BEFORE THE UNITED STATES DEPARTMENT OF ENERGY

Federal Power Act Section 202(c) Emergency Order: Tri-State Generation and Transmission Association, Platte River Power Authority, Salt River Project, PacifiCorp, and Xcel Energy	)

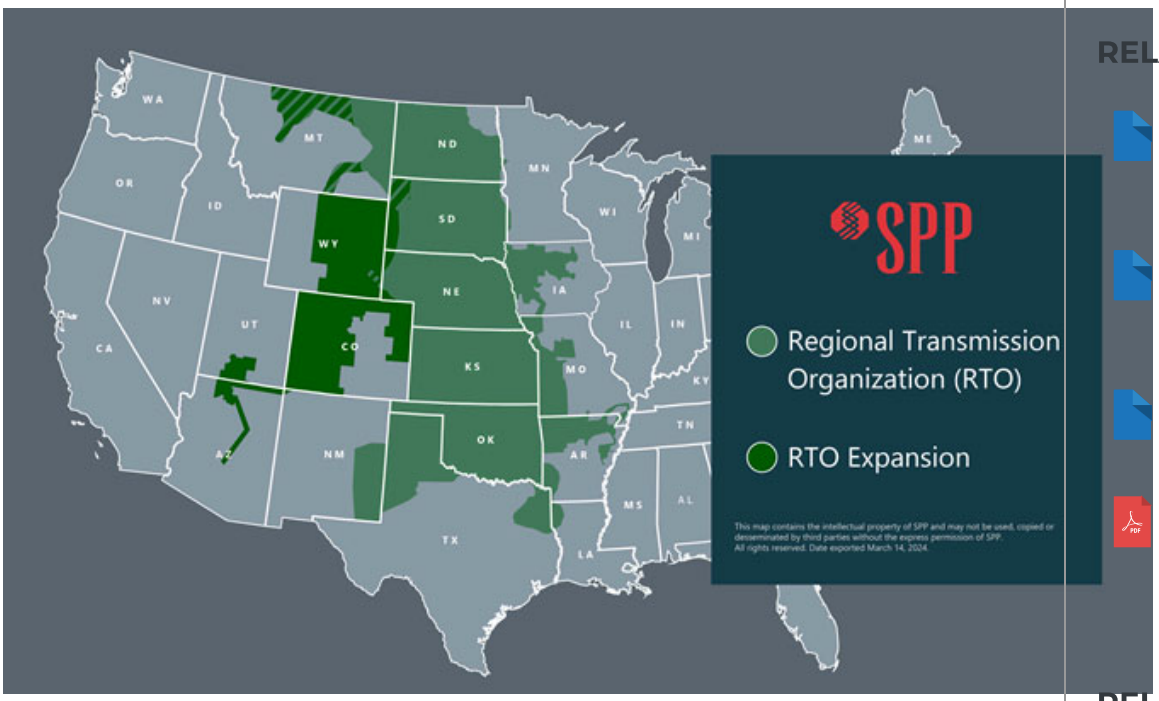
Exhibit to
Motion to Intervene and Request for Rehearing and Stay of
Public Interest Organizations

Exhibit 2-180
SPP RTO Expansion

RTO EXPANSION

In July 2021, Southwest Power Pool's board of directors and Strategic Planning Committee approved the submitted policy-level terms and conditions for regional transmission organization (RTO) expansion in the Western Interconnection during its quarterly joint stakeholder meeting July 27. (Read more in the July 27, 2021, press release about the board's approval of RTO west terms and conditions.)

In November 2020, SPP announced that several utilities would evaluate the benefits of placing western facilities under the terms and conditions of SPP's Open Access Transmission Tariff. An SPP Brattle study found that the move would be mutually beneficial and produce $49 million a year in savings. Additionally, SPP anticipates its wholesale electricity market, resource adequacy program and other regionalized services can help western members achieve renewable-energy goals, reinforce system reliability and leverage new opportunities to buy, sell and trade power. (Read more in the Nov. 12, 2020, press release about the potential benefits of the expansion of the SPP RTO to the west.)



If they pursue membership, the following organizations would become the first members of SPP's RTO to place facilities in the Western Interconnection under the

WESTERN SERVICES

Western Newsroom
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RTO Expansion
- New Member Integration
- RTO Expansion Program Documents
- Southwest Power Pool Current List - RTO Expansion Project 20240412
- RTO Expansion Revision Requests

Western Resource Adequacy Program
Western RC Services
Western Interconnection Unscheduled Flow Mitigation Plan (WIUFMP)
WEIS

RELATED DOCUMENTS

Resource Adequacy - Study Data Request for RTOW New Participant
Resource Adequacy - Non NERC GADS Resources Outage Data Submission Form RTOW
RTO West Resource Adequacy Data Request Instruction Manual
2024-2026 SPP RTOE Coordination Agreement Development Strategy and Roadmap

RELATED DOCUMENT GROUPS

RTO Western Expansion Program

terms and conditions of SPP's tariff:

- Basin Electric Power Cooperative
- Colorado Springs Utilities (CSU)
- Deseret Power Electric Cooperative
- Municipal Energy Agency of Nebraska (MEAN)
- Platte River Power Authority (PRPA)
- Tri-State Generation and Transmission Association
- Western Area Power Administration (WAPA)*

** WAPA's evaluation of RTO membership will consider the participation of its Upper Great Plains-West (UGP-West) region, Colorado River Storage Project and Rocky Mountain region.*

This would extend the reach and value of SPP's services — including day-ahead wholesale electricity market administration, transmission planning, reliability coordination, resource adequacy and more — and the synergies they provide when bundled under the RTO structure.

The SPP Brattle study found that the organization's membership in the SPP RTO would produce approximately $49 million in savings annually for SPP's current and new members. The western utilities joining SPP would receive $25 million a year in adjusted production cost savings and revenue from off-system sales, and SPP's members in the east would benefit from $24 million in savings resulting from the expansion of SPP's market, transmission network and generation fleet. SPP's prior calculations of the value of RTO membership suggest that these benefits are only a portion of those current and new members will derive. There is additional value not considered by the Brattle study in five-minute real-time economic dispatch, achievement of public policy goals, lowered reserve-margin requirements, consolidation and regionalization of planning and other processes and more.

Basin Electric, MEAN, Tri-State and WAPA's UGP-East Region are already members of SPP, having joined the RTO in 2015 when they placed their respective facilities in the Eastern Interconnection under SPP's tariff. Along with Deseret, each is also a customer of at least one of SPP's contract-based Western Energy Services, which includes reliability coordination and a real-time market scheduled to launch in February 2021. The companies' letters indicate they will now work with SPP to evaluate the terms, costs and benefits of putting western facilities under the RTO's tariff.

SPP's New Member Integration Process

SPP's Strategic Planning Committee will oversee a five-stage New Member Integration Process designed to provide transparency during SPP's negotiations with prospective new members.

RTO Expansion Bi-Weekly Meeting Notes and Materials

1. The Initial Discussion phase occurred when the interested western utilities asked SPP to provide information about SPP and its interest in providing RTO membership services in the Western Interconnection.
2. The Due Diligence and Membership Agreement Discussions phase was initiated in Nov. 2020 when prospective members publicly announced their intent to evaluate membership. This initiates negotiations regarding any potential changes to SPP's governing documents required to accommodate new members' integration into the RTO. At this point in the process, SPP establishes a Members Forum and State Commission Forum which give guidance and assist SPP in performing its due diligence. Participation in these forums may require execution of a confidentiality agreement.
3. The Tariff and Governing Document Changes Phase occurs when prospective transmission owning members decide to announce results of discussions with SPP publicly. This is considered the second triggering event in the communication process. SPP staff will convene special all-member and stakeholder meetings to present proposed membership terms and analyses conducted.
4. As appropriate, SPP will then seek the necessary FERC and state approvals.
5. Finally, the Integration phase occurs when the new members officially join the SPP RTO.

To follow the progression of this process, you may register for meetings or download materials of the Members Forum or State Commission Forum.

RTO Expansion Stakeholder Training

Explore RTO Expansion stakeholder training offerings here.

Western Stakeholder Groups

Meeting materials, member info,

Western Energy Service Documents

Filings, governing documents, and other resources.

Western Energy Service News

Latest company news and media contacts.

BEFORE THE UNITED STATES DEPARTMENT OF ENERGY

Federal Power Act Section 202(c)	)
Emergency Order: Tri-State	)
Generation and Transmission	)
Association, Platte River Power	)
Authority, Salt River Project,	)
PacifiCorp, and Xcel Energy	)

Exhibit to
Motion to Intervene and Request for Rehearing and Stay of
Public Interest Organizations

Exhibit 2-181
Department Press Release on March Centralia Order

An official website of the United States government Here's how you know

Trump Administration Keeps Coal Plant Open to Ensure Affordable, Reliable and Secure Power in the Northwest

U.S. Secretary of Energy Chris Wright today issued an emergency order to ensure Americans in the Northwestern region of the United States have access to affordable, reliable and secure electricity.

Energy.gov

March 16, 2026

2 min

Emergency order addresses critical grid reliability issues, lowering risk of blackouts and ensuring affordable electricity access.

WASHINGTON—U.S. Secretary of Energy Chris Wright today issued an emergency order to ensure Americans in the Northwestern region of the United States have access to affordable, reliable and secure electricity. The order directs TransAlta to keep Unit 2 of the Centralia Generating Station in Centralia, Washington available to operate. Unit 2 of the coal plant was scheduled to shut down at the end of 2025. The reliable supply of power from the Centralia plant is essential to maintaining grid stability across the Northwest, and this order ensures that the region avoids unnecessary blackout risks and costs.

"The last administration's energy subtraction policies had the United States on track to likely experience significantly more blackouts in the coming years — thankfully, President Trump won't let that happen," **said Energy Secretary Wright**. "The Trump administration will continue taking action to keep America's coal plants running so we can stop the price spikes and ensure we don't

lose critical generation sources. Americans deserve access to affordable, reliable, and secure energy to power their homes all the time, regardless of whether the wind is blowing or the sun is shining."

Thanks to President Trump's leadership, coal plants across the country are reversing plans to shut down. On December 16, 2025, Secretary Wright issued an emergency order directing TransAlta to keep Unit 2 (729.9 MW) available to operate.
According to DOE's Resource Adequacy Report, blackouts were on track to potentially increase 100 times by 2030 if the U.S. continued to take reliable power offline as it did during the Biden administration.

This order is in effect beginning on March 17, 2026, through June 14, 2026.

###

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United States and Australia meet for Mining, Minerals and Metals Investment Ministerial

March 14, 2026

View Next

Energy Department Announces $293 Million in Funding to Support Genesis Mission National Science and Technology Challenges

March 17, 2026

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Exhibit to
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Public Interest Organizations

Exhibit 2-182
Grid Strategies Analysis of NERC LTRA

Grid Strategies

Review of NERC's 2025 Long-Term Reliability Assessment

Adria E. Brooks, Michael Goggin, John D. Wilson

March 5, 2026

Prepared for Earthjustice, Natural Resource Defense Council, Sierra Club, and Environmental Defense Fund

Table of Contents

1. Executive Summary
2. Generation resource assumptions
3. Interregional transmission assumptions
4. Demand assumptions
5. Extreme event energy adequacy
6. Conclusions and solutions
7. Methodology

Executive Summary

The NERC LTRA assesses future regional resource adequacy risk. Re-assessment using a more complete accounting of generation, imports, and demand from other data sources results in lower risk.

Overall, the LTRA resource margins are much tighter than what may occur for four reasons.

First, the LTRA underestimates likely-to-connect power resources. Power resources in advanced development stages are projected to provide enough capacity to resolve the majority of shortfalls identified in the LTRA.

Second, the most significant risk to resource adequacy shortfalls are delays to generator interconnection. Actions that delay interconnection study, permitting, and/or construction for generation facilities increase the likelihood of shortfalls.

Third, the LTRA underestimates imports from one region to another. At levels seen historically during extreme events, these are sufficient to further alleviate resource inadequacy.

Furthermore, additional interregional transmission would lessen shortfall risk. The NERC-identified interregional transfer capability additions would help resolve many of the identified seasonal capacity and energy shortfalls.

Fourth, data centers may require significantly less power than expected. Combined with the other three corrections, this scenario could allow all regions to meet 2030 peak summer load and reserve needs.

With a clearer vision of the future and rapid action, the grid could be even more reliable in five years than it is today.

NERC's 2025 Long-Term Reliability Assessment is too pessimistic. This analysis explores three major categories of input assumptions that impact the regional risks NERC identified.

North American Electric Reliability Corporation (NERC)'s Long-Term Reliability Assessment (LTRA) importantly captures potential reliability issues for a snapshot in time. NERC relies on utility-reported input data in making its assessments. This data, by definition, does not account for national power sector trends or limitations—such as double-counting of prospective demand or generation—that can have large impacts on future risk.

In this analysis we compare NERC's input data and assumptions against other sources to explore how changes to inputs impact the severity of risk identified in the LTRA. We explore three categories of inputs: demand, generation resources, and interregional transmission.

As the LTRA highlights, reserve margins—the difference between electricity demand and available supply—are tightening across the country. We find that while these margins are tightening, the severity of that risk is likely less than reported in the LTRA.

Three major factors:



Generation Resources



Interregional Transmission



Demand for electricity

GridStrategies

SOURCE | NERC "2025 Long-Term Reliability Assessment (LTRA)" (Jan. 2026)

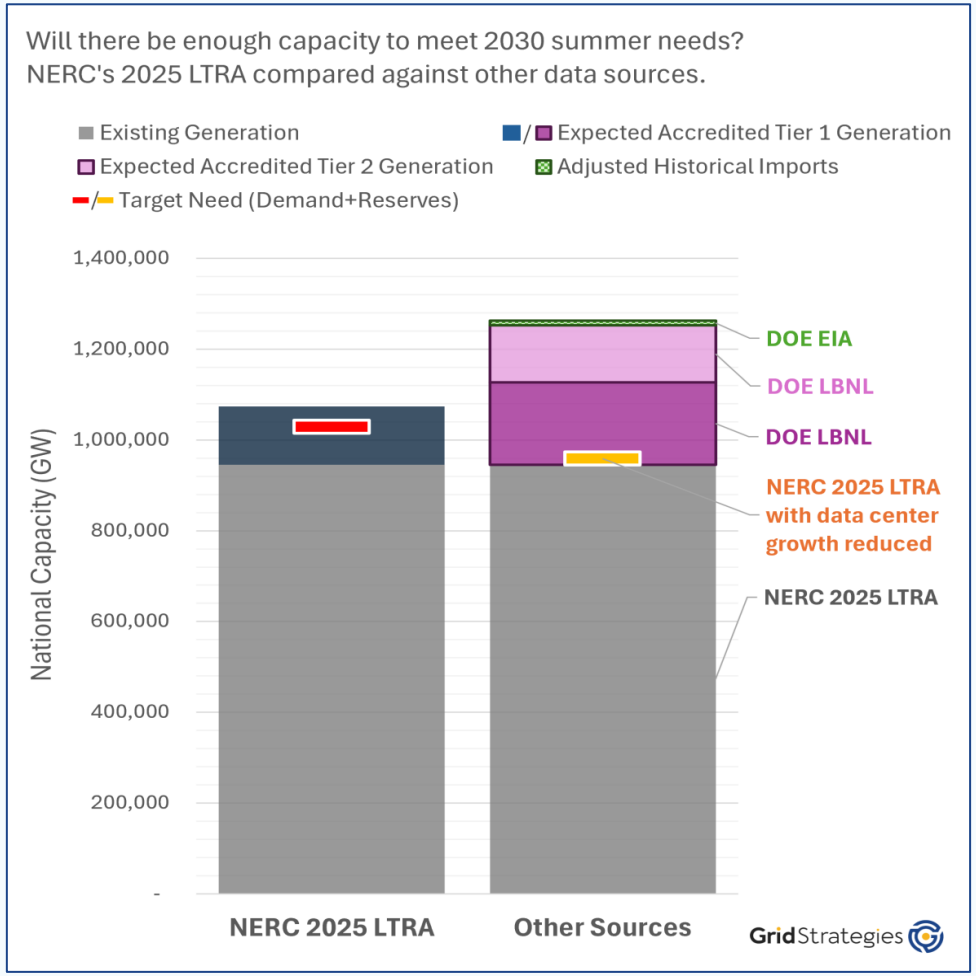
NERC's 2025 LTRA highlights important reliability concerns, but the severity of these concerns depends on the data used.

A reassessment of the LTRA regional seasonal adequacy using a more complete accounting of generation, imports, and demand from other data sources reveals different—and in many cases less dire—risk assessments for some regions.

- The LTRA generation forecast is based on an incomplete accounting of nearly built generation projects. A more reasonable expectation for generation growth can be determined from each region's interconnection queue.
- The LTRA import forecast excludes the opportunity for increased imports from new interregional transfer capability.
- The LTRA demand forecast is supplied by utilities and regional planners. The vast majority of the load growth in the LTRA forecast is based on utility large load forecasts. Some of this load is uncommitted and may not materialize or it may curtail during peak periods.

The combination of low generation, low import, and high demand assumptions used in the 2025 LTRA resulted in resource margins appearing tighter than may actually materialize.

A comparison of the aggregated resource margins from NERC's LTRA and other national, reputable data sources, which account for the above three factors, is shown to the right. This chart is explained in the Methodology.



SOURCE | NERC "2025 LTRA" (2026); NERC "ES&D" (2026); Wilson, J., et al. (2025; Rand, J. et al. (2025); EIA, "About the EIA-930 data" (accessed Feb. 2026)

Implementing currently available solutions will help all regions alleviate the identified capacity and energy risks.



Resource supply is available to meet rising needs but is encountering roadblocks. Potential solutions include:

- More efficient interconnection queues for all resources
- Permitting certainty and reduced construction delays for needed grid infrastructure
- Adopting reforms to increase coordination between transmission planning and generator interconnection



Additional import capability would help alleviate tight reserve margins. Potential solutions include:

- Appropriately valuing the resource adequacy (capacity) contribution of interregional transmission
- Comprehensive transmission planning processes that consider both firm and non-firm imports
- Acting on NERC's recommended interregional transfer capability additions



Tightening reserve margins are driven primarily by demand growth from large source loads, such as data centers. Potential solutions include:

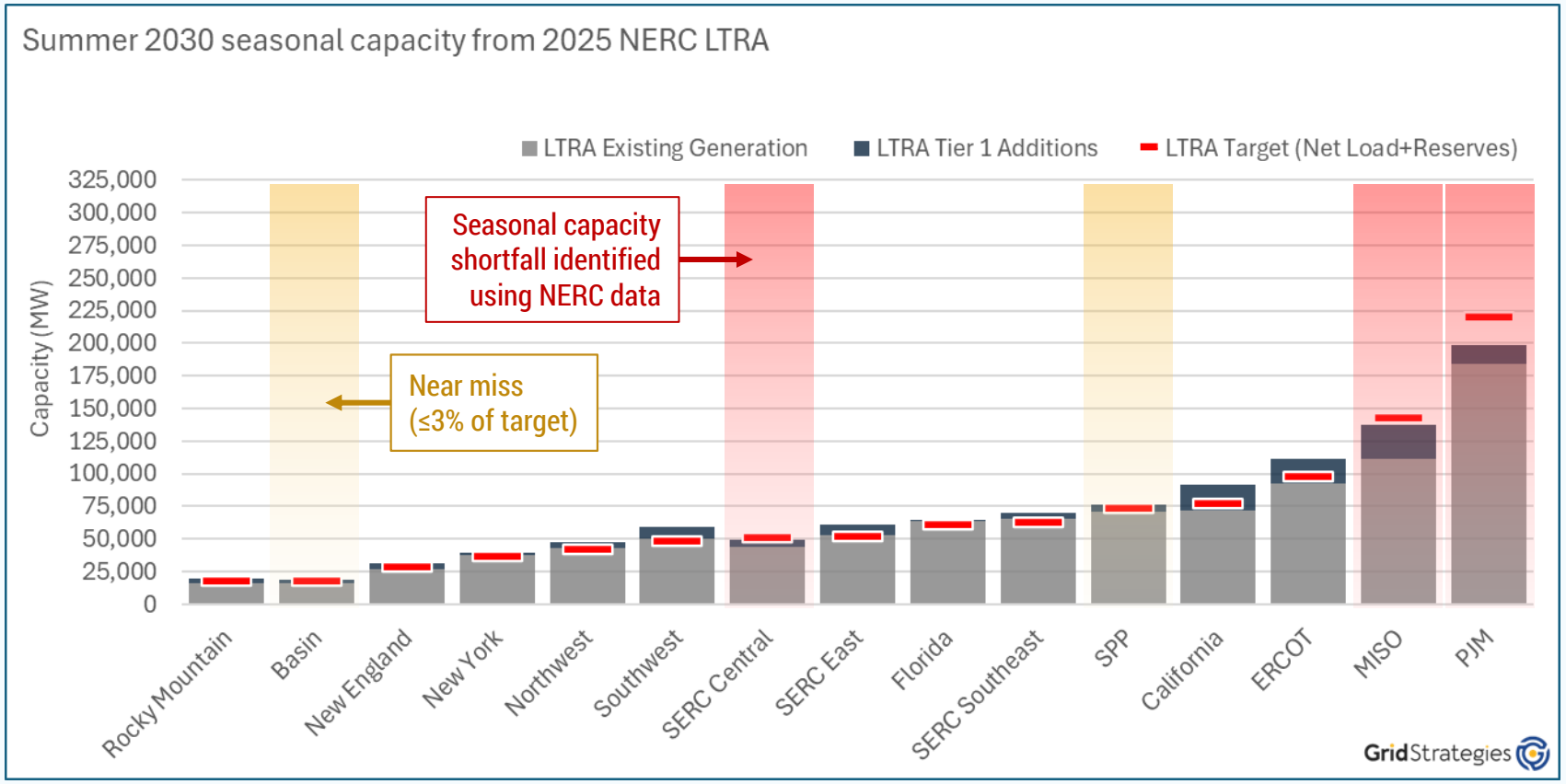
- Reducing the uncertainty and lack of transparency in load forecasts
- Regulatory solutions to connect large loads reliably

Generation Resource Assumptions

NERC only considered resources with executed interconnection agreements when determining shortfall risk.

All resources must undergo interconnection studies to identify any grid upgrades that may be necessary to reliably connect. At the end of the interconnection queue process, an interconnection agreement (IA) is executed. NERC considers any resource that has an executed IA as **Tier 1**.

To be resource adequate, a region must have enough future capacity and imports to meet load and reserve margins ("target"). NERC only counts Tier 1 resources toward future resources in the LTRA. NERC identifies three regions* that may be short of 2030 summer capacity needs using its assumptions. Two regions only exceed their target by less than 3%, marked here as "near miss" regions.



*NERC did not identify SERC Central as a heightened risk region though it is shown to be short of future capacity using the LTRA source data, perhaps because they did not identify elevated energy inadequacy risk despite the seasonal capacity shortfall in the region. We highlight it as elevated risk given the identified seasonal capacity shortfall.

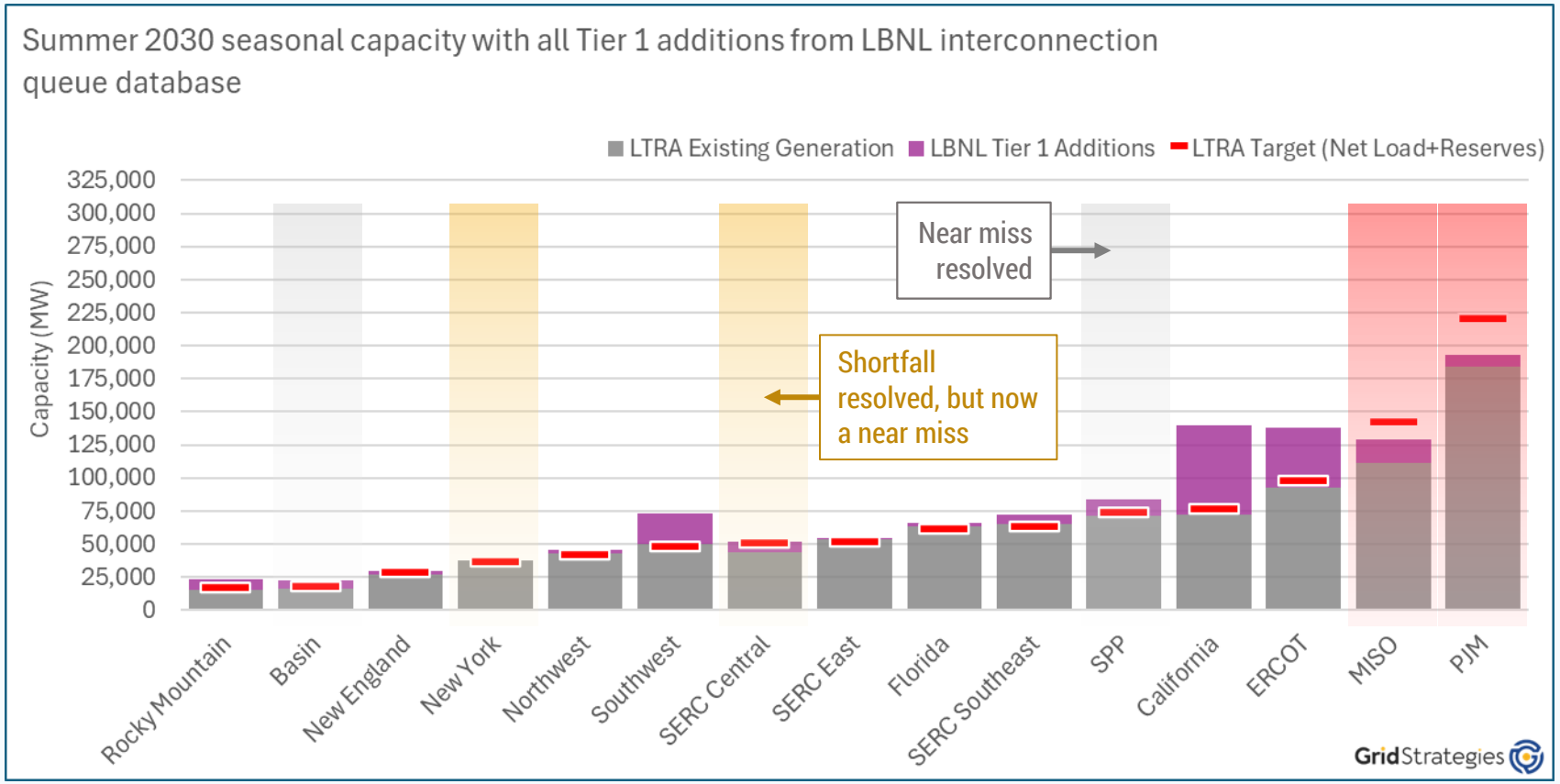
GridStrategies

SOURCE | NERC "2025 LTRA" (2026); NERC "2025 Electricity Supply & Demand (ES&D)" (Jan. 2026)

The amount of resource capacity with executed interconnection agreements in the LTRA is lower than that compiled by LBNL.

The U.S. Department of Energy (DOE)'s Lawrence Berkley National Laboratory (LBNL) tracks interconnection queue data across all regions and is a reputable source of high-quality data. The LBNL data suggests more accredited **Tier 1** resource capacity is available nationwide than is recorded in the LTRA, though regional allocations vary. The mismatch in data could be due to different processing methods, collection periods, and, importantly, resource accreditation methods.*

Using the LBNL data paints a different future risk picture than the LTRA—only two regions show 2030 summer shortfalls. This highlights how sensitive risk assessments are to their input data.



*All LBNL generation capacity used in this analysis has been discounted using regional, seasonal, and resource-specific accreditation methods, to show the expected generation capacity during peak load. Utilities do not uniformly report seasonal or resource-specific accredited capacity to NERC for use in the LTRA, which, as NERC highlights, may inaccurately account for the capacity availability during peak load (LTRA at 9, 44, 60, 71, 76, 122). See the Methodology for more information.

GridStrategies

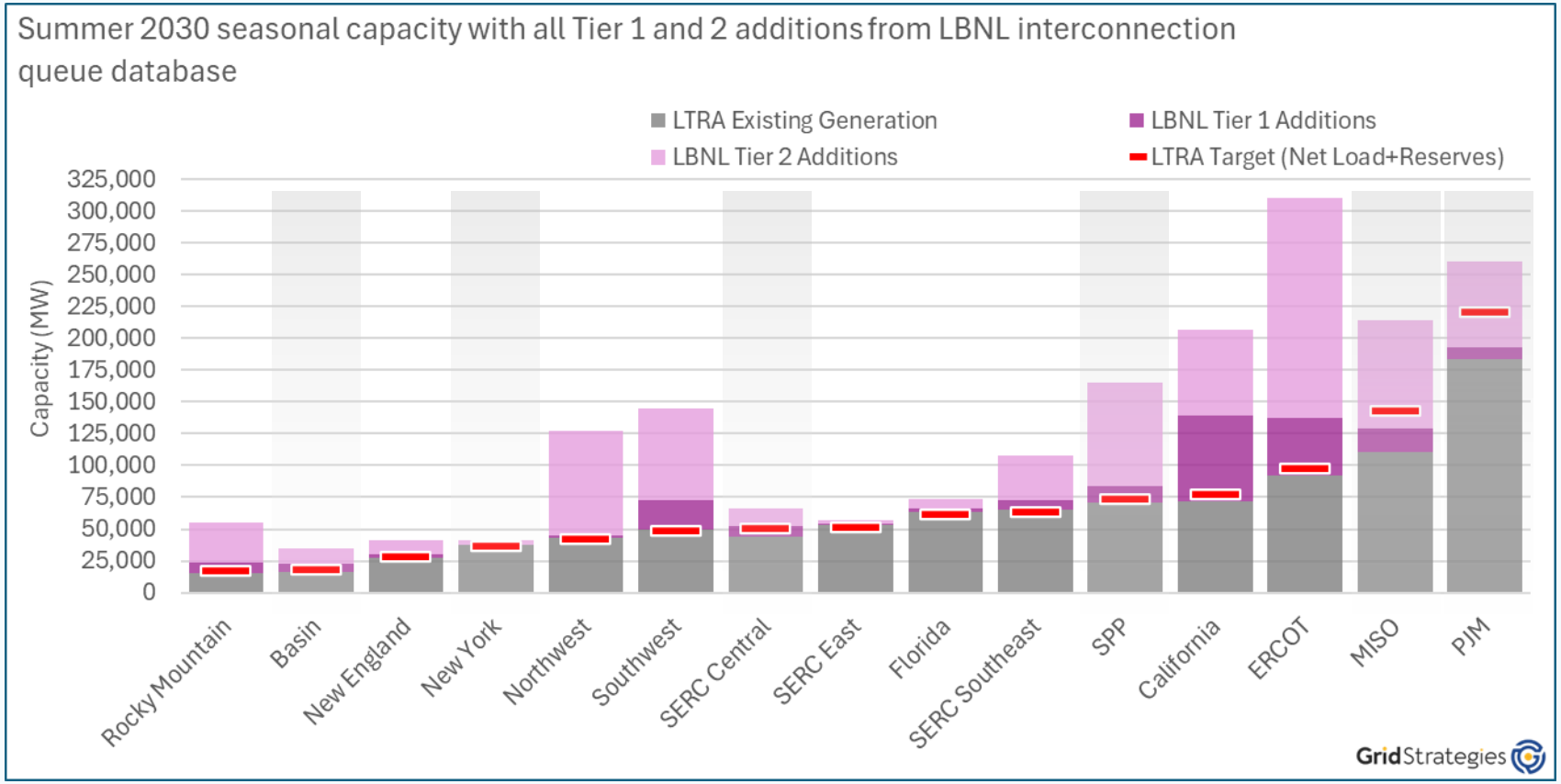
SOURCE | NERC "2025 LTRA" (2026); NERC "ES&D" (2026); Rand, J. et al. "Interconnection Queue Dataset & Summarized Data Files, through 2024" (Aug. 2025)

There are more resources under development in each region than those with executed IAs. Providing a path to interconnection for these resources helps alleviate risk.

NERC considers any resource that has begun system studies, but has not yet completed them, to be a **Tier 2** resource. According to LBNL data, there is nearly five times the accredited Tier 2 resource capacity with planned in-service dates by 2030 nationwide than NERC-counted Tier 1 as well as three times the NERC-counted Tier 2 summer 2030 resource capacity.

NERC does not include any Tier 2 capacity in the LTRA shortfall analysis. Inclusion of this capacity suggests that regions could be at less risk of seasonal shortfalls than illustrated in the LTRA.

But this is only true if there are clear pathways for interconnection of these resources. LBNL research shows that generators are facing increasing delays in the interconnection study and post-study phases. These delays contribute to project cancellations, which is dangerous for seasonal resource adequacy.



GridStrategies

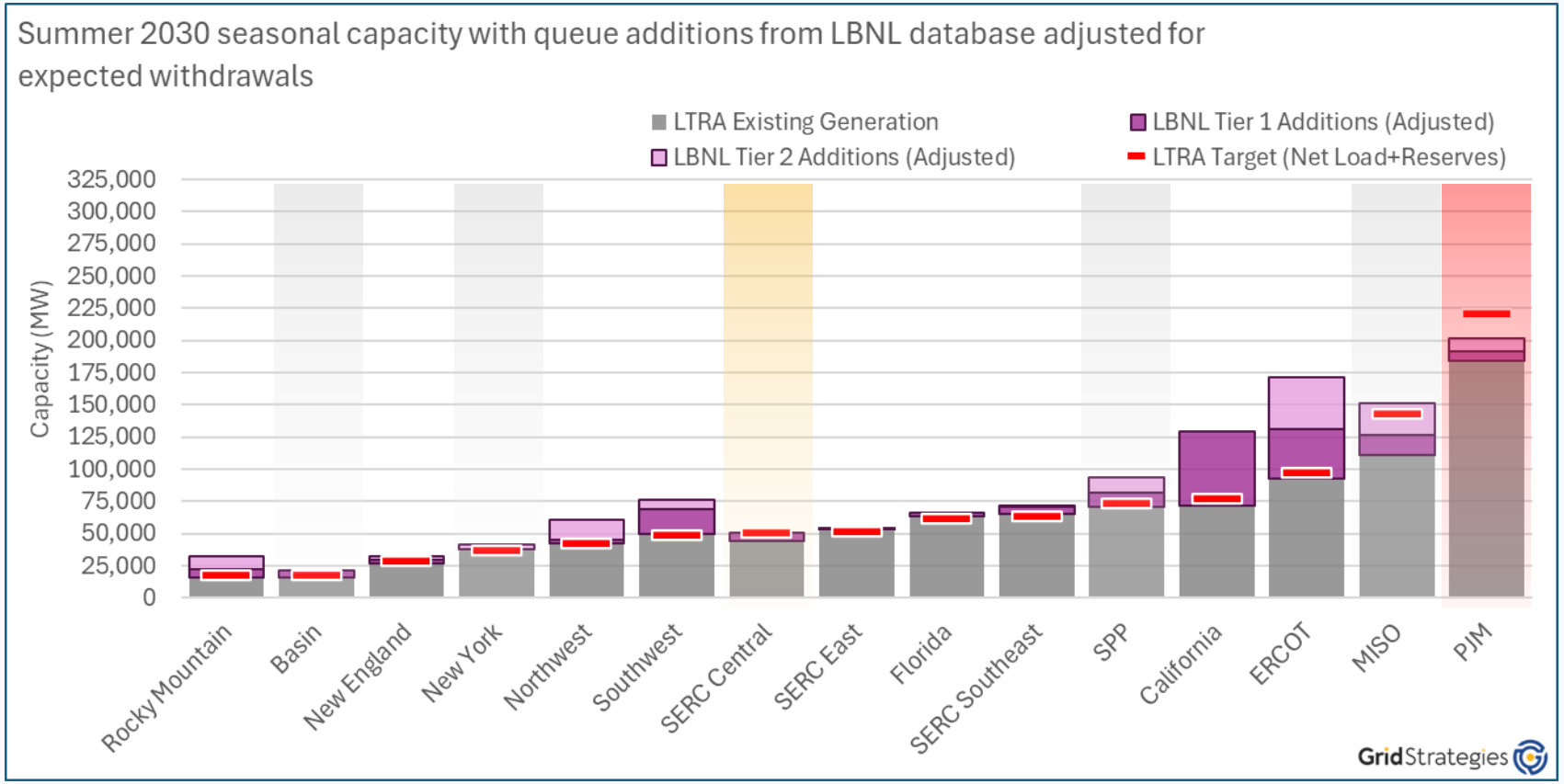
SOURCE | NERC "2025 LTRA" (2026); NERC "ES&D" (2026); Rand, J. et al. (2025)

Even when accounting for likely resource cancellations in the queue and post-queue phases, LBNL data suggests enough resources could connect to meet most regions' 2030 capacity needs.

It is unlikely that all Tier 1 and Tier 2 resources will connect to the grid. LBNL analysis shows as much as 85% of resources that enter the queues fails to connect to the grid ("withdrawal rates"), including facilities with executed IAs.

Rather than omit all Tier 2 data to account for the risk of cancellations (as done in the LTRA), we apply historic region-specific and phase-specific withdrawal rates to the LBNL data to estimate how much may connect to the grid by 2030.

Consideration of likely-to-connect resources currently in the interconnection queues resolves the majority of identified seasonal adequacy shortfalls. The resolution of shortfalls shown here is accomplished without a delay to announced resource retirements.



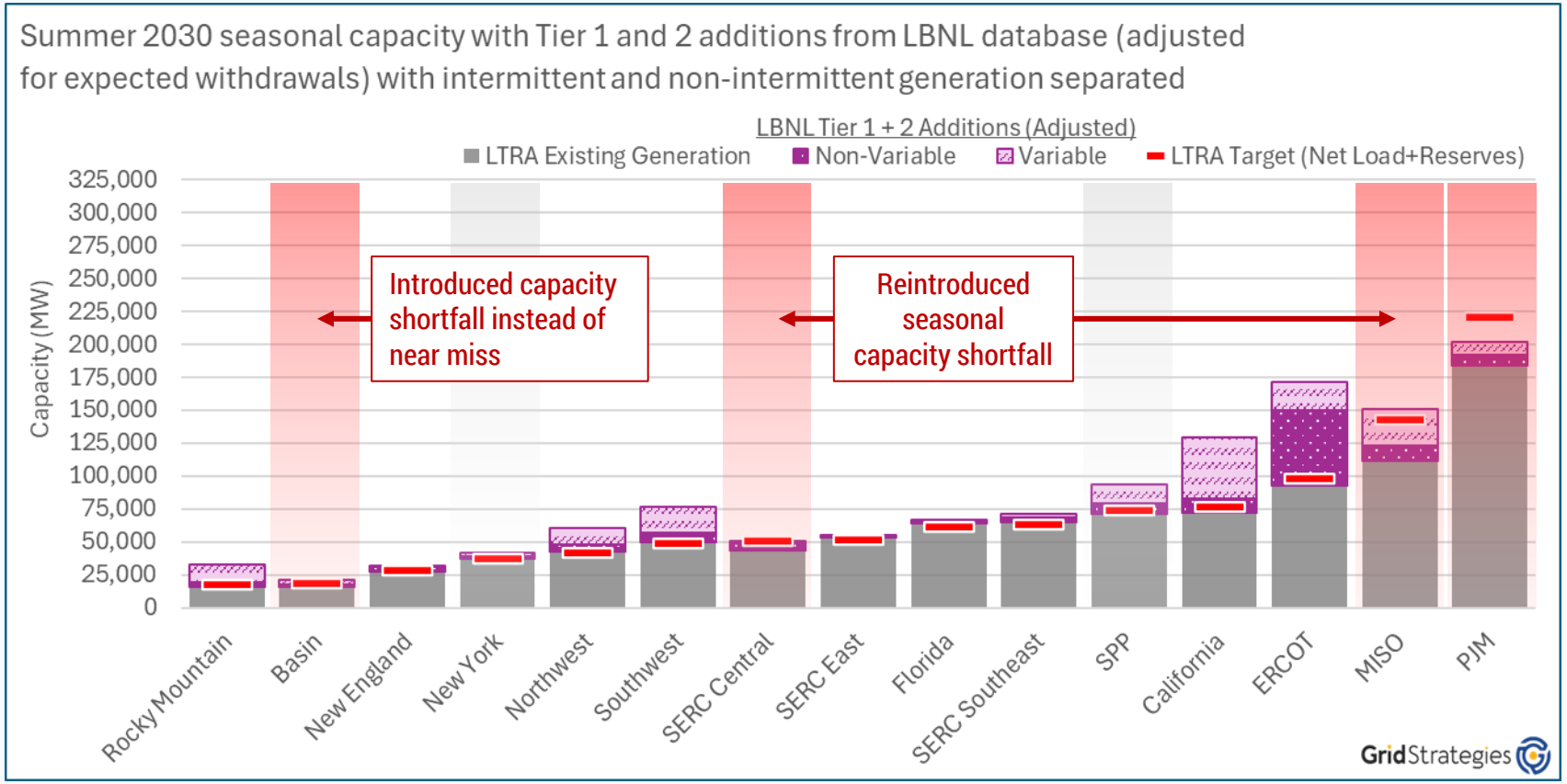
SOURCE | NERC "2025 LTRA" (2026); NERC "ES&D" (2026); Rand, J. et al. (2025)

Delays in the study, permitting, and/or construction phases to resources already in the queues—including wind and solar facilities—could jeopardize meeting regional seasonal capacity needs.

Additional permitting or equipment procurement steps applied to facilities increases their time to interconnection or results in project cancellation outright. Unnecessary hurdles for facilities waiting to interconnect could jeopardize huge amounts of resource capacity in advanced stages of development.

Shown here is the amount of likely-to-connect Tier 1 and 2 resource capacity from the LBNL data, broken out into variable (wind and solar) and non-variable resources.

Actions which delay permitting or construction for variable generation facilities could prevent large portions of the Midwestern, Southeastern, and Western regions from maintaining resource adequacy where they otherwise would be able to.



SOURCE | NERC "2025 LTRA" (2026); NERC "ES&D" (2026); Rand, J. et al. (2025)

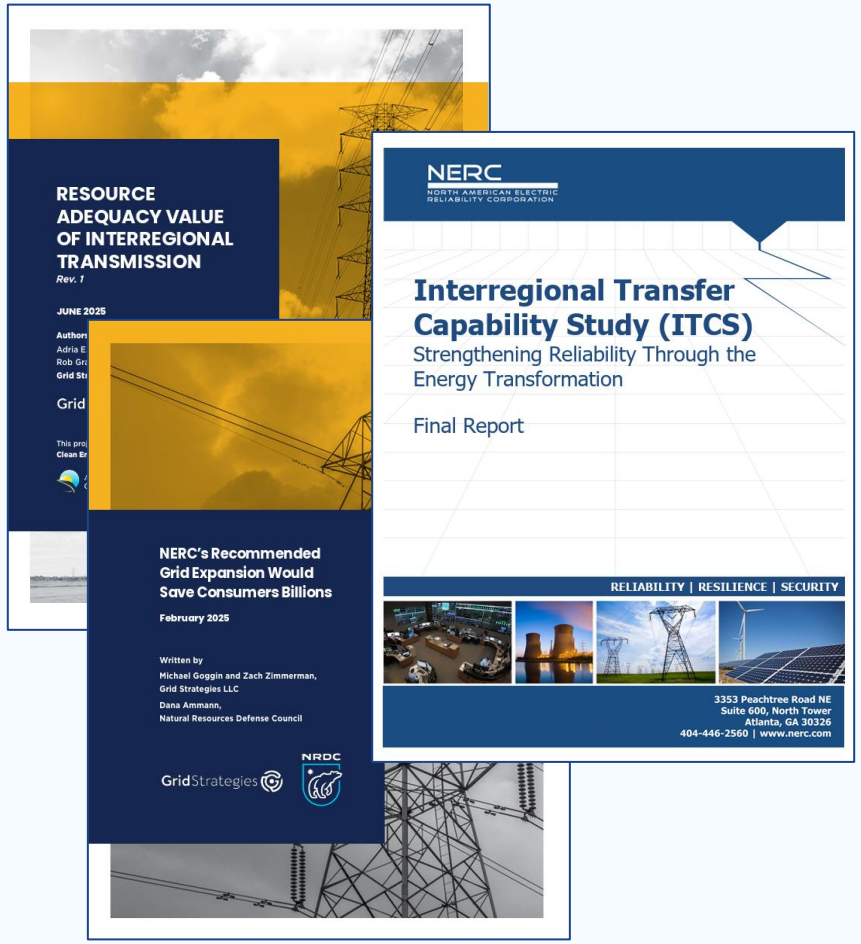
Interregional Transmission Assumptions

Interregional transmission helps to alleviate capacity adequacy concerns, especially during times of grid stress.

One of the many benefits of interregional transmission is the ability to move power between regions during times of grid stress. The availability of imports is primarily due to net load diversity among regions due to timing differences in peak demand and generation unavailability, particularly during severe weather events. Weather patterns and extreme grid events do not impact all regions equally, so there is often spare capacity in a neighboring region that could be shared during times of need. As a result, this benefit will largely persist even if reserve margins in neighboring regions are lower going forward. This phenomenon is well documented in several studies.

The LTRA only includes firm interregional capacity transfers in assessing anticipated reserve margins, which NERC defines as transfers with firm contracts. This ignores the historical role of "non-firm" imports, which are available during extreme events. For example, MISO imported over 13 GW during Winter Storm Uri, of which 5 GW was in turn exported to SPP, imports that literally kept the lights on in those regions.

Sharing of power can only occur, of course, if enough interregional transmission exists to move the available power. NERC acknowledged this in their 2024 Interregional Transfer Capability Study (ITCS) where they measured the amount of interregional transmission capacity that should be added to each region to help support energy adequacy. The ITCS analysis looks at peak grid stress days for each region and determines if excess capacity is likely to be available in neighboring regions during those same hours. It then suggests interregional transmission capacity be added to move that excess generation.



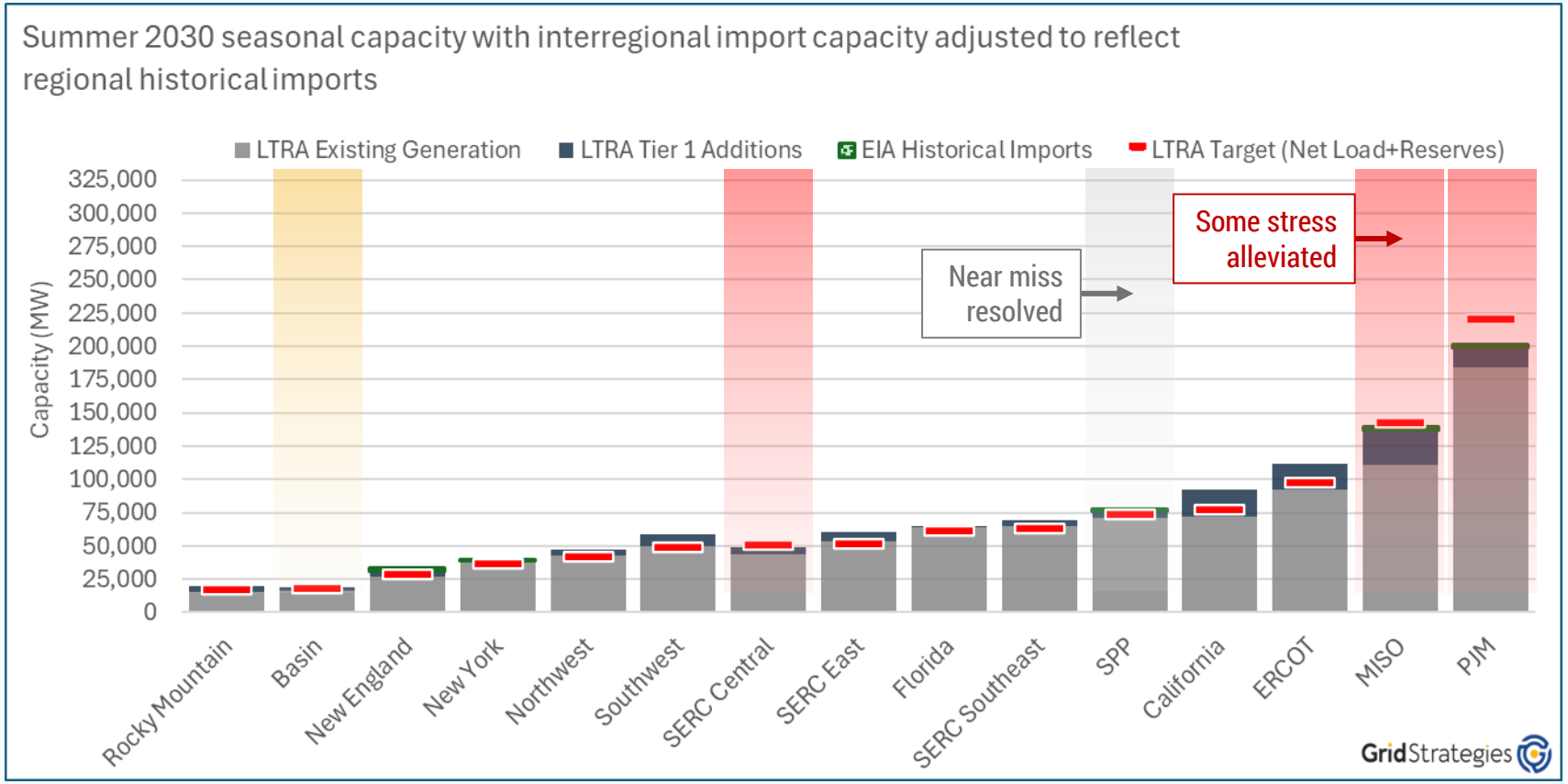
Source | NERC "Interregional Transfer Capability Study" (2024); Goggin, M., Zimmerman, Z., Amman, D., "NERC's Recommended Grid Expansion would Save Consumers Billions" (2025); Brooks, A., Silverstein, A., Gramlich, R., "The Resource Adequacy Value of Interregional Transmission" (2025)

The LTRA only counts firm imports, omitting non-firm imports. Some regional stress is alleviated when combining the LTRA capacity assumptions with historical non-firm import availability.

The LTRA only includes firm interregional capacity transfers in assessing anticipated reserve margins, which NERC defines as transfers with firm contracts. This ignores non-firm imports over interregional transmission lines that have been available during historical grid stress events.

Hourly regional import and export data collected by the U.S. Energy Information Administration (EIA) confirm regions import significantly more during periods of peak demand than the LTRA assumes.

The inclusion of non-firm imports that are historically available during extreme events helps further alleviate resource inadequacy.



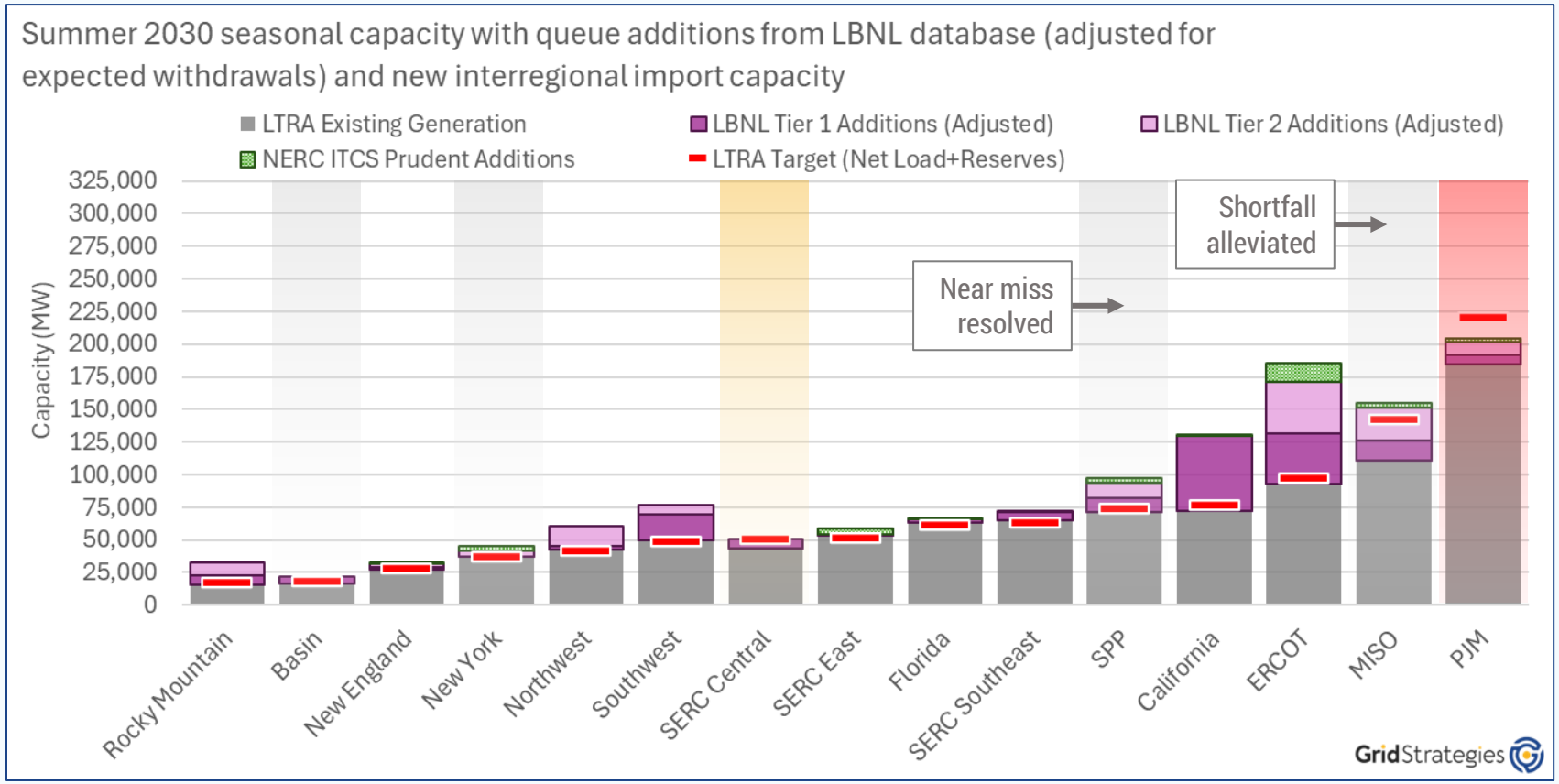
SOURCE | NERC "LTRA" (Jan. 2026); NERC "ES&D" (Jan. 2026); U.S. EIA "About the EIA-930 data" (accessed Feb. 2026)

The combination of NERC-identified increased transfer capability and reasonable resource assumptions from the interconnection queues provides even more security to avoid shortfalls.

