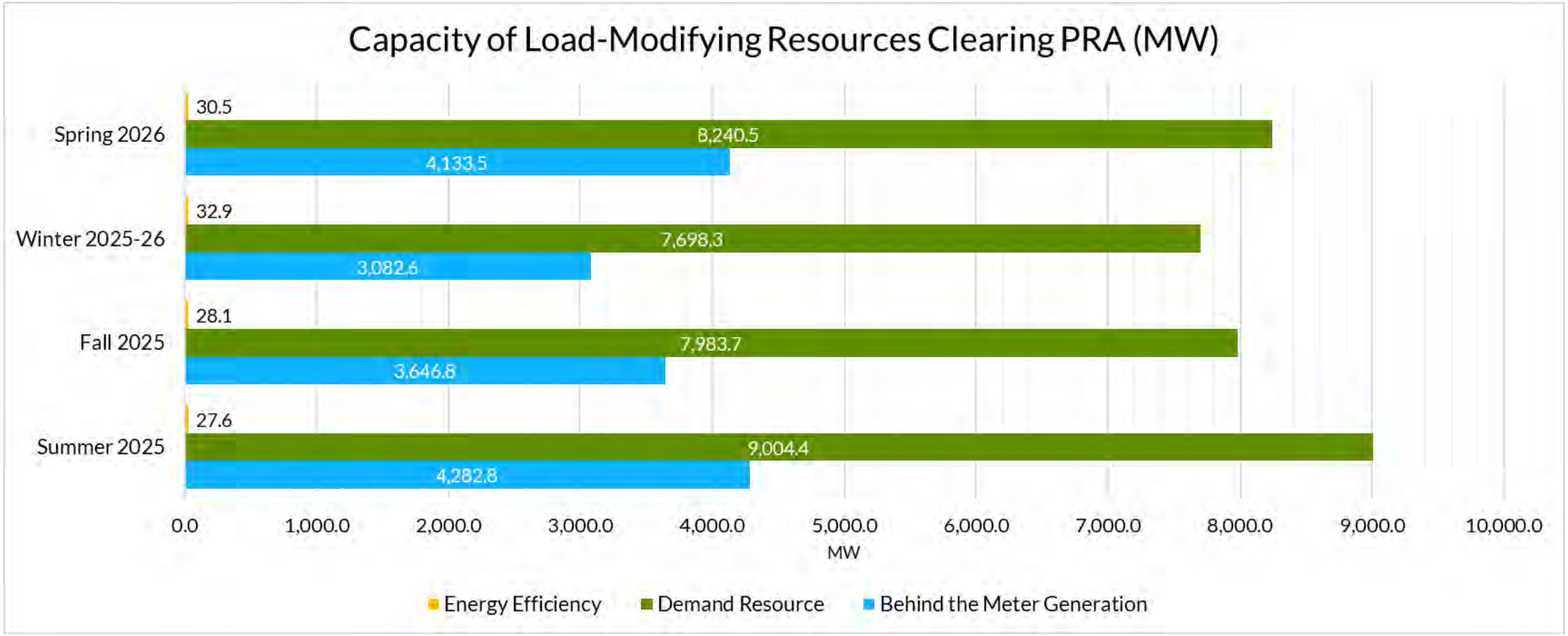


PRMR: Planning Reserve Margin Requirement

The planning resource mix shows the continuation of a multi-year trend towards less coal/nuclear/hydro/oil and increased gas and non-conventional resources



2025/26 Seasonally Cleared Load Modifying Resources Comparison



Visit MISO’s Help Center
for more information
https://help.misoenergy.org/

Attachment C

Collection of MISO Attachment Y materials

Consumers Energy
Count on Us®

A CMS Energy Company

Timothy J. Sparks, P.E.
Vice President Electric Grid Integration

VIA Electronic Mail

December 14,2021

Andrew Witmeier
Director of Resource Utilization
Midcontinent Independent System Operator, Inc.
720 City Center Drive
Carmel, IN 46032

Re: Suspension of Campbell Units 1, 2 & 3

Dear Mr. Witmeier:

Consumers Energy Company ("Company") hereby provides notice to the Midcontinent Independent System Operator, Inc. ("MISO") that it intends to suspend Campbell Units 1, 2 and 3 effective June 1, 2025. Attached is the notice of such intent in accordance with Section 38.2.7 and Attachment Y of MISO's Open Access Transmission, Energy and Operating Reserve Markets Tariff ("Tariff").