The combination of interregional transmission additions suggested by NERC's ITCS and reasonable generation additions using LBNL queue data would provide regions with additional capacity to weather seasonal grid stress events.

The addition of new NERC-identified transfer capability would likely resolve many of the identified seasonal capacity and energy shortfalls.

All transmission takes a long time to develop, but this is especially true for interregional transmission. Unfortunately, the NERC-identified interregional transfer capability additions are unlikely to be built by 2030 under the status quo. Legislative and regulatory action taken now could accelerate the construction of these prudent additions.



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SOURCE | NERC "2025 LTRA" (2026); NERC "ES&D" (2026); Rand, J. et al. (2025)

Demand Assumptions

The load growth in the LTRA is based on utility projections that, in some cases, are based on overstated assumptions.

NERC compiled the LTRA load growth forecast by rolling up projections from utilities and regional grid operators. Large load forecasts are uncertain and could overstate load growth for several reasons.

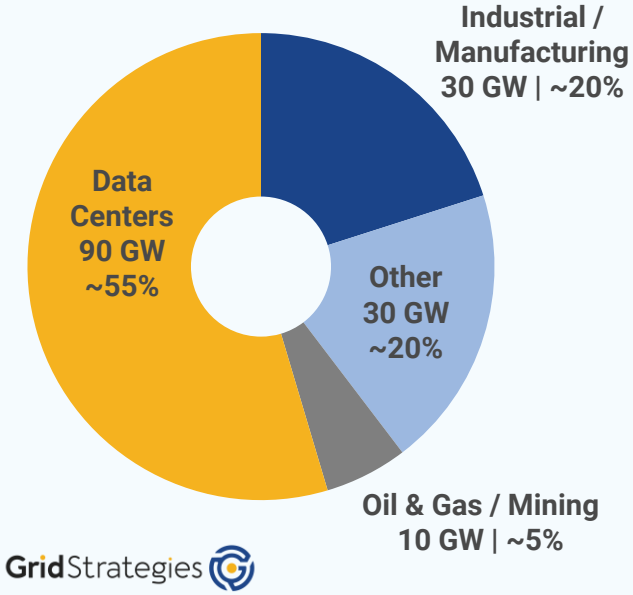
Reliance on customer data: Large load forecasts rely primarily on customer-supplied information.

- Data centers, in particular, are constrained by global supply chains. There is no clear method for individual load forecasts to account for how supply chain constraints will affect specific projects.
- Load forecasts lack visibility into customers' overall business plans. There may be "double counting" as data center operators develop more sites as options than they intend to build. The LTRA includes all loads with "development commitments necessary to drive grid planning studies." In contrast, the LTRA only counts generators that have completed all planning studies and signed an interconnection agreement.
- Many regulated utilities have an incentive to overstate load growth and interconnection success rates to justify additional rate-based investments in generation and other infrastructure.

Time lags: Producing and compiling load growth projections occurs months before the LTRA is released. Mounting delays in large load interconnection and policy changes appear to have slowed load growth since their compilation.

- Load interconnection queue backlogs and long lead times for power transformers and circuit breakers needed for interconnection are likely to delay commercial operation of many large load projects.
- As outlined in the following slides, new large loads from data centers, cryptocurrency mining, and hydrogen electrolysis could each face headwinds that are not fully accounted for in the LTRA.
- Recent policy changes are reducing load growth, such as the recent termination or restriction of federal tax credits for electric vehicles, heat pumps, hydrogen electrolysis, and advanced manufacturing.

Drivers of Load Growth (2025 – 2030)



Load flexibility: Regulations and utility tariffs are beginning to require some large loads to provide demand response or backup generation during periods of peak demand. ERCOT's load forecast includes substantial demand response for crypto mining facilities and assumes that new requirements for large load emergency curtailment would reduce peak demand growth by 84%.

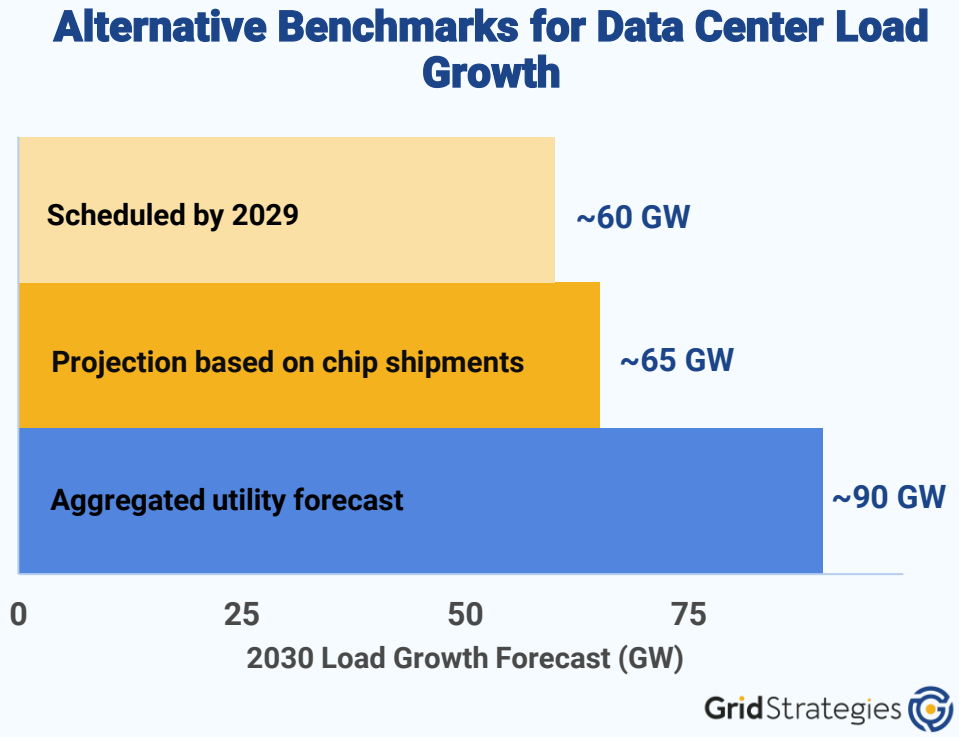
GridStrategies

SOURCE | Wilson, J., et al. "Power Demand Forecasts Revised Up for Third Year Running, Led by Data Centers" (Nov. 2025)

Assumed data center load

The LTRA reasonably states that, “New data centers for artificial intelligence and the digital economy account for most of the projected increase in North American electricity demand over the next 10 years.” However, the growth of data centers and their contribution to peak demand may be overstated due to:

- **Supply chain shortages of chips and other key inputs.** TD Cowen estimated that due to chip limitations, U.S. data center growth would be limited to 65 GW (orange bar), about two-thirds of the data center growth assumed for the U.S. alone in the LTRA (blue).
- **Financial constraints.** Wall Street analysts have expressed concerns that expected revenues are insufficient to sustain the overall industry trajectory for AI data center investment.
- **Load flexibility.** Data centers may be able to use local generation and storage resources to reduce or eliminate their on-peak demand for grid power. Additionally, some types of data centers may opt to curtail their demand during peak periods without local supply. Curtailment activities such as these are unlikely to appear in utility forecasts of expected load. These practices may drive up annual energy use.



GridStrategies

SOURCE | TD Cowen, Data Centers, Generative AI, & Power Constraints: The Path Forward (May 2024); Bain & Company, “$2 trillion in new revenue needed to fund AI’s scaling trend” (Sept. 2025); Wilson, J., et al. (2025)

Assumed cryptocurrency mining load

Cryptocurrency mining accounts for about 7 GW or 15% of ERCOT's projected large load growth through 2030, though it is likely lower in other regions.

However, cryptocurrency mining data centers are understood to be more speculative than other data center types. Cryptocurrency mining facilities are highly modular and can be readily moved to different sites, even after they have been installed and put into service at a site. Unlike some types of data centers, they do not face major siting constraints due to concerns about latency or access to fiber networks. These factors increase the likelihood of "double counting."

In ERCOT, cryptocurrency mines routinely use demand response or price-sensitive demand bids to curtail demand during peak periods. If properly incentivized to do so, their contribution to peak demand can be reduced or eliminated.

Assumed Hydrogen Electrolyzer Load

Most hydrogen production load is forecast in ERCOT, where planned electrolyzers account for about 8-9 GW or 20% of ERCOT's projected large load growth through 2030. NYISO's load forecast used to include substantial hydrogen production, but it has been adjusted downward. Only a few other load forecasts mention hydrogen production, and at much lower volumes than in ERCOT. According to EIA data, the U.S. had only 116 MW of hydrogen electrolyzers in operation in 2024.

ERCOT's forecast may not reflect a full market response to congressional action to tighten the timeframe for projects to qualify for the Section 45V Clean Hydrogen Production Credit. The credit is now only available for facilities that begin construction by the end of 2027 instead of 2032.

The operation of planned electrolyzers is also difficult to forecast, but they are unlikely to fully contribute to peak load for two reasons:

- The tax credit depends on the carbon-intensity of electricity consumption. This will drive electrolyzers operation to hours with high renewable generation, which are unlikely to be periods of peak net load.
- Regardless of the tax credit, electrolyzers will tend not to operate on-peak because the electricity would be too expensive.

SOURCE | U.S. EIA "Electrolyzers are a small but growing source of U.S. hydrogen production" (2024)

Load flexibility can reduce the capacity needed for large loads

Nearly all the preceding categories of large loads can use demand response, on-site generation and storage, or price-responsive loads to reduce or eliminate their contribution to peak demand.

The LTRA assessment of ERCOT's planning reserve margin assumes that new requirements for large load emergency curtailment would reduce peak demand growth by 84%. Through 2035, as load grows by 59 GW, demand response grows by 50 GW. NERC states that it made this assumption because "signed into law in June 2025, Texas Senate Bill 6 directs the Public Utility Commission of Texas to establish uniform large-load interconnection standards that, among other things, provide ERCOT with new large-load curtailment management tools and ERCOT's authority to direct (or require transmission service providers to direct) large loads to curtail their load prior to and during declared energy emergency situations."

While there is considerable debate about the feasibility for some types of data centers to provide flexibility, ERCOT's requirement shows the potential impact on resource adequacy. Nonetheless, no other load forecasts used to inform the LTRA include similar load flexibility assumptions. As a result, a large share of the projected load growth in the LTRA for other regions could be negated if NERC likewise assumed, as it did for ERCOT, that large loads use some type of flexibility during peak periods. Large loads in these regions could use similar flexibility solutions. For example, Google has signed agreements with utilities to use flexibility to reduce peak load contributions from data centers in Indiana, Nebraska, Arkansas, and the Tennessee Valley Authority footprint (Google 2025).

A recent study estimates 30% of data centers may install flexible capability anyway to curtail during localized transmission system overload or contingency events, as a way to move to the front of lengthy interconnection backlogs by reducing the need for cost- and time-intensive grid upgrades (Thomas 2026). Data centers that are unable to curtail could use behind-the-meter resources during peak periods to reduce or eliminate their reliance on grid power.

SOURCE | Google "How we're making data centers more flexible to benefit power grids" (Aug. 2025); Thomas, M. "Bypassing the Grid: How Data Centers Are Building Their Own Power Plants" (Feb. 2026)

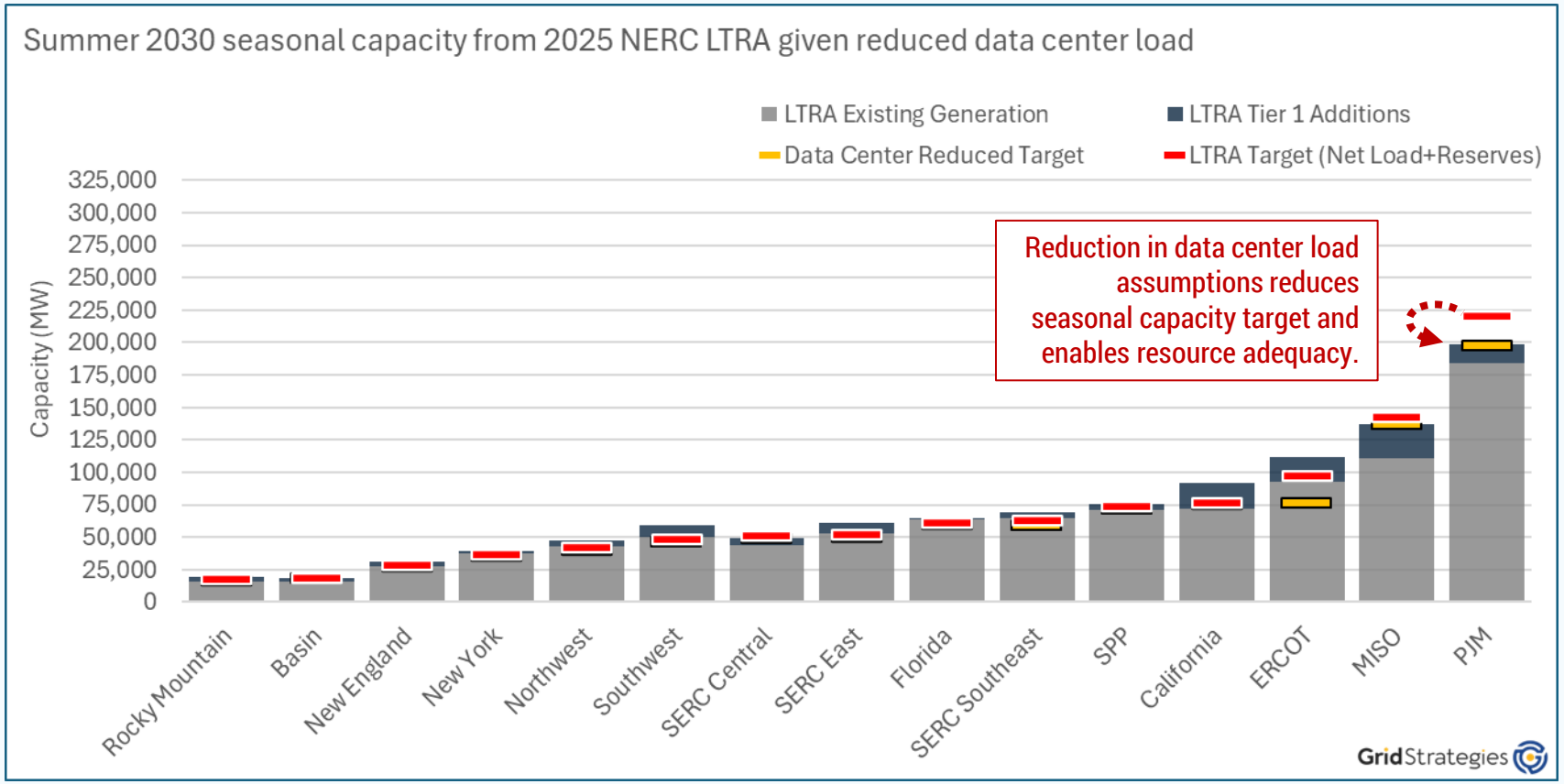
Updating data center load forecasts based on chip-industry forecasts would allow nearly all regions to meet their 2030 target needs

NERC indicates that load growth in several regions is dominated by data centers. To highlight the impacts of uncertainty in data center growth projections in the LTRA, we introduce a scenario which reduces national 2030 data center growth by two-thirds. This reduction is distributed among the regions based on their individual forecasted data center load and is shown as a yellow target in the chart.

A one-third reduction is based on chip industry forecasts and an additional one-third is based on assumed use of on-site generation during peak demand.

Consideration of potential reductions in data center load growth enables all regions to meet their 2030 peak summer load and reserve needs.

Note: If no red target is visible, then the two targets appear to overlap. All regions' net load was reduced.



GridStrategies

SOURCE | NERC "ES&D" (2026); Wilson, J., et al. (2025); Thomas, M. (2026)

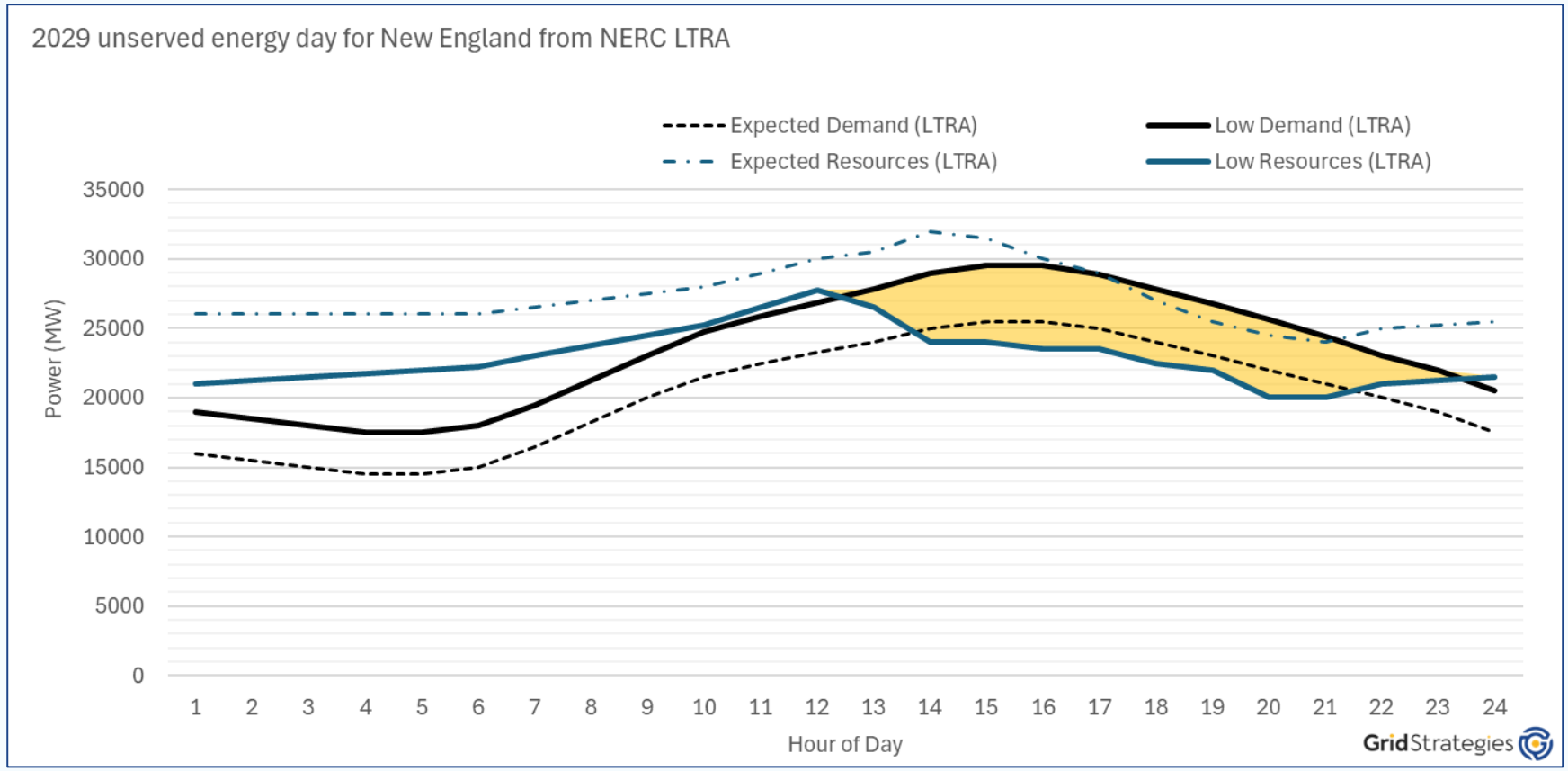
Extreme Event Energy Adequacy

Energy inadequacy risk during extreme events can exist even without seasonal capacity shortfalls. An increase in resource and interregional transfer capability also helps to alleviate extreme event risk.

The risk of energy shortfalls during extreme grid events can exist even without there being a risk of capacity shortfalls when considering only seasonal peak load. It is important to study both capacity and energy adequacy.

For example, NERC found energy shortfalls could occur during extreme heat days in New England,* even though it did not find seasonal capacity shortfalls.

Expected resource production is enough to meet expected demand (dotted lines) on most days, but sensitivity testing shows that the combination of lower-than-expected resources and high demand (solid lines) could result in energy shortfalls (yellow area). Energy shortfalls are often referred to as "unserved energy" or energy inadequacy.



*This figure is a recreation of the extreme event energy analysis shown in the LTRA for New England. We did not independently reproduce this analysis.

GridStrategies

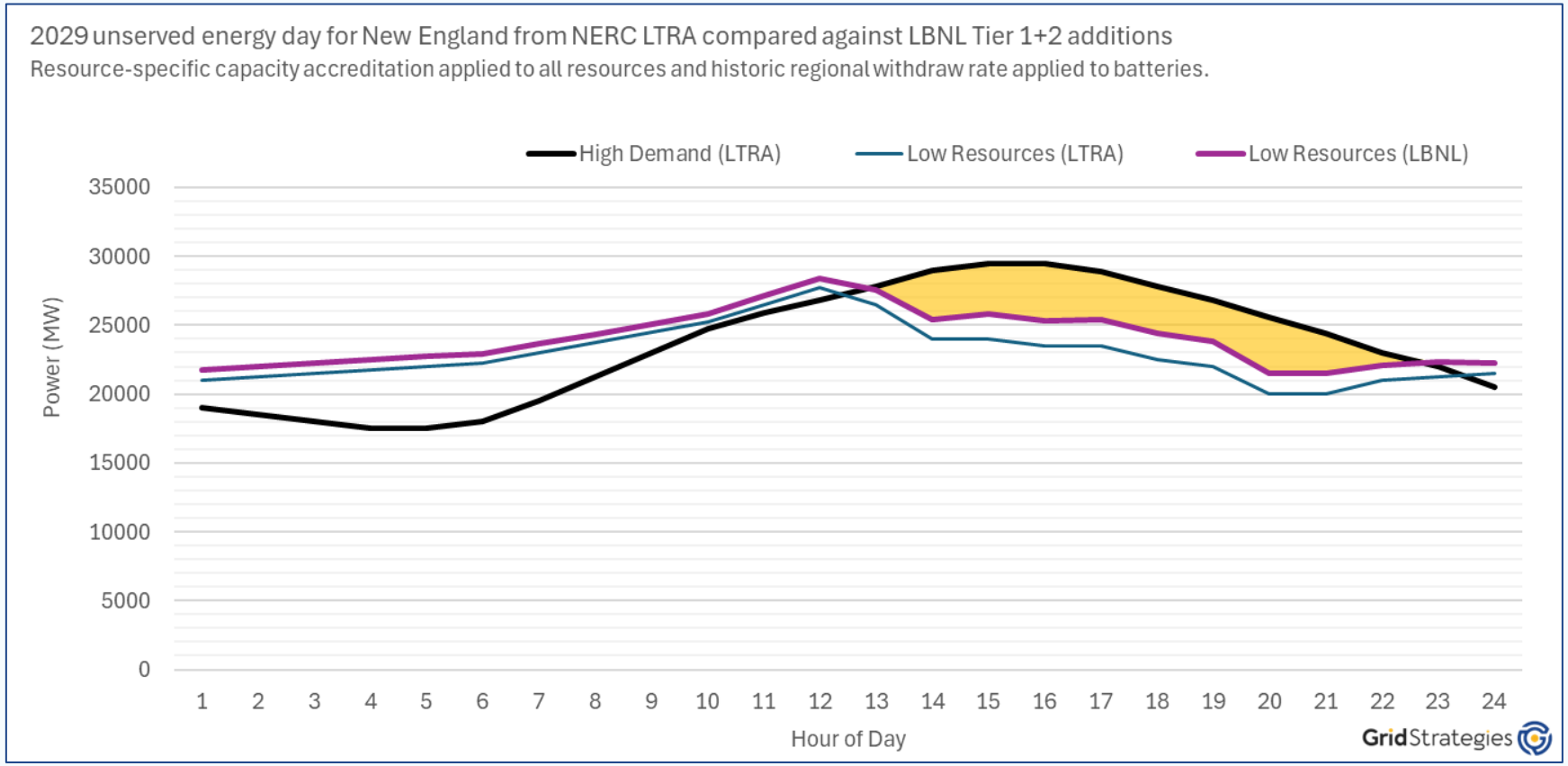
SOURCE | NERC "2025 LTRA" (2026); NERC "ES&D" (2026); Rand, J. et al. (2025)

Using LBNL resource assumptions for New England greatly reduces unserved energy risk during peak load days.

LBNL data records more solar, offshore wind, and storage resources than the NERC data.* Lower-than expected production from the LBNL-identified resource mix (purple line) better matches the times of high demand (black) than the NERC-identified resource mix (blue).

Given accredited, likely-to-connect Tier 1 and 2 resource capacity from LBNL, the amount of potential unserved energy on peak summer days in New England is reduced by nearly 40% of that calculated using NERC data. If capacity had not been reduced by expected withdrawals, the unserved energy shown here would be completely resolved.

Diverse resource mixes—especially those matched to the load profiles of the region—provide major benefits to withstand extreme grid events.



*See the Methodology section for more details.

GridStrategies

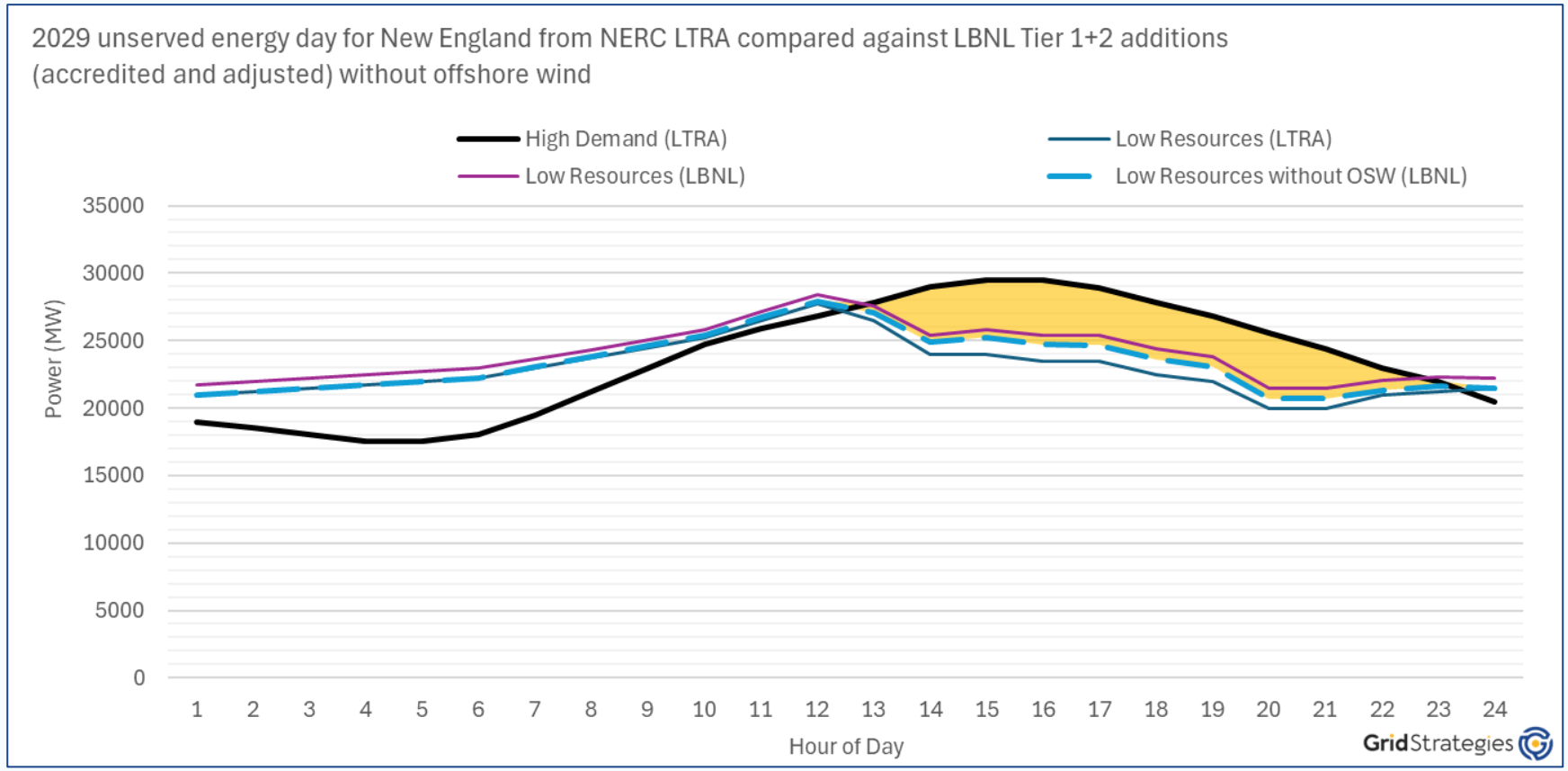
SOURCE | NERC "2025 LTRA" (2026); NERC "ES&D" (2026); Rand, J. et al. (2025)

As with seasonal capacity adequacy, permitting and/or construction delays of resources with executed IAs are likely to exacerbate energy inadequacy risk during extreme grid events.

Delays of resources progressing through the queues or with executed IAs, whatever the cause, will exacerbate the risk of unserved energy during extreme grid events. Currently, offshore wind is facing additional permitting and construction hurdles. This is especially noteworthy for New England, where strong afternoon offshore wind output could directly reduce unserved energy risk during peak load hours.

Near-term unserved energy risk increases substantially given the delay or cancellation of planned offshore wind generation.

Given the low production of a resource mix without offshore wind (shown as the blue dotted line), the unserved energy risk is only reduced by 20% instead of 40% of that calculated in the LTRA.



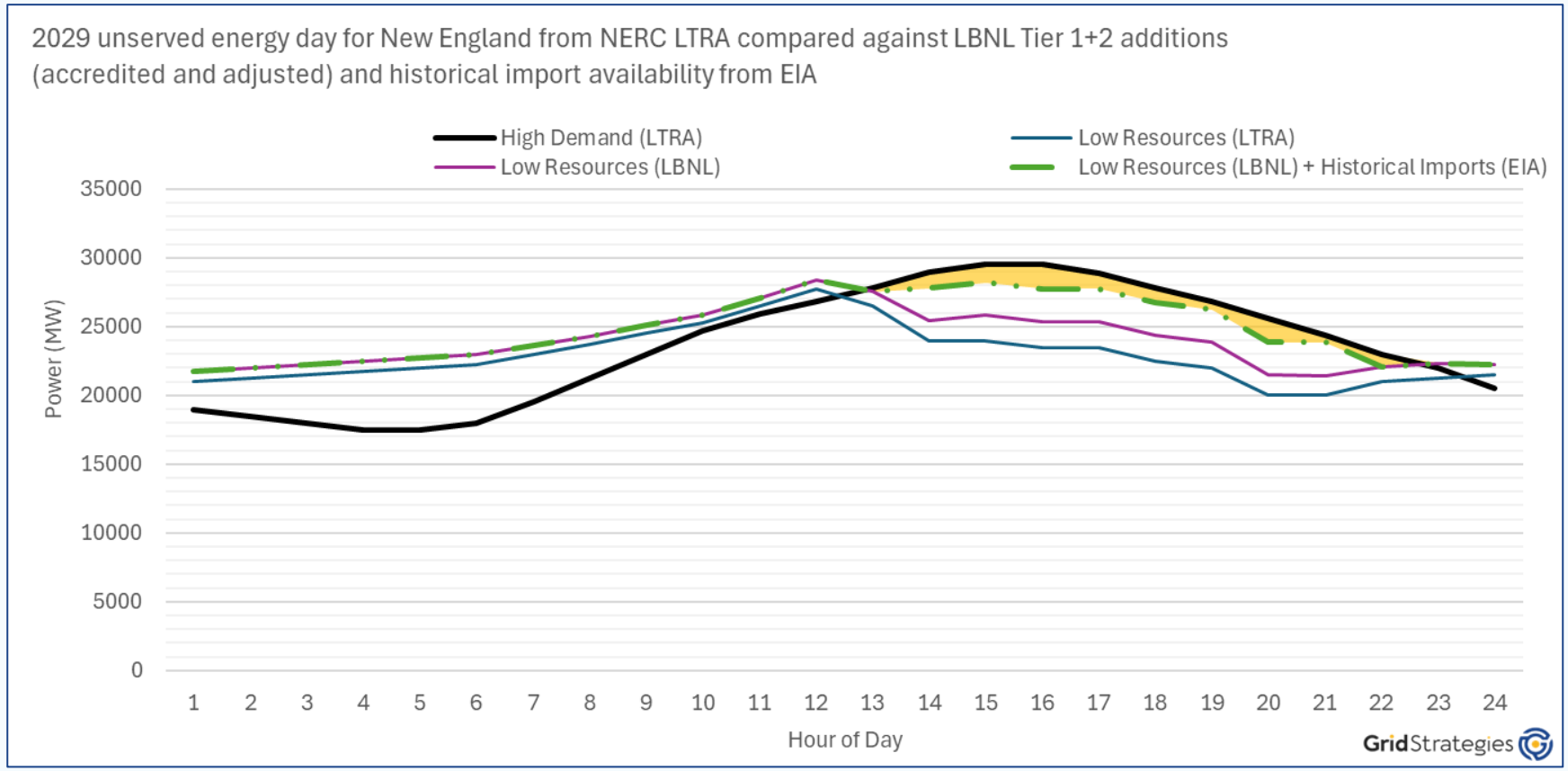
SOURCE | NERC "2025 LTRA" (2026); NERC "ES&D" (2026); Rand, J. et al. (2025)

Interregional transmission designed to move power between regions during times of grid stress further reduces unserved energy risk.

As explained in slides 15-17, NERC only includes firm imports in its seasonal capacity or energy adequacy analysis. This ignores the likelihood of additional "non-firm" imports which are historically available to regions during extreme events. Non-firm imports are those which are not contracted for use during normal operations, but that neighboring regions can export to regions experiencing heightened stress.

Adding the imports which have been historically available to New England during extreme events further reduces expected unserved energy.

The combination of likely-to-connect generation from the interconnection queues and historically available non-firm import data nearly eliminates the unserved energy risk calculated using the LTRA assumptions.



SOURCE | NERC "2025 LTRA" (2026); NERC "ES&D" (2026); Rand, J. et al. (2025)

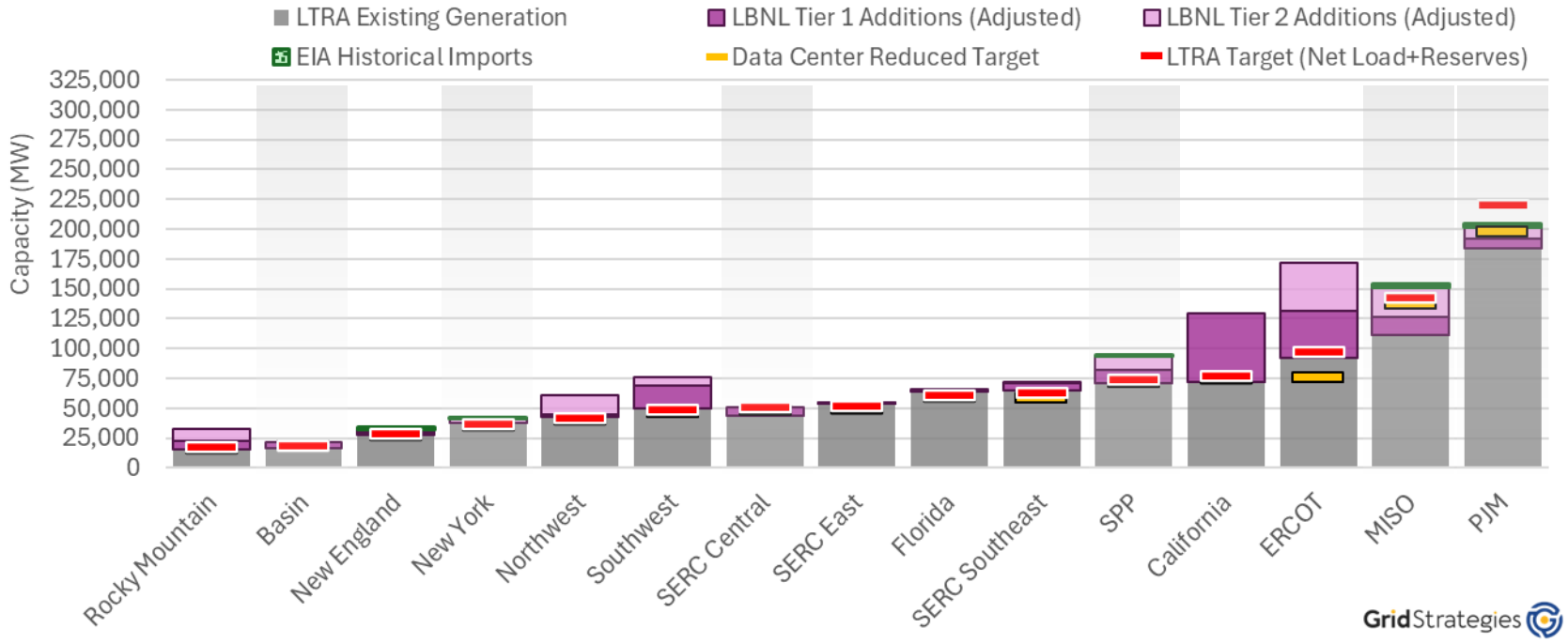
Conclusions and Solutions

In this analysis, we considered different assumptions for generation resource, interregional transmission, and demand than the LTRA. The combination of all three suggest all regions could be resource adequate.

The regional seasonal resource adequacy risks identified in the 2025 NERC LTRA are all resolved when evaluated under different input assumptions:

- Including generation that is actively working through the interconnection queues in each region (Tiers 1 & 2)
  - Discounting all generation nameplate capacity by the resource and region-specific accreditation methods
  - Discounting generation queue data by historic regional and phase-specific withdraw rates
- Consideration of historic non-firm imports during extreme events
  - Including increased interregional transfer capability capacity (albeit low likelihood of 2030 in-service date)
- Reduced data center load to account for microchip industry supply chain constraints and generation flexibility

Summer 2030 seasonal capacity with queue additions from LBNL database (adjusted for expected withdrawals), interregional import capacity (adjusted for historical imports), and reduced data center load



GridStrategies

SOURCE | NERC "2025 LTRA" (2026); NERC "ES&D" (2026); Rand, J. et al. (2025)

While reduced risk is likely given different assumptions, these results should not be taken for granted. Enacting existing solutions is needed to stave off future reliability risk.



Resource supply is available to meet rising needs but is encountering roadblocks. Potential solutions include:

- More efficient interconnection queues for all resources
- Permitting certainty and reduced construction delays for needed grid infrastructure
- Adopting reforms to increase coordination between transmission planning and generator interconnection



Additional import capability would help alleviate tight reserve margins. Potential solutions include:

- Appropriately valuing the resource adequacy (capacity) contribution of interregional transmission
- Comprehensive transmission planning processes that consider both firm and non-firm imports
- Acting on NERC's recommended interregional transfer capability additions



Tightening reserve margins are driven primarily by demand growth from large source loads, such as data centers. Potential solutions include:

- Reducing the uncertainty and lack of transparency in load forecasts
- Regulatory solutions to connect large loads reliably

Methodology

The NERC LTRA assesses each region's ability to meet both its future capacity and energy adequacy needs.

NERC's LTRA importantly captures potential reliability issues for a snapshot in time. Risk is defined by tightening reserve margins—the difference between electricity demand and available supply.

In its 2025 version, NERC identified several regions* as either **High** or **Elevated** risk of not being able to meet their future capacity and energy needs.

Seasonal capacity shortfall risk: MISO, PJM, and SERC-Central (with SPP and Basin on the margin)

Extreme event energy shortfall risk: MISO, PJM, New England, New York, SERC-East, Basin, Northwest, and ERCOT

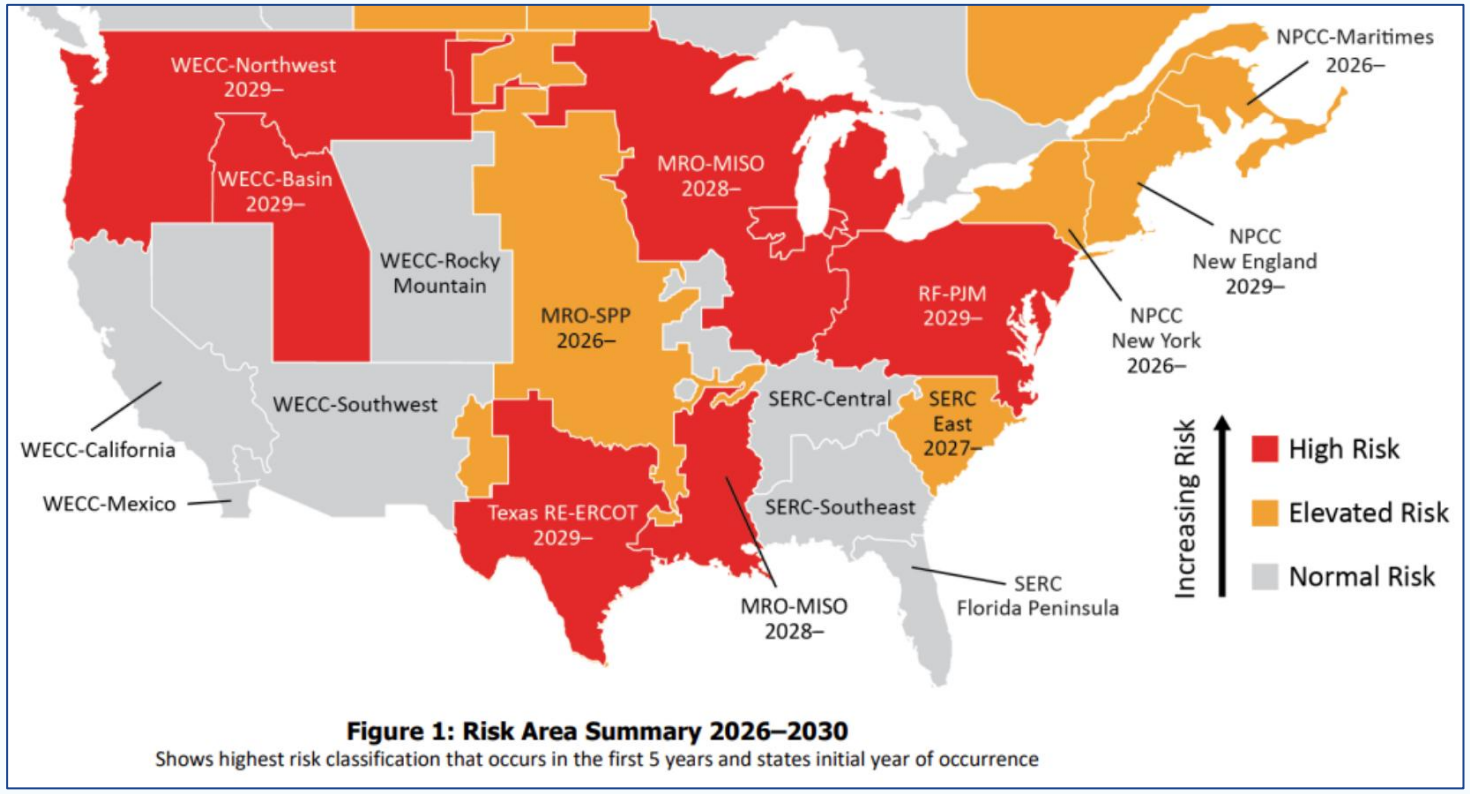


Figure 1: Risk Area Summary 2026–2030
Shows highest risk classification that occurs in the first 5 years and states initial year of occurrence

*NERC did not mark SERC-Central as elevated risk despite showing large seasonal shortfalls while SPP was marked as elevated risk despite having neither seasonal capacity shortalls nor extreme event energy shortfalls.

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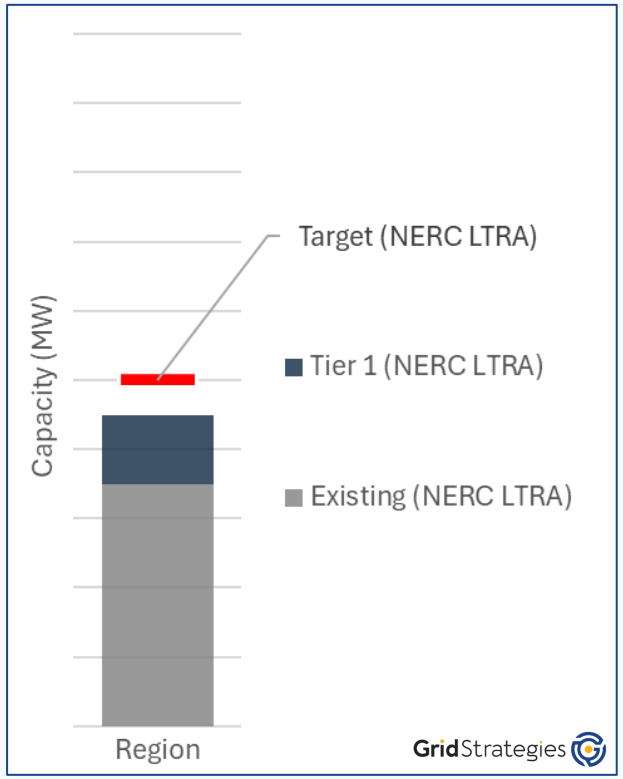
SOURCE | NERC "2025 LTRA" (2026)

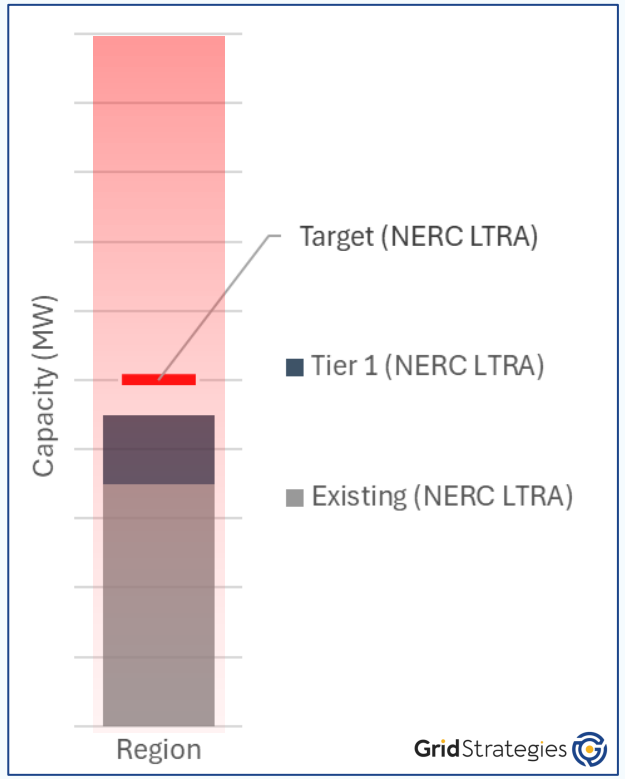
Illustrative walkthrough of seasonal capacity slides

Bar charts showing the existing (light grey) and future (dark blue) resource capacity in each region using NERC LTRA data. The target capacity (red line) is also shown. These charts were created by Grid Strategies using NERC data.

A red highlight is used to signify a shortfall between the existing + future resource capacity and the needed target to meet future load and reserves. A yellow highlight would be used to signify a "near miss."



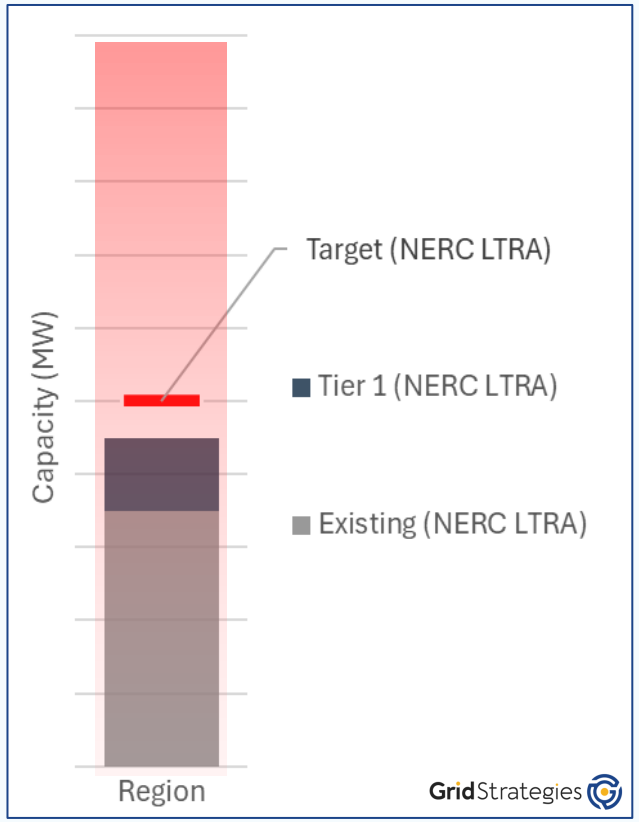
Highlight important features of chart



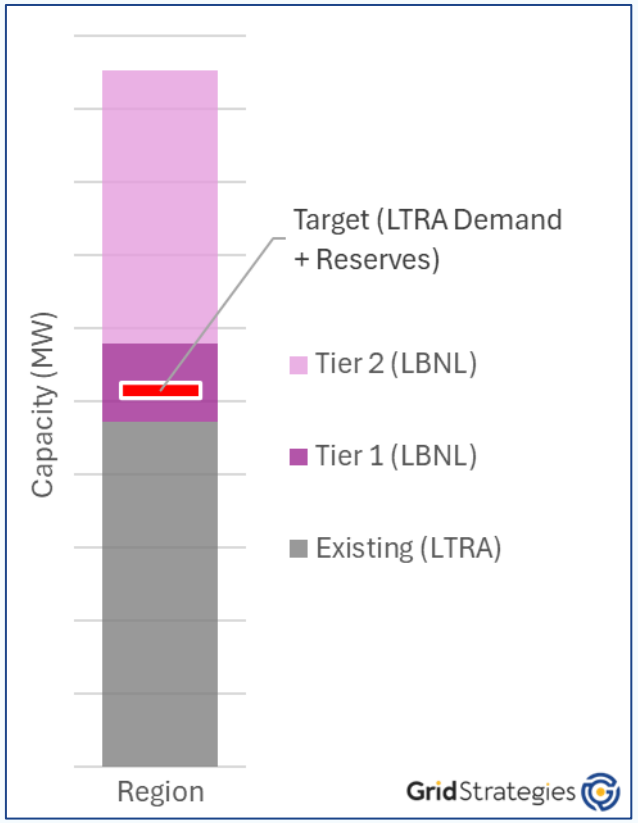
Illustrative walkthrough of seasonal capacity slides

Replace the NERC LTRA resource capacity data with accredited LBNL interconnection queue data (purple) for comparison. Existing and target data is from LTRA and remains unchanged unless specified.

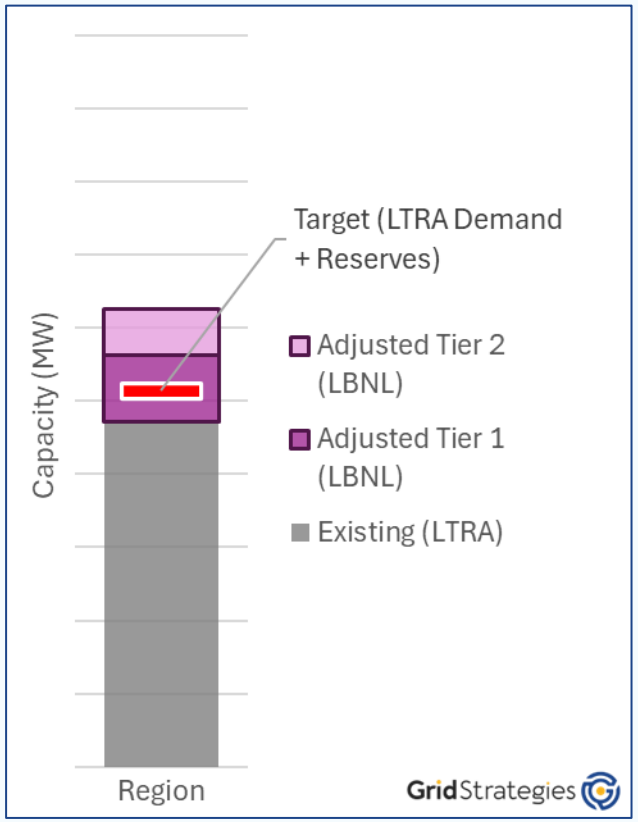
To avoid overcounting queue generation, the LBNL data is discounted based on regional- and study phase-specific withdraw rates.



Replace NERC data with resource-accredited LBNL data



Reduce LBNL data based on expected withdraws



Note red highlight is removed because adequacy has been achieved

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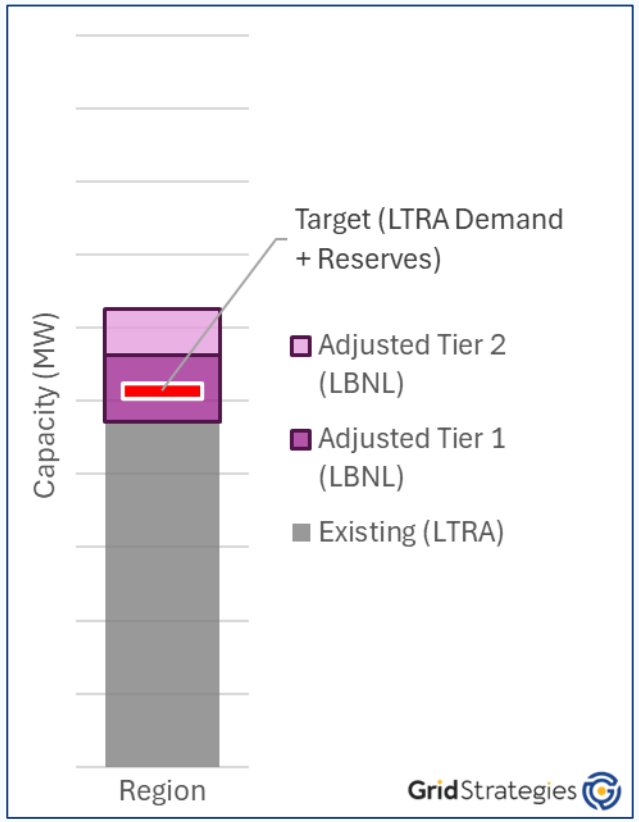
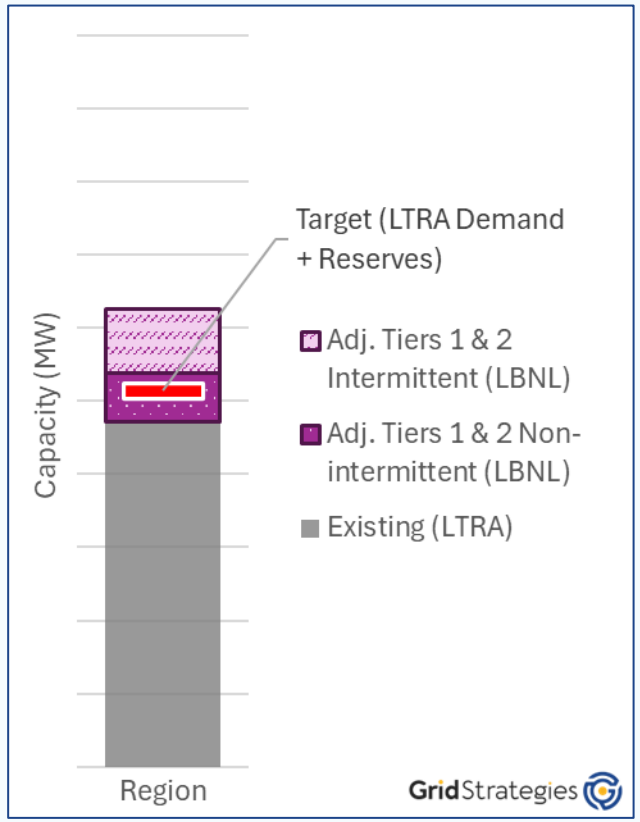
Illustrative walkthrough of seasonal capacity slides

Analyze the LBNL resource data to gain insight into future capacity risk. Purple is still used for LBNL data while different bar borders or pattern are used to indicate interesting features of the data.

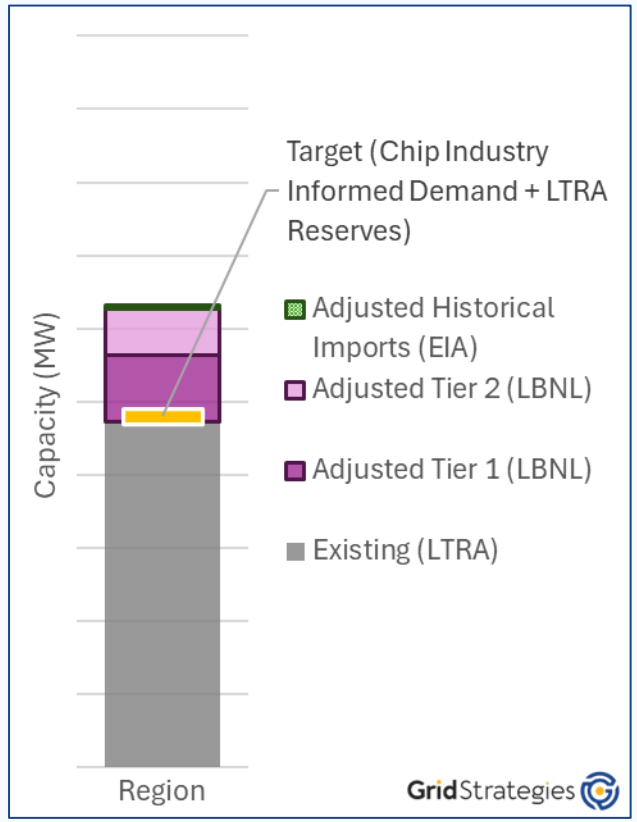
Interregional transfer capability data is adjusted using EIA data to better illustrate available capacity. In some cases, the expected load is changed to match demand forecasts from other sources.



Look at different features of LBNL data



Continue to add more data for analysis



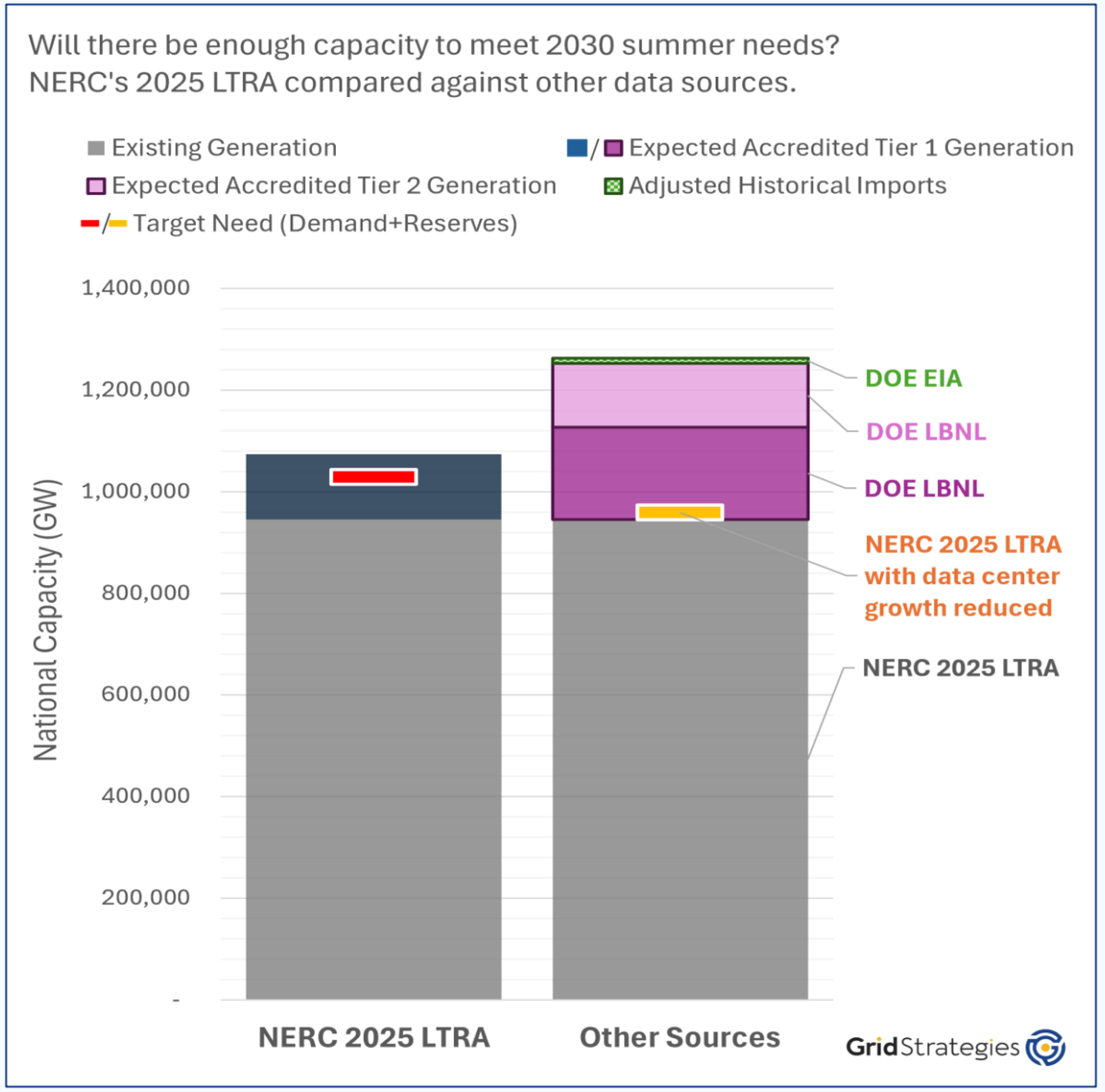
Summary slide of seasonal capacity differences in 2030

On Slide 6, the comparison of NERC 2025 LTRA analysis against our analysis using other sources is meant as an illustrative comparison of the national risk given the use of different credible data sources.

The NERC 2025 LTRA bar was made by summing the forecasted 2030 summer load + reserves (target), existing generation, and Tier 1 data for each region directly from the NERC data.

The target value shown in "Other Sources" was created by applying a one third derate to known data center load growth in all regions. The one-third derate factor is the ratio of estimated data center growth in 2030 from chip shipments to the estimated growth from utility roll-ups as used by LTRA (Wilson, J., et al. 2025). Another one-third derate factor is from the assumption that many data centers are likely to use some form of on-site generation or storage to curtail their peak demand (Thomas, M., 2026). The known data center load growth is from Grid Strategies analysis of total system load growth that is attributable to data centers (Wilson, J., et al. 2025). The impact of this data center growth reduction scenario on individual regions is shown in slide 24.

The generation resources shown in "Other Sources" is the sum of resources available in the LBNL dataset that are reasonably expected to connect by 2030. Adjusted historical imports represent the non-firm imports that have been available during grid stress events from the Energy Information Administration. More detail on the other sources data is provided in subsequent slides.



SOURCE | NERC "2025 LTRA" (2026); NERC "ES&D" (2026); Wilson, J., et al. (2025); Thomas, M. (2026); Rand, J. et al. (2025); EIA, "About the EIA-930 data" (accessed Feb. 2026)

Analysis using LBNL data: Regional assessment areas

The DOE's Lawrence Berkeley National Laboratory collects data from the generation interconnection queues for seven ISOs / RTOs and 49 non-ISO balancing areas (including utilities and Power Marketing Administrations), representing roughly 97% of currently installed U.S. generating capacity. This data is compiled annually with help from Interconnection.fyi and is posted for public view at emp.lbl.gov/queues. The 2025 dataset includes data through the end of 2024.

The 56 entities in the LBNL database were mapped to the NERC LTRA assessment areas by geography (maps to the right). The non-RTO utilities were mapped as follows:

WECC California
- LADWP
- SMUD
- WAPA-SN

WECC Rocky Mtn
- CLPT
- BHCT
- CSU
- PacifiCorp
- PRPA
- PSCo
- TSGT
- WAPA-RM

WECC Northwest
- Avista
- BHP
- BPA
- CPUD
- GrantPUD
- MPC
- NWMT
- PGE
- PSE
- TPU
- WAPA-IS

WECC Basin
- IdahoPower

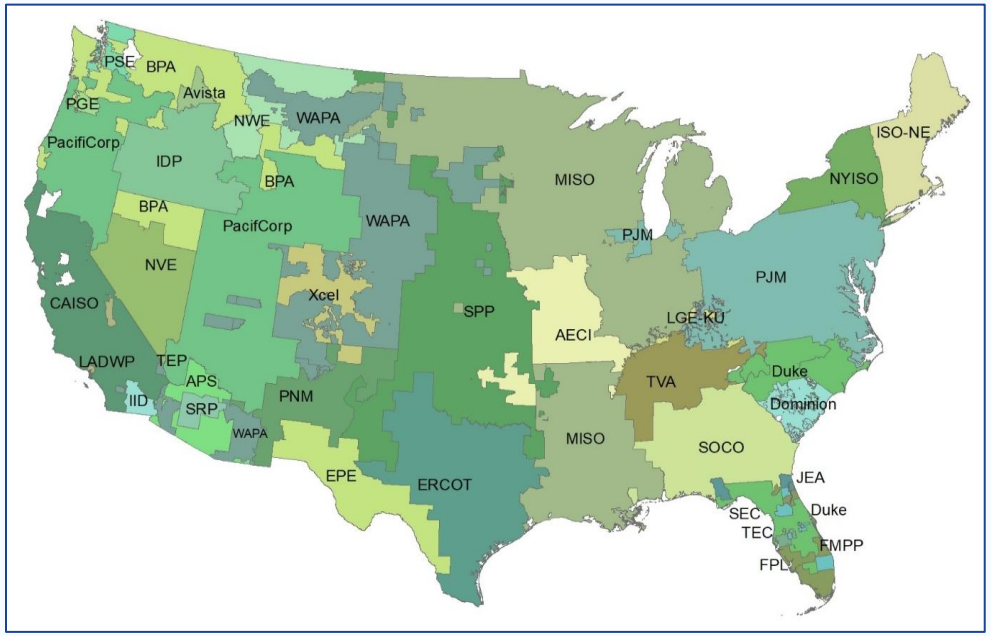
WECC Southwest
- APS
- EPE
- IID
- N-C
- NVE
- PNM
- SRP_ANPP
- SRP
- SRP_Gila
- SRP_PV-PC
- SRP_SWV
- TEP
- WAPA-DSW
- WAPA-MPP

SERC Central
- AEC
- LGE-KU
- TVA

SERC Southeast
- GTC
- SOCO

SERC Florida
- OUC
- TEC
- Duke (FL)

SERC East
- Dominion
- S-C
- Duke (non-FL)



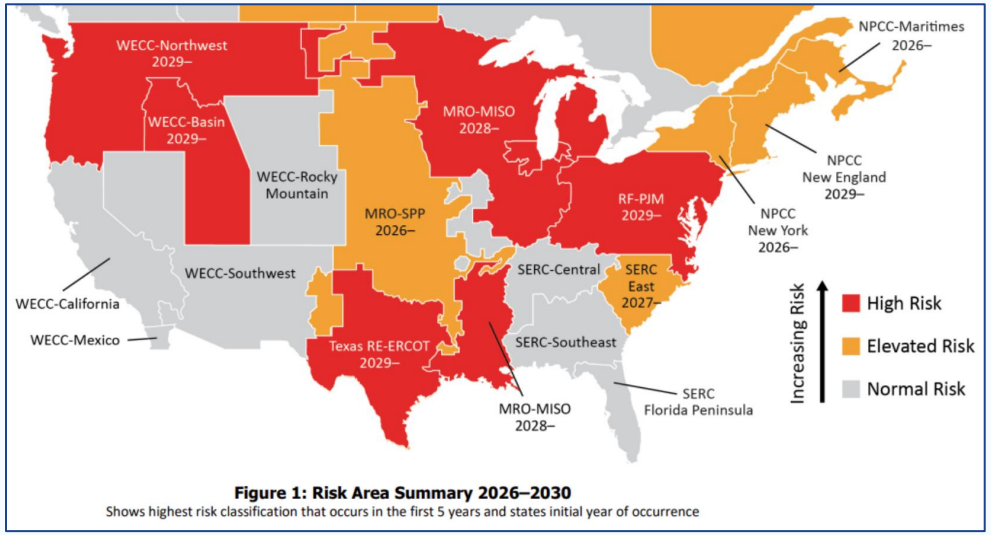


Figure 1: Risk Area Summary 2026–2030
Shows highest risk classification that occurs in the first 5 years and states initial year of occurrence

SOURCE | NERC "2025 LTRA" (2026) and Rand, J. et al. (2025)

Analysis of LBNL data: Generation tier status

LBNL interconnection data is organized by its queue status and study phase in the interconnection queues. Queue status refers to if the facility is completed, withdrawn, or actively progressing through the queues.

NERC organizes in-development generation resources by Tiers, where:

- Tier 1 are resources with executed interconnection agreements
- Tier 2 are any resource that is in the study process, and
- Tier 3 are those that have submitted interconnection requests but are not yet under study.

The cross-walk between LBNL's "Queue Status" and "IA Status Clean" fields and the NERC Tiers used in this analysis are shown to the right. Interconnection requests marked as Active in the Queue Status are organized into Tiers based on their IA Status.

Resources considered in to be in advanced Tier 2 status were those with either "IA Pending" or "Facility Study" status in the LBNL data. Suspended interconnection requests are considered Tier 2 because they have already completed some study phases but have paused their continuation of progress. Requests that un-pause often enter at the same study stage. Requests of Unknown or N/A status are considered Tier 3 because their existence in the database indicates an interconnection request has been made, but whether studies have begun cannot be said for sure.

LBNL Queue Status	NERC Tier
Active	(see IA Status)
Withdrawn	Cancelled
Operational	Operational
Suspended	Tier 2
Unknown	Tier 3

LBNL IA Status Clean	NERC Tier
Withdrawn	Cancelled
Operational	Operational
IA Executed	Tier 1
Construction	Tier 1
IA Pending	Tier 2
Facility Study	Tier 2
Cluster Study	Tier 2
System Impact Study	Tier 2
Feasibility Study	Tier 2
Combined	Tier 2
In Progress (unknown study)	Tier 2
Suspended	Tier 2
Not Started	Tier 3
N/A	Tier 3

SOURCE | NERC "2025 LTRA" (2026) and Rand, J. et al. (2025)

Analysis using LBNL data: Expected withdraw rates

To reduce the likelihood of overcounting generation resources that may not interconnect, we reduced all Tier 1 and 2 resource data in the LBNL queue dataset given region- and status-specific historic withdraw rates.

LBNL publishes the completion rates (as of 2024) of all resources in the regional queues that entered the queue between 2000 and 2019. The withdraw rates vary regionally between 64% and 85%. LBNL also provides information about the queue study phase that projects were in when they withdrew. In general, fewer projects withdraw once they reach advanced stages of the interconnection queue process.

Applying the regional withdraw rates to all generation without regard for its queue location would overly discount generation in Tier 1 and advanced Tier 2 status. Instead, we adjust the amount of generation that is expected to withdraw from each Tier separately. See illustrative figure to the bottom right.

We first calculate the total amount of expected regional withdraws by applying the appropriate withdraw rate to the sum of all Tiers 1, 2, and 3 generation in each region's queue. We assume that 15% of generation in Tier 1 status will withdraw, equivalent to the share of withdrawn requests between 2019 – 2023 in the IA executed phase from LBNL's analysis. Because no generation in Tier 3 is expected to interconnect by 2030, we assume 100% of Tier 3 generation withdraws for every region. The difference between the total amount of expected regional withdraws and that which is assumed to withdraw from Tiers 1 and 3 in each region is applied to the Tier 2 data.

LBNL: Historical completion by region for requests submitted 2000-2019 (as of 2024)

Region	Active	Operational	Withdrawn
CAISO	14%	9%	77%
ERCOT	14%	22%	64%
ISO-NE	8%	18%	74%
MISO	9%	15%	76%
NYISO	7%	8%	85%
PJM	8%	14%	77%
SPP	9%	14%	76%
Southeast	5%	9%	85%
West	13%	9%	79%

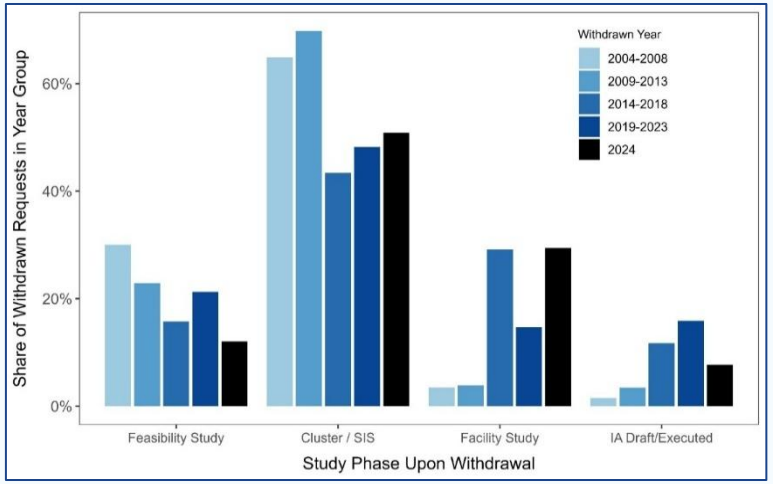
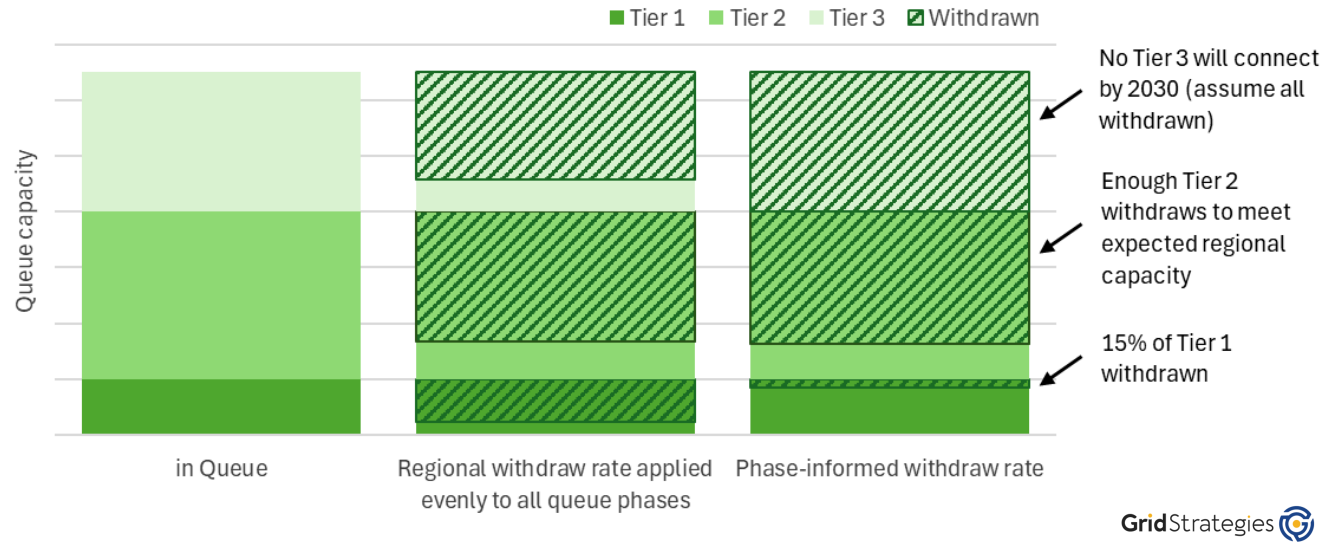


Illustration of two different methods to apply regional withdraw rates to interconnection queue data. The same amount of generation capacity withdraws in both methods.



GridStrategies

SOURCE | Rand, J., et al. (2025)

Analysis using LBNL data: Resource type

LBNL interconnection data is organized by generation resource type. When multiple resource types (e.g., gas and battery storage) are combined into one interconnection request, LBNL lists each resource type. The LBNL database includes a "type_clean" field, which summarizes all types of resources included in the interconnection entry.

These "clean" resource types are organized into a fewer number of categories in our analysis for simplicity. The cross-walk is provided in the two tables to the right.

LBNL Clean Type	Resource Type
Battery	Battery
Offshore Wind+Battery	Battery Hybrid
Other+Battery	Battery Hybrid
Solar+Battery	Battery Hybrid
Solar+Other+Battery	Battery Hybrid
Solar+Wind+Battery	Battery Hybrid
Wind+Battery	Battery Hybrid
Geothermal	Geothermal
Solar+Other	Hybrid
Solar+Wind	Hybrid
Wind+Other	Hybrid
Hydro	Hydro
Offshore Wind	Offshore Wind
Other	Other
Hydrogen	Other Storage
Other Storage	Other Storage
Solar	Solar
Battery+Other Storage	Storage Hybrid
Other+Battery+Other Storage	Storage Hybrid
Solar+Battery+Other Storage	Storage Hybrid
Solar+Wind+Other Storage	Storage Hybrid
Wind	Wind

LBNL Clean Type	Resource Type
Coal	Coal
Gas+Battery	Firm Hybrid
Gas+Battery+Diesel	Firm Hybrid
Gas+Coal	Firm Hybrid
Gas+Diesel	Firm Hybrid
Gas+Oil	Firm Hybrid
Gas+Other	Firm Hybrid
Geothermal+Battery	Firm Hybrid
Hydro+Battery	Firm Hybrid
Oil+Battery	Firm Hybrid
Oil+Coal	Firm Hybrid
Oil+Other	Firm Hybrid
Other+Coal	Firm Hybrid
Other+Diesel	Firm Hybrid
Solar+Diesel	Firm Hybrid
Solar+Gas	Firm Hybrid
Solar+Gas+Battery	Firm Hybrid
Solar+Geothermal	Firm Hybrid
Solar+Hydro	Firm Hybrid
Wind+Gas	Firm Hybrid
Gas	Gas
Diesel	Oil
Oil	Oil
Nuclear	Nuclear

GridStrategies

SOURCE | NERC "ES&D" (2026) and Rand, J. et al. (2025)

Analysis using LBNL data: Accredited capacity

No resource will produce electricity at its rated capacity ("nameplate") all the time. To account for this, regions apply an accredited value to a resource to indicate a percentage of the nameplate capacity that can be expected to perform during peak demand. The accredited value of a resource varies by fuel type, season, year, and geographic location.

Each region calculates accredited capacity differently. Some consider historic forced outages of a resource type (which tend to overestimate availability) while others use modeling tools to determine how much load a resource can be expected to carry in future years given numerous system dynamics.

The LBNL interconnection queue database provides nameplate values for all generators in the queues. To ensure only a reasonable amount of new resources are accounted for in our analysis, we seasonally accredit each resource type based on the region-specific method used locally for resource accreditation. If a region does not use seasonal or resource-specific accreditation, a neighboring region's method is used.

Unless otherwise noted:

- Battery Hybrid resources are equivalent to battery resources' accredited values
- Firm Hybrid resources are the average of firm resources' accredited values
- Hybrid resources are the average of wind and solar resources' accredited values
- Other resources are the average of any remaining resources' accredited values not otherwise listed

Region	Accreditation Method & Source	Notes
MISO	2025-2026 DLOL	Summer & winter values. Battery resource uses storage (blended) and storage hybrid uses pumped storage DLOL. MISO values are also used for all other regions' resources that are not otherwise noted.
SPP	ELCC for Summer 2026	Summer values for battery (6-hr), solar, and wind resources. Values also used for WECC-Basin & CAISO summer battery.
SPP	ELCC for Winter 24/25	Winter values for battery (6-hr), solar, and wind resources. Values also used for WECC-Basin & CAISO summer battery.
SPP	25/26 EFORd	Summer & winter values used for all non variable resources. Oil and other resources are RICE with on-site storage, gas is CC. Values also used for ERCOT other; WECC summer other storage.
ISO-NE	CAR-SA: Impact Analysis 1/14/26	Summer & winter values. Used for solar, wind, and hydro resources
ISO-NE	2025 Capacity, Energy, Loads, and Transmission (CELT) Report	Summer & winter values. CELT used for battery, battery hybrid, coal, gas, nuclear, offshore wind, oil, other, and other (pumped) storage resources.
NYISO	2025-2026 Final Capacity Accreditation Factors	Summer values used for both seasons. Rest of state values used for battery (6-hour), hydro, offshore wind, other, other storage (pumped storage), solar, wind.
NYISO	2024 Review of EFORd	Summer & winter values. NYCA values used for coal (steam turbine), gas (CC), nuclear (steam turbine), oil (jet engine). NYISO values are also used for SERC-E summer battery and summer wind.
PJM	2027/2028 ELCC Class Ratings	Summer values used for both seasons for all resources. Battery is 6-hour CSR, battery hybrid is configuration 3, gas is CC, other is waste-to-energy, other storage is other unlimited resources, solar is fixed-tilt, storage hybrid is configuration 1. PJM values also used for SERC-E hydro, nuclear, oil, other, and other storage resources.
ERCOT	25/29 CDR	Summer & winter values for battery (6-hr), other storage (12-hr), solar, and wind. Values also used for SERC-FP and SERC-SE battery.
SERC	2025 CRP Chapter 3	Winter values used for both seasons. 2030 Reference case used for battery (standalone BESS), battery hybrid (synergistic BESS), offshore wind (avg. ELCC for first 800MW), solar (avg. ELCC for first 10 GW of standalone), wind (avg. ELCC for DEP and DEC for first 300 MW).
SERC	2023 Wind ELCC Study	Average ELCC of 5GW and 15GW standalone solar used for all SERC regions' summer solar.
Southwest	E3 2023 Resource Adequacy in the Desert Southwest	2033 values also used for WECC regions' winter battery, summer hydro, summer nuclear, winter and summer wind (unless otherwise stated).
Northwest	E3 2025 Resource Adequacy and the Energy Transition in the Pacific Northwest: Phase 1 Results	Winter values for Greater Northwest used for WECC regions' gas, other storage, solar, wind (unless otherwise stated).
Northwest	E2 2019 Resource Adequacy in the Pacific Northwest	Winter values for 2030 Reference scenario used for WECC regions' coal, geothermal, hydro, nuclear (unless otherwise stated).
CAISO	2026 Net Qualifying Capacity (NQC) for RA Resources	Summer and winter values used for CAISO geothermal, hydro, other (biomass), solar, wind. Values also used for other WECC regions' other, solar, hydro and geothermal (unless otherwise stated).
National	NREL VRE ELCC Study	Median offshore wind used for SERC-FP (SERC), ERCOT, WECC-NW (NorthernGrid), CAISO

Adding historically available interregional transfer capability to the seasonal capability analysis

The EIA historical imports included in the charts on slides 16 and 29 take the difference between the historical import availability (2015 and 2025) from the U.S. EIA Form 930 data and the 2030 firm import assumptions in the LTRA. The last column subtracts imports from demand in all peak hours over the last decade and shows the minimum reduction in in-region generation due to imports.

For New York, an additional 1,250 MW of import availability was added to the EIA Form 930 data to account for the energization of the Champlain Hudson Power Express transmission line.

Comparison of on-peak net imports in four regions as assumed by LTRA against actual, in MW. Exports are negative.

	LTRA 2026 Assumption	LTRA 2030 Assumption	Historical Availability (2015-2025)
MISO	2,809	2,509	5,344
SPP	-18	-78	1,421
ISONE*	567	84	2,464
NYISO	3,405	3,486	2,730†
PJM	3,840	0	2,937‡

*Data for New England (ISONE) predates completion of the 1200 MW New England Clean Energy Connect with Hydro Quebec, so on-peak imports will likely be higher going forward.

† EIA data for New York does not include the Champlain Hudson Power Express, a 1,250 MW line connecting Quebec to New York City that is slated for completion in 2026. Once that is included, NYISO imports should be roughly in line with the LTRA.

‡ The EIA data show PJM was exporting during most peak demand periods over the last decade, so it is not possible to estimate the historical availability of imports for PJM. PJM administratively sets its capacity benefit of ties (non-firm imports) at 1.5% of nameplate generation procured in the capacity market, calculated here as 1.5% for 195,831 MW in the 2025/2026 Base Residual Auction. In its 2023 reserve margin analysis, PJM calculated 6,474 MW in total diversity benefit with its neighbors, much higher than the capacity benefit of ties shown in the table.

GridStrategies

SOURCE | EIA, "About the EIA-930 data" (accessed Feb. 2026); PJM, "2025/26 Base Residual Auction Report" (2024); Brooks, A. et al. (2025)

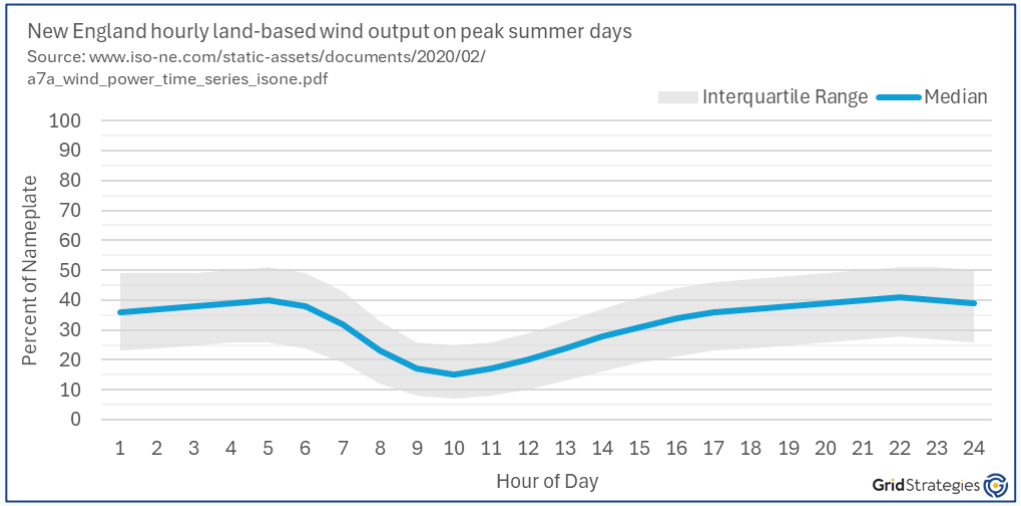
Analysis using LBNL data: New England wind and solar production

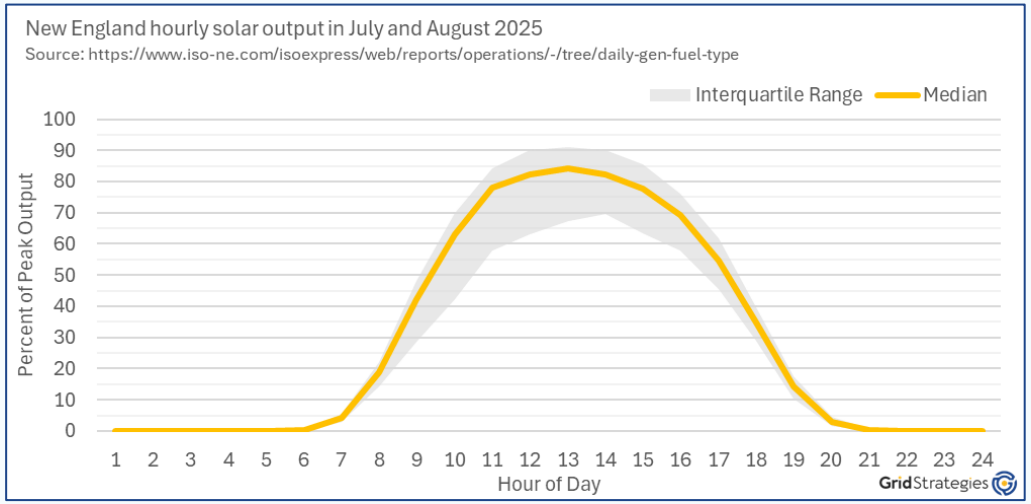
In order to use LBNL data for energy analysis for New England, we compare the amount of Tier 1 and Tier 2 LBNL data against NERC (slide 46). This required an understanding of the generation output in New England during summer months for different resource types.

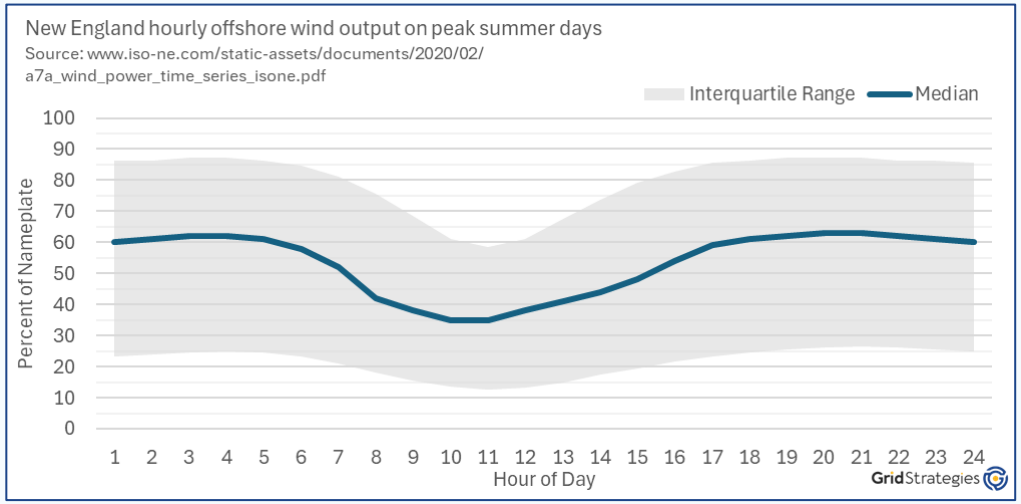
On the right are the hourly median and interquartile range for wind and offshore wind production in New England during peak demand days. This data was collected between 2012 and 2018 by ISONE to help them understand wind output during times of grid stress.

Also shown is the median and interquartile range for average hourly solar output in July and August of 2025, also from data collected by ISONE.

The hourly median data was used to estimate the output of both land-based and offshore wind in New England during peak summer 2029.







GridStrategies

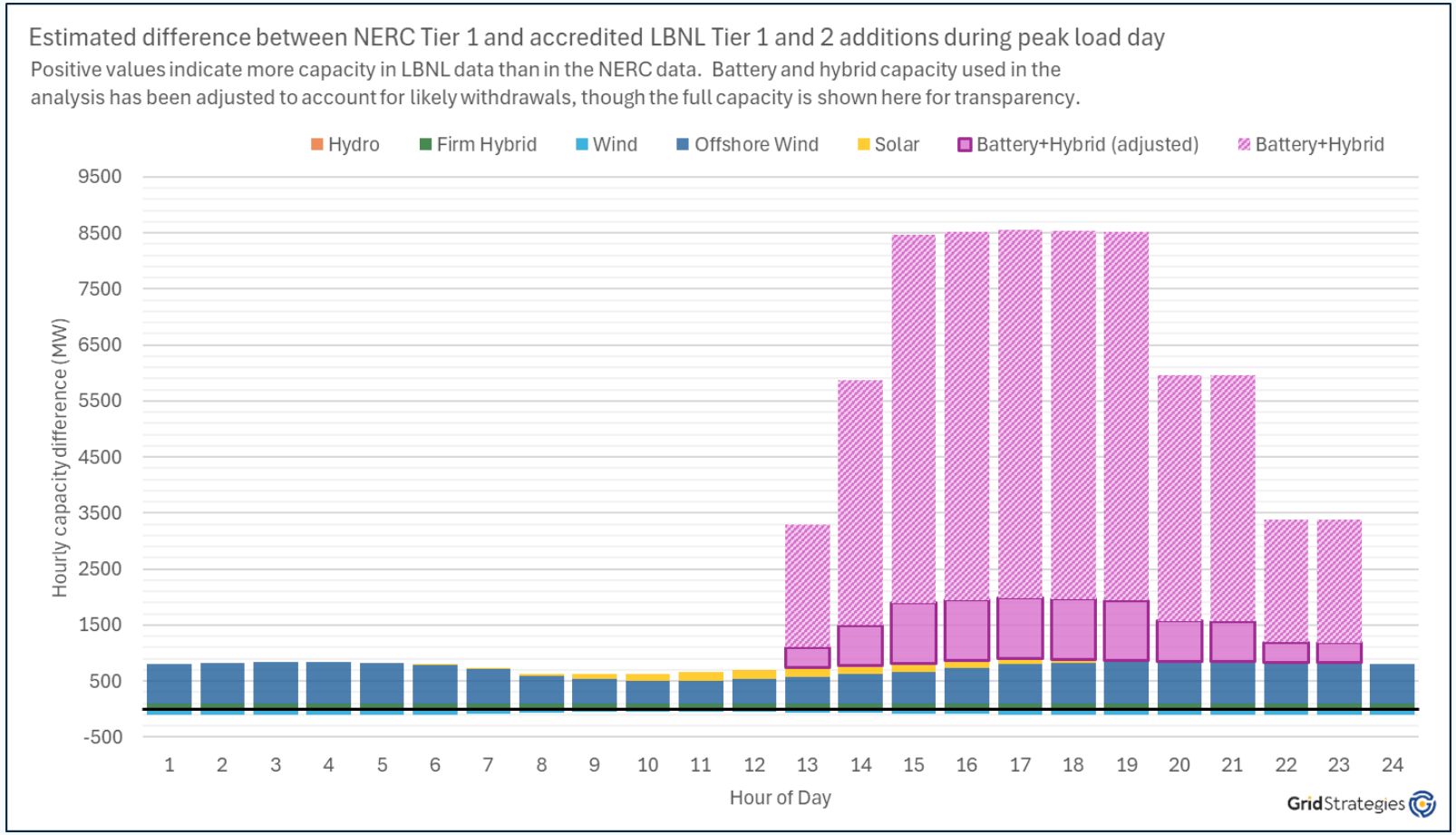
SOURCE | Judd, S. "Wind and Power Time Series Modeling of ISO-NE Wind Plants" (2020); ISONE "2025 Hourly Solar Generation" (2026)

Analysis using LBNL data: New England hourly production

Shown here is the potential change in hourly energy output for New England on peak load days given the different resource mixes between the LBNL and NERC data. Positive values indicate LBNL recorded more capacity for that resource type while negative values indicate NERC recorded more capacity.

As explained on slide 45, we adjusted the hourly production of each resource type to match expected peak day behavior, given regional resource accreditation methods. Battery and battery hybrid resources are expected to discharge at partial capacity for all hours of unserved energy, modulating their output so that no one resource discharges for longer than 6 hours. Given the large quantity of battery and hybrid resources in the LBNL data, these resources were additionally discounted by the historic withdraw rate of the region.

Given the data available, we cannot replicate the energy inadequacy analysis presented in the LTRA exactly. We provide this rough estimate to understand how different generation assumptions would impact unserved energy results.



SOURCE | NERC "2025 LTRA" (2026); NERC "2024 LTRA" (2025); NERC "ES&D" (2026); Rand, J. et al. (Aug. 2025)

BEFORE THE UNITED STATES DEPARTMENT OF ENERGY

Federal Power Act Section 202(c) Emergency Order: Tri-State Generation and Transmission Association, Platte River Power Authority, Salt River Project, PacifiCorp, and Xcel Energy	)

Exhibit to
Motion to Intervene and Request for Rehearing and Stay of
Public Interest Organizations

Exhibit 2-183
2025 Western Assessment of Resource Adequacy



2025 Western Assessment of Resource Adequacy

WECC's annual Western Assessment of Resource Adequacy provides a high-level examination of risks to the reliability of the Western Interconnection related to resource adequacy over the next 10 years. Through an energy-based probabilistic approach, WECC examines the risks throughout the entire interconnection and

eight subregions, across all potential hours at risk (unlike traditional peak load hour assessments). This work is intended to help stakeholders target specific areas and topics for deeper evaluation and mitigation.

Key Takeaway

The West's planned resource buildout will not keep up with anticipated load growth over the next decade, particularly in the Basin and Northwest subregions. The West could see energy shortfalls as early as 2028.

This is the case even with an incredibly high amount of resource additions planned over the next 10 years, approximately half of which are speculative. Any delay or cancellation of planned resource additions would exacerbate the resource adequacy risk.

Further complicating the risk, 90% of planned additions are inverter-based resources. So, while it seems 177 GW of new resources should be able to serve 31 GW of projected load growth, most of the new resources are weather dependent, which creates uncertainty.

Much of the load growth is attributed to large loads. While there is uncertainty about whether large loads will materialize as predicted, even if some large loads do not, there is still a resource adequacy risk.

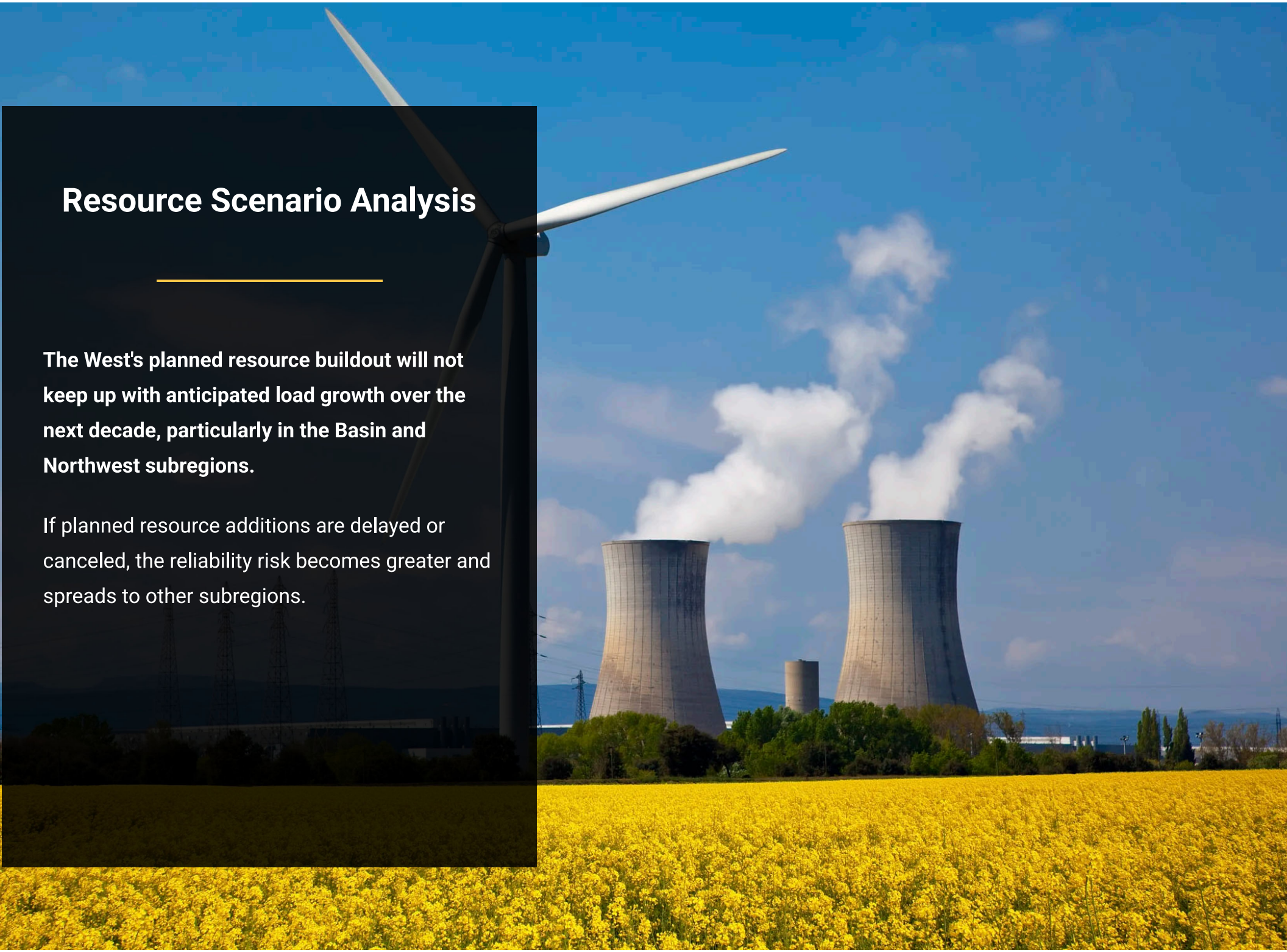
Western Interconnection Subregional Resource Adequacy Risks



Resource Scenario Analysis

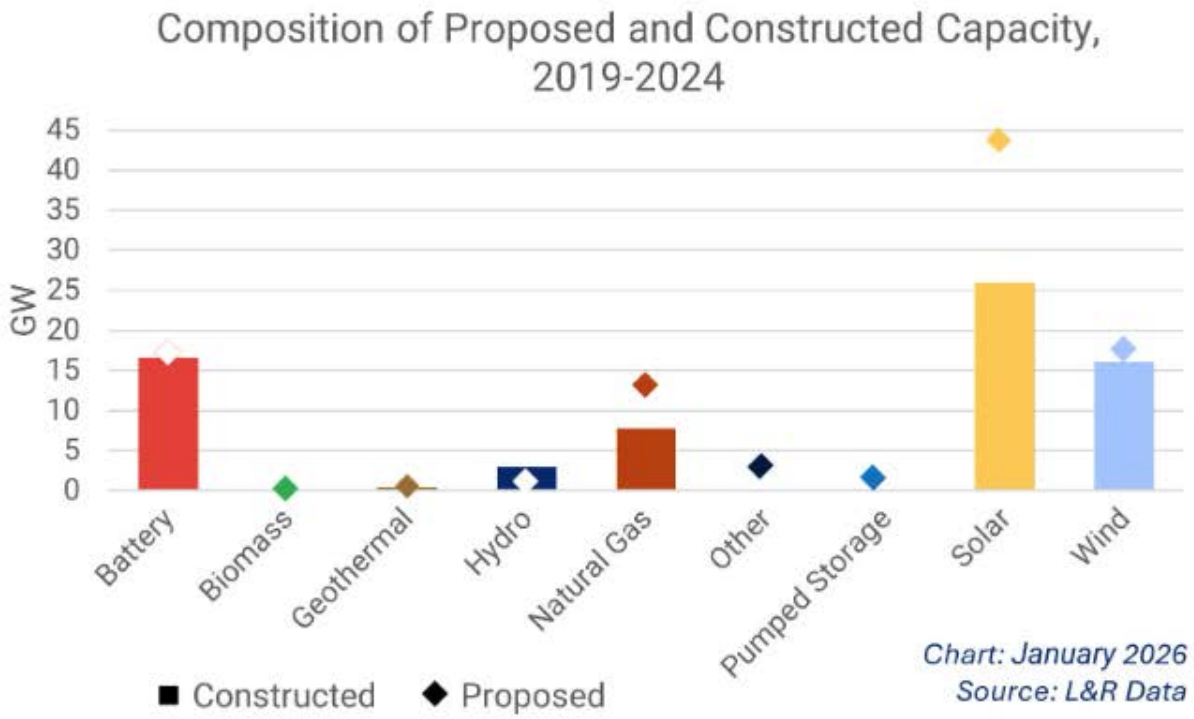
The West's planned resource buildout will not keep up with anticipated load growth over the next decade, particularly in the Basin and Northwest subregions.

If planned resource additions are delayed or canceled, the reliability risk becomes greater and spreads to other subregions.