Campbell Unit 3 is jointly owned by the Company (93.3%), CPNode CONS.CAMPBELL3, Michigan Public Power Agency (4.8%), CPNode CONS.CA3.MPPA, and Wolverine Power Supply Cooperative (1.9%), CPNode CONS.CA3_WPSC. The Company attests that, pursuant to the relevant Operating Agreements, it is authorized to submit this Attachment Y notice on behalf of all Campbell Unit 3 owners.

In the event you have any questions regarding this matter, please contact Kathy Wetzel at (517) 788-2039.

Regards,

Timothy J. Sparks
Vice President Electric Grid Integration
Consumers Energy Company
1945 W. Parnall Rd.
Jackson, MI 49201

Cc: Kathy Wetzel
Thomas Clark

Electric Supply
Contract/Commitment Cover Sheet

*(**Note:** Contracts, purchase orders, or other commitment instruments will not be signed unless this sheet is completed in full)*

Subject/Commitment: **MISO Attachment Y Notification of Generating Resources /SCU/ Pseudo-tied Out Generator Change of Status / Including Notification of Rescission Form**

Reason: **Notice to Suspend Karn Units 3 & 4 effective June 1, 2023.**

Check One			
Yes	No*	N/A	
☐	☐	☒	1) Gateway Assessment Tool completed and attached
☒	☐	☐	2) Legal Review / Approval to Form
☐	☐	☒	3) Credit Risk Management Approval
☐	☐	☒	4) Competitive Bid
☐	☐	☒	5) Sole Source Approval completed and attached

***If No is checked or special circumstances apply, please explain:**

Legal review by Emerson Hilton.

***Contract Owner:** **Kathy Wetzel**

Department Sign Off
(Signature & Date Required)

ML Metz
Merchant Ops & PSCR

KG Troyer
EGI Contracts & Settlements
Renewables

BD Gallaway
Fuel Supply

TP Clark
Electric Supply

12/14/2021
TJ Sparks
Electric Grid Integration

Form Revised: 04/16/21

**Contract Owner Responsible for Scanning & Placing on SharePoint Site*

ATTACHMENT Y

Notification of Generation Resource/SCU/Pseudo-tied Out Generator

Change of Status,

Including Notification of Rescission

This is a notification of change of status of a Generation Resource, Synchronous Condenser Unit ("SCU"), or Pseudo-tied out Generator in accordance with Section 38.2.7.a of the Tariff. An electronic copy of the completed form will be accepted by the Transmission Provider, however, a form will not be considered complete until the original form containing an original signature, including all attachments, is received by the Transmission Provider at the following address: MISO, Attention: Director of Transmission Planning; 720 City Center Drive, Carmel, IN 46032.

The Transmission Provider may request additional information as reasonably necessary to support operations under the Tariff.

Owner of the Generation Resource, SCU or Pseudo-tied out Generator:
Consumers Energy Company (see attached letter re: Campbell Unit 3)

Name of Market Participant: Consumers Energy Company - NERC ID: CETR

Owner's state of organization or incorporation Michigan

Generation Resource/SCU/Pseudo-tied Out Generator [plant and unit number(s)] Campbell Units 1, 2 & 3

Source/Identification of Generation Interconnection Service [name of agreement, parties, date, date filed and docket number, and any other information to identify an agreement] CAMPBELL UNITS 1+2: UMBRELLA GIA BETWEEN CONSUMERS, METC+MISO FERC DOCKET ER21-999. CAMPBELL UNIT 3: FERC DOCKET ER06-1441 FOR MISO SERVICE AGREEMENT NO. 1755