Resource Buildout

Entities in the Western Interconnection plan to add 177 GW of new resources over the next decade. Historically, the number of new resources built according to plan and on time has varied. WECC's analysis found that in 2024, 80% of planned resources came online as scheduled. In 2023, approximately 53% of planned resources were added on time, and the three-year average (2022–2024) of resources that become operational in the year planned is 67%. Even though the planned capacity additions are significant, it is unlikely that everything planned will be built as planned, creating the chance of a shortfall.



Resource Scenarios

To assess the impact of failing to add generation as planned, WECC evaluated four scenarios :

- All planned resources are built on time
- 95% of planned resources are built on time
- 85% are built on time
- 67% are built on time

All Additions Scenario

Even if all planned additions are completed and operational on time, WECC's analysis found loss of load every year beginning in 2029 and continuing through the end of the decade for a total of 463 LOLH over the 10-year period studied. Two subregions saw loss of load in this scenario; as a result, they are at Elevated Risk for resource adequacy shortfalls over the coming decade:

- Northwest: 445 LOLH over 10 years
- Basin: 18 LOLH

95% Scenario

In this scenario, there was slightly more loss of load than in the All Additions Scenario, as expected: 568 hours vs. 463 hours.

- Northwest: 525 LOLH
- Basin: 43 LOLH

85% Scenario

If 85% of resources are built on time, WECC's analysis found 873 loss of load hours over the decade.

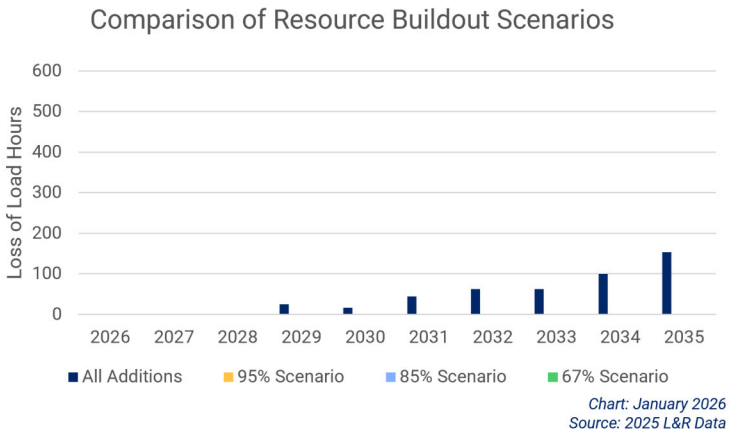


Chart: January 2026
Source: 2025 L&R Data

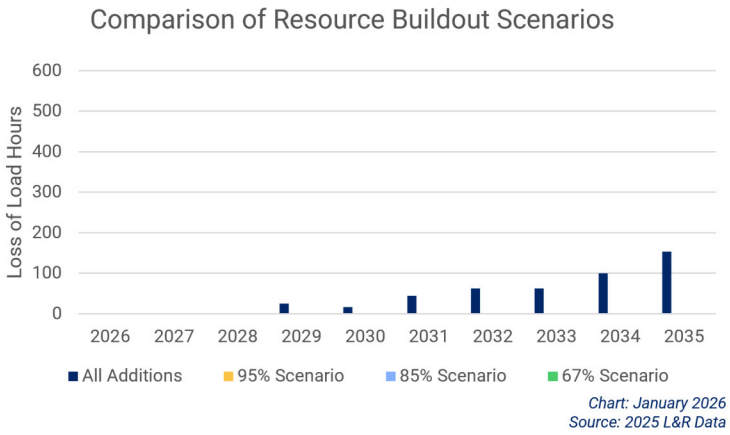


Chart: January 2026
Source: 2025 L&R Data

See Western Assessment Supplemental Information for more information about the scenarios.

Resource Scenarios

To assess the impact of failing to add generation as planned, WECC evaluated four scenarios :

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Resource Scenarios

To assess the impact of failing to add generation as planned, WECC evaluated four scenarios :

- All planned resources are built on time
- 95% of planned resources are built on time
- 85% are built on time
- 67% are built on time

In this year's Western Assessment, WECC uses the term "loss of load hours" instead of the term used in previous assessments, "demand at risk hours." This change was made to align WECC's terminology with that used by NERC. The terms have the same meaning, which is that there is a risk of load loss under certain circumstances.

All Additions Scenario

Even if all planned additions are completed and operational on time, WECC's analysis found loss of load every year beginning in 2029 and continuing through the end of the decade for a total of 463 LOLH over the 10-year period studied. Two subregions saw loss of load in this scenario; as a result, they are at Elevated Risk for resource adequacy shortfalls over the coming decade:

- Northwest: 445 LOLH over 10 years
- Basin: 18 LOLH

- Northwest: 706 LOLH
- Basin: 163 LOLH
- Rocky Mountain: 4 LOLH

67% Scenario

If only 67% of resources are built as planned over the coming decade, 2,144 hours may be at risk for loss of load across five subregions:

- Northwest: 1,294 LOLH
- Basin: 711 LOLH
- Rocky Mountain: 83 LOLH
- Mexico: 52 LOLH
- California: 4 LOLH

Key Takeaway

If resources are added as planned, loss of load may be limited to the Basin and Northwest subregions. However, if planned resource additions are delayed or cancelled, other subregions could also be at risk. In addition, 80% of the planned resource additions in Basin and Northwest, and more than half in Southwest, are categorized as Tier 3 ⓘ resources. Tier 3 resources are speculative, making it a risk to rely heavily on them to cover load growth.

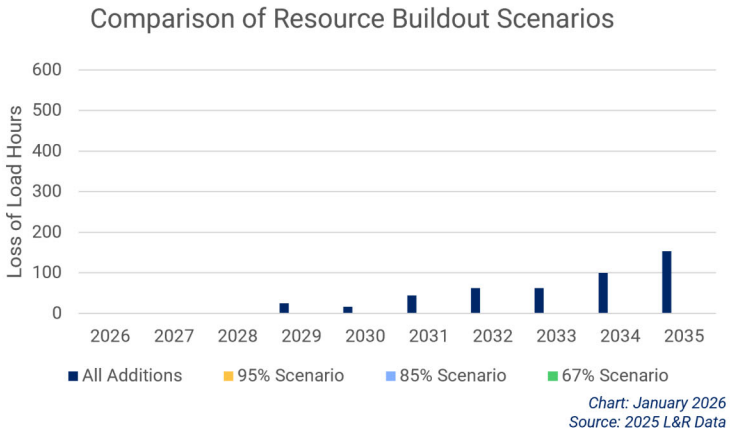


Chart: January 2026
Source: 2025 L&R Data

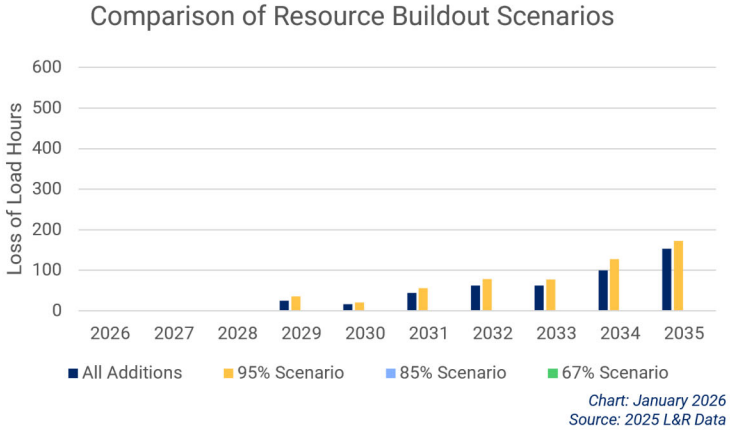


Chart: January 2026
Source: 2025 L&R Data

- Mexico: 52 LOLH
- California: 4 LOLH

Key Takeaway

If resources are added as planned, loss of load may be limited to the Basin and Northwest subregions. However, if planned resource additions are delayed or cancelled, other subregions could also be at risk. In addition, 80% of the planned resource additions in Basin and Northwest, and more than half in Southwest, are categorized as Tier 3 ⓘ resources. Tier 3 resources are speculative, making it a risk to rely heavily on them to cover load growth.

Tier 1 resources are under construction and expected to be complete and available for the year being studied.
Tier 2 resources are under contract but have yet to begin construction. These resources may be operational by the year being studied.
Tier 3 resources range from generic placeholder resources that an entity has less certainty about to more developed projects that, although the commission date is unknown and construction has not started, other details are known including capacity, type, and location information. The Western Assessment differs from other assessment in that it includes Tier 3 resources in its analysis.

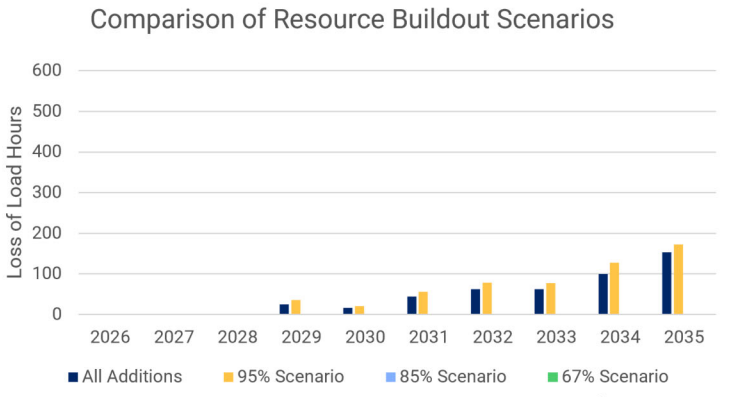


Chart: January 2026
Source: 2025 L&R Data

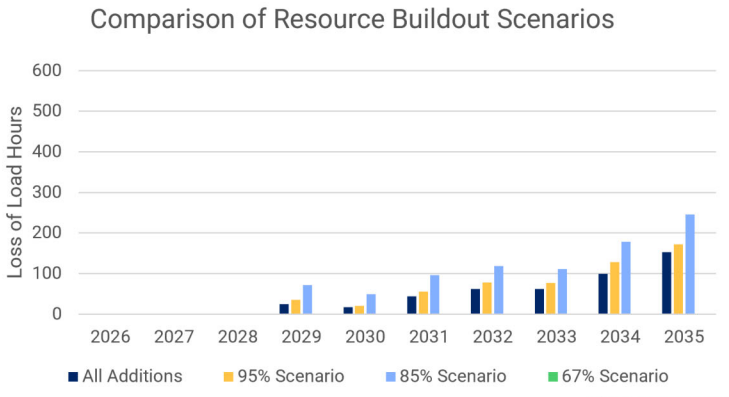


Chart: January 2026
Source: 2025 L&R Data

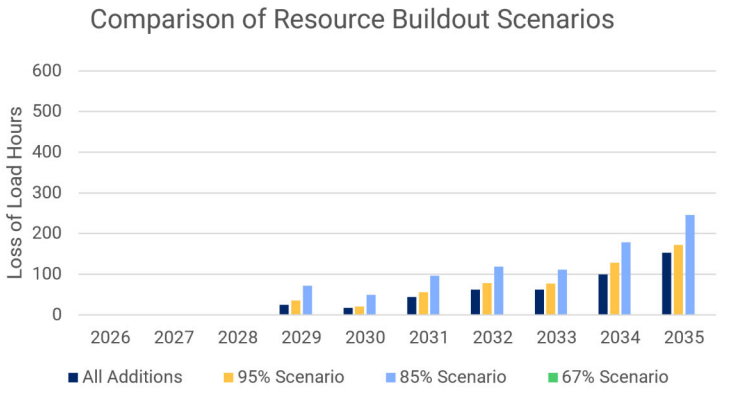


Chart: January 2026
Source: 2025 L&R Data

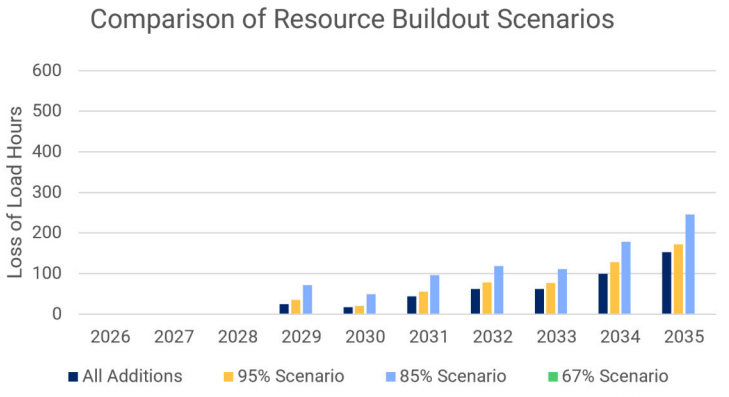


Chart: January 2026
Source: 2025 L&R Data

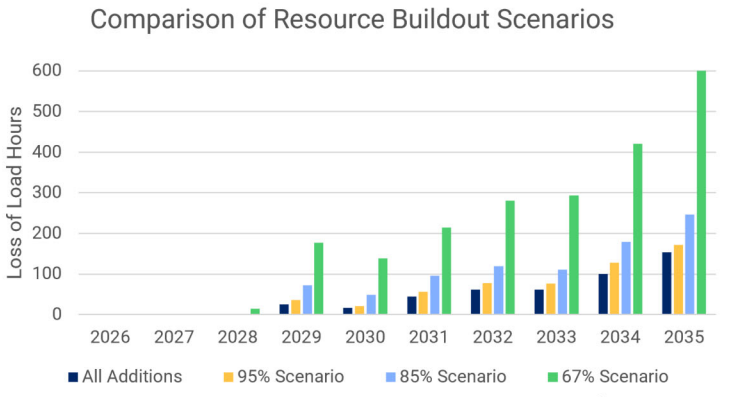


Chart: January 2026
Source: 2025 L&R Data

Comparison of Resource Buildout Scenarios

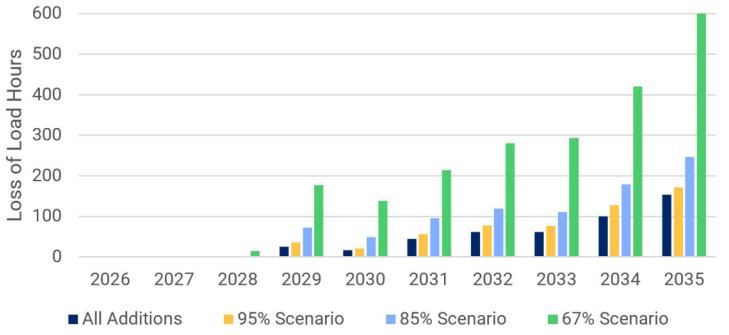


Chart: January 2026
Source: 2025 L&R Data

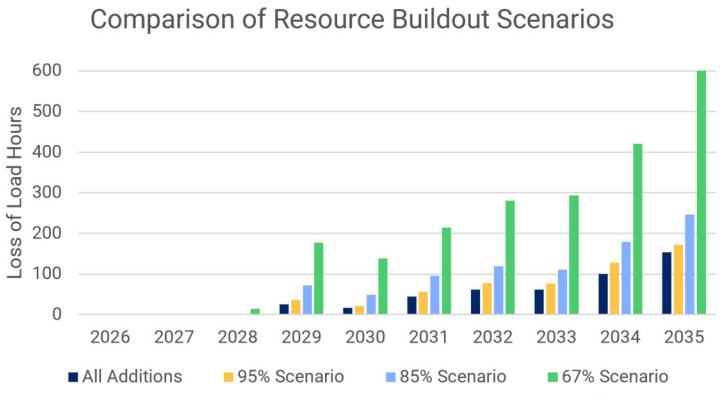
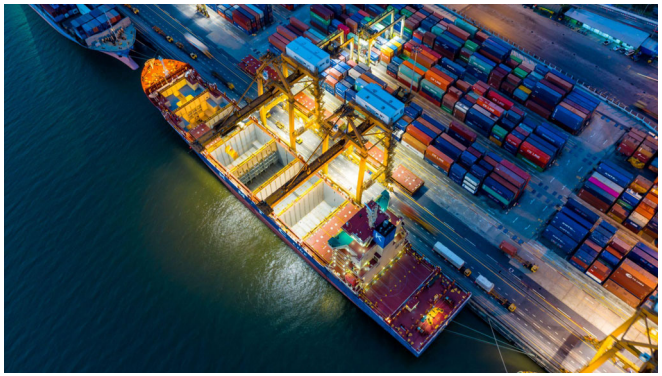


Chart: January 2026
Source: 2025 L&R Data

Risks to Planned Resource Additions



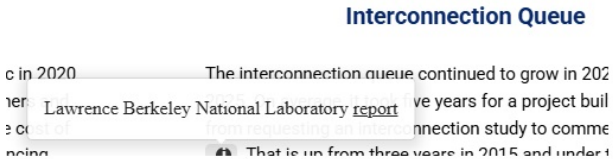
Supply Chain Disruptions

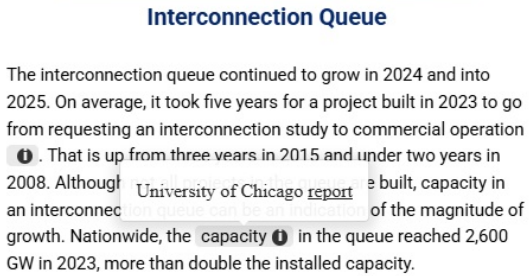
Supply chain issues that surfaced during the pandemic in 2020 continue to affect the industry. Wait time for transformers and circuit breakers is between two and four years, and the cost of both has increased significantly, according to the Balancing Authorities. Switchgears and substation switches have seen delays, too. In addition, trade issues and geopolitical tensions have raised concerns about supply chain reliability.



Interconnection Queue

The interconnection queue continued to grow in 2024 and into 2025. On average, it took five years for a project built in 2023 to go from requesting an interconnection study to commercial operation ⓘ. That is up from three years in 2015 and under two years in 2008. Although not all projects in the queue are built, capacity in an interconnection queue can be an indication of the magnitude of growth. Nationwide, the capacity ⓘ in the queue reached 2,600 GW in 2023, more than double the installed capacity.







Siting Delays

Restrictions, including outright bans on siting renewable energy facilities, and controversy over specific energy infrastructure projects have become more common across the U.S. By the end of 2024, at least 459 counties and municipalities across 44 states had adopted restrictions on siting renewables. That is an increase of 16% in one year. The report also identified 498 projects in 49 states that faced significant opposition, a 32% increase.

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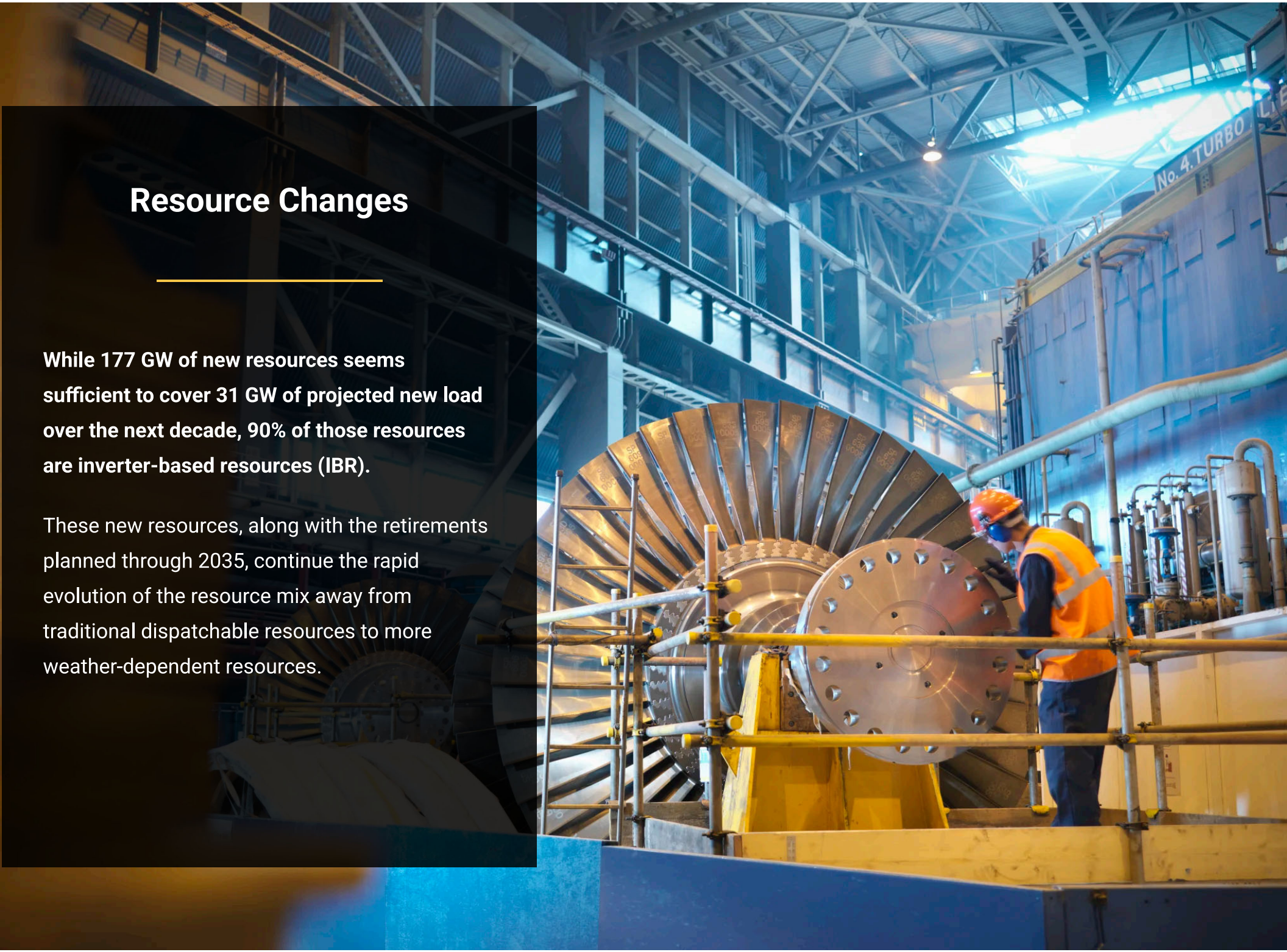
Columbia Law School report

Resource Changes

While 177 GW of new resources seems sufficient to cover 31 GW of projected new load over the next decade, 90% of those resources are inverter-based resources (IBR).

These new resources, along with the retirements planned through 2035, continue the rapid evolution of the resource mix away from traditional dispatchable resources to more weather-dependent resources.



Inverter-based Resources

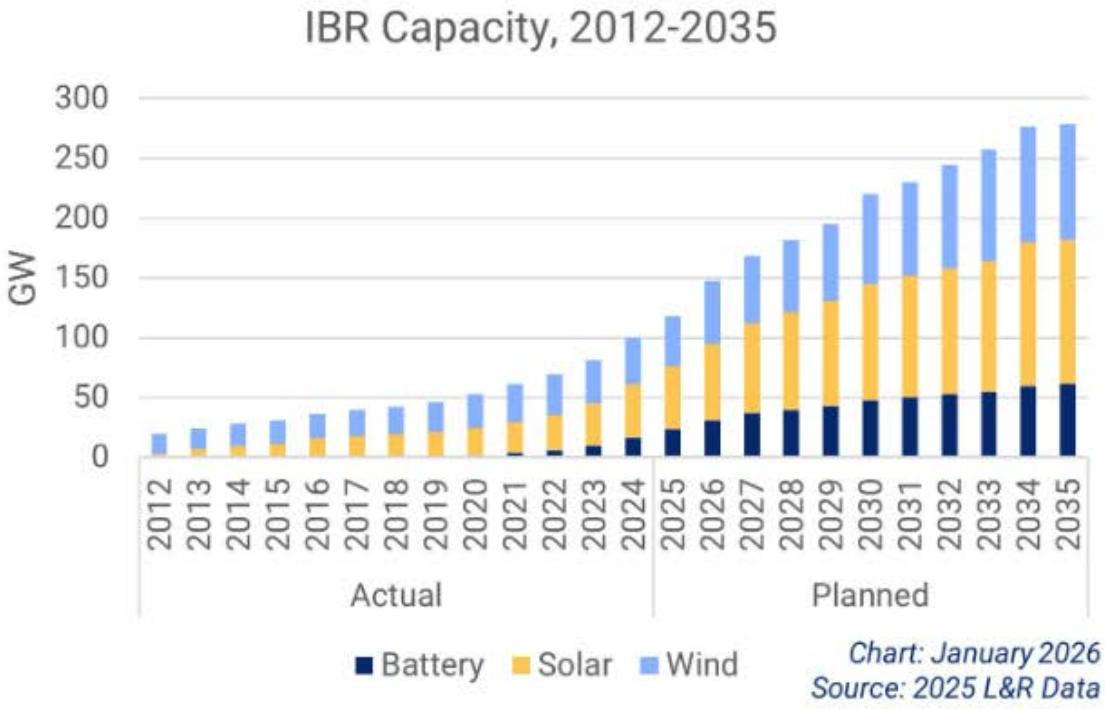
Of the 177 GW in planned resource additions over the coming decade, 90% are IBRs:

- 68 GW of solar capacity
- 55 GW of wind capacity
- 37.5 GW of battery storage capacity

Inverter-based Resources

Battery storage systems do not generate electricity. Instead, they harness the energy created by generation resources, often solar or wind. They are typically charged during off-peak hours to ensure energy is available during peak periods.

- 37.5 GW of battery storage capacity

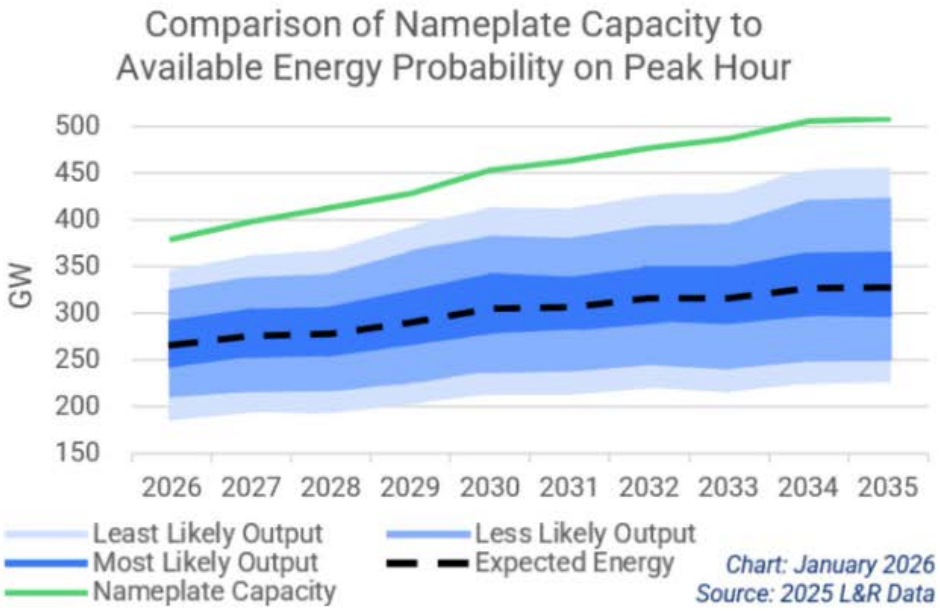


Increasing Variability

Given the significant increase in variable energy resources, efforts to determine resource adequacy must examine energy availability, as opposed to traditional resource planning in which nameplate capacity was the focus. IBRs do not generate electricity at nameplate capacity all the time, and their output can be weather-dependent. As a result, the expected energy of the resource mix is lower than its installed capacity. This gap will widen as more IBRs come online and dispatchable resources retire ⓘ.

WECC has calculated the probability distributions for each resource in the generation fleet, showing the likelihood that a resource will produce electricity at levels other than what is expected. The probabilities form a band of variability where the most likely output is in the middle of the band and the least likely outputs are at the edge. The wider the band, the higher the system's variability and the more possibilities for planners and operators to consider. The size of the band increases over the coming decade in the Western Interconnection, an indication that variability is increasing on the system even as the West builds significant amounts of new generation.

Increasing Variab
Given the significant inc
examine energy availab
focus. IBRs do not gene
dependent. As a result,
will widen as more IBRs come online and dispatchable resources retire ⓘ.

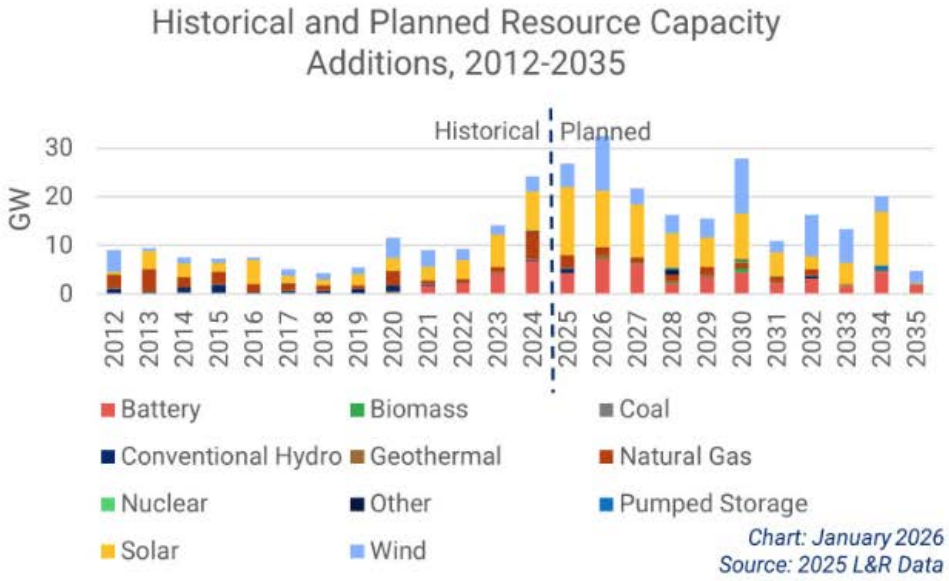


Resource Additions

Planned Resource Additions

Of the 177 GW expected to be added in the Western Interconnection over the decade, 32 GW are planned to be built in 2026. This is over three times the historical resource build average of 10 GW per year for 2015 through 2024. During that time, the greatest resource buildout occurred in 2024, with 24 GW of new resources built.

In addition to the IBRs planned, 9 GW of natural gas capacity is expected to be added over the decade, while 0.3 GW of nuclear is listed in current resource plans.



Subregional Breakdown

Almost 70% of the planned resource additions are in two subregions: Southwest (70 GW) and California (49 GW).

Basin, Northwest, and Rocky Mountain subregions each have about 15 GW in planned additions over the coming decade. The Mexico subregion has 600 MW of solar planned.

See Western Assessment Supplemental Information for more information on planned resource additions and retirements at the subregional level.

Subregional Breakdown

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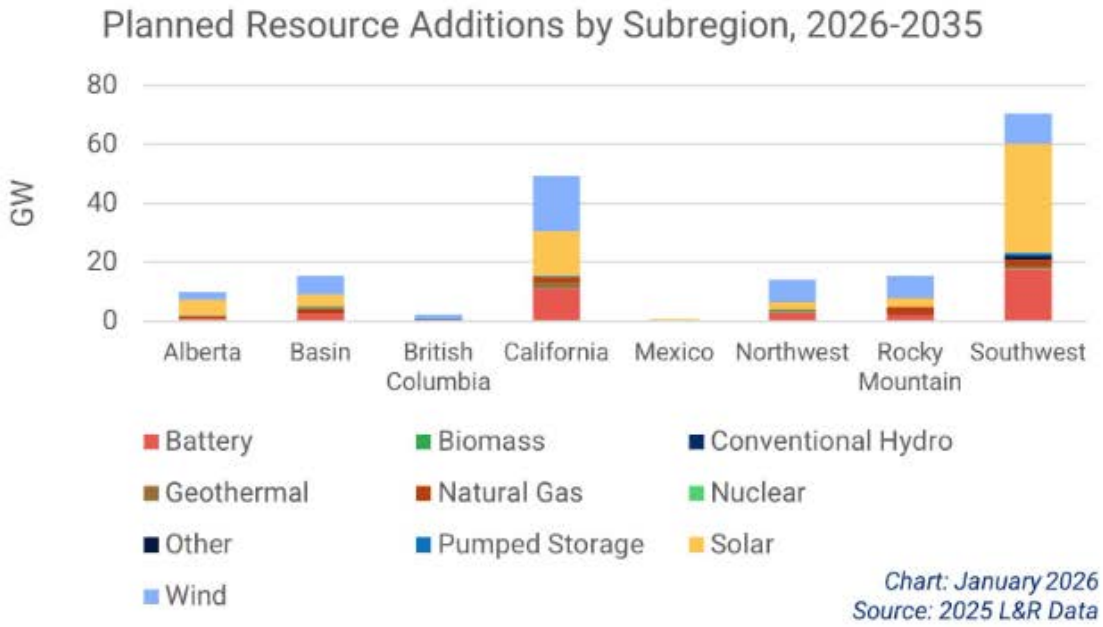
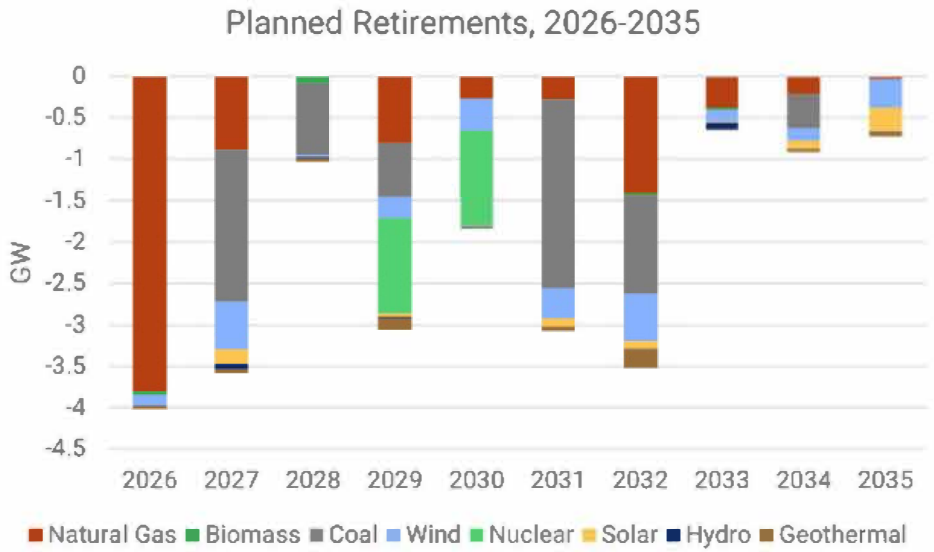


Resource Retirements

Planned Retirements

Entities plan to retire 22 GW of generation over the next 10 years. The vast majority is baseload generation such as coal (7 GW), natural gas (8 GW), and nuclear (2.3 GW, Diablo Canyon's two units, in 2029 and 2030).



Resource Mix

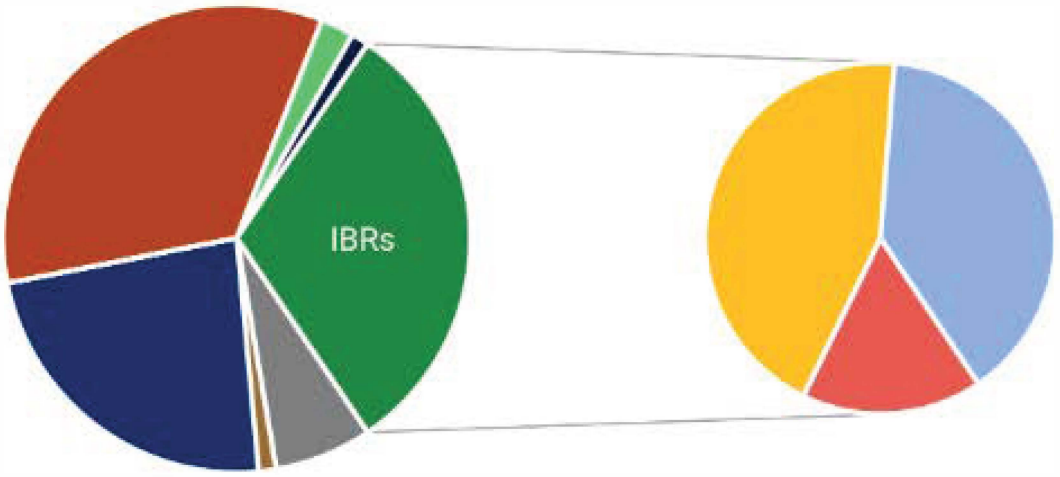
If all retirements and resource additions are made as planned, more than half of the total resource mix in 2035 will be IBRs. The expected energy output of the projected future resource mix is much lower than the nameplate capacity and fluctuates based on weather. This creates uncertainty, which increases resource adequacy risk.

Resource	% of resource mix today	% of resource mix in 2035
Battery	5%	12%
Coal	7%	2%
Geothermal	1%	1%
Hydro	23%	15%
Natural Gas	34%	23%
Nuclear	2%	1%
Other	1%	1%
Solar	14%	25%
Wind	12%	19%

Key Takeaway

Adding 32 GW of nameplate capacity in one year seems implausible as there is only one year in the last decade in which more than 20 GW were added.

Resource Mix, Year-end 2024



Battery Coal Geothermal Hydro Natural Gas
Nuclear Other Solar Wind

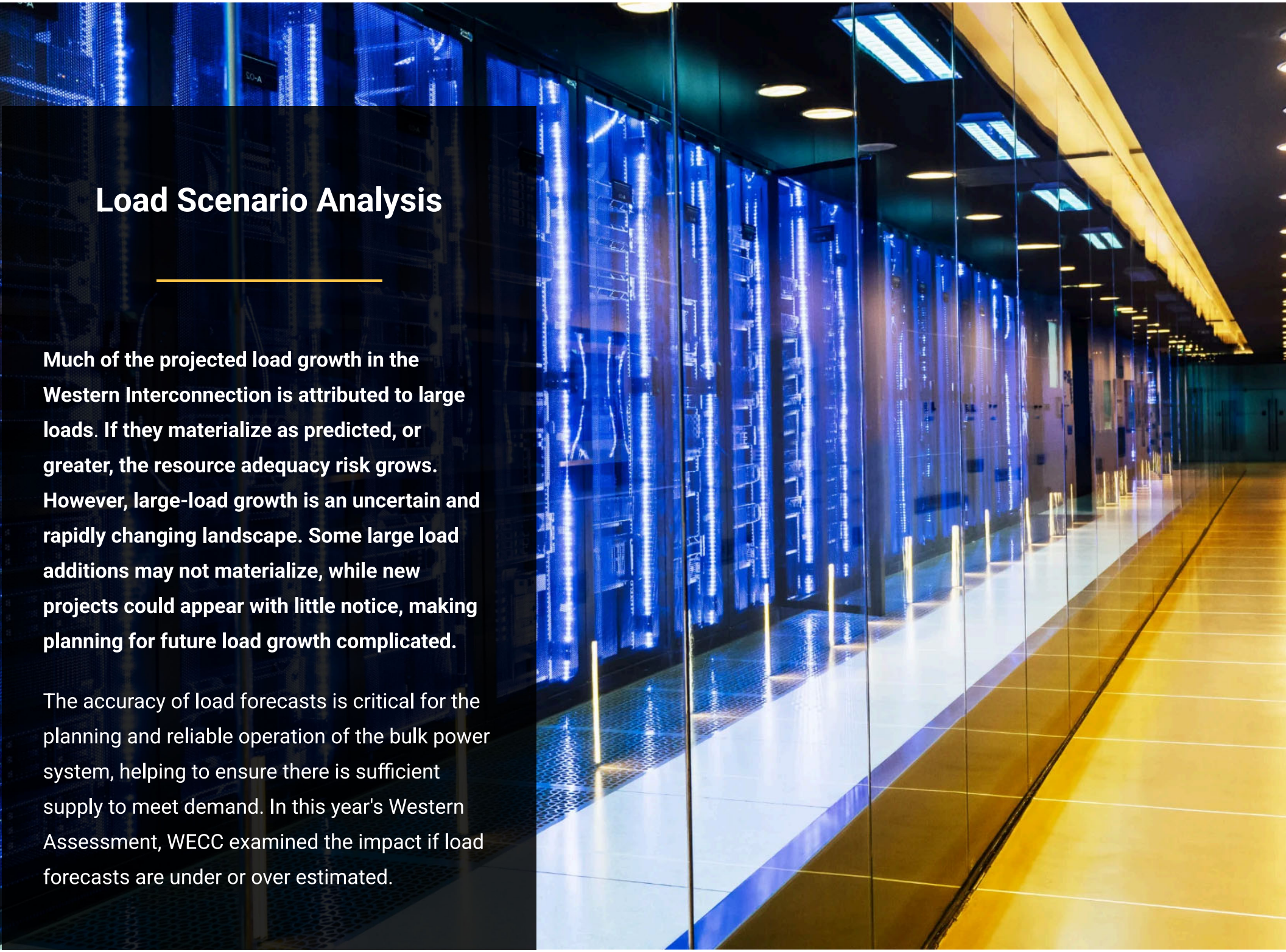
Chart: January 2026
Source: L&R Data

Resource Mix, Projected 2035



Battery Coal Geothermal Hydro Natural Gas
Nuclear Other Solar Wind

Chart: January 2026
Source: L&R Data



Load Scenario Analysis

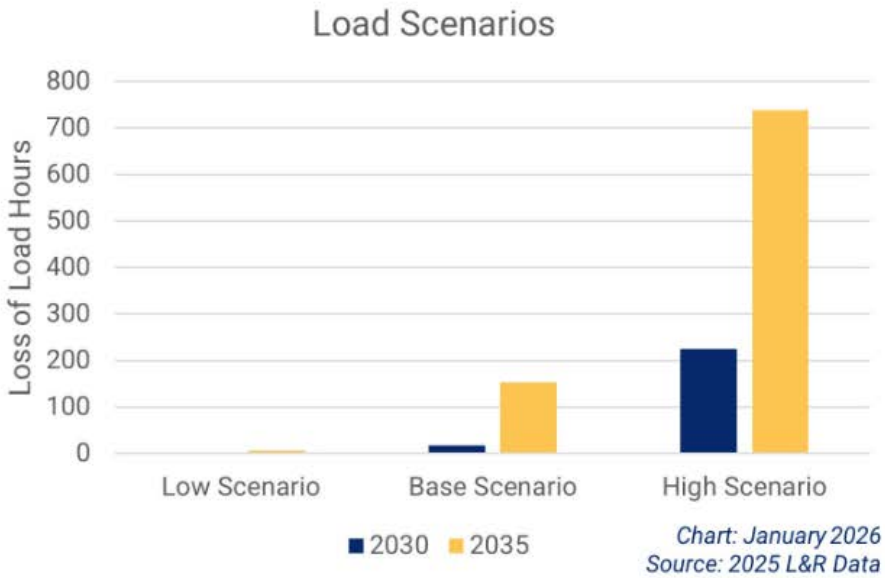
Much of the projected load growth in the Western Interconnection is attributed to large loads. If they materialize as predicted, or greater, the resource adequacy risk grows. However, large-load growth is an uncertain and rapidly changing landscape. Some large load additions may not materialize, while new projects could appear with little notice, making planning for future load growth complicated.

The accuracy of load forecasts is critical for the planning and reliable operation of the bulk power system, helping to ensure there is sufficient supply to meet demand. In this year's Western Assessment, WECC examined the impact if load forecasts are under or over estimated.

Uncertainty related to large loads is growing in the West, with questions about whether they will arrive as forecast, or beyond, or whether the projections over estimate their impact.

To account for this uncertainty, WECC examined three load scenarios in 2030 and 2035. In all the scenarios, it is assumed that 100% of the planned resources come online as submitted, including a large amount of speculative resources.

- Base Scenario: Examined demand growth as forecast
- Low Scenario: Load forecasts were adjusted downward to incorporate potential variance in projected demand growth
- High Scenario: Load forecasts were increased to incorporate some speculative large-load increases (not included in the base scenario), as provided by balancing authorities



Uncertainty related to large loads is growing in the West, with questions about whether they will arrive as forecast, or beyond, or wh

See Western Assessment Supplemental Information for details on these scenarios.

To account for this uncertainty, WECC examined three load scenarios in 2030 and 2035. In all the scenarios, it is assumed that 100% of the planned resources come online as submitted, including a large amount of speculative resources.

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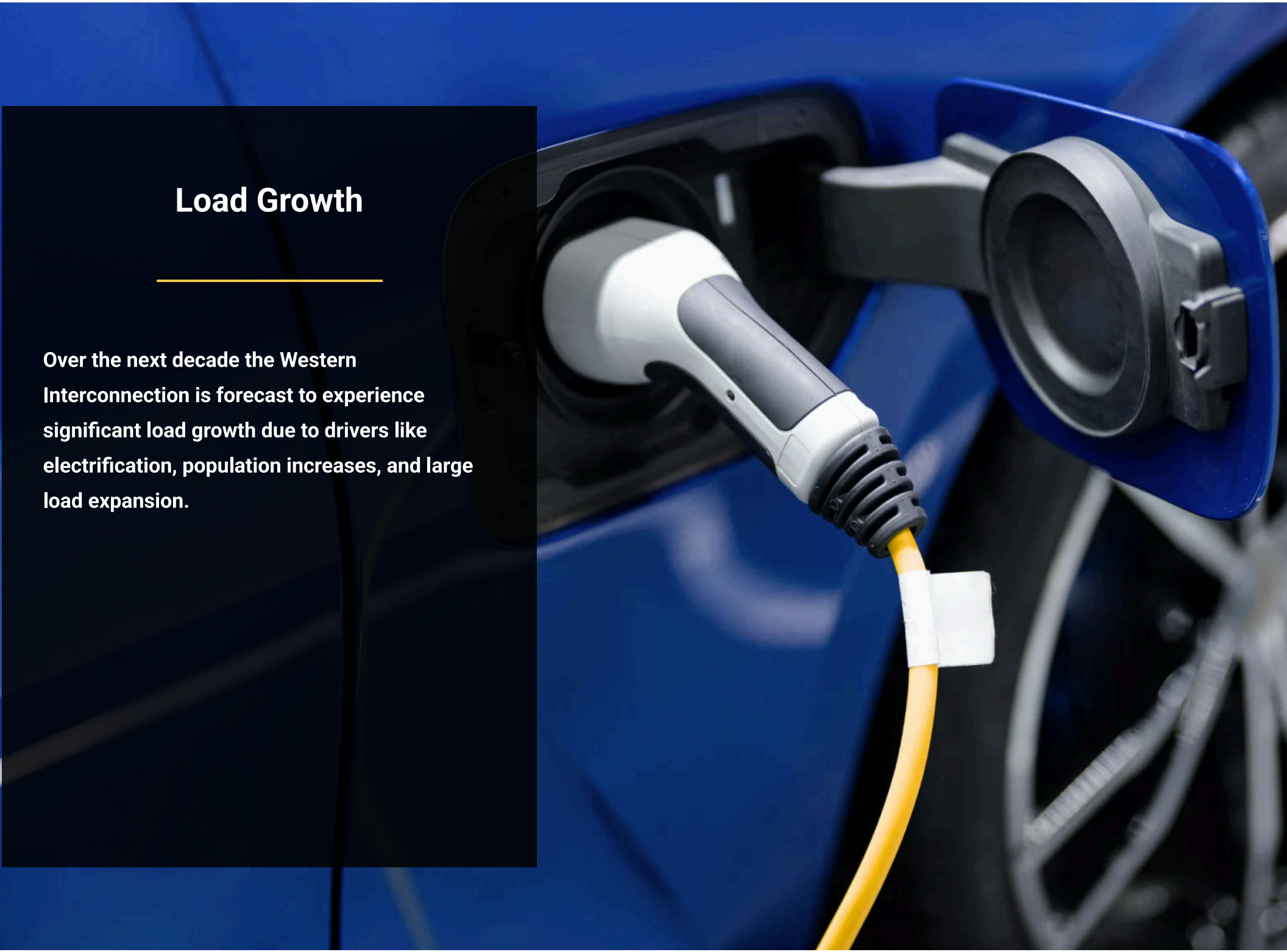
- Low Scenario: Load forecasts were adjusted downward to incorporate potential variance in projected demand growth
- High Scenario: Load forecasts were increased to incorporate some speculative large-load increases (not included in the base scenario), as provided by balancing authorities

Key Takeaway

The interconnection saw loss of load in the Base Scenario, and the loss of load hours increased significantly in the High Scenario. More notably, even if the demand is lower than expected and all resources are built as planned, resource adequacy risk is not completely mitigated.

Load Growth

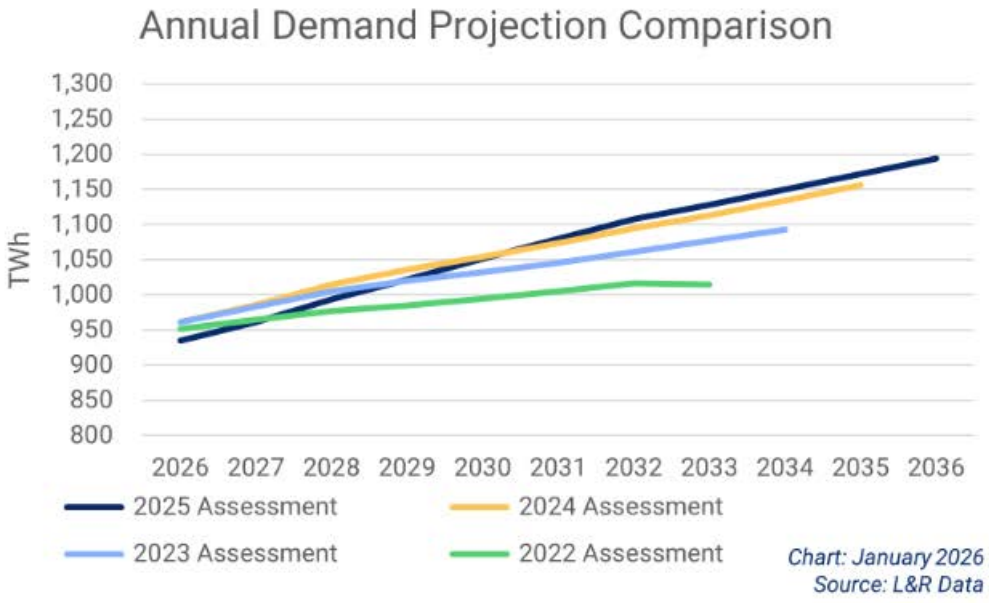
Over the next decade the Western Interconnection is forecast to experience significant load growth due to drivers like electrification, population increases, and large load expansion.



Annual Demand

Demand for electricity across the Western Interconnection is expected to grow 25% over the next 10 years, with two of the eight subregions projected to see increases of more than 40%. Four other subregions are projected to see demand increase over 20%. A year ago, load forecasts indicated a 20% increase in demand over the decade.

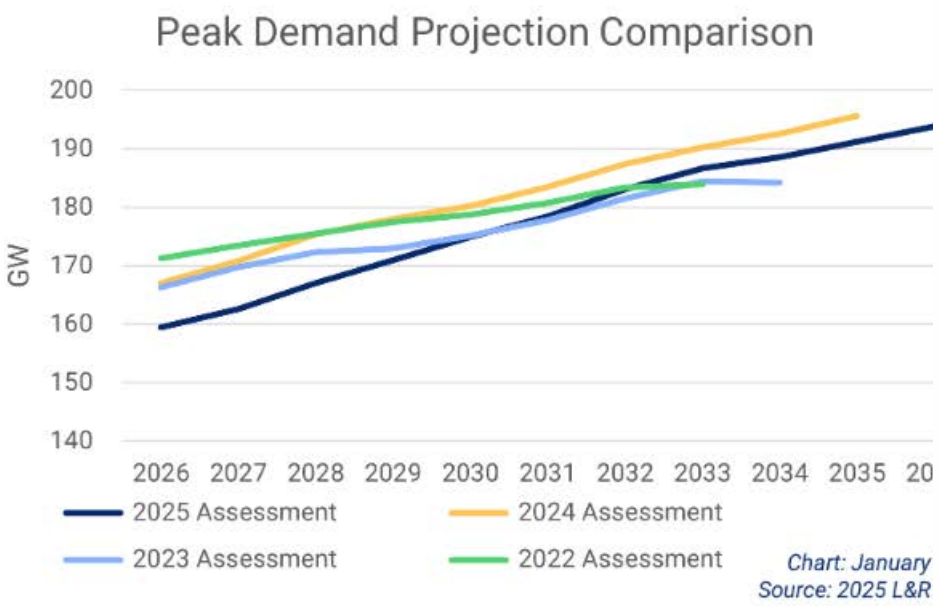
Annual Demand



Peak Demand

Peak demand in the Western Interconnection is expected to grow 20% over the next decade, from 160 GW in 2026 to 191 GW in 2035. Peak demand values, while projected to increase over the next 10 years, are not as high as projected in 2024. Several subregions are projected to see peak demand grow significantly more than the interconnection-wide average.

Peak Demand



Subregion	10-year Demand Growth Projection	Average Annual Growth Rate
Alberta	8 TWh (9%)	1%
Basin	20 TWh (26%)	2%
British Columbia	5.5 TWh (8%)	1%
California	69 TWh (26%)	2%
Mexico	9 TWh (45%)	4%
Northwest	47 TWh (24%)	2%
Rocky Mountain	21 TWh (27%)	2%
Southwest	67 TWh (42%)	4%

Subregion	10-year Peak Demand Growth Projection	Average Annual Growth Rate
Alberta	1 GW (8%)	1%
Basin	3 GW (18%)	2%
British Columbia	.4 GW (3%)	.3%
California	12 GW (21%)	2%
Mexico	1.6 GW (41%)	4%
Northwest	7 GW (21%)	2%
Rocky Mountain	3 GW (23%)	2%
Southwest	10 GW (29%)	3%

Key Takeaway

Load forecasts continue to show significant growth over the next decade following similar projections in the 2024 Western Assessment. While utilities must ensure they have enough energy to meet projected load, load forecasting certainty is not the same as it was several years ago because of speculative large loads, primarily data centers and AI. It may be necessary for utilities to change the way they forecast demand growth.

Methods & Data

- This year's Western Assessment uses eight new subregional boundaries that better align with operational and planning realities, and are consistent with other WECC assessments.
- This assessment uses Loads & Resources data provided by the Balancing Authorities in early 2025.
- For more information on the methodology used in the scenarios, a glossary, and profiles of the subregions, read the 2025 Western Assessment Supplemental Information.

BEFORE THE UNITED STATES DEPARTMENT OF ENERGY

Federal Power Act Section 202(c)	)
Emergency Order: Tri-State	)
Generation and Transmission	)
Association, Platte River Power	)
Authority, Salt River Project,	)
PacifiCorp, and Xcel Energy	)

Exhibit to
Motion to Intervene and Request for Rehearing and Stay of
Public Interest Organizations

Exhibit 2-184
2025 WARA Supplemental Information



2025 Western Assessment Supplemental Information

Introduction

WECC's annual Western Assessment of Resource Adequacy provides a high-level examination of resource-adequacy-related risks to the reliability of the Western Interconnection over the next 10 years. Through an energy-based probabilistic approach, WECC examines the risks across the entire interconnection and eight subregions. This work is intended to help stakeholders target specific areas and topics for deeper evaluation and mitigation. The 10-year assessment period for this year's Western Assessment is 2026 through 2035.

This supplemental material provides a more in-depth look at the eight subregions that make up the Western Interconnection, with information on resource portfolio, demand projections, planned resource additions and retirements, and how the subregion fared in WECC's analysis. All times listed are Pacific Time.

Scenarios

WECC performed six scenarios in the 2025 Western Assessment, using data provided by WECC members as of the end of 2024. This information included planned resource additions and retirements over the coming decade, as well as demand forecasts for the 10-year assessment period.

The “All Additions” scenario evaluated resource adequacy assuming all planned resource additions and retirements come to fruition, while three scenarios reduced the planned resource additions. Resource additions in these scenarios were based on capacity decreases of 5%, 15%, and 33%, respectively. These scenarios are called the “95% Additions,” “85% Additions,” and the “67% Additions” scenarios. The reduction in resource additions was applied evenly to each resource type and subregion. Demand forecasts in these scenarios were unaltered for the assessment period and reflect annual and peak demand projections as of year-end 2024.

The remaining two scenarios focused on demand in the years 2030 and 2035. The “High Load Scenario" incorporates large load customer demand that was not included in original demand forecasts due to uncertainty in customer materialization. The additional demand from these customers is modeled as being present 24/7, year-round. Resource additions were not altered in the High Load scenario.

Large load demand added to the peak and annual demand forecasts in the High Load Scenario.

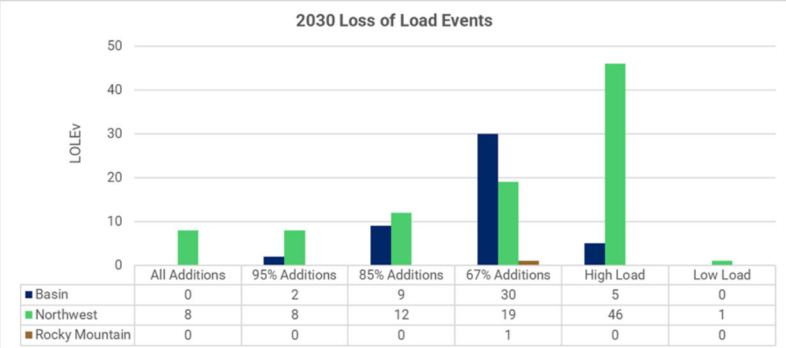
The “Low Load Scenario" applies percentage reductions to peak and annual demand forecasts in 2030 and 2035. The reductions are seasonal for the peak hour forecasts and applied evenly to the annual demand forecasts. The shoulder season reductions for the peak hour are an average of the summer and winter percentage reductions. The percentages chosen represent an approximation of the typical high-side forecasting error for peak and annual demand. They are shown below. Resource additions were not altered in the Low Load Scenario:

Reductions to peak and annual demand forecasts in the Low Load Scenario

Results

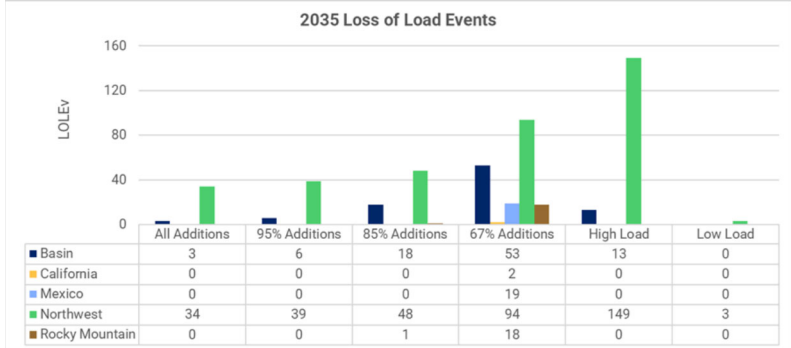
Resource adequacy metrics, such as loss of load events (LOLEv), loss of load hours (LOLH), expected unserved energy (EUE), and duration of loss of load events, were derived for each scenario by subregion and are provided below for years 2030 and 2035.

Loss of Load Events



	All Additions	95% Additions	85% Additions	67% Additions	High Load	Low Load
Basin	0	2	9	30	5	0
Northwest	8	8	12	19	46	1
Rocky Mountain	0	0	0	1	0	0

LOLEvs by subregion and scenario for 2030



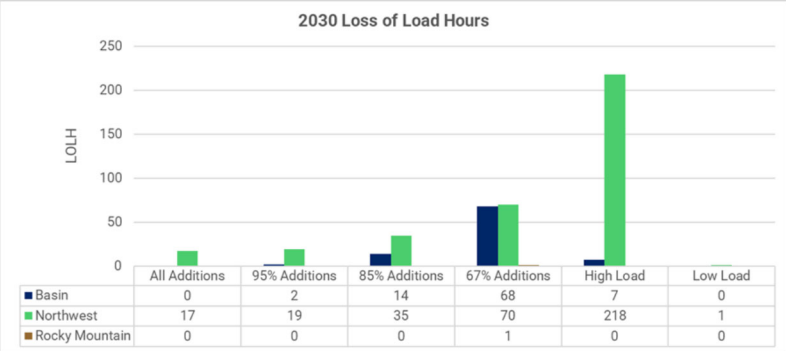
	All Additions	95% Additions	85% Additions	67% Additions	High Load	Low Load
Basin	3	6	18	53	13	0
California	0	0	0	2	0	0
Mexico	0	0	0	19	0	0
Northwest	34	39	48	94	149	3
Rocky Mountain	0	0	1	18	0	0

LOLEvs by subregion and scenario for 2035

An LOLEv is a period during which system load cannot be served. The Northwest contains the greatest LOLEvs across all scenarios. Both Basin and the Northwest encounter LOLEvs as early as 2029 in the All Additions Scenario, however only the Northwest shows LOLEvs in 2030. When 3 GW of speculative large load demand is added to the Northwest subregion in the High Load Scenario, the Northwest's LOLEvs increase dramatically. It should also be noted that when demand is reduced in the Low Load Scenario, there is a singular LOLEv for the Northwest in 2030. This is noteworthy as the Low Load Scenario incorporates all planned resource additions. The Rocky Mountain subregion has one LOLEv in 2030 in the 67% Additions Scenario.

Examining the 2035 LOLEvs, California and Mexico show loss of load in the 67% Additions Scenario. California has one LOLEv in 2032 and 2033, and two LOLEvs in 2035. Mexico has one LOLEv in 2034 and 19 LOLEvs in 2035. The Rocky Mountain subregion shows 18 LOLEvs in 2035 in the 67% Additions Scenario and shows an LOLEv in 2034 and 2035 in the 85% Additions Scenario. The Northwest shows LOLEvs across all scenarios in 2035, with the greatest amount shown in the High Load Scenario. The High Load Scenario features over 3.5 GW of additional consumer demand for the Northwest subregion in 2035, driving this increase. The Northwest is also the only subregion showing LOLEvs in 2035 for the Low Load Scenario. Basin shows LOLEvs in all scenarios except the Low Load Scenario.

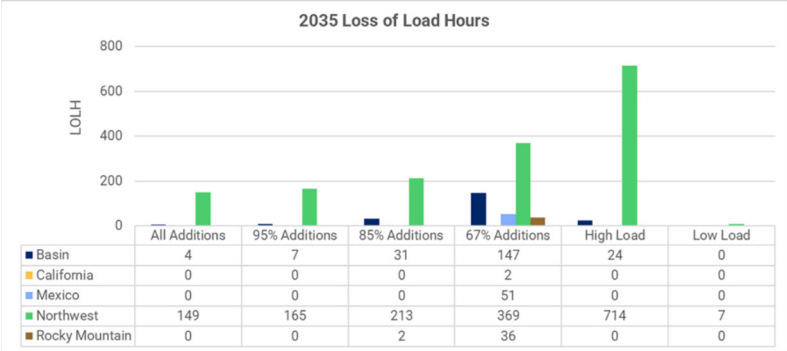
Loss of Load Hours



	All Additions	95% Additions	85% Additions	67% Additions	High Load	Low Load
Basin	0	2	14	68	7	0
Northwest	17	19	35	70	218	1
Rocky Mountain	0	0	0	1	0	0

LOLHs by subregion and scenario for 2030

LOLHs are the number of hours a subregion's demand is projected to exceed generating capability. LOLHs for each scenario in 2030 are provided above. Results viewed through the lens of LOLHs are generally similar to those of LOLEvs, in that the Northwest and Basin subregions show most of the LOLHs. It is noteworthy in the 2030 67% Additions Scenario that Basin displayed more LOLEvs; however, the Northwest subregion shows greater LOLHs. This indicates the Northwest is generally experiencing longer LOLEvs. In the 2030 67% Additions Scenario, the average length of time per LOLEv in the Northwest is close to four hours, whereas, for Basin, LOLEvs average about two hours. The Northwest shows over 200 LOLHs in the High Load Scenario with 46 LOLEvs, increasing the average length of LOLEv to almost five hours. Rocky Mountain has one LOLH in 2030 in the 67% Additions Scenario.

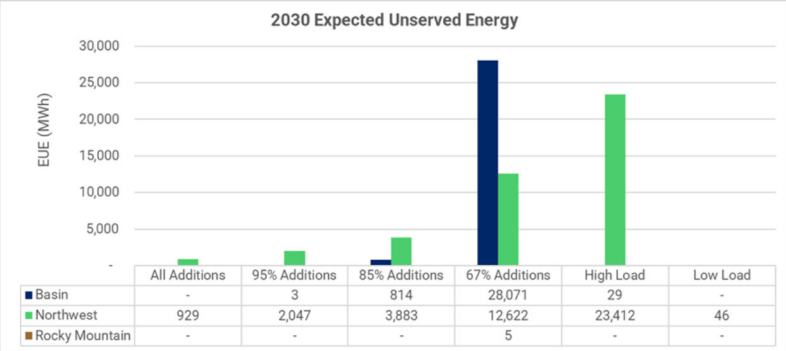


	All Additions	95% Additions	85% Additions	67% Additions	High Load	Low Load
Basin	4	7	31	147	24	0
California	0	0	0	2	0	0
Mexico	0	0	0	51	0	0
Northwest	149	165	213	369	714	7
Rocky Mountain	0	0	2	36	0	0

LOLHs by subregion and scenario for 2035

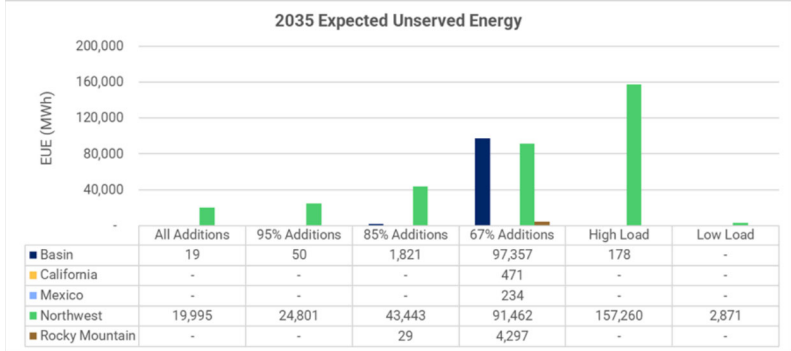
Comparing 2035 to 2030, LOLHs increase across the board in all scenarios. Basin and the Northwest show LOLHs in the All Additions Scenario, whereas Rocky Mountain has LOLHs in the 85% Additions Scenario. The Northwest shows over 700 LOLHs in the High Load Scenario, and similar to the 2030 High Load Scenario, averages approximately five hours per LOLEv. The Northwest also shows seven LOLHs in the Low Load Scenario. Basin shows 147 LOLHs in the 67% Additions Scenario spread over 53 LOLEvs, averaging about three LOLHs per LOLEv. California shows two LOLHs in the 2035 67% Additions Scenario, whereas Mexico shows 51 LOLHs. The 51 LOLHs for Mexico were spread over 19 LOLEvs, resulting in an average duration of about three hours per LOLEv.

Expected Unserved Energy



	All Additions	95% Additions	85% Additions	67% Additions	High Load	Low Load
Basin	-	3	814	28,071	29	-
Northwest	929	2,047	3,883	12,622	23,412	46
Rocky Mountain	-	-	-	5	-	-

EUE by subregion and scenario for 2030



	All Additions	95% Additions	85% Additions	67% Additions	High Load	Low Load
Basin	19	50	1,821	97,357	178	-
California	-	-	-	471	-	-
Mexico	-	-	-	234	-	-
Northwest	19,995	24,801	43,443	91,462	157,260	2,871
Rocky Mountain	-	-	29	4,297	-	-

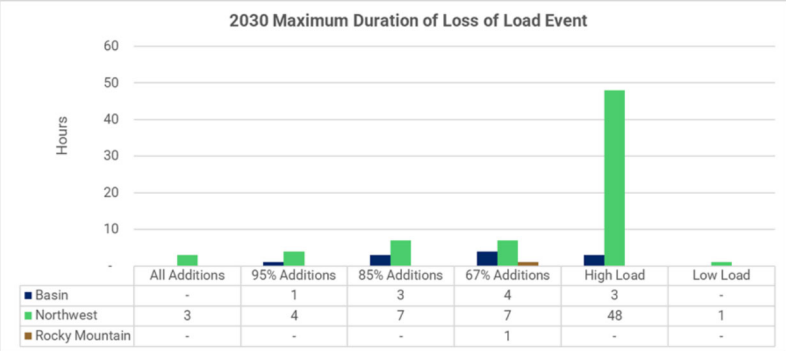
EUE by subregion and scenario for 2035

EUE is the anticipated demand that will not be served due to demand exceeding available energy. It is intended to provide a measure of energy shortfall. In the 67% Additions Scenario, Basin and the Northwest have nearly identical LOLHs; however, Basin's EUE was 28.1 GWh versus the Northwest's 12.6 GWh. Basin's hourly average EUE in the 2030 67% Additions Scenario is slightly over 410 MWh, whereas the Northwest's hourly average EUE in this scenario is closer to 180 MWh. As such, despite the Northwest having more frequent and longer LOLEvs, the magnitude of energy shortfall in those events is typically shallower than the LOLEvs in Basin. This trend reverses in the High Load Scenario in which Basin shows 29 MWh of EUE over seven LOLHs, whereas the Northwest shows 23.4 GWh of EUE over 218 LOLHs.

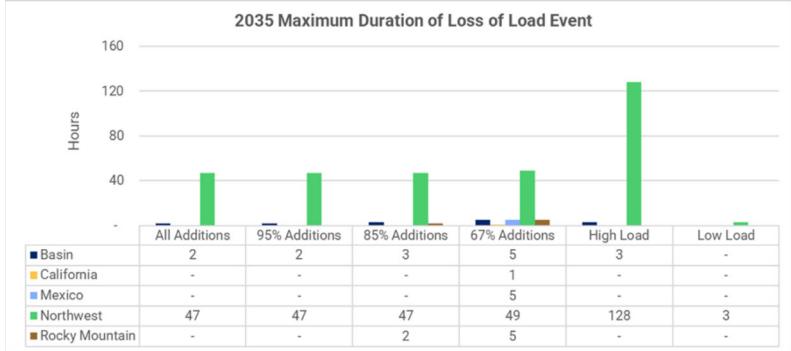
The 2035 EUE results indicate that the trends identified in 2030 are exacerbated by continued load growth. Basin shows 97.3 GWh of EUE in the 67% Additions Scenario over 147 LOLHs, which is an average of 660 MWh of EUE per LOLH. The Northwest shows 91.4 GWh of EUE over 369 LOLHs, averaging 248 MWh of EUE per LOLH. This again emphasizes that loss of load is anticipated to be a more frequent occurrence in the Northwest but by a smaller margin than experienced in the Basin subregion. Also in the 67% Additions Scenario, the Rocky Mountain subregion shows 4.3 GWh of EUE over 36 LOLHs, which is an average of 120 MWh per LOLH.

In the High Load Scenario, the Northwest's EUE skyrockets to 157 GWh over 714 LOLHs. The LOLEvs for the Northwest subregion in the High Load Scenario effectively become longer, however result in smaller average EUE per LOLH (220 MWh) than experienced in the 67% Additions Scenario.

Duration



Maximum duration of LOLEvs by subregion and scenario for 2030



Maximum duration of LOLEvs by subregion and scenario for 2035

Average duration of LOLEvs is between one and five hours depending on the scenario and subregion. However, when the maximum duration of LOLEvs is examined, the Northwest stands out. In the 2030 resource addition scenarios, Northwest LOLEvs have a maximum duration of three to seven hours. However, in the High Load Scenario, the Northwest has an LOLEv that lasts 48 consecutive hours in January. Given the cold weather during January and the significant electrification of heating in the Northwest, this is a noteworthy risk.

In 2035, the Northwest again stands out as the subregion with longest-lasting LOLEvs. The resource addition scenarios all show at least one LOLEv that lasts between 47 and 49 hours. The High Load Scenario for the Northwest shows an LOLEv lasting 128 consecutive hours — equivalent to over five days of outage — in January. This is a significant concern given electricity is a primary fuel for residential heating in the Northwest.

Subregional Data

This section gives a subregional view of present and future resource portfolios, resource additions and retirements, demand forecasts, and loss of load metrics. Loss of load metrics are presented as heat maps that show seasonality, timing, frequency, and magnitude. The loss of load heat maps have been constructed for the years 2030 and 2035 for the All Additions, 67% Additions, and High Load scenarios.

Subregion: Alberta

The Alberta subregion spans the province, which has a population of approximately 5 million. Although its demand peaks in winter, an hour in summer 2024 was within 1.3% of its winter peak and four of the top seven hours were in the summer. There are an estimated 16,369 miles of transmission lines in this subregion.

Current resource mix

Natural gas dominates the resource mix in the Alberta subregion, with 61% of the installed capacity. Wind generation makes up 25% of the resource mix, while solar and hydro make up 8% and 4%, respectively.

2035 resource mix

If all generating resources included in current resource plans are built, in 2035 natural gas's share of the resource mix will decrease to 45%, while solar's share will increase to 23%. Battery storage is expected to grow from 1% of the resource mix to 3% in 2035.

Planned additions

The subregion is expected to add close to 10 GW of new generation over the coming decade, primarily solar (5 GW) and wind (3 GW).

Planned retirements

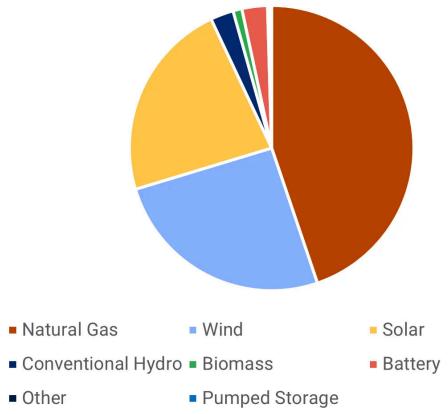
No retirements are planned in the Alberta subregion through 2035 according to current resource plans.

Annual and peak demand

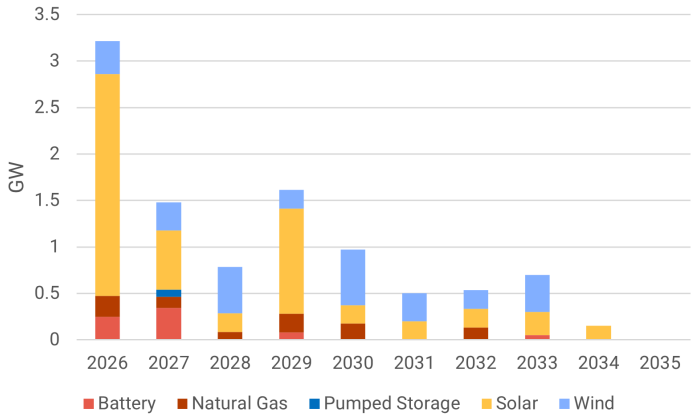
Demand in the subregion is forecast to grow by 9% over the coming decade, while peak demand is projected to increase 8%. A major driver of demand growth in this subregion is transportation electrification.

Loss of Load

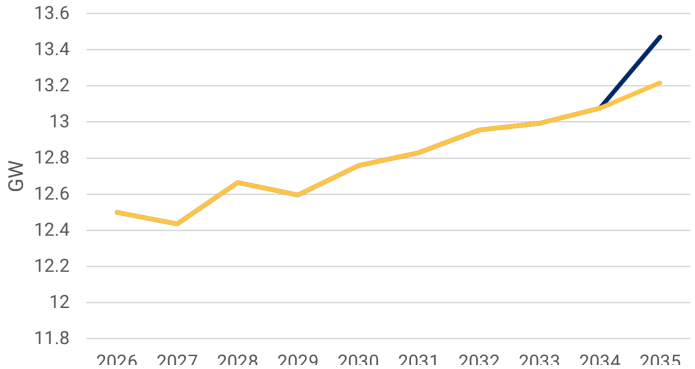
Alberta saw no loss of load in any of the scenarios.



Resource mix in 2035, if all planned additions are built



Planned resource additions, 2026-2035





Projected peak demand, 2026-2035

Subregion: Basin

Basin is a summer-peaking subregion that includes Utah, southern Idaho, and part of western Wyoming. The population of this area is approximately 5.4 million. There are an estimated 15,910 miles of transmission lines in this subregion.

Resource mix

Basin's resource portfolio as of year-end 2024 is primarily coal and natural gas. The two make up 51% of nameplate capacity in the subregion. Wind and solar make a combined total of 36% of the resource mix, with the remaining portfolio primarily composed of hydro resources.

2035 resource mix

Over the next decade, wind and solar additions are anticipated to shift the resource mix to 51% variable energy resources (VER) and 33% thermal resources. BESSs are anticipated to make up 8% of the resource mix in the subregion by year-end 2035.

Planned additions

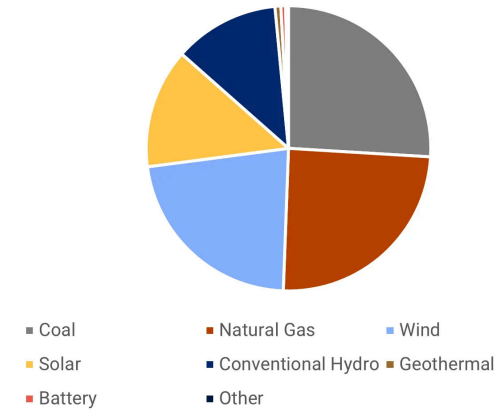
Basin has over 15 GW of resource additions planned from 2026 through 2035. Slightly over 40%, or 6 GW, of the planned additions are wind resources, and over 25%, or 4 GW, are solar resources. BESS makes up 18%, or 3 GW, of the resource additions in the subregion, with half of the BESS capacity planned to be added in 2026.

Planned retirements

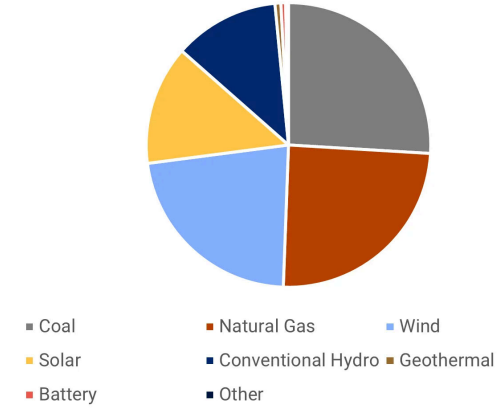
Approximately 2.2 GW is planned for retirement through 2035, almost half of which are coal (980 MW). 700 MW of wind resources are planned for retirement over the decade, along with 360 MW of natural gas generation.

Annual and peak demand

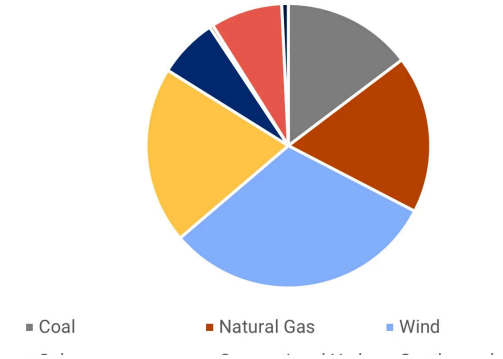
Demand in the subregion is forecast to grow by almost 26% over the coming decade, while peak demand is projected to increase 18%. Interconnection-wide annual energy load is projected to increase by 25%, and peak energy by 20%. Main contributors to demand growth in the Basin subregion are data centers and semiconductor manufacturing.



Resource mix, year-end 2024



Resource mix, year-end 2024



Loss of Load

The heat maps below highlight the loss of load in several scenarios.

The heat maps for 2030 and 2035 67% Additions Scenario provide the clearest picture of the risk hours for the subregion. Basin is summer-peaking with peak load generally occuring between 3 p.m. and 4 p.m. However, during the summer, heat can linger after the peak hour, resulting in elevated demand lasting through the evening. Basin's planned resource additions are primarily wind and solar. The summer is not generally as windy as winter or shoulder seasons, and solar begins to dissipate in the evening. The elevated loads, coupled with a reduction in solar output during the evening hours, and general variability of wind, results in Basin showing the greatest risk to resource adequacy between 5 p.m. and 10 p.m. during July and August. Summer evenings also correspond with elevated demand in the Rocky Mountain and California subregions, lessening import availability from these subregions to Basin and further contributing to the loss of load.

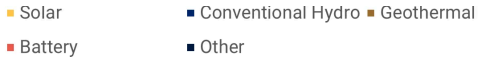
Basin: All Additions 2035 LOLH	Hour Beginning																						
Month	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

LOLH by month and hour for Basin in the 2035 All Additions Scenario

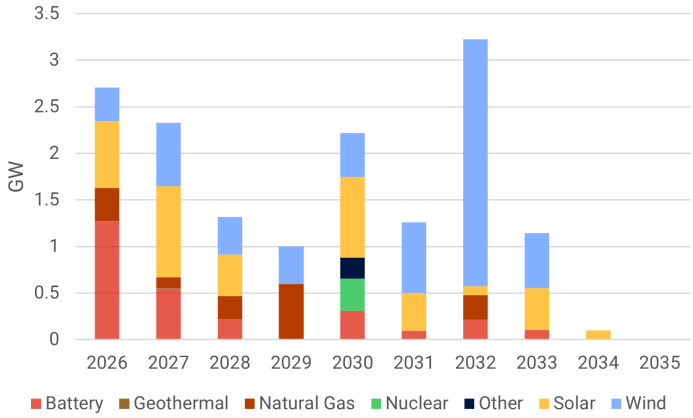
Basin: All Additions 2035 EUE (MWh)	Hour Beginning																							
Month	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	9	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

EUE by month and hour for Basin in the 2035 All Additions Scenario

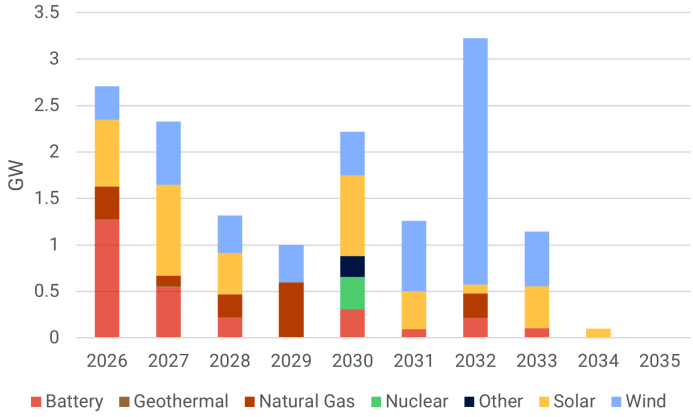
Basin: 67% Additions 2030 LOLH	Hour Beginning																							
Month	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	2	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	3	11	10	1	-	-
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	6	8	4	2	-	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	7	5	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



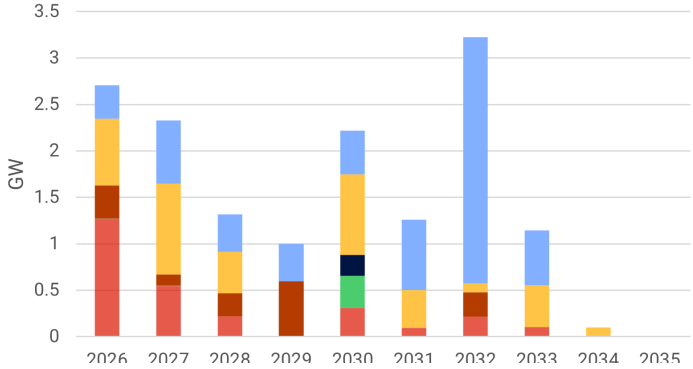
Resource mix in 2035 if all planned resources are built



Planned resource additions, 2026-2035



Planned resource additions, 2026-2035



LOLHs by month and hour for Basin in the 2030 67% Additions Scenario

Basin: 67% Additions 2030 EUE (MWh)	Hour Beginning																						
Month	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	821	109	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	230	7,932	2,818	1	-	-
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	4,621	7,568	2,798	48	-	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	852	262	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

EUE by month and hour for Basin in the 2030 67% Additions Scenario.

Basin: 67% Additions 2035 LOLH	Hour Beginning																						
Month	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	5	5	1	-	-
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	11	18	16	7	-	-
8	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	3	14	18	8	5	1	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	10	10	3	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

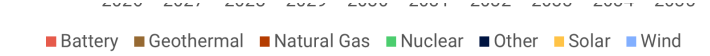
LOLHs by month and hour for Basin in the 2035 67% Additions Scenario

Basin: 67% Additions 2035 EUE (MWh)	Hour Beginning																						
Month	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	290	4,709	1,541	3	-	-
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	740	24,700	13,825	188	-	-
8	-	-	-	-	-	-	-	15	-	-	-	-	-	-	-	-	-	18	10,626	19,406	8,615	1,797	2	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	5,621	5,099	127	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

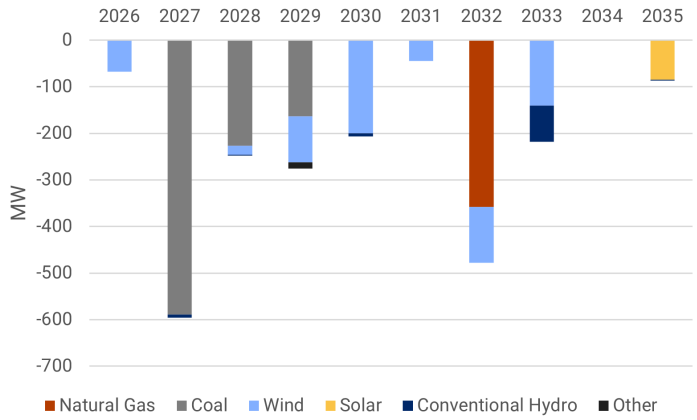
EUE by month and hour for Basin in the 2035 67% Additions Scenario

Basin: High Load 2030 LOLH	Hour Beginning																						
Month	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	1	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

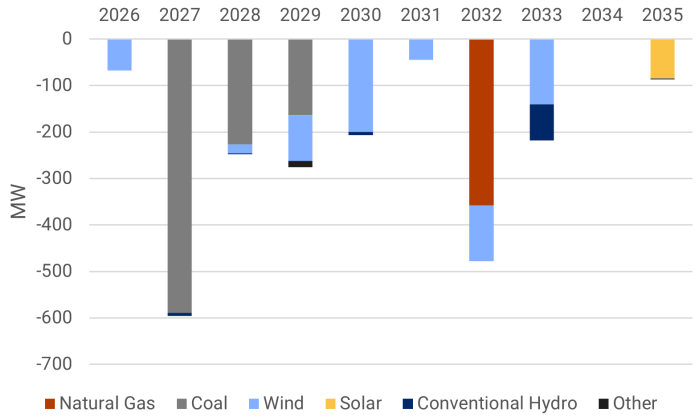
LOLHs by month and hour for Basin in the 2030 High Load Scenario



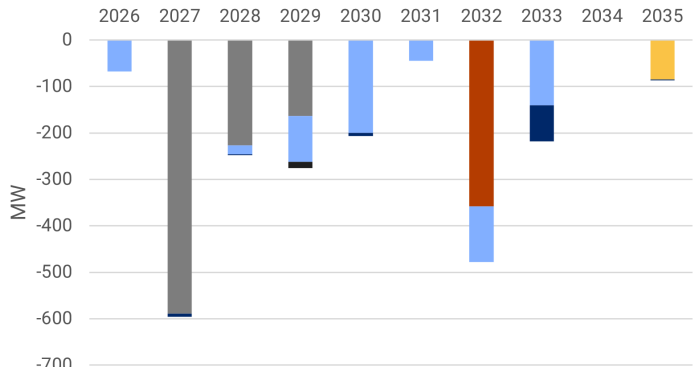
Planned resource additions, 2026-2035



Planned retirements, 2026-2035



Planned retirements, 2026-2035



Basin: High Load 2030 EUE (MWh)	Hour Beginning																							
Month	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	15	3	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

EUE by month and hour for Basin in the 2030 High Load Scenario

Basin: High Load 2035 LOLH	Hour Beginning																							
Month	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	8	5	1	-	-
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-
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11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

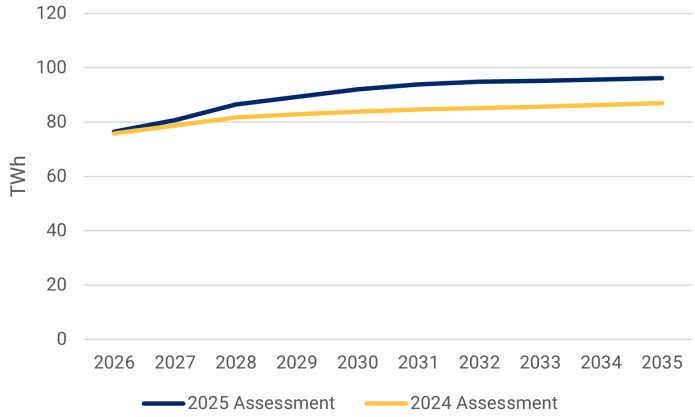
LOLHs by month and hour for Basin in the 2035 High Load Scenario

Basin: High Load 2035 EUE (MWh)	Hour Beginning																							
Month	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	30	13	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	82	22	1	-	-
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

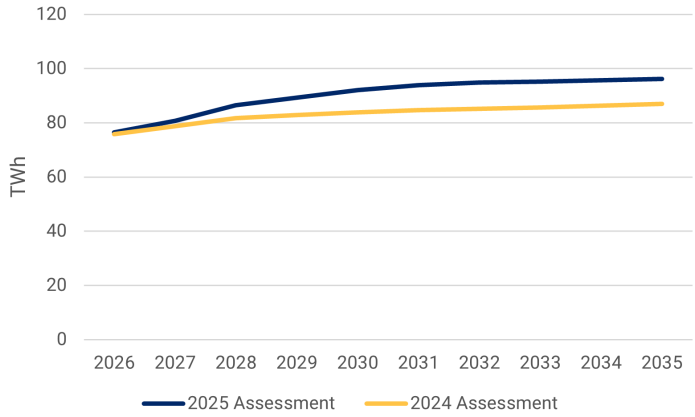
EUE by month and hour for Basin in the 2035 High Load Scenario



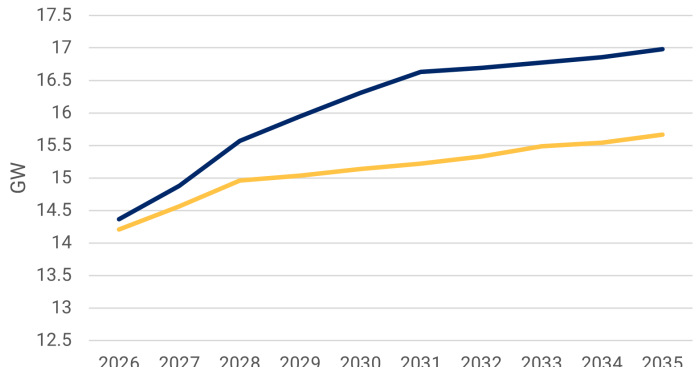
Planned retirements, 2026-2035



Projected annual demand, 2026-2035

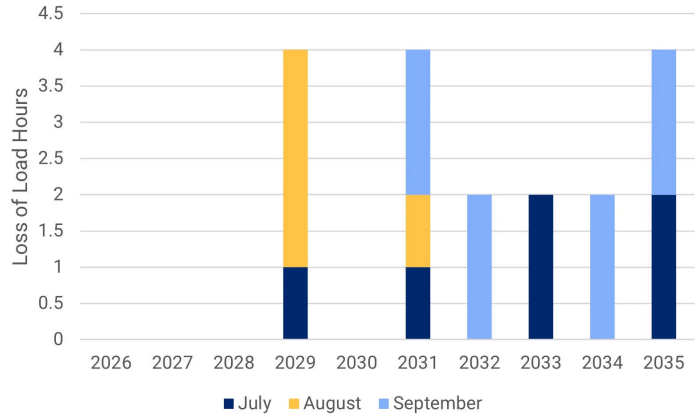


Projected annual demand, 2026-2035

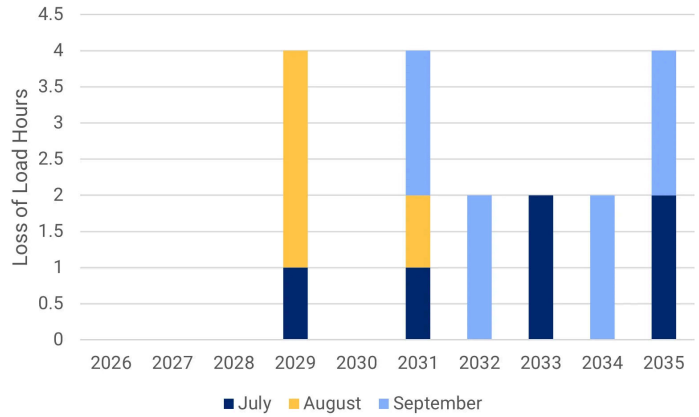




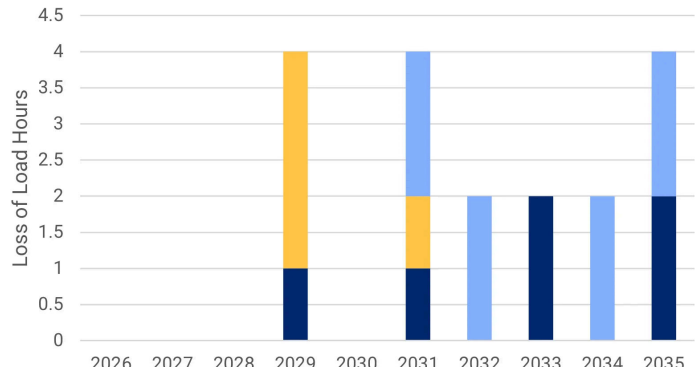
Projected peak demand, 2026-2035



All additions scenario

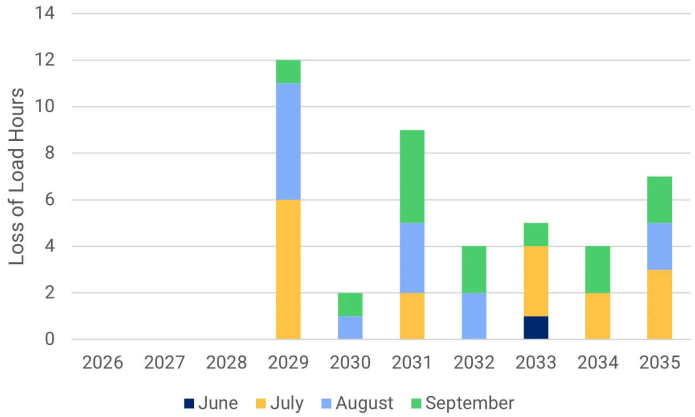


All additions scenario

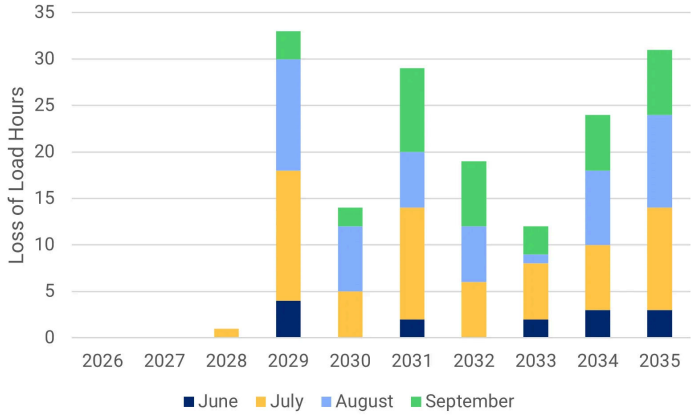




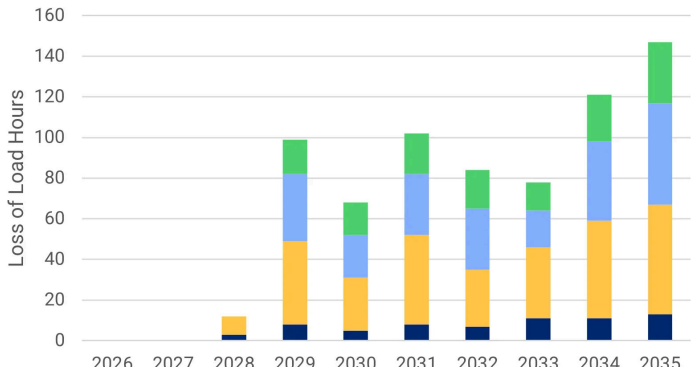
All additions scenario



95% scenario

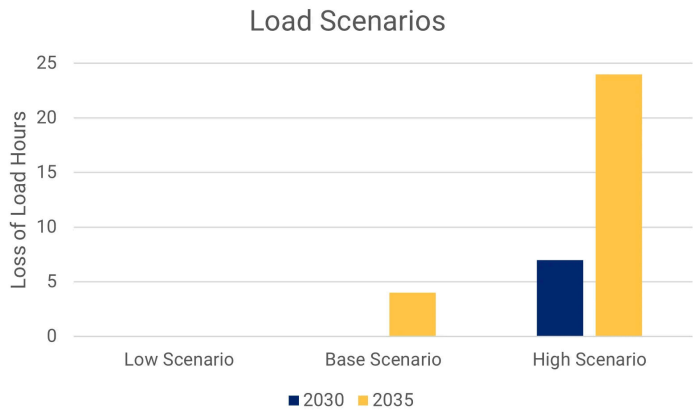


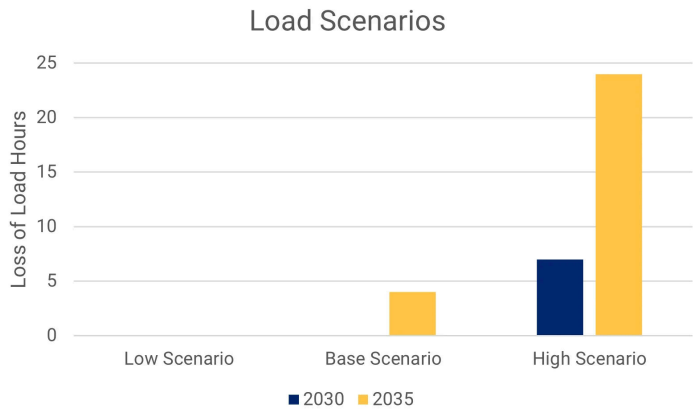
85% scenario




June
July
August
September

67% Scenario


Load Scenarios
Loss of Load Hours
25
20
15
10
5
0
Low Scenario
Base Scenario
High Scenario
2030
2035


Load Scenarios
Loss of Load Hours
25
20
15
10
5
0
Low Scenario
Base Scenario
High Scenario
2030
2035

Subregion: British Columbia

British Columbia is a winter-peaking area that spans the province, which has a population of approximately 5.7 million. There are an estimated 11,184 miles of transmission lines in this subregion.

Current resource mix

Hydro dominates the resource mix in the British Columbia subregion with 89% of the installed capacity. Biomass makes up 5%, wind 4%, and natural gas 2% of the resource portfolio as of year-end 2024.

2035 resource mix

If all generating resources included in current resource plans are built, in 2035, hydro's share of the resource mix would decrease to 83%, primarily due to a large influx of wind capacity, which would then made up 10% of the resource portfolio.

Planned additions

2.2 GW of new generation is planned in the subregion over the coming decade, including 1.5 GW of wind in 2030. There is also .5 GW of additional hydro capacity planned in 2032.

Planned retirements

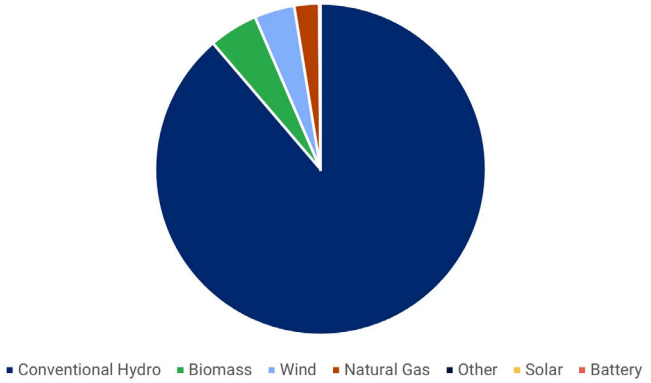
Approximately 290 MW of natural gas generation is slated for retirement over the next decade.

Annual and peak demand

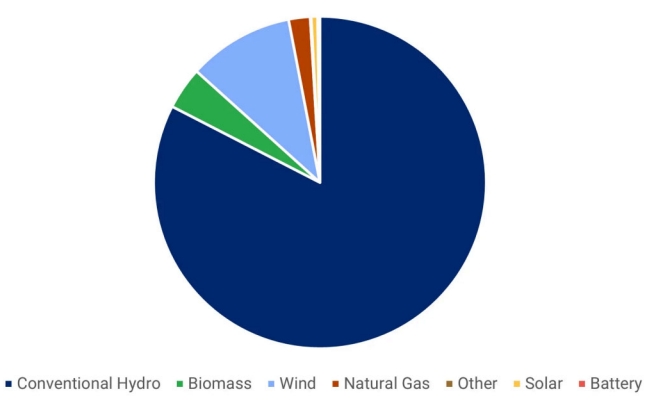
Demand in the subregion is forecast to grow by 8% over the coming decade, while peak demand is projected to increase 3.4%. Population growth, transportation and industrial electrification, and natural gas processing all contribute to demand growth in this subregion.

Loss of Load

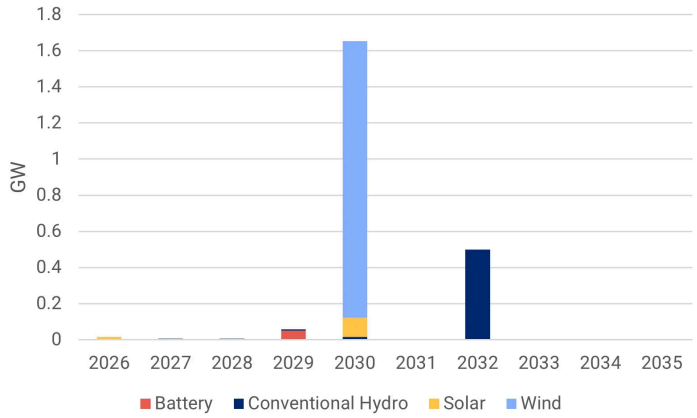
British Columbia saw no loss of load in any of the scenarios.



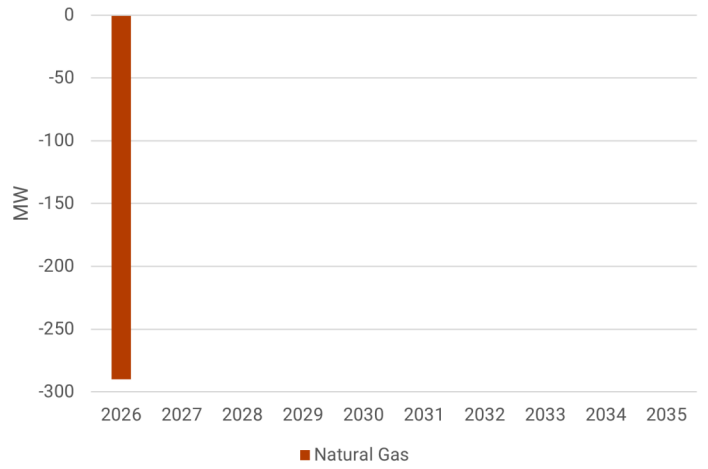
Resource mix, year-end 2024



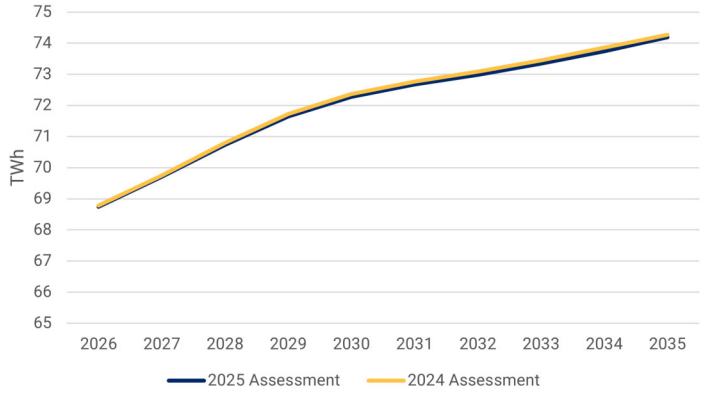
Resource mix in 2035, if all planned resources are built



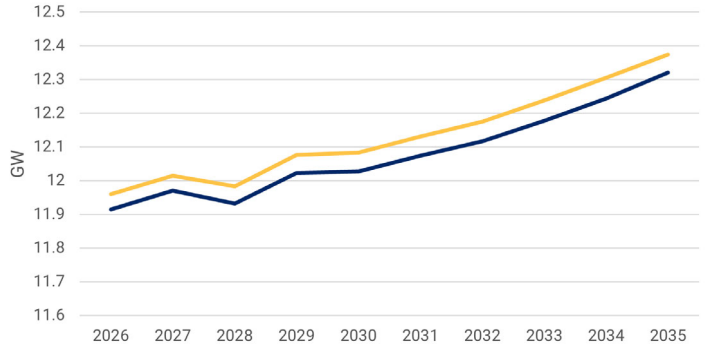
Planned resource additions, 2026-2035



Planned retirements, 2026-2035



Annual demand forecast, 2026-2035





Subregion: California

California is a summer-peaking area that includes most of the state, which has a population of over 42.5 million people. There are an estimated 32,700 miles of transmission lines in this subregion.