ATTACHMENT Y
Notification of Resource/SCU/Psuedo-tied Out Generator Chang
32.0.0

Pursuant to the terms of the MISO Tariff, Owner hereby certifies that it will

☒ Suspend for economic reasons operation of all or a portion of the Generation Resource/SCU/Pseudo-tied out Generator commencing on 1st [day] of June [month] of 2025 [year]

☐ Rescind the current notice to SuspendThe facility is further described as follows:

Location: West Olive, Michigan

Unit Name	CPNode (if applicable)	Nameplate Capacity(MW)	Change in Capacity(MW)
Campbell Unit 1	CONS.CAMPBELL1	260	260
Campbell Unit 2	CONS.CAMPBELL2	360	360
Campbell Unit 3	CONS.CAMPBELL3	844	844

Owner understands and agrees that this notification is provided in accordance with Section 38.2.7 of the Transmission Provider's Tariff and will not be made public by the Transmission Provider except as provided for under Section 38.2.7 of the Tariff.

The undersigned certifies that he or she is an officer of the owner of the Generation Resource/SCU/Pseudo-tied out Generator, that he or she is authorized to execute and submit this notification, and that the statements contained herein are true and correct.

Signature

Name: TIMOTHY J SPARKS

Title: VP ELECTRIC GRID INTEGRATION

Date:

Contact Information

Email: TIMOTHY.SPARKS@CMSENERGY.COM

Phone: 517 788 1053

Andrew Witmeier
Director, Resource Utilization
317-249-5585
awitmeier@misoenergy.org

VIA OVERNIGHT DELIVERY

March 11, 2022

Timothy J. Sparks
Vice President, Electric Grid Integration
Consumers Energy Company
1945 W. Parnall Rd.
Jackson, MI 49201

Subject: **Approval of Campbell Units 1,2 &3 Attachment Y Suspension Notice**

Dear Mr. Sparks,

On December 14, 2021, Consumers Energy Company submitted an Attachment Y Notice to MISO for the suspension of Campbell Units 1,2 & 3, effective June 1, 2025. After being reviewed for power system reliability impacts as provided for under Section 38.2.7 of MISO's Open Access Transmission, Energy, and Operating Reserve Markets Tariff ("Tariff"), the suspension of Campbell Units 1,2 & 3 would not result in violations of applicable reliability criteria. Therefore, Campbell Units 1,2 & 3 may suspend without the need for the generators to be designated as a System Support Resource ("SSR") units as defined in the Tariff.

As there were no reliability criteria violations, MISO will continue to preserve the confidentiality of the Attachment Y Notice.

Please do not hesitate to contact me if you have any questions regarding this matter.

Respectfully,

Andrew Witmeier
Director, Resource Utilization

Consumers Energy
Count on Us

VIA EMAIL

Andrew Witmeier
Director of Resource Utilization
Midcontinent Independent System Operator, Inc.
720 City Center Drive
Carmel, IN 46032

May 28, 2025

Re: Modified Suspension Date for Campbell Units 1, 2, & 3

Mr. Witmeier:

On December 14, 2021, Consumers Energy Company (“Consumers Energy”) submitted an Attachment Y Notice to the Midcontinent Independent System Operating, Inc. (“MISO”) for the suspension of Units 1, 2, and 3 at the J.H. Campbell Generation Complex (“Campbell Plant”), effective June 1, 2025. After reviewing for power system reliability impacts as provided for under Section 38.2.7 of MISO’s Open Access Transmission, Energy, and Operating Reserve Markets Tariff (“Tariff”), MISO determined the suspension of Campbell Plant Units 1, 2, and 3, would not result in violations of applicable reliability criteria, as outlined in the Tariff. On March 11, 2022, MISO approved the suspension of Campbell Plant Units 1, 2, and 3 without the need for the generators to be designated as System Support Resource units as defined in the Tariff.