Current resource mix

Natural gas makes up 37% of the resource mix in the California subregion on a nameplate capacity basis, followed by solar, which makes up 24%. Hydro and BESS make up 12% and 11%, respectively. Wind is 8% of the resource mix.

2035 resource mix

If all generating resources included in current resource plans are built, in 2035, natural gas's share of the resource mix will decrease to 25%, while battery storage and wind will each increase to 17% and solar to 26%.

Planned additions

The subregion is expected to add 49 GW of new generation over the coming decade. That includes 19 GW of wind, 15 GW of solar, and 11 GW of BESS. Approximately 2 GW of natural gas and geothermal generation is expected to be added.

Planned retirements

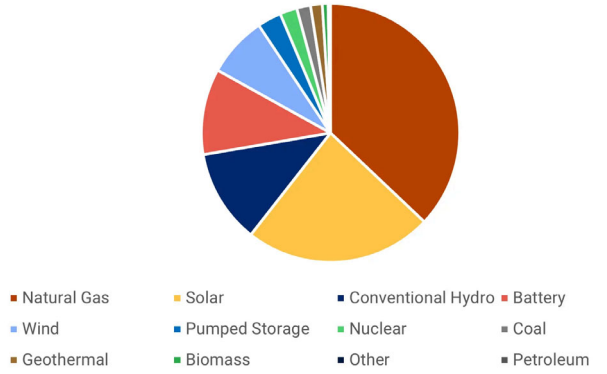
Nearly 6 GW of generation is planned for retirement over the coming decade, nearly all of it natural gas (3.6 GW) and nuclear (2.3 GW).

Annual and peak demand

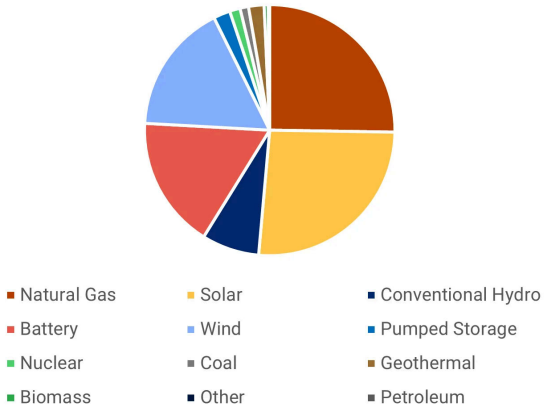
Demand in the subregion is forecast to grow by 26% over the coming decade, while peak demand is projected to increase 21%. Transportation electrification and the anticipation of additional load during extreme heat events are major factors of demand growth for this subregion.

Loss of Load

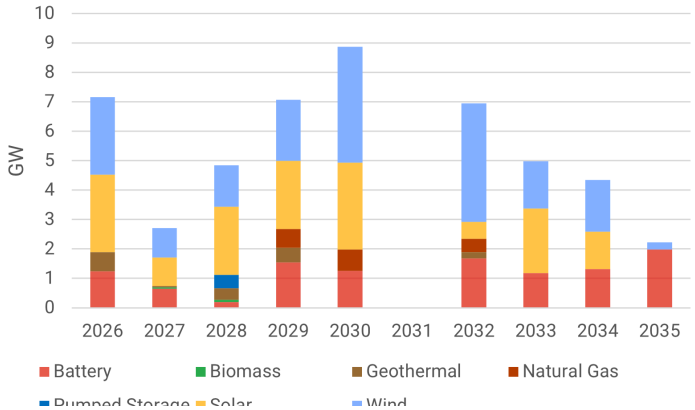
The California subregion did not show loss of load in the All Additions or High Load scenarios. California only shows loss of load under the 67%



Resource mix, year-end 2024



Resource mix in 2035, if all planned resources are built



Additions Scenario, and not until 2032, 2033, and 2035. The loss of load heat maps for 2035 for the 67% Additions Scenario are shown below.

California shows two LOLHs in 2035 totaling 471 MWh of EUE in September. This occurs between the hours of 6 and 7 p.m. This time frame is slightly after peak, which generally occurs between 4 and 5 p.m. in this subregion. During the summer, heat can linger after the peak hour, resulting in elevated demand lasting through the evening. California is anticipated to retire 6 GW of natural gas and nuclear capability over the next decade, while adding approximately 34 GW of solar and wind. Solar availability diminishes in the evening, and wind output during this time can vary. The elevated load during summer evenings, coupled with thermal retirements and diminishing solar availability during this period, result in the identified LOLHs shown below.

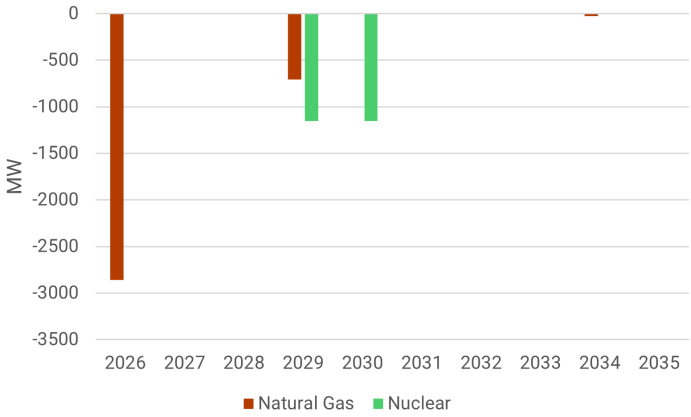
California: 67% Additions 2035 LOLH	Hour Beginning																						
Month	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

LOLHs by month and hour for the California subregion in the 2035 67% Scenario

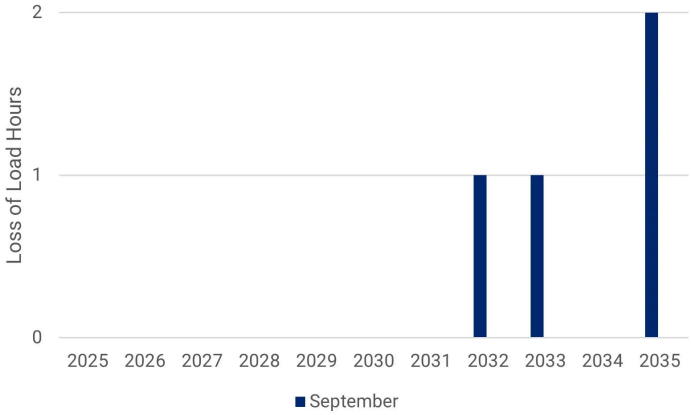
California: 67% Additions 2035 EUE (MWh)	Hour Beginning																						
Month	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	471	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

EUE by month and hour for the California subregion in the 2035 67% Scenario

Planned resource additions, 2026-2035



Planned retirements, 2026-2035



67% Scenario

Subregion: Mexico

Mexico is a summer-peaking area that includes the northern portion of the Mexican state of Baja California, which has a population of 3.8 million people. There are an estimated 1,568 miles of transmission lines in this subregion.

Current resource mix

Natural gas makes up 72% of the resource mix on a capacity basis. This is followed by geothermal at 13%, solar at 8%, and petroleum at 7%.

2035 resource mix

If all generation resources are built according to current resource plans, in 2035, solar's share of the resource mix will increase to 14%, while geothermal and petroleum will decline to 9% and 4%, respectively. Natural gas remains at 72%.

Planned additions

600 MW of solar is planned to be built over the coming decade in the Mexico subregion. This occurs primarily in years 2026 and 2028.

Planned retirements

The subregion has no retirements through 2035.

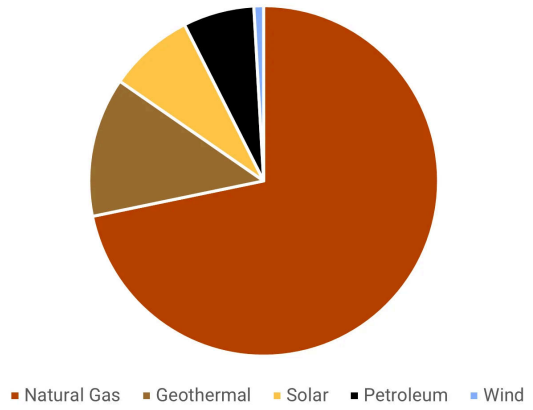
Annual and peak demand

Demand in the subregion is forecast to grow 45% over the coming decade, while peak demand is projected to increase 41%. The anticipation of additional load during extreme heat events is the major factor driving demand growth for this subregion.

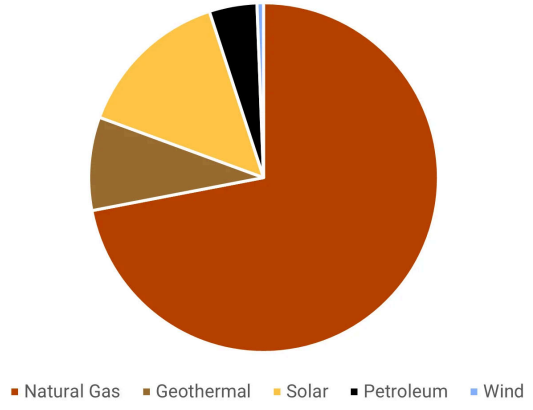
Loss of Load

The Mexico subregion only shows loss of load under the 67% Additions Scenario in years 2034 and 2035. The loss of load heat maps for 2035 are provided below for the 67% Additions Scenario.

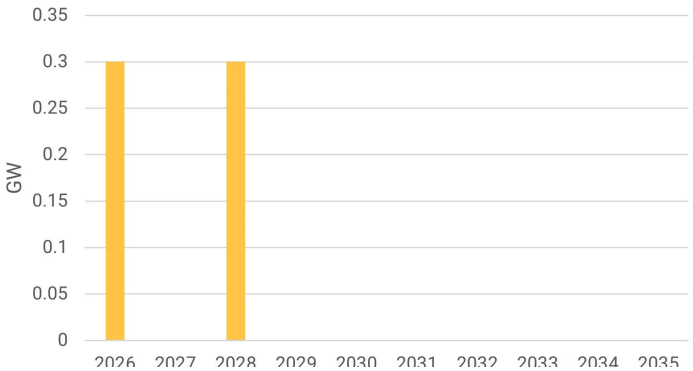
Mexico is a summer-peaking subregion that generally experiences peak load between 4 and 5 p.m. August is typically the hottest month in the subregion,



Resource mix, year-end 2024



Resource mix in 2035 if all planned resources are built



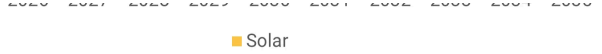
thereby experiencing the greatest demand. Similar to California and Basin, summer heat can last beyond the peak hour, resulting in elevated demand through the evening. Solar is diminished during this period, and solar resources are the only additions planned for this subregion. The significant increase in demand over the next 10 years, coupled with the solar resource additions, which have diminished efficacy as daylight wanes, are the primary reason for the LOLHs during summer evenings after peak. The California subregion does support Mexico if there is surplus energy to do so, but despite the Mexico subregion importing up to the transfer limit from California, loss of load still occurs.

Mexico: 67% Additions 2035 LOLH	Hour Beginning																						
Month	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	17	10	10	5	-	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

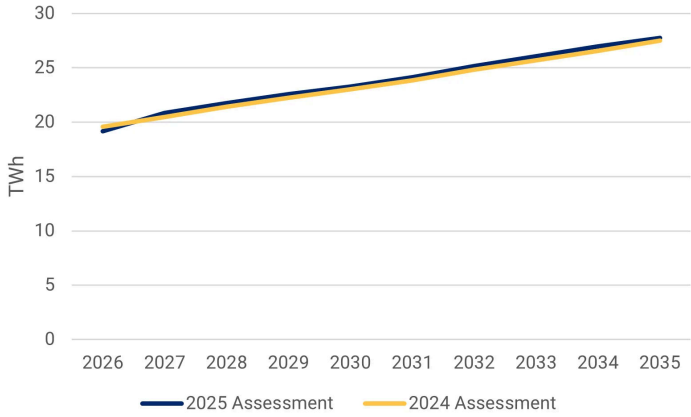
LOLHs by month and hour for the Mexico subregion in the 2035 67% Scenario

Mexico: 67% Additions 2035 EUE (MWh)	Hour Beginning																						
Month	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25	94	57	37	21	-	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

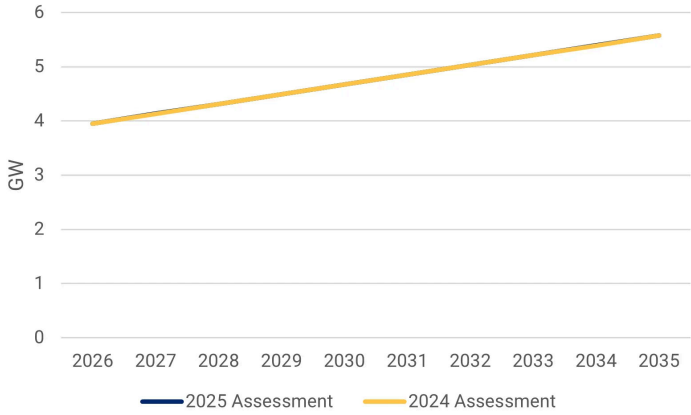
EUE by month and hour for the Mexico subregion in the 2035 67% Scenario.



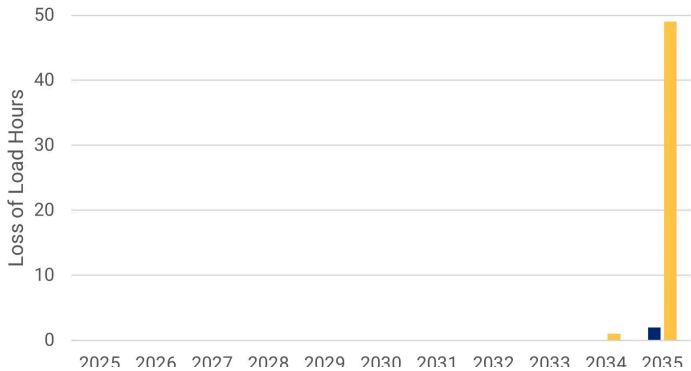
Planned resource additions, 2026-2035



Annual demand forecast. 2026-2035



Peak demand forecast, 2026-2035





67% scenario

Subregion: Northwest

Northwest is a winter-peaking area that includes Montana, Oregon, Washington, and parts of northern California and Idaho. The population of the subregion is approximately 13.7 million. There are 16 Balancing Authorities in this subregion, which has an estimated 32,751 miles of transmission lines.

Current resource mix

As of year-end 2024, the Northwest's resource portfolio primarily consists of hydro, natural gas, and wind resources. Hydro resources are a significant contributor to the Northwest's energy supply making up 55% of the resource portfolio. Natural gas makes up 18%, and wind accounts for 16%.

2035 resource mix

Resource plans indicate a significant influx of wind, solar, and BESS resources by year-end 2035. Wind grows to a 27% portfolio share, BESS increases to 6%, and solar increases to 9%.

Planned additions

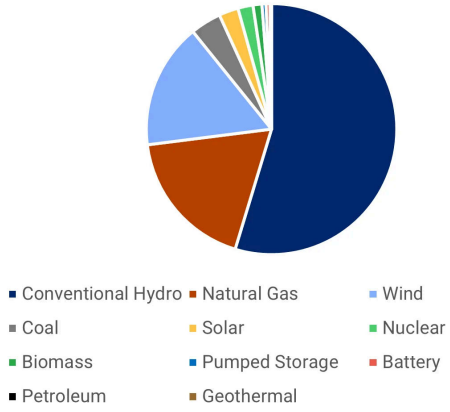
14 GW of new generation is planned in the subregion over the coming decade, including almost 8 GW of wind and 3 GW of battery storage.

Planned retirements

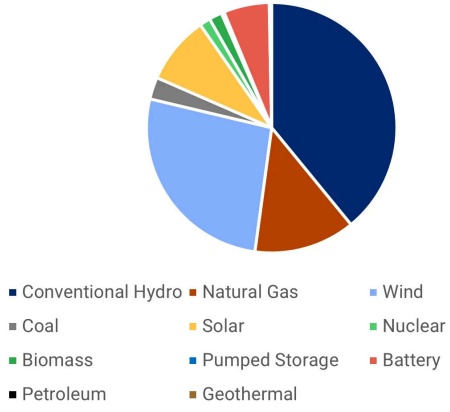
The Northwest has approximately 340 MW of retirements slated to occur between 2026 and 2035. Over one-third of these retirements is biomass facilities. Hydro, wind, and solar retirements make up approximately half the retirements. It is worth noting that part of the renewable retirements may be repowers or non-renewals of purchase power agreements. The remaining retirements are primarily natural gas resources, the majority of which are set to retire in 2035.

Annual and peak demand

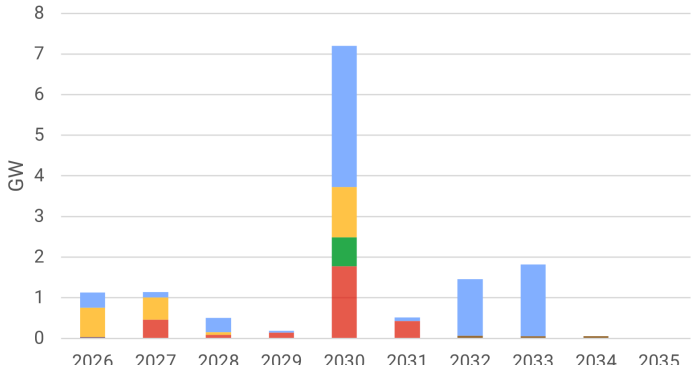
Demand in the subregion is forecast to grow by 24% over the coming decade, while peak demand is projected to increase 21%. Major drivers of demand growth in the Northwest include data centers, residential and transportation electrification, customer growth, and semiconductor manufacturing.



Resource mix, year-end 2024



Resource mix in 2035 if all planned resources are built

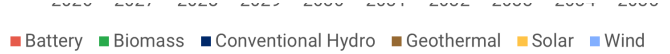


Loss of Load

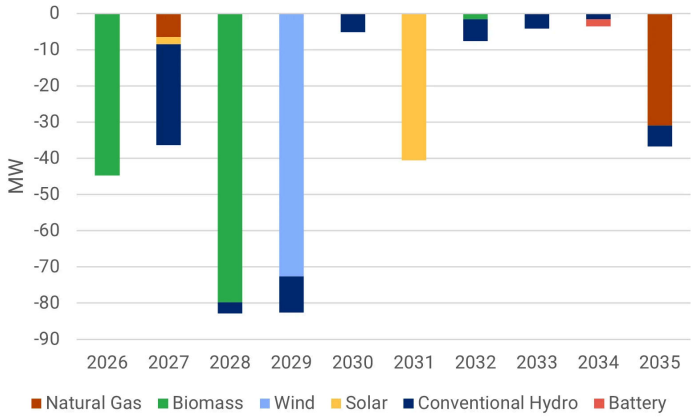
The Northwest shows loss of load in all scenarios beginning as early as 2028 in the 67% Additions Scenario. Heat maps showing the timing and seasonal loss of load are provided below for the 2030 and 2035 All Additions, 67% Additions, and High Load scenarios.

The Northwest is unique in that it experiences loss of load in the summer *and* winter in all scenarios, as well as the shoulder seasons in the High Load Scenario. The Northwest is also unique because, over the last decade, it has experienced system peaks both during the morning ramp (between 7 and 10 a.m.), which are more typical, *and* during the evening between 5 and 6 p.m. Morning ramps in the winter coincide with the greatest frequency of loss of load, whereas in the summer, the evening peak hours are when the greatest energy shortfalls are projected to occur. LOLHs and LOLEvs are greatest in the winter months, primarily in January and December, indicating that these months have a higher propensity for loss of load. Electricity is the predominant source of heat in the Northwest subregion, with the coldest temperatures occurring in the early morning and again dropping in the evening. In the winter, solar primarily contributes between the hours of 9 a.m. and 3 p.m., falling right in between the hours of greatest demand. Solar irradiance is weaker during the winter, which also lessens the contribution from solar resources. Wind makes up over 50% of the projected resource additions for the subregion, however these resources have the highest variability in energy output compared to other VERs. Wind can be prone to icing or overspeed during extreme cold weather events, which may minimize their availability during periods of elevated load. The significant demand associated with heating electrification, coupled with the timing of solar output and high wind variability, are the main drivers of LOLHs during the winter. In the summer, the primary driver of LOLHs is solar availability diminishing in the evening during periods of elevated demand. Given that BESS resources are modeled as being fully available for discharge, and that the All Additions Scenario shows LOLHs, these results indicate that the Northwest will need additional resources to meet demand over the next decade.

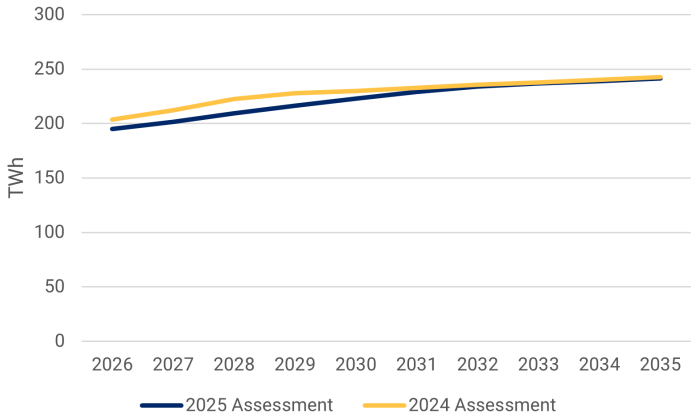
The California, Alberta, and British Columbia subregions support the Northwest during the morning winter ramps and evenings. However, transfer limitations from these subregions are frequently reached when attempting to



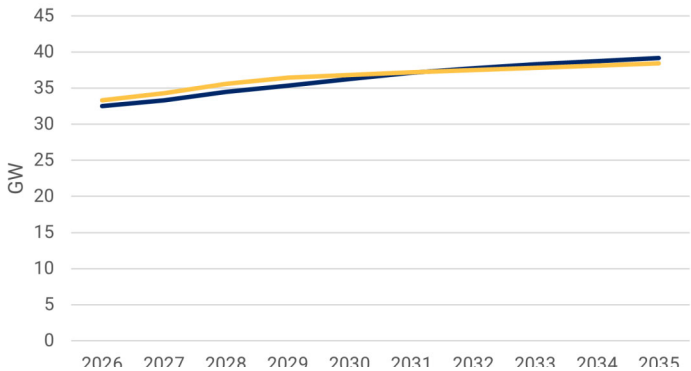
Planned resource additions, 2026-2035



Planned retirements, 2026-2035



Annual demand forecast, 2026-2035



mitigate loss of load in the Northwest, preventing further support to the subregion. In the summer, the California and Rocky Mountain subregions must meet their own native load obligations in the evenings, and can only provide limited support to the Northwest. The Alberta subregion also assists the Northwest during summer evenings but runs into transfer limitations. Beyond additional resources, additional transfer capability to the Northwest would also help reduce the projected loss of load in the subregion.

Northwest: All Additions 2030 LOLH	Hour Beginning																							
Month	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	-	-	-	-	-	-	-	1	-	-	1	1	1	-	-	-	1	3	3	1	-	-	-	-
2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	2	2	-	-	-	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

LOLHs by month and hour for the Northwest in the 2030 All Additions Scenario

Northwest: All Additions 2030 EUE (MWh)	Hour Beginning																							
Month	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	-	-	-	-	-	-	-	2	-	-	1	1	1	-	-	-	1	38	4	1	-	-	-	-
2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	875	6	-	-	-	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

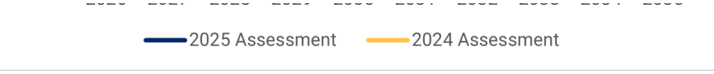
EUE by month and hour for the Northwest in the 2030 All Additions Scenario

Northwest: All Additions 2035 LOLH	Hour Beginning																							
Month	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	2	2	2	2	3	3	4	4	4	5	4	4	4	4	4	2	5	6	6	6	5	3	3	3
2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	3	2	1	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	3	5	4	2	1	-	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	5	2	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	5	1	-	-	-	-	-	-	-	2	6	6	5	2	-	-	-

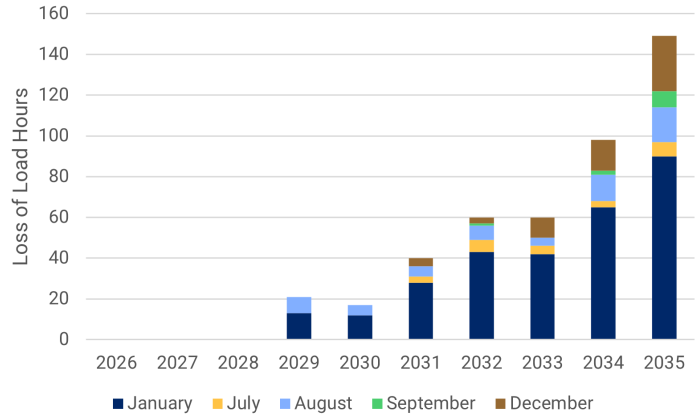
LOLHs by month and hour for the Northwest in the 2035 All Additions Scenario

Northwest: All Additions 2035 EUE (MWh)	Hour Beginning																							
Month	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	18	35	54	72	54	17	8	307	90	182	478	385	216	63	16	39	269	1,864	875	248	40	32	14	4
2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	48	293	5	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	990	4,046	5,044	3,151	686	3	-	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	89	2	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	35	8	-	-	-	-	-	-	-	3	88	92	27	2	-	-	-

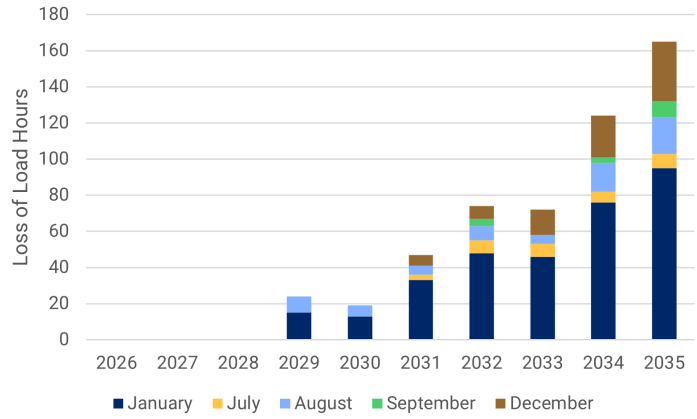
EUE by month and hour for the Northwest in the 2035 All Additions Scenario.



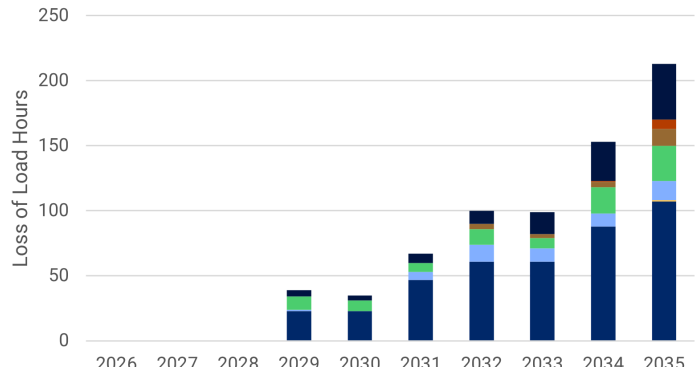
Peak demand forecast, 2026-2035



All Additions Scenario



95% Scenario



Northwest: 67% Additions 2030 LOLH	Hour Beginning																							
Month	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	-	1	2	2	1	-	-	4	3	3	2	3	3	1	1	2	4	5	5	4	3	2	-	-
2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	2	2	2	2	-	-	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	1	1	-	-	-

LOLHs by month and hour for the Northwest in the 2030 67% Additions Scenario.

Northwest: 67% Additions 2030 EUE (MWh)	Hour Beginning																							
Month	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	-	7	31	31	19	-	-	8	6	5	2	5	3	1	1	4	49	259	165	53	4	1	-	-
2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	1	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	230	3,094	3,430	3,241	1,945	5	-	-	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	7	5	1	-	-	-

EUE by month and hour for the Northwest in the 2030 67% Additions Scenario

Northwest: 67% Additions 2035 LOLH	Hour Beginning																							
Month	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	4	4	4	4	4	5	4	8	5	5	5	5	5	5	4	5	7	11	8	6	6	5	5	3
2	-	-	-	-	-	-	2	4	1	-	-	-	-	-	-	-	-	2	3	2	1	-	-	-
3	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-	-	-	2	3	4	5	7	11	6	1	-	-	-
8	-	-	-	-	-	-	-	-	-	-	1	1	2	2	3	4	6	7	10	9	5	2	-	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	5	7	10	8	1	-	-	-	-
10	-	-	-	-	-	1	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	1	5	5	2	-	-	-	-
12	-	-	-	-	-	2	7	12	10	3	2	-	-	-	-	1	8	13	8	8	6	1	-	-

LOLHs by month and hour for the Northwest in the 2035 67% Additions Scenario

Northwest: 67% Additions 2035 EUE (MWh)	Hour Beginning																							
Month	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	272	577	869	771	607	280	133	1,707	1,939	1,789	1,448	1,039	773	683	659	1,175	4,213	7,064	6,311	4,673	1,424	979	184	107
2	-	-	-	-	-	-	39	222	18	-	-	-	-	-	-	-	-	32	309	280	1	-	-	-
3	-	-	-	-	-	-	-	143	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	5	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-	-	-	25	125	267	1,455	1,419	2,310	1,897	1	-	-	-
8	-	-	-	-	-	-	-	-	-	-	5	563	1,563	2,684	3,400	3,712	4,891	6,027	6,627	5,131	3,169	130	-	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	280	254	158	809	1	-	-	-	-
10	-	-	-	-	-	12	8	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	12	-	-	-	-	-	-	-	-	1	131	87	4	-	-	-	-
12	-	-	-	-	-	20	226	609	211	8	2	-	-	-	-	2	59	1,385	509	380	139	3	-	-

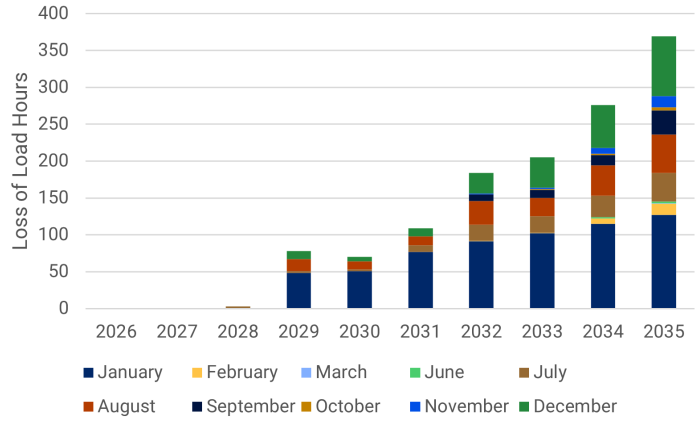
EUE by month and hour for the Northwest in the 2035 67% Additions Scenario

Northwest: High Load 2030 LOLH	Hour Beginning																							
Month	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	3	4	4	4	4	4	4	5	5	5	4	4	4	4	4	4	6	6	6	6	5	3	4	3
2	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	3	5	3	1	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	2	6	4	5	4	1	-	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	6	4	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	1	-	-	-	-
12	-	-	-	-	-	2	6	9	8	2	-	-	-	-	-	-	2	7	7	6	5	-	-	-

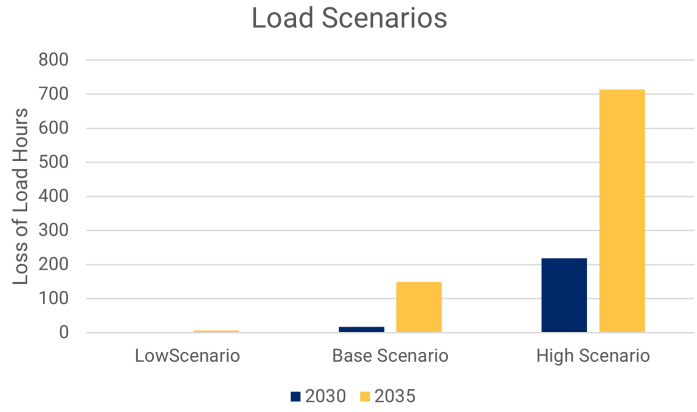
LOLHs by month and hour for the Northwest in the 2030 High Load Scenario



85% Scenario



67% scenario



Northwest: High Load 2030 EUE (MWh)	Hour Beginning																							
Month	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	138	288	338	432	301	138	53	215	231	106	464	335	196	142	177	115	479	903	644	142	29	181	76	43
2	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	168	1,019	482	1	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	276	3,033	3,592	3,493	2,776	923	10	-	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	288	239	54	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	1	-	-	-	-
12	-	-	-	-	-	16	135	290	94	1	-	-	-	-	-	-	5	133	154	47	9	-	-	-

EUE by month and hour for the Northwest in the 2030 High Load Scenario

Northwest: High Load 2035 LOLH	Hour Beginning																							
Month	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	6	6	6	6	6	6	6	9	7	7	8	8	8	7	6	6	8	9	9	7	7	7	5	5
2	-	-	-	-	-	2	5	8	7	4	2	-	-	-	-	1	2	5	7	5	4	2	-	-
3	-	-	-	-	-	1	6	7	5	4	-	-	-	-	-	-	-	-	3	3	1	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	4	13	18	17	16	5	-	-
8	-	-	-	-	-	-	-	1	-	-	1	1	2	2	2	3	5	11	24	24	15	6	2	-
9	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	4	7	12	13	11	6	-	-	-
10	-	-	-	-	1	5	6	6	1	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-
11	-	-	-	-	-	1	4	9	3	2	-	-	-	-	-	-	2	5	6	2	1	-	-	-
12	-	1	2	3	6	8	10	15	14	13	9	3	1	-	-	5	14	17	16	14	13	8	3	-

LOLHs by month and hour for the Northwest in the 2035 High Load Scenario

Northwest: High Load 2035 EUE (MWh)	Hour Beginning																							
Month	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	2,314	3,558	4,340	5,329	4,521	2,725	1,139	2,968	4,233	4,668	4,582	2,159	2,594	1,864	2,282	2,212	4,285	6,665	6,056	4,645	2,272	1,218	959	1,411
2	-	-	-	-	-	37	194	786	606	18	2	-	-	-	-	1	41	353	1,272	383	97	2	-	-
3	-	-	-	-	-	1	161	279	97	4	-	-	-	-	-	-	-	-	6	8	1	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23	11	5	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	198	695	5,237	7,512	5,304	887	56	-	-
8	-	-	-	-	-	-	-	1	-	-	3	81	186	470	1,088	1,143	1,874	6,833	8,470	6,212	3,705	876	75	-
9	-	-	-	-	-	-	-	-	-	-	-	-	0	2	11	62	542	2,620	2,598	713	25	-	-	-
10	-	-	-	-	7	159	332	295	1	-	-	-	-	-	-	-	-	73	-	-	-	-	-	-
11	-	-	-	-	-	13	126	281	8	2	-	-	-	-	-	-	85	243	193	42	16	-	-	-
12	-	8	20	33	135	570	3,183	5,090	1,911	297	35	2	1	-	-	35	309	933	809	628	395	97	25	-

EUE by month and hour for the Northwest in the 2035 High Load Scenario

Subregion: Rocky Mountain

Rocky Mountain is a summer-peaking area that includes Colorado, most of Wyoming, and parts of Nebraska and South Dakota. The population of the area is approximately 6.7 million. There are an estimated 18,800 miles of transmission lines in this subregion.

Current resource mix

On a capacity basis, the resource portfolio in the Rocky Mountain subregion primarily consists of natural gas, coal, and wind resources. Natural gas and coal together make up 55% of the resource mix, with wind at 21%. Solar and hydro each make up 10%. Battery storage is at 1%.

2035 resource mix

If all generation resources are built according to current resource plans, the capacity of thermal generation in the subregion will decrease to 40%, from 55% today. Wind would increase to 31% of the resource mix, while solar would increase to 14% and BESS to 6%.

Planned additions

15 GW of new resources is planned in the subregion over the coming decade, including almost 8 GW of wind and 3 GW of both natural gas and solar.

Planned retirements

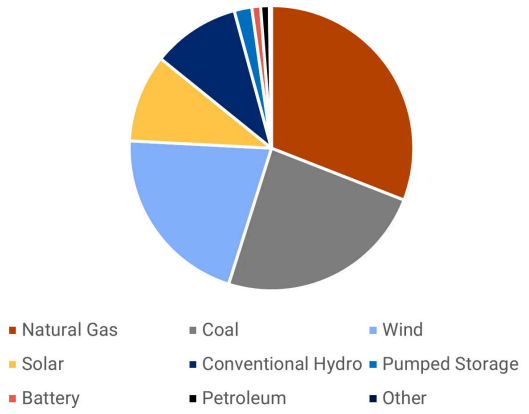
Over 6 GW of generation is planned for retirement over the coming decade, including 2.8 GW of coal and 1.7 GW of both natural gas and wind.

Annual and peak demand

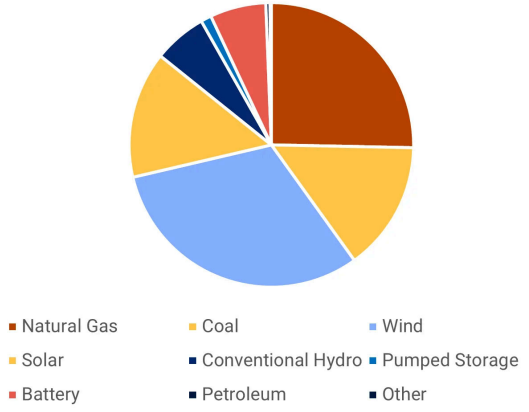
Demand in the subregion is forecast to grow by 27% over the coming decade, while peak demand is projected to increase 23%. Major drivers of demand growth in the Rocky Mountain subregion include data centers, as well as commercial and industrial customer growth.

Loss of Load

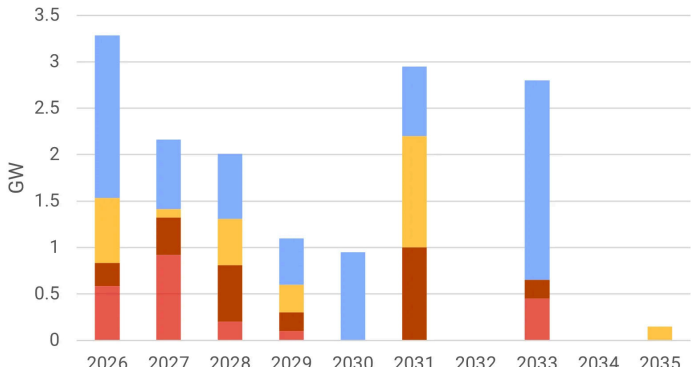
The Rocky Mountain subregion does not show loss of load in the All Additions or High Load scenarios. This subregion shows loss of load under



Resource mix, year-end 2024



Resource mix in 2035, if all planned generation is built



the 67% Additions Scenario for years 2030 through 2035, as well as one LOLH in 2034 and 2035 of the 85% Additions Scenario. The loss of load heat maps for the 2030 and 2035 67% Additions Scenario are provided below.

The Rocky Mountain subregion shows one LOLH for 5 MWh of EUE in 2030 and 18 LOLHs for 4,297 MWh of EUE in 2035 in the 67% Additions Scenario. The LOLHs occur between the hours of 4 and 9 p.m., primarily in July and August. This time frame includes the peak hour, which is anticipated to occur in the summer between 4 and 5 p.m. The Rocky Mountain subregion is showing a significant increase in both its annual demand and peak hour forecasts. The 2035 peak hour demand is projected at over 3 GW higher than last year's forecast, and the annual demand totals close to 13 TWh higher than last year's forecast. Similar to other subregions showing LOLHs during and shortly after their summer evening peak, these LOLHs are primarily a product of demand remaining elevated while solar output diminishes. In addition, there are over 6 GW of resource retirements with 4.5 GW of that being thermal resources. The additions in the 67% Additions Scenario total about 10 GW, with close to 7 GW of that being VERs. The reduction in additions, coupled with the increased uncertainty in energy output and unchanged retirements in the 67% Additions Scenario, also contribute to the LOLHs projected for this subregion.

Rocky Mountain: 67% Additions 2030 LOLH	Hour Beginning																							
Month	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

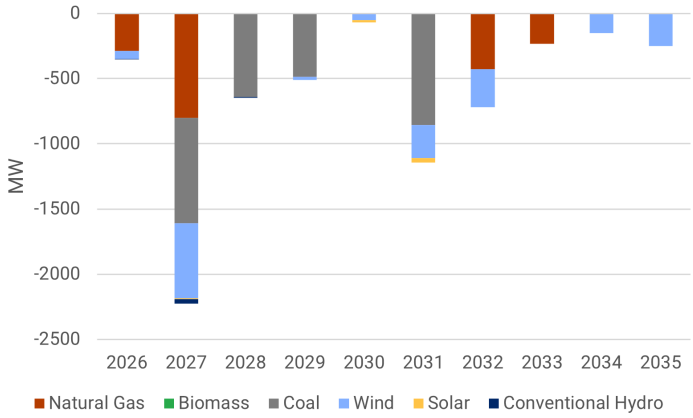
LOLHs by month and hour in the 2030 67% Additions Scenario

Rocky Mountain: 67% Additions 2030 EUE (MWh)	Hour Beginning																							
Month	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	-	-	-	-	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

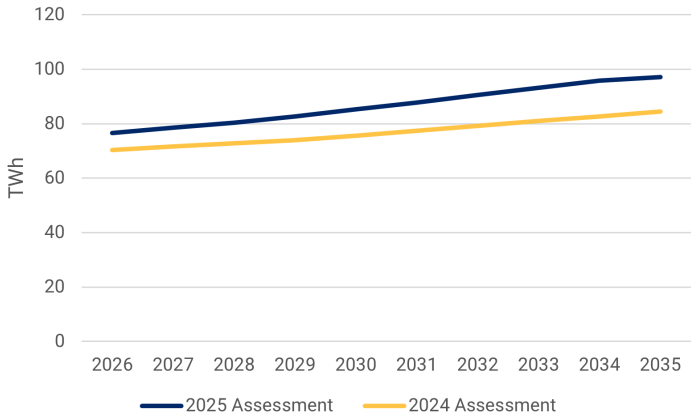
EUE by month and hour for the Rocky Mountain subregion in the 2030 67% Additions Scenario



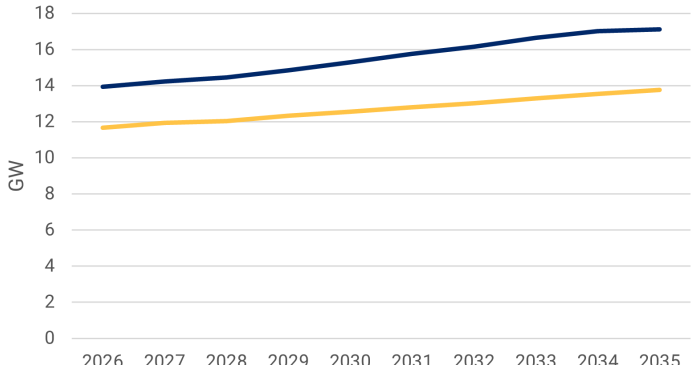
Planned resource additions, 2026-2035



Planned retirements, 2026-2035



Annual energy demand forecast, 2026-2035



Rocky Mountain: 67% Additions 2035 LOLH	Hour Beginning																							
Month	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-
2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	6	7	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	9	5	1	-	-	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-

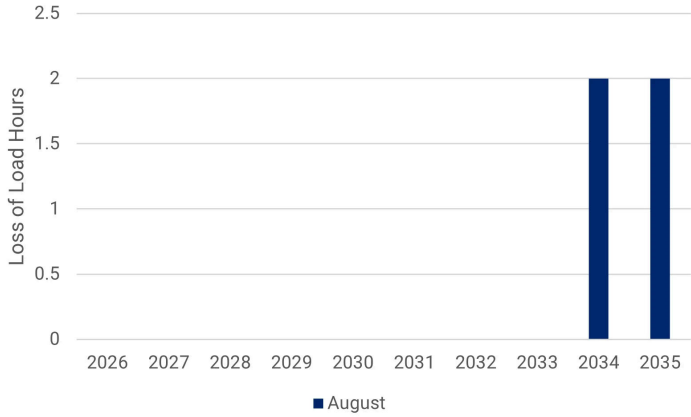
LOLHs by month and hour for the Rocky Mountain subregion in the 2035 67% Additions Scenario

Rocky Mountain: 67% Additions 2035 EUE (MWh)	Hour Beginning																							
Month	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21	3	-	-	-	-	-
2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	1,189	891	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	135	1,418	595	31	-	-	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	-	-	-	-	-	-

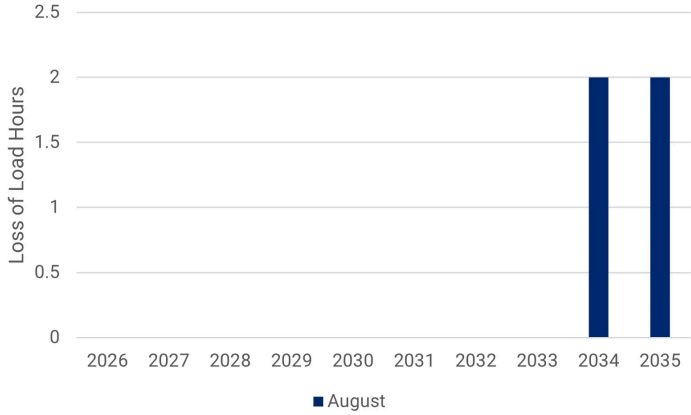
EUE by month and hour for the Rocky Mountain subregion in the 2035 67% Additions Scenario



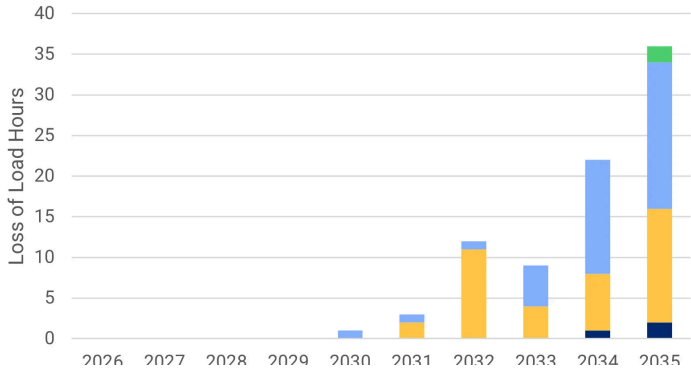
Peak demand forecast, 2026-2035



85% Scenario

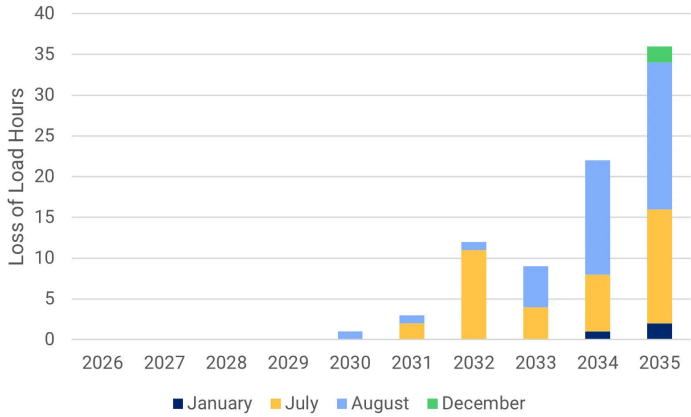


85% Scenario





67% scenario



67% scenario

Subregion: Southwest

Southwest is a summer-peaking area that includes all of Arizona and New Mexico, most of Nevada, and a small part of Texas. The area has a population of approximately 13.6 million. There are an estimated 23,100 miles of transmission lines in this subregion.

Current resource mix

As of year-end 2024, natural gas makes up almost half of the resource mix in the subregion (46%), while solar makes up 16%. Coal, wind, nuclear, and BESS make up between 7% and 9% each of the current resource mix.

2035 resource mix

If all generation resources are built according to current resource plans, in 2035, the resource mix will comprise 22% natural gas, 37% solar, and 18% battery storage. Along with natural gas's significant decline in the share of the resource mix, coal is expected to drop from 9% today to 4% in 2035.

Planned additions

70 GW of new resources are planned in the subregion over the coming decade, more than in any other subregion. Over half of the planned additions are solar (37 GW). 17 GW of BESS is planned, and 10 GW of wind.

In addition, 40 GW of the planned additions are tier 3 resources, which are more speculative.

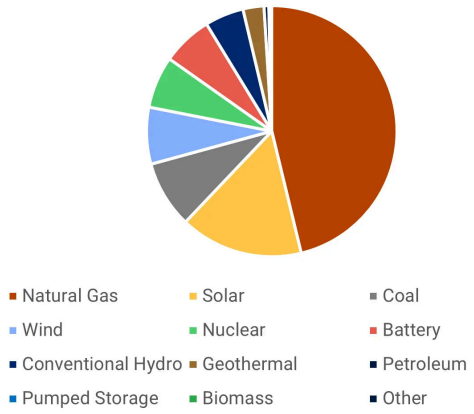
Planned retirements

7 GW of generation is planned for retirement over the coming decade, including 3 GW of coal and 2 GW of natural gas.

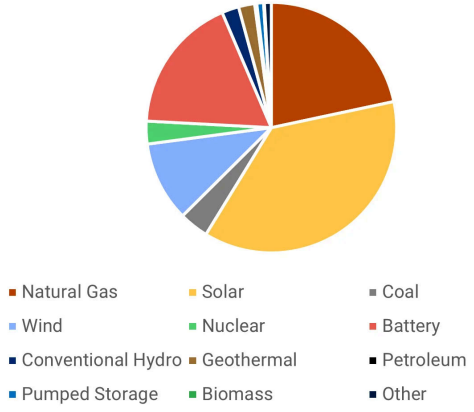
Annual and peak demand

Demand in the subregion is forecast to grow 42% over the coming decade, while peak demand is projected to increase 29%. The major drivers of demand growth in the Southwest subregion include data centers, industrial and residential electrification, and residential customer growth.

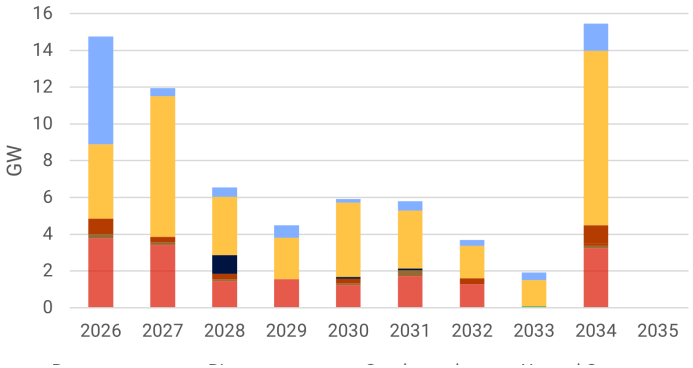
Loss of Load



Resource mix, year-end 2024



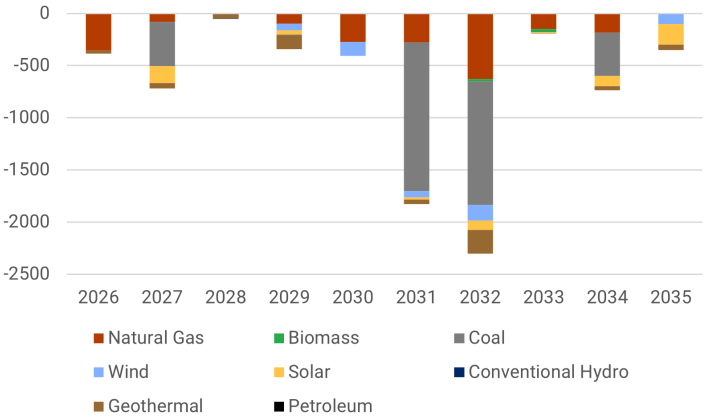
Resource mix in 2035, if all planned resources are built



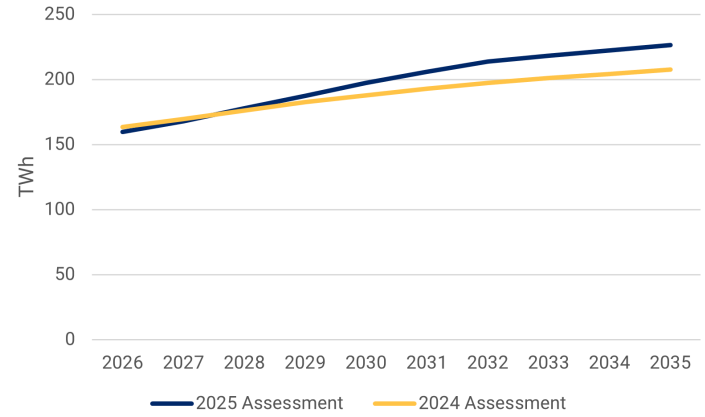
The subregion did not show loss of load in any scenario over the coming decade.