On May 23, 2025, the U.S. Department of Energy (“DOE”) issued Order No. 202-25-3 (the “Order”), requiring the Campbell Plant to be available to MISO through August 20, 2025.

In order to comply with the Order, Consumers Energy hereby provides notice to MISO, consistent with Section 38.2.7(d)(ii)(1) of the Tariff, of its intent to modify the current Attachment Y Notice such that the Campbell Plant will now suspend on August 21, 2025.

As noted in Consumers Energy’s original Attachment Y Notice, Campbell Unit 3 is jointly owned by Consumers Energy (93.3%), CPNode CONS.CAMPBELL3, Michigan Public Power Agency (4.8%), CPNode CONS.CA3.MPPA, and Wolverine Power Supply Cooperative (1.9%), CPNode CONS.CA3_WPSC. The Company attests that it has notified all Campbell Unit 3 owners of this submittal.

In the event you have any questions regarding this matter, please contact Derek Anspaugh at (517) 788-1869.

Regards,

Sri M.

Consumers Energy
One Energy Plaza
Jackson, MI 49201-2357

www.consumersenergy.com

Sri Maddipati
VP Electric Supply
1945 W. Parnell Rd
Jackson, MI 49901

ATTACHMENT Y

Notification of Generation Resource/SCU/Pseudo-tied Out Generator

Change of Status,

Including Notification of Rescission

This is a notification of change of status of a Generation Resource, Synchronous Condenser Unit ("SCU"), or Pseudo-tied out Generator in accordance with Section 38.2.7.a of the Tariff. An electronic form must be submitted to the Transmission Provider via its online application tool in the manner specified by the Transmission Planning Business Practices Manual (BPM-020), and a form will be considered complete on the date of such online application.

The Transmission Provider may request additional information as reasonably necessary to support operations under the Tariff.

Owner of the Generation Resource, SCU or Pseudo-tied out Generator: Consumers Energy Company (see attached letter re Campbell 3)

Name of Market Participant: Consumers Energy Company - NERC ID: CETR

Owner's state of organization or incorporation Michigan

Generation Resource/SCU/Pseudo-tied Out Generator [plant and unit number(s)] Campbell Units 1, 2 & 3

Source/Identification of Generation Interconnection Service [name of agreement, parties, date, date filed and docket number, and any other information to identify an agreement] ____________

Campbell Units 1 & 2: Umbrella GIA Between Consumers, METC, and MISO, FERC Docket No. ER24-1359
Campbell Unit 3: FERC Docket No. ER06-1441 for MISO Service Agreement No. 1755

Pursuant to the terms of the MISO Tariff, Owner hereby certifies that it will

[X] Suspend for economic reasons operation of all or a portion of the Generation Resource/SCU/Pseudo-tied out Generator commencing on 21 [day] of August [month] of 2025 [year]

[ ] Rescind the current notice to Suspend

The facility is further described as follows:

Location: West Olive, Michigan

Unit Name	CPNode (if applicable)	Nameplate Capacity(MW)	Change in Capacity(MW)
Campbell Unit 1	CONS.CAMPBELL1	260	260
Campbell Unit 2	CONS.CAMPBELL2	360	360
Campbell Unit 3	CONS.CAMPBELL3	844	844

Owner understands and agrees that this notification is provided in accordance with Section 38.2.7 of the Transmission Provider's Tariff and will not be made public by the Transmission Provider except as provided for under Section 38.2.7 of the Tariff.

The undersigned certifies that he or she is an officer of the owner of the Generation Resource/SCU/Pseudo-tied out Generator, that he or she is authorized to execute and submit this notification, and that the statements contained herein are true and correct.