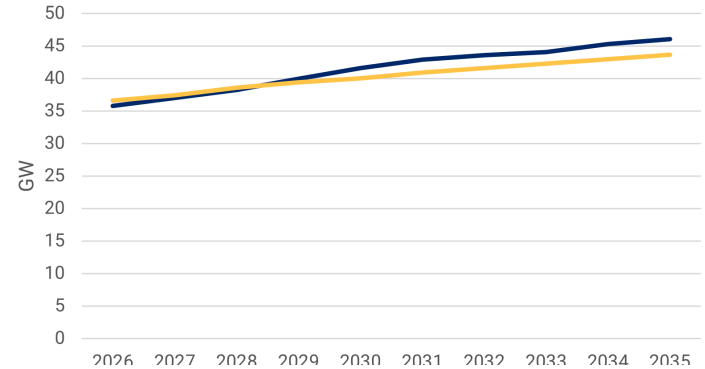
Planned resource additions, 2026-2035



Planned retirements, 2026-2035



Annual demand forecast, 2026-2035





Peak demand forecast, 2026-2035

Transfers

Transfers by subregion for years 2030 and 2035 for the All Additions, 67% Additions, and the High Load scenarios are provided below. Transfers are separated into imports and exports and shown both by month and by hour of the day.

The Northwest shows the greatest amount of imports in all scenarios. This is particularly true in the winter months during the morning and evening ramps. As discussed in the Northwest Loss of Load Section, winter mornings and evenings are the times when this subregion experiences most of its loss of load. MAVRIC's transfer logic only allows for transfers when loss of load is identified for an area in an islanded state. Therefore, the timing and magnitude of imports align with the periods of greatest need for a subregion. Most of the transfers to the Northwest come from the California subregion, specifically during the morning ramp hours of the winter months when the California subregion has surplus energy. There are times where the transfer limits from the California subregion to the Northwest are met, and Alberta, British Columbia, and Rocky Mountain subregions also support the Northwest. However, transfer limits from the Alberta and British Columbia subregions to the Northwest are frequently reached when attempting to mitigate loss of load in the Northwest. This indicates that additional transfer capability to the Northwest from the California, Alberta, or British Columbia subregions would help alleviate winter LOLHs.

Summer evenings in the Northwest appear to be partially supported by the California subregion as well. However, the California subregion's ability to export during the evening becomes limited due to diminished solar and elevated native load. In other words, transfer limits to the Northwest from California during summer evenings are rarely met, as California is satisfying its obligations rather than exporting power. With less support from the California subregion, the Northwest leans more heavily on Alberta and the Rocky Mountain subregion for support. The Alberta subregion appears to hit its transfer limits to the Northwest frequently during summer evenings, indicating that loss of load could partially be alleviated with additional transfer capability from Alberta to the Northwest. The Rocky Mountain subregion can assist during summer evenings to an extent but does not hit its transfer limits to the Northwest. This indicates that, like California, the Rocky Mountain subregion must also meet its native load during summer evenings and can only provide limited support to the Northwest.

Basin also shows loss of load in all scenarios, primarily during summer evenings in the latter years of the Western Assessment. As such, Basin is primarily shown to import energy from June through August during and after its evening peak. During these hours, external transfers are sourced from the Rocky Mountain, Southwest, and California subregions. The Southwest subregion maxes out its transfer capability to Basin during the summer evening hours, indicating that there may be additional energy in the Southwest that could be provided to Basin if additional transfer capability were available. The Rocky Mountain and California subregions do not meet their transfer limits when assisting Basin on summer evenings, indicating that these subregions are meeting native load obligations with available resources rather than providing surplus energy to Basin. This is exacerbated in the High Load Scenario, in which transfers from the Rocky Mountain and California subregions become even more limited, resulting in an increase in LOLHs within the Basin subregion. This is despite Basin not having additional speculative large load demand in the subregion itself.

The Southwest shows a significant bump in exports during summer evenings in 2035 of the 67% Additions and High Load scenarios. Most of this increase in export activity is to support both the Basin and Rocky Mountain subregions. Mexico displays a notable increase in its imports in the 2035 67% Scenario, which are primarily fulfilled by the California subregion. Many LOLHs in the Mexico subregion occur despite the California subregion exporting up to its transfer limit to the Mexico subregion.

All Additions

Subregional transfers by month and time of day for the 2030 All Additions Scenario

Subregional transfers by month and time of day for the 2035 All Additions Scenario

67% Additions

Subregional transfers by month and time of day for the 2030 67% Additions Scenario

Subregional transfers by month and time of day for the 2035 67% Additions Scenario

High Load

Subregional transfers by month and time of day for the 2030 High Load Scenario

Subregional transfers by month and time of day for the 2035 High Load Scenario

Methods & Data

- Read the methodology used in this assessment.
- Read the glossary of terms used in this assessment.
- This year's Western Assessment uses eight new subregional boundaries that better align with operational and planning realities and are consistent with other WECC assessments.
- This assessment uses Loads & Resources data provided by the Balancing Authorities in early 2025.

BEFORE THE UNITED STATES DEPARTMENT OF ENERGY

Federal Power Act Section 202(c)	)
Emergency Order: Tri-State	)
Generation and Transmission	)
Association, Platte River Power	)
Authority, Salt River Project,	)
PacifiCorp, and Xcel Energy	)

Exhibit to
Motion to Intervene and Request for Rehearing and Stay of
Public Interest Organizations

Exhibit 2-185
Current Energy Group April Report

CURRENT
ENERGY GROUP

Resource Adequacy in the Mountain West

Addendum to

"An Assessment of Resource Adequacy Studies Following the Planned Retirement of Craig Station Unit 1"

Prepared for Earthjustice, Sierra Club, and Environmental Defense Fund

Authors
Maria Roumpani
Edward Burgess
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CURRENT ENERGY GROUP

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Executive Summary

On March 30, 2026, the U.S. Department of Energy (DOE) issued Order No. 202-26-21 (2026 Order), extending the requirement that Craig Station Unit 1 remain available to operate through June 28, 2026. [1] Previously, on December 30, 2026, the DOE issued Order No. 202-25-14 (2025 Order), which had required Craig Unit 1's continued availability through March 30, 2026. The 2026 Order relies on a finding that emergency conditions exist in the Western Electricity Coordinating Council (WECC) Rocky Mountain assessment area, a geographic area that differs from the WECC Northwest assessment area identified in the 2025 order, due to a shortage of electric energy, a shortage of generation facilities, and other causes.

The 2026 Order rests on a similar but not identical evidentiary foundation as the 2025 Order, in that the 2026 Order relies on the North American Electric Reliability Corporation's (NERC) 2025 Long-Term Reliability Assessment (LTRA) and WECC's 2025 Western Assessment of Resource Adequacy (WARA) while the 2025 Order relied on the 2024 LTRA and the 2024 WARA. The 2026 Order relies on the same U.S. Energy Information Administration (EIA) generation data, invokes the same executive orders, and cites to the same DOE July 2025 Resource Adequacy Report, as in the 2025 Order.

Current Energy Group prepared a report that accompanied the request for rehearing of the 2025 Order. This addendum to that report evaluates whether the updated sources in the 2026 Order provide any basis for the finding of a current emergency. It also addresses a shift in the geographic framing of the Order, from the WECC Northwest to the WECC Rocky Mountain assessment area, and assesses whether that reframing materially changes the reliability picture. As in the original report, CEG did not conduct independent modeling; rather, this addendum examines how, if at all, the methodology, assumptions, and conclusions of DOE's cited sources speak to the existence of a resource adequacy crisis in the relevant area.

We conclude that the 2026 Order does not provide a reasoned basis for the declared emergency. The 2026 Order's evidentiary record suffers from the same fundamental limitations identified in our original report.

First, the sources on which DOE relies do not support the existence of a near- or medium-term resource adequacy crisis. NERC's 2025 LTRA rates the WECC Rocky Mountain region at normal risk of energy shortfalls over the next five years, its lowest risk category. The reserve margin concerns NERC identifies are not projected to arise until Summer 2034 and Winter 2034-35, roughly eight years from now, which is typical of normal, non-emergency conditions. The reframing of the Order's geographic scope from the WECC Northwest to the WECC Rocky Mountain assessment area does not strengthen the evidentiary basis for the Order. The change reflects NERC's own updated assessment area boundaries rather than any new evidence of reliability risk, and the underlying

[1] U.S. Department of Energy (DOE). "Order No. 202-26-21," March 30, 2026. https://www.energy.gov/documents/doe-order-no-202-26-21-craig

reliability picture for Colorado and the broader Rocky Mountain region is no less secure than what was assessed in the original order.

Second, the long-term projections in some sources identified in the 2026 Order are consistent with the normal and intended function of resource adequacy planning: to identify the potential need to acquire new resources with sufficient lead time for state, regional, and utility processes to respond with deliberate, coordinated action. The identification of a potential reserve margin shortfall in 2034 does not constitute an emergency in 2026. Using projected long-term deficits to justify near-term emergency action conflates two distinct planning functions and could render the emergency order authority effectively boundless. Any region with projected growth in energy demand could be characterized as facing an emergency at any time.

Third, the 2026 Order invokes data center and industrial load growth as a basis for emergency action; but such growth is highly uncertain, and the evidence shows it will materialize at a different pace and scale than projected, with projects frequently failing to materialize on the timelines initially claimed. The 2026 Order does not evaluate this issue. Further, even accepting the projections at face value, data center load growth in the Rocky Mountain assessment area is not a near-term phenomenon that gives rise to an emergency condition. The geographic scope of the 2026 Order is not aligned with the projections cited in the Order regarding data center development: Colorado and the WECC Rocky Mountain assessment area are not among the primary markets for such development.

The retirement of Craig Station Unit 1 represents a long-planned transition that is reflected in regional planning analyses and is not identified as a driver of either near- or medium-term reliability risk. The studies cited in the 2026 Order do not support the existence of an emergency.

Introduction

This report is an addendum to CEG's January 2026 report assessing DOE Order No. 202-25-14, which required Craig Station Unit 1 in Craig, Colorado to remain available to operate through March 30, 2026. On March 30, 2026, the Department of Energy issued Order No. 202-26-21, extending that requirement through June 28, 2026 on similar grounds. Specifically, the Department claims that there is a continuation of emergency conditions in the WECC Rocky Mountain assessment area due to a shortage of electric energy and generation facilities.

This addendum evaluates whether the new evidence cited in the 2026 Order supports DOE's emergency determination, applying a similar analytical framework as the original report. The addendum is organized as follows:

- Section I evaluates each of the sources DOE relies upon: namely the 2025 NERC LTRA, WECC's 2025 WARA, DOE's July 2025 Resource Adequacy Report, and EIA generation data. This evaluation concludes that none of the evidence presented supports the existence of a near-term or long-term emergency for reliability of the electricity system.
- Section II provides additional context demonstrating that the identification of potential long-term resource adequacy gaps is a normal feature of utility resource planning, not evidence of an emergency.
- Section III addresses the 2026 Order's reliance on national demand growth narratives, including data center and industrial load projections, and explains why those narratives do not establish a reliability emergency in the WECC Rocky Mountain assessment area.

The original report is incorporated by reference.

I. The 2026 Order's Evidentiary Basis Does Not Support a Finding of An Emergency

In the 2026 Order, DOE relies on four sources in support of its emergency determination: the 2025 NERC LTRA, WECC's 2025 WARA, DOE's own July 2025 Resource Adequacy Report, and EIA generation data. This section evaluates each in turn and concludes that none of them, individually or collectively, support the existence of a near-term resource adequacy crisis.

NERC's Long-Term Reliability Assessment

NERC annually releases the LTRA to provide a forward-looking, regional assessment of bulk power system reliability over a 10-year period. The assessment is primarily targeted at the medium- and long-term timeframes and assigns a risk level to each region using a three-tiered classification system: "high risk," "elevated risk," and "normal risk."

2024 LTRA — WECC Northwest Assessment Area

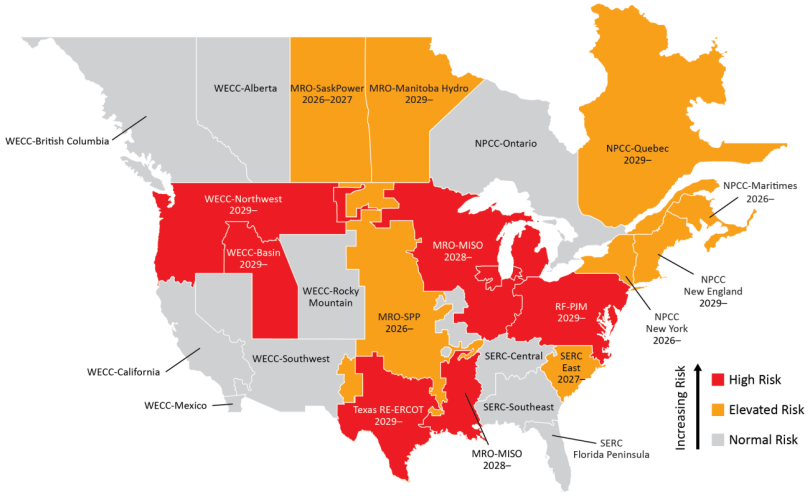
The 2025 Order cited the 2024 LTRA in support of its emergency determination.[2] As discussed in detail in the original report, the 2024 LTRA's findings did not support the proposition that the assessment area containing Craig 1 i (i.e., the WECC NW assessment area, which for purposes of the 2024 LTRA included the Rocky Mountain area) faced near- or medium-term resource adequacy risk. The assessment assigned the region its lowest possible risk classification, "normal risk," across the full study period through 2034, reported negligible unserved energy and loss-of-load risk, and identified reserve margins substantially above the reference margin level until the summer of 2031.[3] The assessment did not identify planned retirements as a reliability concern and did not call for delaying them.

2025 LTRA — WECC Rocky Mountain Assessment Area

The 2026 Order cites the 2025 LTRA in support of its continued emergency determination.[4] In the 2025 LTRA, WECC changed the geographic boundaries of assessment areas, such that Craig Unit 1 is now located in what WECC calls the Rocky Mountain assessment area. Much like the 2024 LTRA, the 2025 LTRA assigned the geographic area where Craig 1 is located (i.e., the WECC Rocky Mountain area) its lowest possible risk classification: "normal risk."[5] This designation means that resource adequacy criteria are met, and there is a low likelihood of electricity supply shortfall even when demand exceeds forecasts or resource performance is abnormally low (i.e. below the lowest risk criteria level).

[2] 2025 Order, at 1.
[3] NERC, 2024 LTRA (Corrected July 11, 2025), at 6 and 127-130, available at https://www.nerc.com/globalassets/our-work/assessments/2024-ltra_corrected_july_2025.pdf
[4] 2026 Order, at 3.
[5] NERC, 2025 LTRA (January 2026), at 7, available at https://www.nerc.com/globalassets/our-work/assessments/nerc_ltra_2025.pdf

Figure 1: NERC Risk Area Summary 2026-2030 (Source: 2025 LTRA)



Near-Term Findings

The 2025 LTRA assigned the WECC Rocky Mountain region its lowest possible risk classification: "normal risk." The study found that planned resources meet demand and reliability margins for all hours, with zero EUE[6] and zero LOLH[7] in both 2027 and 2029 (the two years studied).[8] The assessment does not identify any near-term reliability violations or unserved energy risk in the region, and does not identify Craig Unit 1's planned retirement as a contributing factor to any near-term reliability concern. The Anticipated Reserve Margin (ARM) for the region stands at 60.0% in 2027 and 38.1% in 2029, substantially above the Reference Margin Levels (RML) of 17.0% and 16.1% respectively.[9]

Table 2: Base Case Summary of NERC 2025 LTRA Results for WECC-Rocky Mountain

	2027	2029
EUE (MWh)	0	0
LOLH (hours per year)	0	0
Anticipated Reserve Margin	60.0%	38.1%

[6] Expected Unserved Energy or "EUE" is a standard metric of reliability risk used in electric system planning. A lower EUE value indicates a more reliable system in the years evaluated.

[7] Loss of Load Hours or "LOLH" is a standard metric of reliability risk used in electric system planning. A lower LOLH value indicates a more reliable system in the years evaluated.

[8] 2025 LTRA, at 161.

[9] *Id.* at 159.

Medium-Term Findings

The 2025 LTRA finds that the ARM remains above the RML through 2033.[10] The ARM and Prospective Reserve Margin (PRM) first fall below the RML in 2034 and 2035 (respectively). These findings are very typical for the medium- to long-term planning horizon (i.e., eight to nine years from now) and reflect the normal function of resource adequacy planning. As with the 2024 LTRA's findings regarding the WECC Northwest area, the potential for reserve margin shortfalls emerging in the later years of the study period is conditioned on the pace of demand growth and the pace of resource additions into the interconnection queue, not on the retirement of any specific unit.

Notably, the resource mix projections show substantial growth in solar, wind, and battery storage capacity over the study period, alongside declining coal capacity: from 5,383 MW in 2026 to 3,585 MW in 2030 on a base case basis.[11] This transition is reflected in and anticipated by the assessment, which does not characterize planned retirements as a reliability threat.

Conclusion

In sum, as with the 2024 LTRA, the 2025 LTRA finds that the WECC Rocky Mountain area begins from a position of strong resource adequacy, with zero probabilistic risk identified in the near term. The assessment does not call for delaying planned retirements or identify any planned retirements (including Craig 1) as a reliability concern. As explained in greater detail below in Section II, the identification of potential reserve margin shortfalls in 2034 and 2035 reflects the intended function of long-term resource adequacy planning: identifying the potential need for new resources with sufficient lead time for deliberate, coordinated action; and does not constitute evidence of a present-day or near-term emergency.

WECC's 2025 Western Assessment of Resource Adequacy

WECC releases annually the WARA report, providing a high-level, energy-based probabilistic examination of resource adequacy risks across the Western Interconnection and eight subregions over the next 10 years, examining risks across all potential hours rather than traditional peak load hour assessments only. The assessment employs a demand at risk hours (DARH) metric to evaluate resource adequacy.[12] DARH are defined as hours in which the probability that resources are inadequate to serve demand falls below 99.98%.[13] The identification of such hours is not a prediction that load will actually be lost; rather, it is a planning signal that indicates the system is approaching conditions under which the probability of a reliability shortfall, while still very low, has increased to a level warranting attention.

[10] 2025 LTRA, at 160.
[11] *Id.*
[12] In the 2025 assessment, WECC uses the term "loss of load hours" instead of the term used in previous assessments, "demand at risk hours." This change was made to align WECC's terminology with that used by NERC. The terms have the same meaning, which is that there is a risk of load loss under certain circumstances.
[13] Western Assessment of Resource Adequacy Appendix, January 24, 2025, at 3. https://www.wecc.org/sites/default/files/documents/products/2025/2024%20WARA%20Appendix.pdf

2024 WARA — WECC Northwest Central Subregion

The 2025 Order cited the 2024 WARA.[14] As discussed in detail in the original report, the 2024 WARA did not identify the existence of a near-term resource adequacy emergency in the WECC Northwest assessment area. The 2024 assessment found no demand-at-risk hours in the three subregions roughly corresponding to the WECC Northwest area until 2031, even under the most extreme scenario in which only 55% of planned resources are built on time.[15]

2025 WARA — WECC Rocky Mountain Subregion

The 2026 Order cites the 2025 WARA.[16] Like its predecessor, the 2025 WARA does not support the existence of a near- or medium-term resource adequacy emergency in the geographic area identified in the 2026 Order.[17]

Figure 2: Risk Level assessment for WECC subregions used in the 2025 Western Assessment of Resource Adequacy (Source: 2025 WARA)



Near-Term Findings

The 2025 WARA assigns the WECC Rocky Mountain subregion, where Craig is located, a normal risk classification with no identified LOLH in the near term. This means it is not subject to risk in the near-term: under all modeled scenarios, the Rocky Mountain subregion shows no loss-of-load hours through 2029.

Medium-Term Findings

In the medium term, the Rocky Mountain subregion is subject to minimal risk under the modeled scenarios. The Rocky Mountain subregion does not show loss of load in the All Additions or High Load scenarios. LOLH for the area only appear, and then only minimally, under the 85% and 67%

[14] 2025 Order, at 2.
[15] 2024 WARA, March 12, 2024, available at: https://feature.wecc.org/wara/
[16] 2026 Order, at 3-4.
[17] 2025 WARA, January 22, 2026, available at: https://feature.wecc.org/2025wara/index.html

build-out scenarios, in which 15% and 33% respectively of planned resources fail to come online as scheduled. Under the 85% build-out scenario, the Rocky Mountain subregion shows only 4 LOLHs (i.e., 4 hours with potential reliability risk) over the entire 10-year study period, with the first appearing in the summer of 2034. Under the 67% build-out assumption, which grounds WECC's most conservative scenario, the Rocky Mountain subregion still shows low risk in the medium term with the first LOLH appearing in the summer of 2030, increasing to 18 LOLHs by 2035.

Conclusion

The 2025 WARA, like its predecessor, does not support the existence of a near-term or medium-term resource adequacy crisis in the Rocky Mountain assessment area.

DOE's July Resource Adequacy Report

The DOE July 2025 Resource Adequacy Report, discussed in detail in the original report, is cited in the 2026 Order but does not strengthen the evidentiary basis for the emergency determination. As discussed in the original report, the July report analyzes resource adequacy conditions in 2030 under scenarios that assume no Tier 2 or Tier 3 generation resources are built, a highly conservative assumption inconsistent with typical electric utility planning requirements. Even under that assumption, DOE found that the non-CAISO West region had the least amount of normalized unserved energy (NUSE) of all regions analyzed. The report does not analyze near-term conditions, does not identify a resource adequacy crisis in the Rocky Mountain region, and does not support the existence of an emergency in 2026. DOE itself acknowledged that its study "could benefit greatly from the in-depth engineering assessments which occur at the regional and utility level."[18] Nothing in the 2026 Order's reliance on this report adds to or changes the conclusions set forth in the original report.

Energy Information Administration Planned Additions and Retirements

The 2026 Order, like its predecessor, relies on EIA data to characterize planned generation retirements in Colorado. As discussed in detail in the original report, DOE's reliance on EIA retirement data is selective; it cites planned retirements without acknowledging that the same EIA data show substantial net generation additions in Colorado. To reiterate the numbers cited in the original report, between 2019 and 2029, EIA data forecasts approximately 4,300 MW of retirements but more than double that amount of capacity additions, with over 10,000 MW of new generation added.[19] Moreover, in the 2026 Order, DOE has not corrected the mistake we identified in the 2025 Order: DOE incorrectly calculates planned coal retirements in Colorado using EIA data.[20] The 2026 Order's characterization of EIA data as supporting an emergency finding remains

[18] "Resource Adequacy Report: Evaluating the Reliability and Security of the United States Electric Grid," page i. U.S. Department of Energy, July 2025, https://www.energy.gov/topics/reliability.
[19] Current Energy Group, "Resource Adequacy in the Mountain West An Assessment of Resource Adequacy Studies Following the Planned Retirement of Craig Station Unit 1" at 18 (Table 4) (Jan. 2026).
[20] *Id.* at 18 (Table 3).

as incomplete and misleading as in the original order, and the conclusions set forth in the original report apply with equal force here.

II. Long-Term Analyses Showing the Potential Need for Additional Resources Are a Normal Feature of Utility Resource Planning

The potential for reserve margin shortfalls identified in the later years of the 2025 LTRA and 2025 WARA study periods is not evidence of an emergency; it is evidence that resource adequacy planning is working as intended. The fundamental purpose of utility resource planning is to analyze the potential need to acquire additional resources (whether demand- and/or supply-side resources) far enough in advance to enable the utility to acquire such resources to meet future customer demand. Studies such as the LTRA and WARA, and utility integrated resource plans, are not designed to provide an iron-clad prediction that a shortage or loss of load will actually occur many years from now. Indeed, just the opposite: the purpose of long-term analyses is to provide utilities and other planners with the information they need so they can take steps to avoid a shortage many years from now.

Utilities regularly issue requests for proposals (RFPs) to acquire resources with in-service dates five to eight years in the future, reflecting the normal lead time required to plan, procure, permit, and construct new generation. Table 1 below illustrates this pattern for the major utilities in the region.

These procurement timelines demonstrate that utilities in the region are actively planning for and acquiring resources to address projected needs prior to any potential resource adequacy risks identified in the LTRA or WARA analyses materializing. The fact that a study such as the 2025 LTRA might show a potential shortfall in 2034 and beyond *if no further action is taken* does not mean that shortfall will, or is likely to, actually occur in 2034. That is because each utility in the Rocky Mountain assessment area regularly forecasts whether it will need additional resources and then procures the resources needed to meet future customer demand.

Table 1: Resource Acquisition Periods outlined in utility RFPs

Utility	Proceeding	Date initial RFP issued	Latest date in resource acquisition period	Max length of resource acquisition period
Tri-State Generation and Transmission Association, Inc.	20A-0528E[21]	May 18, 2022	12/31/2030	7.5 years
	23A-0585E[22]	September 13, 2024	12/31/2031	7 years
Public Service Company of Colorado (Xcel)	21A-0141E[23]	December 1, 2022	12/31/2028	6 years
	21A-0141E,[24] Near Term Procurement	August 29, 2025	12/31/2029	4.5 years
	24A-0442E[25]	Expected summer 2026	12/31/2031	5.5 years

The Order specifically cites to NERC's 2025 LTRA, which identified the WECC Rocky Mountain Region to have "[anticipated reserve margin] that falls below the [Reference Margin Level] in Summer 2034 and 2035, and Winter 2034–35,"[26] for the apparent proposition that an "emergency condition" exists based on those forecasts. But a resource need identified 8-9 years into the future is very typical and does not represent a departure from standard planning practices. In fact, both NERC's LTRAs (WECC Rocky Mountain region) and Tri-State Electric Resource Plans (ERP) have consistently identified a resource need within a similar time horizon (i.e., within 6-10 years) going back many years. Each year the identified need is generally pushed back as well, demonstrating how standard planning practices address the identified need. The tables below demonstrate the years into the future when a potential resource need was identified for several recent LTRAs and ERPs.

[21] Colorado Public Utilities Commission (CO PUC), Proceeding No. 20A-0528E, Tri-State Generation and Transmission Association, Inc. 2020 Electric Resource Plan, Phase II Implementation Report, at 11 (RFP issuance date) and 15 (Resource Acquisition Period). Available at https://www.dora.state.co.us/pls/efi/efi.show_document?p_dms_document_id=989882&p_session_id=

[22] CO PUC, Proceeding No. 23A-0585E, Tri-State Generation and Transmission Association, Inc. 2023 Electric Resource Plan, Phase II Implementation Report, at 10 (RFP Issuance date) and 16 (Resource Acquisition Period). Available at: https://www.dora.state.co.us/pls/efi/efi.show_document?p_dms_document_id=1038782&p_session_id=

[23] CO PUC, Proceeding No. 21A-0141E, Decision No. C24-0052, paragraph 35 (RFP issuance date), available at: https://www.dora.state.co.us/pls/efi/efi_p2_v2_demo.show_document?p_dms_document_id=1014518;
CO PUC, Proceeding No. 24A-0442E, Decision No. C25-0747, Paragraph 15 (Resource Acquisition Period). Available at: https://www.dora.state.co.us/pls/efi/efi_p2_v2_demo.show_document?p_dms_document_id=1052251

[24] CO PUC, Proceeding No. 21A-0141E, 2025 Near-Term Procurement Report, Rev. 1. Available at: https://www.dora.state.co.us/pls/efi/efi.show_document?p_dms_document_id=1054340&p_session_id=

[25] CO PUC, Proceeding No. 24A-0442E, Decision No. C25-0747, Paragraph 33. Available at: https://www.dora.state.co.us/pls/efi/efi_p2_v2_demo.show_document?p_dms_document_id=1052251

[26] 2026 Order, page 3.

Table 2: Anticipated Reserve Margin Shortfalls in NERC LTRAs (WECC Rocky Mountain Region)

Year of NERC LTRA	Year when Anticipated Reserve Margin falls below Reference Margin Level	Years in Future
LTRA 2025[27]	2034	9
LTRA 2024[28]	2031	7
LTRA 2023[29]	2032	9
LTRA 2022[30]	2029	7
LTRA 2021[31]	2028	7
LTRA 2020[32]	2028	8

Another trend to note from Table 2 above is that the ARM initially projected for any future year does not remain static and generally increases as the projected year draws closer. For instance, the 2020 LTRA projected a potential shortfall in 2028 that the 2025 LTRA now shows will not occur. This phenomenon is most apparent in Table 3 below, which shows the predicted 2028 Anticipated Reserve Margin increasing from 13.5% in the 2020 LTRA for the WECC NW region to 53.2% in the 2025 LTRA for the Rocky Mountain region (previously included in the WECC NW region), thereby avoiding any risk of a shortfall.

Table 3: ARM and RML in NERC LTRAs - WECC NW Region (Rocky Mountain in LTRA 2025)

	2028 Anticipated Reserve Margin	2028 Reference Margin Level	Projected Deficit/Surplus in 2028
2020 LTRA	13.5%	15.6%	-2.1%
2021 LTRA	12.8%	13.4%	-0.6%
2022 LTRA	14.8%	14.0%	0.8%
2023 LTRA	30.9%	17.4%	13.5%
2024 LTRA	29.3%	15.4%	14.1%
2025 LTRA	53.2%	16.2%	37.0%

[27] Available at https://www.nerc.com/globalassets/our-work/assessments/nerc_ltra_2025.pdf
[28] Available at https://www.nerc.com/globalassets/our-work/assessments/2024-ltra_corrected_july_2025.pdf
[29] Available at https://www.nerc.com/globalassets/programs/rapa/ra/nerc_ltra_2023.pdf
[30] Available at https://www.nerc.com/globalassets/programs/rapa/ra/nerc_ltra_2022.pdf
[31] Available at https://www.nerc.com/globalassets/programs/rapa/ra/nerc_ltra_2021.pdf
[32] Available at https://www.nerc.com/globalassets/programs/rapa/ra/nerc_ltra_2020.pdf

A similar trend can be observed for any year in which a shortfall is initially observed. The fact that the initial year of need continually advances over time indicates that a projected future shortfall from a single assessment is generally not actually experienced.

Over many years and many planning cycle iterations, the routine identification of future resource needs leads to subsequent procurement activities. Resource additions from those procurements serve to maintain the timing of future needs within an acceptable 6-10 year window, even while accounting for the Craig plant's retirement. Current conditions are no different. In fact, the timing of future needs presently appears to be on the upper end of this range, signifying a more robust reliability position than even in prior years.

For example, Tri-State's 2023 ERP resulted in resource procurement activities that increased the length of time for future resource needs from 6 years in 2023 to 10 years in the 2025 ERP. In other words, whereas in 2024 Tri-State predicted that it might need incremental resources six years ahead of time, Tri-State now predicts that it will not need any incremental resources for at least the next ten years.

Table 4: Anticipated Resource Needs in Tri-State ERPs

Year of Tri-State ERP	Year of Resource Need	Years in Future
2025 Plan[33]	2035	10
2024 Plan[34]	2030	6
2023 Plan[35]	2029	6
2022 Plan[36]	2030	8
2021 Plan[37]	2030	9
2020 Plan[38]	2029	9
2019 Plan[39]	2027	8
2018 Plan[40]	2026	8

[33] Available at https://www.dora.state.co.us/pls/efi/efi_p2_v2_demo.show_document?p_dms_document_id=1053542&p_session_id=
[34] Available at https://www.dora.state.co.us/pls/efi/efi_p2_v2_demo.show_document?p_dms_document_id=1032064&p_session_id=
[35] Available at https://www.dora.state.co.us/pls/efi/efi_p2_v2_demo.show_document?p_dms_document_id=1011533&p_session_id=
[36] Available at https://www.dora.state.co.us/pls/efi/efi.show_document?p_dms_document_id=985193&p_session_id=
[37] Available at https://www.dora.state.co.us/pls/efi/efi.show_document?p_dms_document_id=961080&p_session_id=
[38] Available at https://www.dora.state.co.us/pls/efi/efi.show_document?p_dms_document_id=961080&p_session_id=
[39] Available at https://tristate.coop/sites/tristategt/files/PDF/resourceplan/ERP%20Annual%20Progress%20Report%202019%20%28121019%29%20%281%29%20filed.pdf
[40] Available at https://www.dora.state.co.us/pls/efi/efi_p2_v2_demo.show_document?p_dms_document_id=894891&p_session_id=

2017 Plan[41]	2025	8
2015 Plan[42]	2023	8

The 2026 Order's reliance on projected long-term reserve margin shortfalls as justification for an emergency action under FPA section 202(c) conflates two fundamentally different planning functions. Long-term resource adequacy assessments are designed to identify risks with sufficient lead time for deliberate action through established processes. They are not (and are not intended to be) evidence of a present-day emergency requiring extraordinary intervention. Using projections of potential shortfalls in 2034 to justify an emergency order in 2026 would render the emergency authority effectively limitless, as virtually any region with projected energy demand growth could be characterized as facing an emergency at any time.

III. National Demand Growth Narratives Do Not Establish a Resource Adequacy Emergency in the WECC Rocky Mountain Area

The 2026 Order adopts the position that absent decisive intervention, the nation's power grid will be unable to meet projected demand for manufacturing, re-industrialization, and data centers driving AI innovation.[43] That assertion does not provide a sufficient basis for emergency action in the WECC Rocky Mountain assessment area.

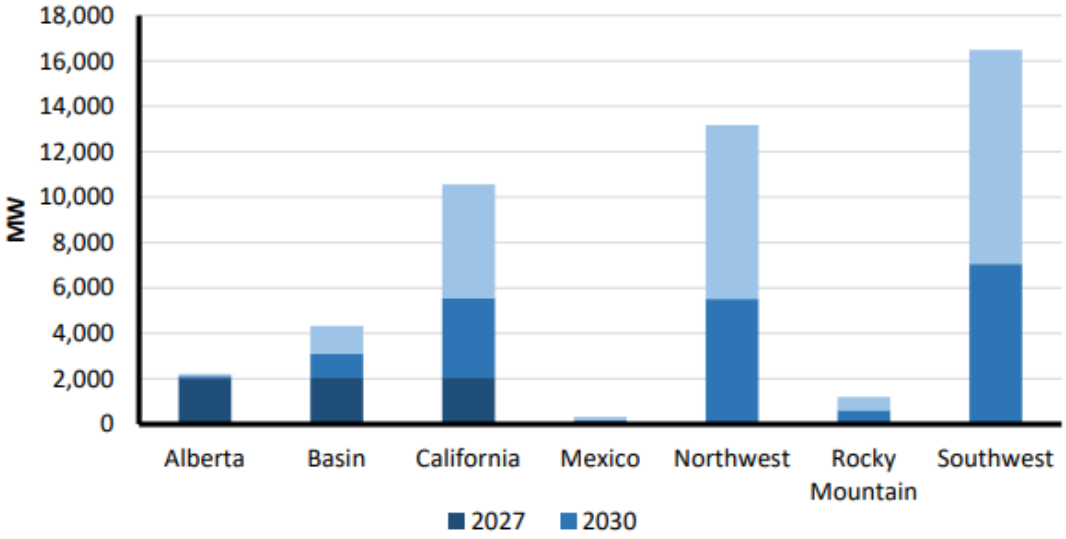
First, the load growth projections underlying the Order are subject to significant uncertainty. NERC itself acknowledges this in the 2025 LTRA, noting that "large loads inherently add volatility to load forecasts as project timelines and commitments can vary with factors related to construction, permitting approvals, grid development, and data center owner decisions."[44] Critically, the LTRA's own demand projections reflect mid-2025 data collection and do not incorporate more recent forecast revisions. NERC expressly acknowledges that both ERCOT and PJM, the two grid regions experiencing the most vigorous large-load development, have each prepared revised load forecasts since the LTRA data collection period, and that "both forecasts indicate that some large-load projects have slowed or failed to materialize within the shorter-term horizon." NERC further notes that "[l]oad forecasts that are revised downward can shrink the energy shortfalls that are projected in this LTRA," meaning the already-modest concerns identified in the LTRA may still overstate actual near-term risk. NERC further notes that in Texas, new data center demand projections have been reduced by almost 50% of their originally requested load level to reflect actual consumption behavior, and that ERCOT excludes most new large loads that have not yet entered a transmission service contract from its long-term forecast. Independent analysis corroborates this picture.

[41] Available at https://www.dora.state.co.us/pls/efi/efi_p2_v2_demo.show_document?p_dms_document_id=865735&p_session_id=
[42] Available at https://www.dora.state.co.us/pls/efi/efi_p2_v2_demo.show_document?p_dms_document_id=637884&p_session_id=
[43] 2026 Order, page 5.
[44] 2025 LTRA, page 9.

Sightline Climate's 2026 Data Center Outlook, tracking 777 large data center projects announced since 2024, found that 30–50% of the 2026 pipeline is unlikely to come online before the end of the year.[45] Of the at least 16 gigawatts of capacity planned for 2026, only 5 GW is currently under construction. The Order treats highly uncertain future demand as though it were a known and imminent fact, substantially overstating the evidentiary basis for emergency action.

Second, the geographic premise of the Order's demand narrative does not hold in the WECC Rocky Mountain area. The 2025 LTRA's own data confirm that large-load growth is not evenly distributed across WECC assessment areas. As shown in Figure 12 of the 2025 LTRA, reproduced below, the Rocky Mountain assessment area projects among the lowest large-load growth of any WECC region.

Figure 3: Large-Load Projection by Year in WECC Assessment Areas (Source: 2025 LTRA)



The LTRA notes that while Texas, PJM, and several WECC assessment areas are reporting steep demand increases due primarily to new data centers and large loads, the Rocky Mountain area is not among the areas with the highest projected growth. The Order's reliance on national demand growth narratives built around load centers far removed from the Rocky Mountain region does not provide a sufficient evidentiary basis for finding a resource adequacy emergency in the specific Rocky Mountain assessment area the 2026 Order purports to address.

[45] Catherine Boudreau, "Up to Half of the World's Data Centers May Be Delayed This Year," Latitude Media, February 27, 2026, available at https://www.latitudemedia.com/news/up-to-half-of-the-worlds-data-centers-may-be-delayed-this-year/.

Conclusion

Like its predecessor, the 2026 Order relies on a set of sources that do not support the existence of an emergency in the relevant assessment area.

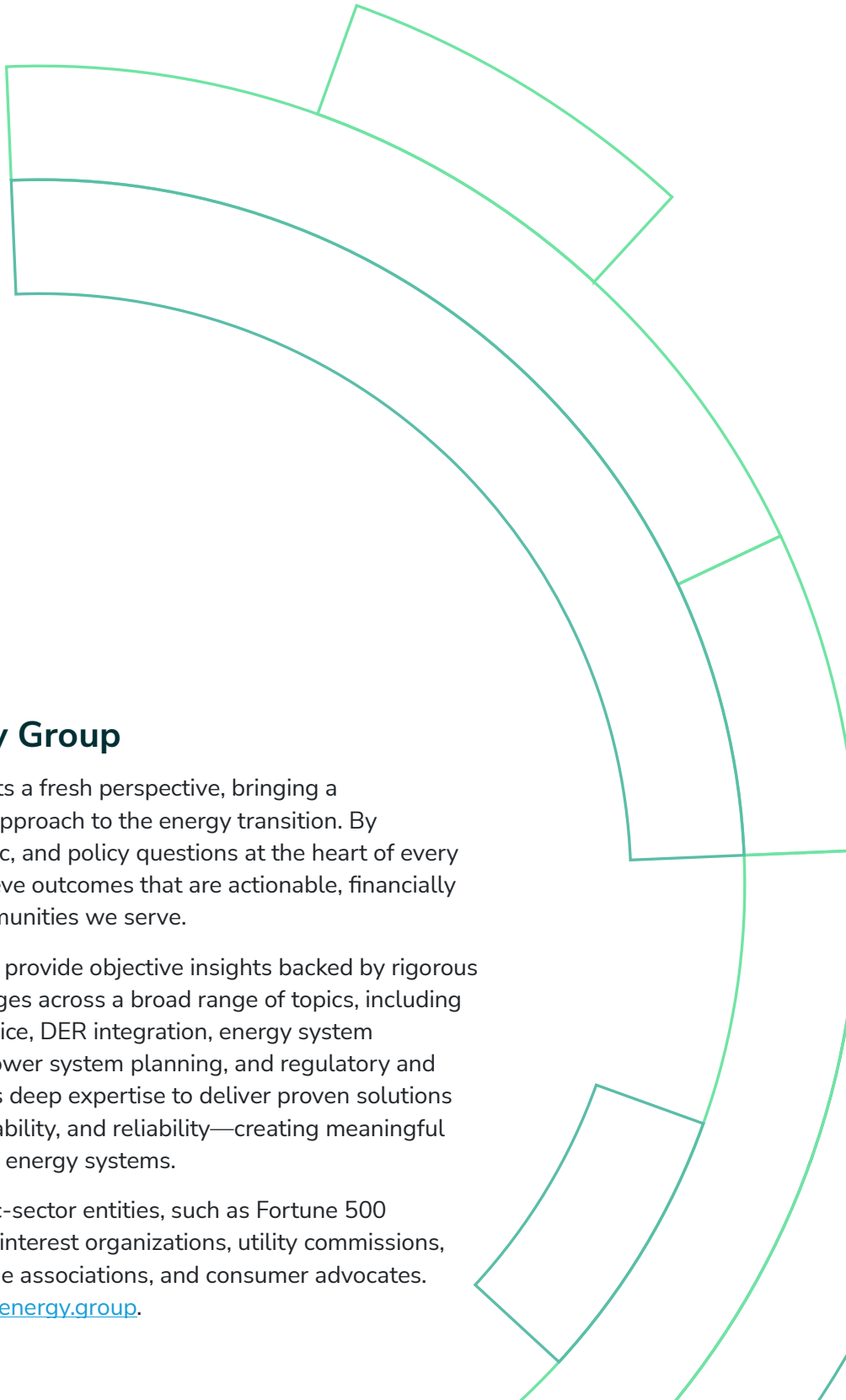
The 2025 LTRA assigns the WECC Rocky Mountain region its lowest possible risk classification, normal risk, with zero probabilistic risk identified in the near term. The 2025 WARA assigns the Rocky Mountain subregion normal risk, identifies no near-term demand-at-risk hours in the subregion, and concentrates its identified risks in the Northwest and Basin subregions. DOE's July 2025 Resource Adequacy Report does not analyze near-term conditions and, even under highly conservative assumptions, does not find evidence of a crisis in the Rocky Mountain region. And EIA data, relied upon selectively by DOE, show that planned generation additions in Colorado substantially exceed planned retirements over the relevant period.

The 2026 Order introduces one notable change from its predecessor: a shift in geographic framing from the WECC Northwest to the WECC Rocky Mountain assessment area. This change reflects NERC's updated assessment area boundaries and does not support the Order's conclusion that an emergency exists. The WECC Rocky Mountain region, like the WECC Northwest area before it, is not facing a near-, medium-, or long-term resource adequacy crisis by any measure.

The reserve margin shortfalls projected for 2034 and beyond reflect the normal and intended function of long-term resource adequacy planning, identifying the potential need for utilities to acquire additional resources (if current demand projections prove to be accurate) with sufficient lead time for deliberate, coordinated action. Colorado utilities are already responding through competitive resource acquisition processes with in-service timelines extending to 2029-2031, demonstrating that the planning process is functioning as designed. The identification of the potential need for new resources so far in the future that it falls outside the number of years that utilities acquire resources in advance is not evidence of a present-day emergency; instead, it is a part of a system that informs utilities whether they might need to acquire additional resources in the future.

Disclaimer

This report was prepared by Current Energy Group (CEG). It is intended to be read and used as a whole and not in parts. The report reflects the analyses and opinions of the authors using currently available information and does not necessarily reflect those of any other entity associated with this work.



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BEFORE THE UNITED STATES DEPARTMENT OF ENERGY

Federal Power Act Section 202(c) Emergency Order: Tri-State Generation and Transmission Association, Platte River Power Authority, Salt River Project, PacifiCorp, and Xcel Energy	)

Exhibit to
Motion to Intervene and Request for Rehearing and Stay of
Public Interest Organizations

Exhibit 2-186
Public Interest Organizations' January 2026 Rehearing Request

BEFORE THE UNITED STATES DEPARTMENT OF ENERGY

Federal Power Act Section 202(c) Emergency Order: Tri-State Generation and Transmission Association, Platte River Power Authority, Salt River Project, PacifiCorp, and Xcel Energy	Order No. 202-25-14

Motion to Intervene, Motion for Clarification and Request for Rehearing and Stay of Sierra Club, GreenLatinos, Vote Solar, Public Citizen, and Environmental Defense Fund (collectively, "Public Interest Organizations")

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I. INTRODUCTION

The Department of Energy ("Department") is unlawfully using Section 202(c) of the Federal Power Act to prevent the retirement of Craig Unit 1 ("Craig"). Craig generates power by burning coal, and the Department is acting pursuant to a new and unprecedented policy to exceed its carefully constrained emergency authority under Section 202(c) in order to prevent coal plant retirements. The policy is unlawful because Section 202(c) applies only to imminent, unexpected shortfalls, not to the Department's preference for specific types of energy generation.

Order No. 202-25-14 (the "Order") offers no lawful basis, rational reasoning, or evidentiary support for an emergency justifying the invocation of Section 202(c). In purporting to find an emergency in seven states—Colorado, Idaho, Montana, Oregon, Utah, Washington, and Wyoming—the Department focuses on changes to the mix of generators. Generators burning coal and other fossil fuels are retiring, but are being replaced by new resources, including solar, wind, and battery resources. Replacing dirty, expensive, and unreliable plants with modern technology is not an emergency. It is, instead, a result of market forces and prudent planning.

None of the sources the Department cites in the Order, collectively or separately, support the claimed near-term or long-term emergency. The Department looks for support from the 2024 Long-Term Reliability Assessment published by the North American Electric Reliability Corporation ("NERC"), but that document finds "negligible unserved energy and load-loss risk" in a region that encompasses the Department's seven-state emergency and extends further to parts of other states. The Department also turns to the 2024 Western Assessment of Resource Adequacy from the Western Electricity Coordinating Council ("WECC"). That report finds zero hours in which demand is at risk in 2026 (and almost zero hours in 2027) in another large footprint subsuming and extending beyond the area in which the Department claims an emergency. The Department also cites a couple of executive orders containing no relevant facts, as well as its own error-riddled and widely panned study that attempts to evaluate resource adequacy in 2030. Further, in reaching for data about the mix of generators in a single state (Colorado) to support its purported seven-state emergency, the Department looks only at one side of the coin, focusing on planned retirements with no attention paid to planned additions. In fact, Colorado has added, and plans to add, more generating capacity than has been and will be retired, resulting in a significant net increase in generating resources. And the Department somehow commits an even more basic error; in pulling data from its own Energy Information Administration, the Department overstates what that data says about the amount of planned coal retirements by more than 900 MW.

Meanwhile, the Department fails to consider a multitude of evidence that the Department is or should be aware of. This list begins with the careful and detailed resource planning undertaken by all five of Craig's co-owners: Tri-State Generation and Transmission Association ("Tri-State"), Platte River Power Authority ("Platte

River"), Salt River Project, PacifiCorp, and Xcel Energy (also known as Public Service Company of Colorado) ("Xcel") (collectively, the "Craig Co-Owners"). For nearly a decade, the Craig Co-Owners have been planning to retire Craig on December 31, 2025, and otherwise ensure resource adequacy. The Department devotes not a word to these efforts.

More broadly, the Department fails to address a host of studies and monitoring from state regulators, regional entities, and private utilities. These efforts undercut the Department's claimed emergency. The evidence shows that the established planning and monitoring efforts are resulting in sufficient supplies of electricity now and will continue to provide for resource adequacy and reliability through the end of the decade and beyond, particularly as planned resources enter service. Two sources omitted from the Order, the 2025–2026 Winter Reliability Assessment and a presentation from a private consultancy, actually appear in another (unlawful) Section 202(c) order issued two weeks earlier. The Department's failure to engage these studies and efforts while reaching sweeping, unsupported conclusions is not reasoned decision-making.

Indeed, the Department itself undercuts the emergency claim. In recent orders, the Department allows electricity exports from the Pacific Northwest to Canada upon "find[ing] that the wholesale energy markets are sufficiently robust to make supplies available to exporters and other market participants serving United States regions along the Canadian and Mexican borders" and recounting the multi-layered and "comprehensive" reliability processes that "ensure[] that bulk-power system owners, operators, and users have a strong incentive both to maintain system resources and to prevent reliability problems that could result from movement of electric supplies through export." Research Power Corp., Order No. EA-365-C at 4–6 (Oct. 21, 2025), https://www.energy.gov/gdo/ea-365-c-research-power-corporation; *see* Dep't of Energy, Export Authorization Library (last visited Jan. 28, 2026), https://www.energy.gov/gdo/export-authorization-library. The Department makes no attempt to reconcile the Order with its views of just a few months ago.

And whatever needs our modern energy system has, Craig is not the answer. The plant is an old, dirty, expensive generator that is required to retire under Colorado law. Running Craig after December 31, 2025, violates state law and plagues the region with excessive amounts of harmful air pollution that clouds Colorado's treasured federal public lands in haze, including Rocky Mountain National Park, Flat Tops Wilderness Area, Eagles Nest Wilderness Area, Mount Zirkel Wilderness Area, and Rawah Wilderness Area. Pollution from Craig also causes premature deaths and tens of millions of dollars in health harms. Ex. 1-123 at PDF 5 (EPA COBRA Health Effects Estimate).

"All costs" incurred by the Craig Co-Owners to comply with the Order "end up on ratepayers." *See* Laura Sanicola, Barrons, *Who's Paying to Keep Coal Plant Alive? All Electricity Customers, Trump Advisor Says* (Jan. 14, 2026), https://www.msn.com/en-

us/money/markets/who-s-paying-to-keep-coal-plant-alive-all-electricity-customers-trump-advisor-says/ar-AA1UdRHI. Tri-State avers that the Order is likely to require additional expenditures "in operations, repairs, maintenance and, potentially, fuel supply, all factors increasing costs," and that the utility "is working to prepare filings in support of cost recovery." *Tri-State Makes Craig Generating Station Unit 1 Available to Operate in Compliance with DOE Emergency Order* (Jan. 23, 2026), https://tristate.coop/tri-state-makes-craig-generating-station-unit-1-available-operate-compliance-doe-emergency-order.

Craig's inability to operate reliably and economically is plainly apparent but not addressed in the Order. Craig's operator and co-owners have substantially reduced capital and major maintenance expenditures over the past few years in anticipation of retirement. As a result, the plant would require tremendous maintenance and investment to function consistently. In fact, Craig was broken when the Department issued the Order, having suffered a mechanical failure that halted electricity generation. Tri-State, *U.S. DOE Orders Tri-State to Keep Craig Generating Station Unit Operating for Next 90 Days* (Dec. 31, 2025), https://tristate.coop/us-doe-orders-tri-state-keep-craig-generating-station-unit-operating-next-90-days.

The Order was not requested by the Craig Co-Owners or any of their state-level regulators. The Order, issued just a day before Craig's long-planned retirement, is a hasty and ill-advised eleventh-hour maneuver that stands in opposition to years of meticulous and coordinated planning. The Department lacks authority to override the states' and utilities' decisions to retire the plant and bring on cleaner and cheaper resources.

The Order is costly, harmful, unnecessary, unwanted, and unlawful. Public Interest Organizations respectfully request that the Department grant intervention in the proceedings over the Order; stay the Order; grant clarification of the Order; grant rehearing of the Order; rescind the Order (and any renewals of the Order); and allow Craig to retire.