Signature

Name: Srikanth Maddipati

Title: VP Electric Supply

Date: May 28, 2025

Contact Information

Email: sri.maddipati@cmsenergy.com

Phone: 517-788-0635

From: Marc Keyser
To: Rachael H. Moore; Huaitao Zhang; DEREK S. ANSPAUGH; Adam C. French; NICHOLAS B. TENNEY; Emerson J. Hilton
Cc: Sumit Pal Brar
Subject: RE: [EXT]RE: Order from Secretary of Energy to keep Campbell Unit ON for the summer (until Aug 21, 2025) - Action required
Date: Friday, May 30, 2025 4:05:01 PM

Rachael: I'm responding back on behalf of the team, after they briefly reviewed with legal here:

we received the Attachment Y, and the new cessation is 8/21/2025. Additionally, you have until 8/21/2027 to submit a new replacement request before the suspension period ends. In other words, the Attachment Y remains as is, still approved, except with a new/different start date.

From: Rachael H. Moore <Rachael.Moore@cmsenergy.com>
Sent: Friday, May 30, 2025 12:15 PM
To: Huaitao Zhang <HZhang@misoenergy.org>; Derek Anspaugh <Derek.Anspaugh@cmsenergy.com>; Adam French <adam.french@cmsenergy.com>; NICHOLAS B. TENNEY <NICHOLAS.TENNEY@cmsenergy.com>; Emerson J. Hilton <Emerson.Hilton@cmsenergy.com>
Cc: Sumit Pal Brar <SBrar@misoenergy.org>; Marc Keyser <MKeyser@misoenergy.org>
Subject: RE: [EXT]RE: Order from Secretary of Energy to keep Campbell Unit ON for the summer (until Aug 21, 2025) - Action required

Thank you, Huaitao. Can you confirm that this modification of the suspension start date provided consistent with Section 38.2.7(d)(ii)(1) of the Tariff does not impact the overall approval of the Attachment Y the Company previously received on March 11, 2022, and that the Company is still approved to enter suspension (now effective 8/21/25)?

Thank you!

Rachael Moore | Senior Attorney
[redacted]

From: Huaitao Zhang <HZhang@misoenergy.org>
Sent: Wednesday, May 28, 2025 1:47 PM

To: Rachael H. Moore <Rachael.Moore@cmsenergy.com>; DEREK S. ANSPAUGH <DEREK.ANSPAUGH@cmsenergy.com>; Adam C. French <ADAM.FRENCH@cmsenergy.com>; NICHOLAS B. TENNEY <NICHOLAS.TENNEY@cmsenergy.com>; Emerson J. Hilton <Emerson.Hilton@cmsenergy.com>
Cc: Sumit Pal Brar <SBrar@misoenergy.org>; Marc Keyser <MKeyser@misoenergy.org>
Subject: RE: [EXT]RE: Order from Secretary of Energy to keep Campbell Unit ON for the summer (until Aug 21, 2025) - Action required

Rachael,

Thanks for the quick response, and we are all good.

Thanks,
Huaitao

From: Rachael H. Moore <Rachael.Moore@cmsenergy.com>
Sent: Wednesday, May 28, 2025 12:40 PM
To: Huaitao Zhang <HZhang@misoenergy.org>; Derek Anspaugh <Derek.Anspaugh@cmsenergy.com>; Adam French <adam.french@cmsenergy.com>; NICHOLAS B. TENNEY <NICHOLAS.TENNEY@cmsenergy.com>; Emerson J. Hilton <Emerson.Hilton@cmsenergy.com>
Cc: Sumit Pal Brar <SBrar@misoenergy.org>; Marc Keyser <MKeyser@misoenergy.org>
Subject: [EXT]RE: Order from Secretary of Energy to keep Campbell Unit ON for the summer (until Aug 21, 2025) - Action required

Huaitao –

Attached is the modified Attachment Y with the amended suspension start date of 8/21/2025. Please let me know if we should send this notice of Modified Attachment Y to anyone else at MISO or if you would like us to mail a physical copy as well.

Thank you,
Rachael

Rachael Moore | Senior Attorney
[redacted]

From: Rachael H. Moore
Sent: Tuesday, May 27, 2025 11:52 AM
To: Adam C. French <adam.french@cmsenergy.com>; Huaitao Zhang <HZhang@misoenergy.org>; NICHOLAS B. TENNEY <nicholas.tenney@cmsenergy.com>
Cc: Sumit Pal Brar <SBrar@misoenergy.org>; Marc Keyser <MKeyser@misoenergy.org>
Subject: RE: Order from Secretary of Energy to keep Campbell Unit ON for the summer (until Aug 21, 2025) - Action required

Good afternoon,

Yes, I will be working with members of the Company to ensure we have the Attachment Y notice updated by 5/28. Please let me know if there is a specific contact at MISO we should plan to send this to.

Thank you!
Rachael

Rachael Moore | Senior Attorney
[redacted]

From: Adam C. French <ADAM.FRENCH@cmsenergy.com>
Sent: Tuesday, May 27, 2025 11:49 AM
To: Huaitao Zhang <HZhang@misoenergy.org>; NICHOLAS B. TENNEY <NICHOLAS.TENNEY@cmsenergy.com>; Rachael H. Moore <Rachael.Moore@cmsenergy.com>
Cc: Sumit Pal Brar <SBrar@misoenergy.org>; Marc Keyser <MKeyser@misoenergy.org>
Subject: RE: Order from Secretary of Energy to keep Campbell Unit ON for the summer (until Aug 21, 2025) - Action required

It is my understanding that is being handled by Rachael Moore
RACHAEL.MOORE@CMSENERGY.COM

From: Huaitao Zhang <HZhang@misoenergy.org>
Sent: Tuesday, May 27, 2025 11:41 AM
To: NICHOLAS B. TENNEY <NICHOLAS.TENNEY@cmsenergy.com>; Adam C. French <ADAM.FRENCH@cmsenergy.com>
Cc: Sumit Pal Brar <SBrar@misoenergy.org>; Marc Keyser <MKeyser@misoenergy.org>
Subject: FW: Order from Secretary of Energy to keep Campbell Unit ON for the summer (until Aug 21, 2025) - Action required

Nick and Adam,

Marc pointed to me that you are the contact for this request.

Thanks,
Huaitao

From: Huaitao Zhang
Sent: Tuesday, May 27, 2025 11:05 AM
To: KATHY S. WETZEL <KATHY.WETZEL@cmsenergy.com>
Cc: timothy.sparks@cmsenergy.com; Sumit Pal Brar <SBrar@misoenergy.org>; Marc Keyser <MKeyser@misoenergy.org>; Jagdesh Shivani <JShivani@misoenergy.org>
Subject: Order from Secretary of Energy to keep Campbell Unit ON for the summer (until Aug 21, 2025) - Action required

Hi Kathy,

Pertain to the Order from Secretary of Energy regarding the suspension/cessation date of Campbell units 1,2&3, MISO requests Consumer Energy to submit the following application updates to MISO by 5/28/2025:

Attachment Y request with suspension start date as 8/21/2025

FYI, the order link is https://www.energy.gov/sites/default/files/2025-05/Midcontinent%20Independent%20System%20Operator%20%28MISO%29%20202%28c%29%20Order_1.pdf [energy.gov]

Thanks,
Huaitao Zhang
Resource Utilization Engineer

Integrity | Collaboration | Commitment | Creativity | Adaptability

Attachment D

Consumers' Responses from June 10, 2025

Question:

23. Absent continued operation of the Campbell Plant, what was Consumers Energy's Zone Resource Credit (ZRC) position for planning year 2025-2026.

Response:

The table below shows our capacity positions using the initial Planning Reserve Margin Requirement (PRMR) for each season of planning year 2025. These numbers do not include any contributions from the Campbell coal-fired generating units.

PY2025	**ZRC**
Summer	272.9
Fall	842.7
Winter	0.0
Spring	4.3

Date: June 10, 2025

Question:

24. How many ZRCs does Consumers anticipate will be accredited for the continued operation of the Campbell Plant?

Response:

At this time we do not anticipate the Campbell units contributing any Zonal Resource Credits to our capacity positions throughout planning year 2025.

Date: June 10, 2025