II. Statement of Issues and Specification of Error

The undersigned Public Interest Organizations move to intervene and request clarification (see *infra* sec. V.D.3), rehearing, and a stay pursuant to Section 313(a) of the Federal Power Act, 16 U.S.C. § 825*l*(a), and the applicable rules of practice and procedure, 18 C.F.R. §§ 385.203, .212, .214, .713; *see* Ex. 1-10 at PDF 2 (Cooke Email to Alle-Murphy) (recommending that "a party seeking rehearing can look for procedural guidance to [Federal Energy Regulatory Commission's ("FERC")] Rules of

Practice and Procedure, 18 CFR Part 385.").[1] Public Interest Organizations' motion and requests are based upon the following errors and issues:

A. The Department has not demonstrated that an emergency exists in any portion of the Western Electricity Coordinating Council Northwest assessment area as defined in the Order, or in any other area, as required by Section 202(c) of the Federal Power Act; nor has the Department demonstrated that an emergency exists as defined in the implementing regulations for Section 202(c). *See, e.g.*, 16 U.S.C §§ 824(a)–(b), 824a(a)–(c); 10 C.F.R. §§ 205.371–.375; *Emergency Interconnection of Elec. Facilities and the Transfer of Elec. to Alleviate an Emergency Shortage of Elec. Power,* 46 Fed. Reg. 39984 (Aug. 6, 1981); *Hughes v. Talen Energy Mktg., LLC*, 578 U.S. 150 (2016); *FDA v. Brown & Williamson Tobacco Corp.*, 529 U.S. 120 (2000); *Jarecki v. G.D. Searle & Co.*, 367 U.S. 303 (1961); *Citizens Action Coal. v. FERC*, 125 F.4th 229 (D.C. Cir. 2025); *Conn. Dep't of Pub. Util. Control v. FERC*, 569 F.3d 477 (D.C. Cir. 2009); *Alcoa Inc. v. FERC*, 564 F.3d 1342 (D.C. Cir. 2009); *Cal. Indep. Sys. Op. Corp. v. FERC*, 372 F.3d 395 (D.C. Cir. 2004); *Otter Tail Power Co. v. Federal Power Commission*, 429 F.2d 232 (8th Cir. 1970); *Richmond Power & Light v. FERC*, 574 F.2d 610, 615 (D.C. Cir. 1978); *Duke Power Co. v. Fed. Power Com.,* 401 F.2d 930, 938 (D.C. Cir. 1968).

B. Even if the emergency described by the Order did exist—it does not—the Department has not demonstrated a reasoned basis for its determination that requiring the Craig Co-Owners to make Craig available to operate at the direction of two specified entities will "best meet the emergency and serve the

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[1] Until sometime after June 18, 2025, the Department maintained a webpage with procedures for intervention and rehearing requests. U.S. Dep't of Energy, *DOE 202(c) Order Rehearing Procedures* (visited June 18, 2025), https://www.energy.gov/ceser/doe-202c-order-rehearing-procedures (attached as Ex. 1-11) [hereinafter "DOE Rehearing Procedures"]. The Department maintains another website that currently states, "All public comments and requests related to FPA section 202(c) should be sent via email to AskCR@hq.doe.gov. . . . Additional information about 202(c) procedures, if necessary, will be announced on this page. The provision of this process for submission of correspondence or comments on any pending application is for purposes of ensuring the receipt by the appropriate office and personnel within the Department. Establishment of this email address does not establish a "docket," and those submitting correspondence do not constitute parties or intervenors to any proceeding." U.S. Dep't of Energy, *DOE's Use of Federal Power Act Emergency Authority* (last visited Jan. 28, 2026), https://www.energy.gov/ceser/does-use-federal-power-act-emergency-authority (attached as Ex. 1-12) [hereinafter "DOE 202(c) Webpage"]. Public Interest Organizations' instant motion and requests are also pursuant to the DOE 202(c) Webpage and the DOE Rehearing Procedures.

public interest." *See, e.g.*, 16 U.S.C. § 824a(c); 10 C.F.R. §§ 205.373; 205.375; *Dep't of Homeland Sec. v. Regents of the Univ. of Calif.*, 591 U.S. 1 (2020); *Entergy Corp. v. Riverkeeper, Inc.*, 556 U.S. 208 (2009); *Allentown Mack Sales & Service, Inc. v. NLRB*, 522 U.S. 359 (1998); *Motor Vehicle Mfrs. Ass'n of the U.S. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29 (1983); *NAACP v. Fed. Power Comm'n*, 425 U.S. 662 (1976); *Gulf States Utils. Co. v. Fed. Power Comm'n*, 411 U.S. 747 (1973); *Otter Tail Power Co. v. United States*, 410 U.S. 366 (1973); *California v. Fed. Power Comm'n*, 369 U.S. 482 (1962); *Pa. Water & Power Co. v. Fed. Power Comm'n*, 343 U.S. 414 (1952); *Nat'l Shooting Sports Found., Inc. v. Jones*, 716 F.3d 200 (D.C. Cir. 2013); *Chamber of Com. of the U.S. v. Secs. & Exch. Comm'n*, 412 F.3d 133 (D.C. Cir. 2005); *Sierra Club v. Env't. Prot. Agency*, 353 F.3d 976, 980 (D.C. Cir. 2004); *Wabash Valley Power Ass'n, Inc. v. FERC*, 268 F.3d 1105 (D.C. Cir. 2001).

C. The Order exceeds the Department's authority in its availability requirement and its decree concerning whether Craig shall be considered a capacity resource. *See, e.g.*, 16 U.S.C. §§ 824(a)–(b), 824a(b)–(c); *Gallardo v. Marstiller*, 596 U.S. 420 (2022); *Hughes v. Talen Energy Mktg., LLC*, 578 U.S. 150 (2016); *FERC v. Elec. Power Supply Ass'n*, 577 U.S. 260 (2016); *Gomez-Perez v. Potter*, 553 U.S. 474 (2008); *Allentown Mack Sales & Service, Inc. v. NLRB*, 522 U.S. 359 (1998); *Fed. Power Comm'n v. Fla. Power & Light Co.*, 404 U.S. 453 (1972); *Conn. Light & Power v. Fed. Power Comm'n*, 324 U.S. 515 (1945); *Conn. Dep't of Pub. Util. Control v. FERC*, 569 F.3d 477 (D.C. Cir. 2009).

D. The Department has unlawfully failed to ensure that the Order requires generation of electric energy only during hours necessary to meet the emergency and serve the public interest, that operations are consistent with any applicable environmental laws and regulations to the maximum extent practicable, and that any adverse environmental impacts are minimized. *See, e.g.*, 16 U.S.C. § 824a(c)(2); *Kingdomware Techs., Inc. v. United States*, 579 U.S. 162 (2016); Ex. 1-13 (DOE Order No. 202-22-4); Ex. 1-14 (Department Order No. 202-17-4 Summary of Findings); Ex. 1-21 (Department Order No. 202-26-01); Ex. 1-22 (Department Order No. 202-26-01A); Ex. 1-24 (Department Order No. 202-24-1).

III. INTERVENORS' INTERESTS

As further discussed below, each of the Public Interest Organizations has interests that may be directly and substantially affected by the outcome of this proceeding. Each party may therefore intervene in this proceeding. 18 C.F.R. § 385.214; *see* Ex. 1-11 (DOE Rehearing Procedures); Ex. 1-12 (DOE 202(c) Webpage); Ex. 1-10 (Cooke Email to Alle-Murphy).

Each of the Public Interest Organizations also demonstrates a concrete injury arising from the Order that is redressable by a favorable outcome. Each organization

is therefore aggrieved by the Department's Order and may properly apply for rehearing. *See* 16 U.S.C. § 825*l*(a); *Wabash Valley Power Ass'n, Inc. v. FERC*, 268 F.3d 1105, 1112 (D.C. Cir. 2001); 18 C.F.R. §§ 385.203, 385.713; Ex. 1-11 (DOE Rehearing Procedures); Ex. 1-12 (DOE 202(c) Webpage); Ex. 1-10 (Cooke Email to Alle-Murphy).

A. Sierra Club

Sierra Club has a demonstrated organizational commitment to reducing pollution and harm from coal-fired power plants, including Craig. Sierra Club's Beyond Coal Campaign seeks to reduce the pollution currently being produced by coal-fired power plants such as Craig, and to reduce energy bills by ensuring that ratepayers do not fund the cost of continuing to operate uneconomic coal plants like Craig. To those ends, Sierra Club has long engaged in advocacy relating to Craig Station. Sierra Club has intervened in Tri-State's electric resource plans before the Colorado Public Utilities Commission (the "Colorado Commission") in order to ensure that the retirement of Craig remained on track and was part of Tri-State's approved resource plan. Craig's retirement has been a premise of much of Sierra Club's work in Colorado.

Craig is owned by five utilities that serve electric customers in several states, including Arizona, Colorado, New Mexico, Utah, and Wyoming. In each of these states, Sierra Club has members who receive electricity service from a utility that owns Craig. For example, Sierra Club has over 15,000 members in Colorado, including members who receive electricity from Xcel, Tri-State, or Platte River. The Order harms Sierra Club's members' financial interests, because they will likely have to pay their share of the costs to comply with the Order.

In addition, Sierra Club has members who live, work, and/or recreate in areas of Colorado that are affected by air pollution from Craig. The Order will harm Sierra Club's members' aesthetic, health, and environmental interests by leading to increased air emissions that will pollute scenic areas, harm human health, and impair air quality.

B. GreenLatinos

GreenLatinos is a national nonprofit organization that convenes a broad coalition of Latino leaders committed to addressing environmental, natural resources, and conservation issues that significantly affect the health and welfare of the Latino community. GreenLatinos engages in this advocacy at the national, regional, and local levels. It strives to amplify the voices of minority, low-income, and tribal communities and to advance health equity, environmental justice, and community resilience. GreenLatinos has members throughout Colorado, including members who live, work, and/or recreate in areas that are affected by air pollution from Craig. GreenLatinos also has members who are customers of the utilities that purchase

electricity from Tri-State Generation and Transmission Association and customers of Craig's other co-owners.

Pollution emitted by Craig harms GreenLatinos' members, and the Order will harm these members by preventing the coal unit from retiring as planned and thus prolonging the time period it can generate electricity and emit pollution into nearby communities. In addition, GreenLatinos' members will likely be harmed by the Order because Tri-State and the other Craig co-owners will incur increased costs to keep Craig online after its current retirement deadline. The customers of the utilities that purchase electricity from Tri-State and customers of the other co-owners, including Green Latinos' members, will likely be responsible for paying these costs and will pay higher utility bills because of the Order. GreenLatinos and its members have an interest in ensuring that Tri-State retires Craig as planned, and the Order extending the life of this coal unit harms GreenLatinos' and its members' interests.

C. Vote Solar

Vote Solar is an independent nonprofit organization working to repower the United States with clean energy by making solar power more accessible and affordable through effective policy advocacy. Vote Solar seeks to promote the development of solar at every scale, from distributed rooftop solar to large utility-scale solar facilities, and to encourage common-sense electrification of the economy, all as part of the transition away from fossil fuel-powered energy consumption. Vote Solar has over 92,000 members nationally and nearly 3,000 members in Colorado, including members who are customers of the utilities that purchase electricity from Tri-State Generation and Transmission Association and customers of Craig's other co-owners. Vote Solar is not a trade group, and it does not have corporate members.

Pollution emitted by Craig harms Vote Solar's members, and the Order will harm these members by preventing the coal unit from retiring as planned and thus prolonging the time period it can emit pollution into nearby communities. In addition, Vote Solar's members will likely be harmed by the Order because Tri-State and the other Craig co-owners will incur increased costs to keep Craig online after its current retirement deadline. The customers of the utilities that purchase electricity from Tri-State and customers of the other co-owners, including Vote Solar's members, will likely be responsible for paying these costs and will pay higher utility bills because of the Order. Vote Solar and its members have an interest in ensuring that Tri-State retires Craig as planned, and the Order extending the lives of these coal units harms Vote Solar's and its members' interests.

D. Public Citizen

Established in 1971, Public Citizen is a national research and advocacy organization representing the interests of household consumers. Public Citizen has members and supporters in every state, including those who pay electric utility bills

in Colorado and the Western United States. Public Citizen is active before the Federal Energy Regulatory Commission promoting just and reasonable rates, and in supporting efforts for utilities to be accountable to the public. Financial details about the organization are on its website. Public Citizen, Annual Reports, www.citizen.org/about/annualreport/.

F. Environmental Defense Fund

The Environmental Defense Fund ("EDF") is a nonprofit membership organization with hundreds of thousands of members nationwide, including approximately 10,000 members who live in Colorado and pay for and consume electricity in the state, and who are harmed by pollution from Craig's coal-burning operations. EDF's mission is to build a vital Earth for everyone by preserving the natural systems on which all life depends. Guided by expertise in science, economics, law, and business partnerships, EDF seeks practical and lasting solutions to address environmental problems and protect human health, including in particular by addressing pollution from the power sector. On behalf of its members, EDF works with partners across the private and public sectors to engage in utility regulatory forums at the federal level and throughout the United States to advocate for policies that will create an affordable, reliable, and low pollution energy system. Craig's retirement would help create an affordable, reliable, and low pollution energy system. Because the Order denies these and other benefits of the plant's retirement, the Order harms EDF members.

IV. BACKGROUND

A. The Primary Actors in the Electric Industry Already Protect Resource Adequacy Without Intrusion from the Department.

Multiple entities in Colorado and the WECC Northwest assessment area[2] have consistently maintained resource adequacy in the region through a combination of resource adequacy assessments and long-term planning. Resource adequacy is "the situation where an electric system has enough capacity available to meet customer

[2] The Order claims an emergency exists "within the Western Electricity Coordinating Council (WECC) Northwest assessment area." Order at 1. The Order employs only one regional definition of WECC Northwest. *Id.* ("In its 2024 Long-Term Reliability Assessment (LTRA), the North American Electric Reliability Corporation (NERC) notes that in the WECC Northwest assessment area, which includes Colorado, Idaho, Montana, Oregon, Utah, Washington, and Wyoming . . . ."). All references in this filing to "WECC Northwest" or "WECC Northwest assessment area" refer to that area. Note, though, that other regional assessments use their own definition of the Northwest region. *See generally* Ex. 1-01 at PDF 9–18, 21, 30–32, 36–62 (Current Energy Group Report) (collecting regional assessments).

demand, plus a reserve margin on top, in most hours under most conditions based on a chosen standard." Ex. 1-01 at 2–6 (Current Energy Group Report) (defining resource adequacy and including perspective from National Laboratory of the Rockies). The electric industry uses a variety of metrics to assess resource adequacy, though each metric gets to the same concept: whether there are sufficient resources available to both meet forecasted demand and provide an additional buffer. *See id.* However defined or measured, the entities and processes discussed below have for decades maintained an interconnected planning web that has sustained, and continues to sustain, resource adequacy across the region. That includes, of course, accounting for declared retirements, including Craig's long-planned retirement.

1. The Federal Energy Regulatory Commission Regulates Wholesale Electricity Markets and Mechanisms that Acquire Adequate Resources.

FERC regulates wholesale sales and transmissions of electric energy in interstate commerce. 16 U.S.C. § 824(b)(1). Federal authority over the electric grid dates back at least to 1935, when the Federal Power Act became law and the Federal Power Commission administered the Act.

The Federal Power Act did not give the federal agency plenary authority over the electric grid. Instead, Congress provided that federal regulation shall "extend only to those matters which are not subject to regulation by the States" and provided that "[t]he Commission" does not have jurisdiction, "except as specifically provided in [the Federal Power Act], over facilities used for the generation of electric energy." *Id.* at § 824(a)–(b)(1). As such, authority over generation facilities belongs to the states. *See id.*

In 1977, through the Department of Energy Organization Act, Congress reorganized the agencies that administer the Federal Power Act. Congress created the Department of Energy and FERC. 42 U.S.C. §§ 7131, 7171(a). Congress also transferred certain functions of "the Commission" in the Federal Power Act to the Department and other functions to FERC, thereby abolishing the Federal Power Commission. *See id.* §§ 7151(b), 7172(a)(1). FERC retained authority over rates and charges for the transmission or sale of electric energy, and the non-emergency interconnection of facilities for the generation, transmission, and sale of electric energy. *Id.* § 7172(a)(1)(B). The Department's authority over functions of "the Commission" in the Federal Power Act include functions under some subsections of Section 202 of the Act. *See id.* § 7151(b). The 1977 reorganization did not expand the role of the "the Commission" at the expense of state authority or shrink states' authority over generation facilities. *See, e.g.*, *id.* § 7113 ("Nothing in this chapter shall affect the authority of any State over matters exclusively within its jurisdiction.").

As part of its regulatory oversight, FERC has promoted the role of nonprofit entities, known as Independent System Operators or Regional Transmission Organizations. *See Fed. Energy Regul. Comm'n v. Elec. Power Supply Ass'n*, 577 U.S.

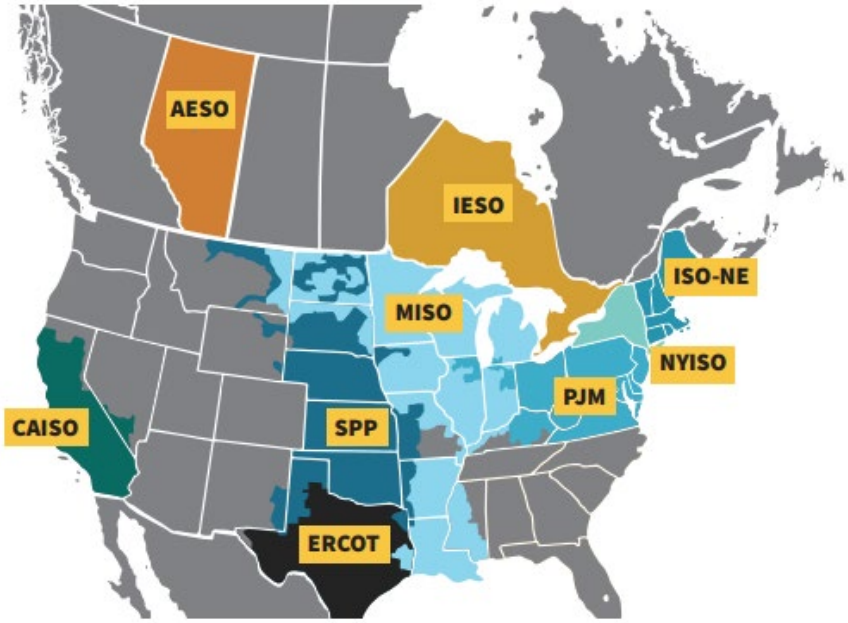
260, 267 (2016); *Regional Transm. Orgs.*, Order No. 2000, 65 Fed. Reg. 810, 811 (Jan. 6, 2000); *Promoting Wholesale Competition Through Open Access Non-Discriminatory Transm. Servs. by Pub. Utils. and Recovery of Stranded Costs by Pub. Utils. and Transm. Utils.*, Order No. 888, 61 Fed. Reg. 21540, 21542 (May 10, 1996). FERC generally regulates these entities pursuant to its authority over rates and charges for wholesale sales and transmissions of electric energy. *See, e.g.*, Order No. 2000, 65 Fed. Reg. at 811. These entities, referred to here as Independent System Operators or RTOs, perform a variety of functions, including:

- Ensuring the electric grid operates reliably in a defined geographic footprint;
- Balancing supply and demand instantaneously and maintaining sufficient operating reserves;
- Dispatching system resources as economically as possible;
- Coordinating system dispatch with neighboring balancing authority areas;
- Planning for transmission in its footprint;
- Coordinating system development with neighboring systems and participating in regional planning efforts; and
- Providing non-discriminatory transmission access.

Ex. 1-19 at 53 (FERC Energy Primer). Some Independent System Operators "also operate capacity markets, which, along with underlying resource adequacy rules, ensure sufficient capacity is available." *Id.* at 68.

The Independent System Operators now span much of the country, excluding portions of the Southeast, Southwest, and Northwest regions of the country. *See id.* at 37. The map in Figure 1 below depicts the geographic footprint of the various Independent System Operators.

Figure 1: Boundary Areas of RTOs and ISOs



Source: Ex. 1-19 at 67 (FERC Energy Primer).

Although there are currently no RTOs in much of the WECC Northwest assessment area, as discussed further below, there are entities that have taken on some of the regional coordination roles and responsibilities that RTOs provide in other parts of the country.

2. NERC Protects Reliability via Standards and Regular Assessments.

NERC is the "Electric Reliability Organization" under section 215 of the Federal Power Act. *N. Am. Elec. Reliab. Corp.*, 116 FERC ¶ 61,062, at P 3, *order on reh'g & compliance*, 117 FERC ¶ 61,126 (2006); *see* 16 U.S.C. § 824o(a)(2). This role dates back to 2005, after Congress added Section 215 to the Act and FERC certified NERC as the Electric Reliability Organization. Energy Policy Act of 2005, Pub. L. No 109-58, Title XII, Subtitle A, section 1211(a), 119 Stat. 594, 941 (2005), 16 U.S.C. 824o (2000 & Supp. V 2005); 116 FERC ¶ 61,062, at P 3.

As the Electric Reliability Organization, NERC is responsible for establishing and enforcing reliability standards for the bulk power system. 16 U.S.C. § 824o(a)(2); 18 C.F.R. § 39.1. NERC's reliability standards are subject to FERC's review and approval. 16 U.S.C. § 824o(d).

The NERC-developed and FERC-approved reliability standards apply to all users, owners, and operators of the bulk power system within the continental United States. *Id.* § 824o(b)(1); 18 C.F.R. §§ 39.2, 40.1(a), 40.2(a); *see id.* § 39.1 (defining "Bulk–Power System"). Each reliability standard identifies the types of entities that must comply with the standard, like generator owners, transmission owners, or transmission operators. *Reliability Standard Compliance and Enforcement in*

Regions with Regional Transm. Orgs. or Indep. Sys. Ops., 122 FERC ¶ 61,247, at P 4 (2008); *e.g.*, Ex. 1-117 (NERC Emergency Operations) (stating requirements applicable to, *inter alia*, balancing authorities, reliability coordinators, and transmission operators for the purpose of "address[ing] the effects of operating Emergencies by ensuring each Transmission Operator and Balancing Authority has developed plan(s) to mitigate operating Emergencies and that those plans are implemented and coordinated within the Reliability Coordinator Area as specified within the requirements").

NERC performs other functions in addition to development and enforcement of reliability standards. For instance, NERC annually assesses seasonal and long-term reliability of the bulk power system and monitors system performance. *See* 18 C.F.R. § 39.11. Since it began providing standardized "risk" assessments by region in the summer of 2021, NERC has adhered to a three-tiered assessment of risk: areas facing the least risk are "low" or "normal" risk regions, areas facing the most risk are "high" risk regions, and areas in between are "elevated" risk regions. *See* Ex. 1-28 at PDF 75, 124, 170, 218 (2019–24 NERC Summer Reliability Assessments). NERC's determination of "elevated" risk generally indicates that there is a "[p]otential for insufficient operating reserves in above-normal conditions." Ex. 1-27 at 6 (NERC 2025 Summer Reliability Assessment). An elevated risk does not constitute an emergency declaration because it does not indicate the possibility of imminent shortfalls; indeed, it is only the second of three risk levels offered by NERC. *See id.* at 10. NERC typically provides specific context and details associated with its determination. *See id.* at 17–39.

NERC also delegates certain authorities to six Regional Entities that make up the Electric Reliability Organization Enterprise. Ex. 1-149 at 1 ("About WECC" Webpage). The largest of these, the Western Electricity Coordinating Council ("WECC"), is one of the key regional actors described below working to ensure that the power grid remains reliable. *Id.* at 1–2.

3. The Utilities that Own and Operate Craig Protect Reliability and Resource Adequacy in Their Service Territories.

The five utilities that own and operate Craig have service territories spanning a significant portion of the Western United States. Tri-State is a wholesale electric cooperative that provides electricity to retail cooperatives in Colorado, New Mexico, Wyoming, and Nebraska. The geographic footprint of the Tri-State members is shown in Figure 2.

Figure 2: Tri-State Members



Source: Ex. 1-114 at 2 (Tri-State Members).

PacifiCorp serves customers in Washington, Oregon, California, Idaho, Utah, and Wyoming. Ex. 1-124 at 1 (2025 PacifiCorp_FactSheet). Salt River Project serves customers in Arizona. Ex. 1-125 at 1 (Service Area and Territory (Electric Power and Water) SRP). Platte River and Xcel serve customers in Colorado. Ex. 1-126 (Xcel, List of Towns Receiving Electric Service in Colorado), Ex. 1-127 (Who we serve - Platte River Power Authority).

The resource adequacy responsibility of the Craig Co-Owners can be broken down into two separate categories: responsibilities of the utilities that serve as balancing authorities; and their responsibilities as load-serving entities, i.e., entities that provide electricity directly to retail customers, and/or their responsibilities as wholesale providers that generate and transmit electricity to other retail utilities.

Currently, none of the Craig Co-Owners is a member of an RTO. Xcel is the balancing authority covering a portion of its service territory (along with the territory served by Platte River). Other portions of Xcel's system, as well as portions of Tri-State's load in the Western Interconnection, are in the Western Area Power Administration balancing authority. Balancing authorities perform many of the functions that RTOs perform, including balancing supply with demand and dispatching generation. *See* Ex. 1-115 (Department Explainer on Balancing Authorities) at *passim*; Ex. 1-116 at 1 (EIA Explainer on Balancing Authorities).

Four of the five Craig Co-Owners are load-serving entities that provide electricity directly to retail customers. The fifth, Tri-State, is a wholesale provider with obligations to meet the demand of its member cooperatives.

The utilities meet their reliability requirements through a variety of overlapping processes. At one end of the spectrum is long-term resource planning, which each utility conducts through resource planning. Platte River prepares and adopts an Integrated Resource Plan ("IRP") every four years. Tri-State and Xcel submit Electric Resource Plans ("ERPs") at least every four years for the Colorado Commission to

approve. PacifiCorp prepares an IRP every two years, which it submits to state commissions in its service territory. Salt River Project updates its IRP every five years. While the cadence varies, each resource plan is, at its core, an exercise in forecasting electricity demand on a long-term basis and then adopting a plan to acquire the quantity of generating, storage, and demand-response resources needed to reliably serve forecasted demand.

Each utility also has various processes for acquiring resources on a shorter-term basis than is possible through an IRP. These processes include short-term purchases made on a seasonal basis; day-ahead purchases; and, at the shortest extreme, purchases made on an intra-hour basis through energy imbalance markets. For example, in its December 2025 Near Term Procurement Report, Xcel indicated it had made seasonal purchases of capacity for the winter and summer seasons in 2026. Ex. 1-93 at 29 (Table 8) (Xcel 2025 Near Term Procurement Report).

The utilities also participate in reserve-sharing agreements that allow them to call upon resources to deal with very short-term resource needs. For example, Salt River Project and Xcel participate in the Northwest Power Pool Reserve Sharing Group:

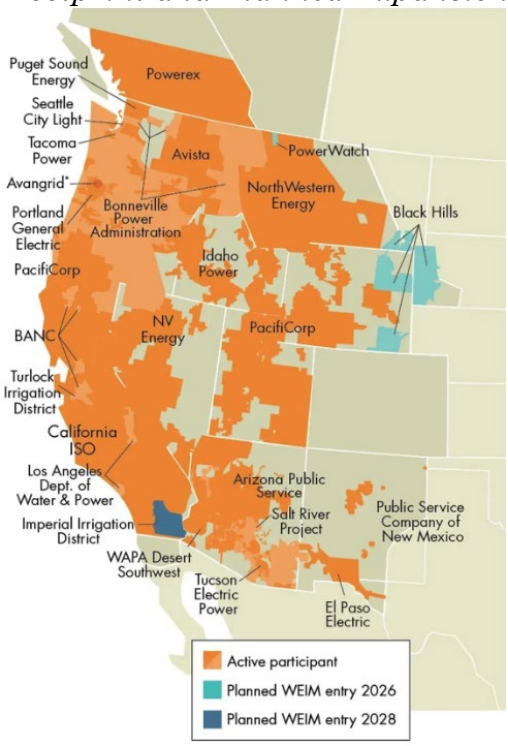
> Along with participating in the [Western Area Power Administration] Balancing Authority, [Xcel] entered the [Northwest Power Pool] Reserve Sharing Program in September 2019. The [Northwest Power Pool] Reserve Sharing Program Agreement provides for sharing of contingency operating reserves among interconnected electric utilities operating in the Western Interconnection. There are presently 22 participating Balancing Authorities in the [Northwest Power Pool] Reserve Sharing Program. By pooling their contingency reserves, these utilities are able to carry less contingency reserve capacity than if they operated independently. Under the [Northwest Power Pool] Reserve Sharing Program Agreement, [Xcel] can call on and purchase contingency reserves (spinning and non-spinning), and the energy associated with such reserves, when they are activated in response to a sudden system disturbance. [Xcel] can also purchase emergency assistance under the [Northwest Power Pool] Reserve Sharing Program Agreement.

Ex. 1-94 at 118 (Xcel 2024 JTS, Volume 2 Technical Appendix).

Finally, each of the Craig Co-Owners participates in an energy imbalance market that allows the utility to purchase and sell energy on an intrahour basis to balance supply and demand on a short-term basis. Xcel, Platte River, and Tri-State participate in the Western Energy Imbalance Service ("WEIS") operated by the Southwest Power Pool. Ex. 1-112 at 1 (WEIS—Southwest Power Pool). PacifiCorp and Salt River Project participate in the Western Energy Imbalance Market operated by

the California Independent System Operator. Ex. 1-111 at 2 (Western Energy Imbalance Market Webpage). The footprint of the Western Energy Imbalance Market and its planned expansion is shown in Figure 3 below.

Figure 3: Western Energy Imbalance Market Footprint and Planned Expansion

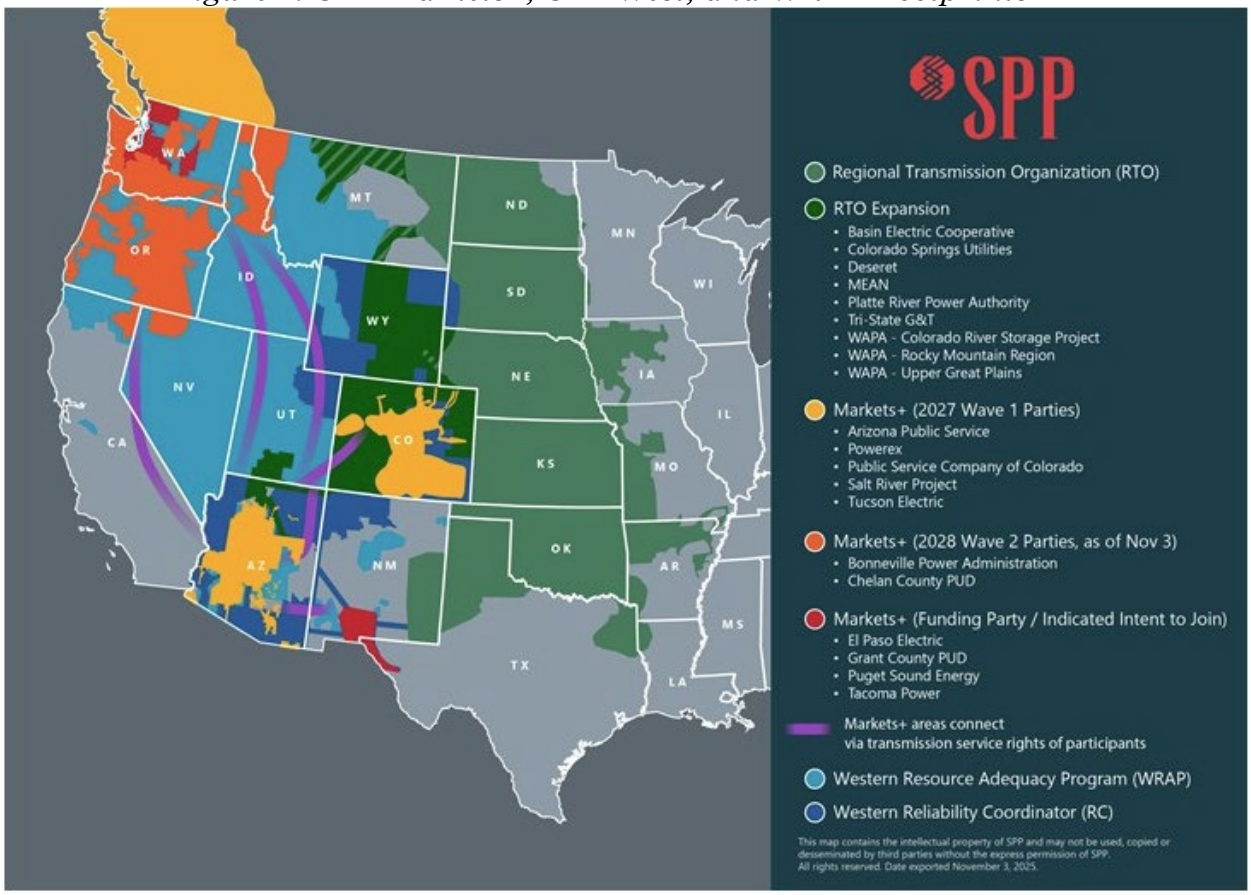


Source: Ex. 1-111 at 2 (Western Energy Imbalance Market Webpage).

Several of the Craig Co-Owners have plans to participate in organized energy markets beyond energy imbalance markets. Xcel and Salt River Project intend to join SPP's day-ahead energy market, called "Markets Plus" or "Markets+," in 2027. Ex. 1-167 at PDF 3 (SPP Markets+ Website). Under Markets+, SPP will perform centralized commitment and dispatch on a day-ahead and real-time basis for participating utilities. *Id.*

Effective April 2026, Tri-State and Platte River plan to join the western expansion of the SPP RTO, called SPP West. Ex. 1-161 at 1 (SPP West Press Release). Under SPP West, SPP would not only perform the centralized dispatch and unit commitment functions that it will perform in Markets Plus, but would also perform other reliability services for Tri-State, Platte River, and other Western utilities, such as transmission planning and assuming the role of balancing authority and reliability coordinator. These plans are shown in Figure 4 below.

Figure 4: SPP Markets+, SPP West, and WRAP Footprints



Source: Ex. 1-167 at PDF 2 (SPP Markets+ Website).

4. State and Regional Regulatory Bodies Protect Resource Adequacy Through Integrated Resource Planning and Annual Capacity Demonstration Requirements.

As noted above, state public utility commissions in the following states regulate at least one of the Craig Co-Owners: California, Colorado, Idaho, Oregon, Utah, Washington, and Wyoming. All seven of these state commissions have reviewed resource plans stating that Craig would retire by December 31, 2025. *See infra* sec. V.A.3.iii. None of these seven state commissions has expressed any concern regarding retiring Craig by December 31, 2025. No state commission has directed any of the Craig owners to operate Craig past 2025. The attached report from Telos Energy describes the role of the Colorado Commission in ensuring resource adequacy and reliability for two of the Craig Co-Owners, Xcel and Tri-State. Ex. 1-5 at 7–9 (Telos Energy Report). Washington State's resource adequacy protocols are discussed *infra* sec. IV.A.4.v.

Additionally, within the Northwest region, there are at least three principal entities whose responsibilities include analyzing resource adequacy and reliability,

as well as proactively working to ensure that the region meets energy demand with sufficient generating resources.

1. The Northwest Power & Conservation Council ("Power Council") develops a regional power plan, which directs how Bonneville Power Administration ("Bonneville") markets federal hydropower and other electricity resources to utilities and other customers primarily within the Northwest and also to other buyers in the Western Interconnection.

2. The Western Power Pool provides a mechanism for load-serving entities to share resources and work together to minimize the risk of service interruptions during emergency events and has for years been developing regional resource adequacy coordination.

3. And as discussed above, WECC is the regional entity (under authority delegated by NERC) responsible for generating regional reliability standards, enforcing the standards, and assessing regional resource adequacy.

In addition to these three regional planning entities, Bonneville itself is responsible for ensuring the stability of its own system. Bonneville is a Power Marketing Administrator within the Department of Energy that markets power from hydroelectric and other generators with a service territory in Washington, Oregon, Idaho, and parts of Nevada, Montana, and Wyoming. *See* Ex. 1-131 at 5 (FERC Western Energy Markets Explainer). Bonneville's planning guides multiple load-serving entities across the region in their efforts to plan for resource adequacy and ensure their system's stability. Between these entities' processes, which are further described below, there is no shortage of planning that goes into ensuring that the Northwest has sufficient energy to service customers.

i. Northwest Power & Conservation Council Develops a Regional Power Plan, Including a Resource Adequacy Analysis.

One distinguishing feature of the Pacific Northwest electric grid is the Northwest Power and Conservation Council, which provides much of the regional coordination and joint planning that RTOs provide in other regions of the country. The Power Council was created pursuant to the Northwest Power Act, 16 U.S.C. § 839, which authorizes Idaho, Montana, Oregon, and Washington to form an interstate compact to develop a regional power plan and a fish and wildlife program that balances the Northwest's environment and energy needs. The Power Council is comprised of two members appointed by each member state. The Northwest Power Act specifically requires that the plan includes an energy demand forecast of at least twenty years, developed in consultation with Bonneville, state ratemaking agencies, utilities, and the public. 16 U.S.C. § 839b(e)(3)(D). This forecast must include regional reliability and reserve requirements, as well as resource acquisition recommendations issued to Bonneville to comply with the reliability and reserve requirements. *Id.*

§ 839b(e)(3)(D). And the law directs planners in the region to "give priority to resources which the Council determines to be cost-effective. Priority shall be given: first, to conservation; second, to renewable resources; third, to generating resources utilizing waste heat or generating resources of high fuel conversion efficiency; and fourth, to all other resources." *Id.* § 839b(e)(1).

As the organization resulting from this mandate, the Power Council is tasked with developing the regional power plan. Ex. 1-132 at 3 (Power Council Overview). Bonneville funds the Power Council's work. 16 U.S.C. § 839b(c)(10)(A). Bonneville must follow the regional power plan developed by the Power Council when acquiring resources. *Id.* § 839b(d)(2). As required, the Power Council's power plan looks forward 20 years, with revisions every five years; the most recent iteration was the Eighth Power Plan of 2021. Ex. 1-133 (Power Council 2021 Power Plan). The Power Council is slated to release the Ninth Power Plan in mid-2026 and to adopt it by the end of the year. Ex. 1-132 at 2 (Power Council Overview).

Beginning in fiscal year 2023, the Power Council's staff adopted a new, more sophisticated way to test whether the region's power grid has adequate resources by using multiple metrics.[3] Ex. 1-134 at 1 (Overview of Power Council's Resource Adequacy Approach). The Power Council's multi-metric approach allows it to understand the probability, shape, and size of adequacy issues. *Id.* The Power Council also continues to update its approach to load forecasting. *See* Ex. 1-135 at 1 (Overview of Power Council's Approach to Load Forecasting).

In 2024, the Power Council published a power supply adequacy assessment that looked forward to 2029 and explored how the Council's 2021 Power Plan supported the regional system in an adequate manner. Ex. 1-137 at 6 (Power Council 2029 Power Supply Adequacy Assessment). The Council used an adequacy model called GENESYS to simulate the regional power system to detect potential shortfalls each year from 2024 through 2029. *Id.* The analysis was based on a number of resource acquisition scenarios and load demands, including scenarios reflecting a rapid uptick in the number of data centers sited in the region. *Id.* at 7. The outcomes of each model were then scored against a set of metrics, including the frequency, duration, and

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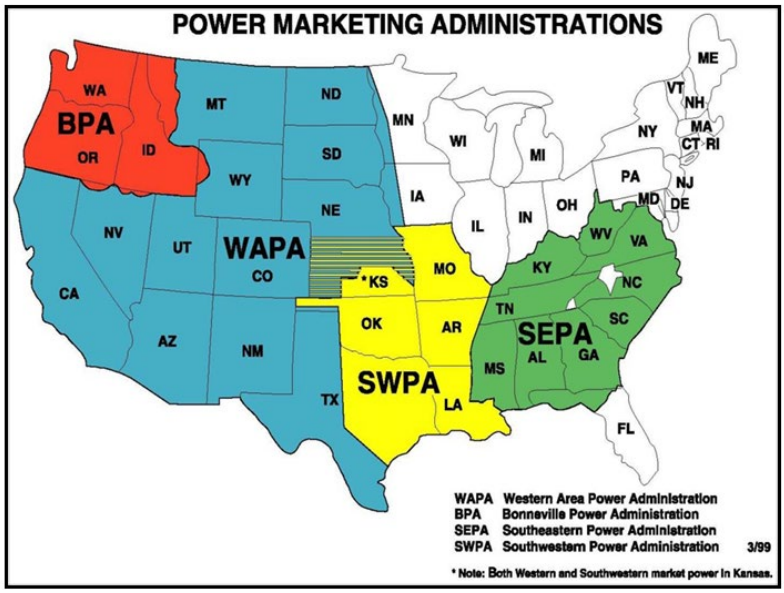
[3] Current Energy Group's report describes and distinguishes between Loss of Load Expectation (LOLE), which measures loss-of-load events per year; Loss of Load Probability (LOLP), which measures loss-of-load events per grid-straining event; Demand-at-Risk Hours (DARH), which measures the number of hours during which load loss is possible; and other metrics. *See* Ex. 1-01 at 3–6, 9–10 (Current Energy Group Report); *see also* Ex. 1-136 at *passim* (WECC Explainer) (discussing probabilistic assessments and the one-day-in-ten-years standard); *see generally* Ex. 1-25 at 3–5, 23–24, 55 (MISO LOLE Presentation) (discussing loss of load expectation calculations).

magnitude of shortfall events. *Id.* at 6–7. This methodology has allowed the Power Council to comprehensively assess the system's resource adequacy. *Id.* at 9–10.

ii. Bonneville Forecasts Regional Demand and Supply on an Annual Basis.

Bonneville is one of the two Western Power Marketing Administrators within the Department of Energy, the other being the Western Area Power Administration. Ex. 1-131 at 5 (FERC Western Energy Markets Explainer). Bonneville's service territory includes Washington, Oregon, Idaho, and parts of Nevada, Montana, and Wyoming, *id.* at 5, as shown below in Figure 5.

Figure 5: Boundary Areas of Power Marketing Administrations



Source: Ex. 1-131 at 5 (FERC Western Energy Markets Explainer).

Bonneville markets about one-third of the power generated in the Pacific Northwest from a series of federally owned hydroelectric dams in the Columbia Basin and a nuclear power plant in Southeast Washington. Ex. 1-138 at 1 (Bonneville 2024 Fact Sheet). It also owns, operates and maintains more than 15,000 circuit miles of the Northwest's high voltage transmission grid. *Id*. It sells the bulk of this power to public power utilities, federal agencies, and Tribal utilities in the region, which are Bonneville's "preference" customers. *Id.; see* 16 U.S.C. § 832c(a). It also sells power to investor-owned utilities like PacifiCorp and Portland General Electric, and to certain industrial customers. Ex. 1-138 at 1 (Bonneville 2024 Fact Sheet); *see* 16 U.S.C. § 839c(b)(1). In addition, Bonneville currently engages in bilateral trading within and outside its service area as needed to balance its load and meet demand. Ex. 1-139 at 7 (Bonneville Day-Ahead Market Policy).

Bonneville must exercise its responsibilities "in accordance with the provisions of the [Northwest Power Act]." 16 U.S.C. § 839b(a)(2)(A). These responsibilities include (1) "to assure the Pacific Northwest of an adequate, efficient, economical, and reliable power supply;" (2) to encourage "the development of renewable resources within the Pacific Northwest;" (3) "to protect, mitigate and enhance the fish and wildlife . . . of the Columbia River and its tributaries[;]" and to (4) "provid[e] environmental quality[.]" *Id.* § 839.

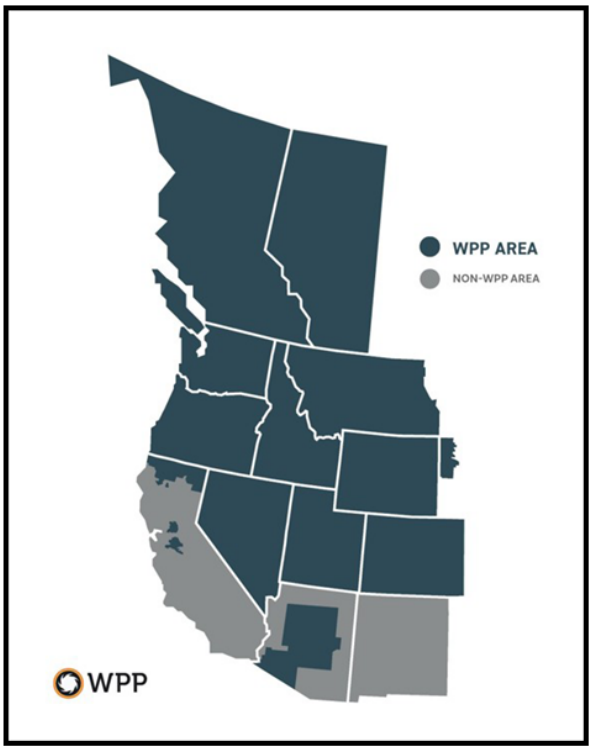
Every year, Bonneville publishes a 10-year "Loads and Resources Study"—which it calls the "White Book"—for the Pacific Northwest region. *E.g.*, Ex. 1-140 (2023 Bonneville "White Book"); Ex. 1-141 (2024 Bonneville "White Book"); Ex. 1-142 (2025 Bonneville "White Book"). Bonneville's forecasting includes analysis of the effects of varying water conditions over the 10-year period. *See, e.g.*, Ex. 1-142 at 9 (2025 Bonneville "White Book"). Every other year, Bonneville uses its latest forecast to conduct a comprehensive resource assessment in which load needs and market resource availability are analyzed to inform Bonneville's own resource portfolio. *E.g.*, Ex. 1-143 at *passim* (Bonneville Resource Plan (compiled 2022 & 2024)). Although these are not necessarily formal resource adequacy projections, these forecasts help guide planning across the region and are a critical piece of the regional coordination that maintains grid reliability. *See* Ex. 1-144 at PDF 2 (Power Council 2024 Resource Program Results).

Bonneville also performs other functions. As a Balancing Authority, Bonneville (like the Western Area Power Administration) ensures that supply and demand are balanced in real time. *See* Ex. 1-116 at *passim* (EIA Explainer on Balancing Authorities). Bonneville also acts as a transmission provider in the region. *See Seminole Elec. Coop., Inc. v. FERC*, 861 F.3d 230, 237 (D.C. Cir. 2017).

iii. The Western Power Pool Is Implementing a Western Resource Adequacy Program and Forecasts Regional Resource Adequacy on an Annual Basis.

The Western Power Pool is a grouping of utilities and partners that coordinate and share resources in the Western Interconnection. Ex. 1-131 at 10 (FERC Western Energy Markets Explainer). The Western Power Pool's territory stretches from British Columbia and Alberta through all or parts of 11 different states, including Washington, Oregon, Idaho, and Montana, *id.* at 9–10, as shown in Figure 6 below.

Figure 6: Boundary Area of Western Power Pool



Source: Ex. 1-131 at 9 (FERC Western Energy Markets Explainer).

The Western Power Pool organizes multiple programs to ensure that participants are protected against emergency events that would otherwise disrupt service or lead to blackouts. For instance, it operates a reserve sharing program, in which participating Balancing Authorities share contingency reserves to ensure that participants have access to sufficient power during emergencies. *See* Ex. 1-145 (Western Pool Reserve Sharing Program). The Western Power Pool also organizes more rapid-response grid stability coordination, including a frequency response sharing group in which participating entities work together to secure adequate ancillary services to maintain minute-to-minute grid stability. Ex. 1-146 (Western Frequency Response Sharing Group).

Of particular note to the question of resource adequacy oversight, in February 2023 the Western Power Pool secured approval from FERC to create a more comprehensive resource adequacy coordination regime, the Western Resource Adequacy Program. *Northwest Power Pool*, 182 FERC ¶ 61063 (2023). The Western Resource Adequacy Program was designed initially as a voluntary resource adequacy planning and compliance program for utilities in the West and is intended to supplement the resource planning and projections undertaken by utilities, states, and provinces. *Id.* at ¶ 5. As FERC identified in its order approving the Western Resource Adequacy Program, the operational program serves as "a resource of last resort—not

a resource of first resort"—and participants are maintaining their own processes to plan ahead and ensure their own resource adequacy. *Id.* at ¶ 98. This makes the coordination offered by the Western Resource Adequacy Program entirely additional and complementary to the other planning processes discussed in this section. *Id.* at ¶ 5.

The Western Resource Adequacy Program has two distinct operational components: a forward-showing process and operational follow-through. Under the forward-showing component, participants in the program demonstrate seven months in advance of each summer season and each winter season that they have secured their proportional share of regional capacity, which includes a required planning reserve margin that is designed to meet a loss-of-load expectation ("LOLE") standard of 1-event-in-10-years. *Id.* at ¶¶ 6, 53. To avoid a charge, participants must also show that they have reserved at least 75% of the transmission necessary to deliver energy at the time of their forward-showing filings, and all of the necessary transmission during the activation period of the operating program. Ex. 1-147 at § 13.2 (WRAP Tariff). This transmission reservation must be at the highest level of reliability (NERC Priority 6 or Priority 7 firm point-to-point or network integration transmission service). *Northwest Power Pool*, 182 FERC ¶ 61063, at ¶¶ 54, 78.

Each participant's forward projection is then tested against a nearer-term forecast (week ahead or day ahead) in the operational phase of the Western Resource Adequacy Program process. Based on the results of the comparison, participants with surpluses may be required to hold back capacity for the benefit of other participants with a deficit, with fines levied for nonperformance of this obligation to hold back. *Id.* at ¶¶ 7, 94–95. In this way, the Western Resource Adequacy Program ensures that each balancing authority in the region is able to rely on imports from neighbors, thereby approximating one of the key benefits load-serving entities gain via participation in RTOs in other parts of the country. *See generally* 89 FERC ¶ 61,285.

As of October 13, 2025, 16 utilities committed to the Program's initial binding operational season, in Winter 2027/28. Ex. 1-148 (WRAP Notice). Even in its voluntary form, the Western Resource Adequacy Program has added to the tapestry of regional cooperation that has helped ensure the Pacific Northwest continues to receive power reliably.

iv. WECC Assesses Resource Adequacy in the Region on an Annual Basis and Enforces Federal Standards.

WECC is the largest of the six Regional Entities that make up NERC's Electric Reliability Organization Enterprise. Ex. 1-149 at 1–2 ("About WECC" Webpage). Its service territory encompasses two Canadian provinces (Alberta and British Columbia), the northern portion of Baja California, Mexico, and all or parts of 14 Western states (including Washington, Oregon, Idaho, Montana, and California). *Id.*

Under its NERC-delegated authority, WECC is responsible for setting regional reliability standards, monitoring compliance with those standards, enforcing standards, and overseeing reliability assessment and performance analysis within WECC's footprint. *Id.*; Ex. 1-150 at § 401 (NERC Rules of Procedure); *see N. Am. Elec. Reliab. Corp.*, 153 FERC ¶ 61,134, at PP 55–56 (2015). This work includes ensuring that regional contingency reserve standards are aligned with national standards and performing risk assessments of bulk power system users, owners, and operators on the reliability of the Western Interconnection. Ex. 1-151 at 13–14 (WECC Contingency Reserve Whitepaper) (finding that by reducing minimum contingency reserve amounts, prior sequestered resources will be made available to match the less predictable response of variable generation resources and more development of variable generation sources may be encouraged); Ex. 1-152 (WECC Risk Factor Criteria).

WECC also performs a yearly assessment of resource adequacy in its footprint, which is a useful resource for system planners. *E.g.*, WECC, *Western Assessment of Resource Adequacy: 2024* (last visited Jan. 28, 2026), https://feature.wecc.org/wara/; Ex. 1-09 (2024 Western Assessment of Resource Adequacy). The yearly resource adequacy assessment performed by WECC is "an energy-based probabilistic" assessment, which evaluates resource adequacy under a variety of conditions. *Id.* It divides WECC's larger footprint into smaller subregions and provides detailed analysis of regional demand forecasts and planned resource additions for the next 10 years. *Id.* The scenarios modeled in the assessment include increased demand and slower buildout of generating resources. *Id*. These analyses provide information that helps inform NERC's reliability assessments of the entire country's energy system. Ex. 1-153 at 1 (WECC Reliability Assessment Webpage). Additionally, WECC contributes to NERC's assessments. *See* Ex. 1-08 at 4 (NERC 2025-26 Winter Assessment).

v. Washington Protects Resource Adequacy Through Integrated Resource Planning and Annual Reviews.

Since 2006, the Washington Department of Commerce has reviewed the integrated resource plans of both consumer- and investor-owned utilities in the state, as well as other state, regional, and national sources, and prepared a biennial report to the legislature on resource adequacy in the region. WASH. REV. CODE § 19.280.060; *see, e.g.*, Ex. 1-154 (Wash. Commerce Util. Res. Planning Report (compiled 2022 & 2024)). Through legislative developments like the Clean Energy Transformation Act (CETA), WASH. REV. CODE § 19.405, the legislature recognized the need for regulatory bodies in the state to work more closely together to ensure that there was sufficient resource adequacy to serve a growing electric demand. To that end, the legislature required the Washington Department of Commerce and the Washington Utilities and Transportation Commission (together, the "Washington Agencies") to

> jointly convene a meeting of representatives of the investor-owned utilities and consumer-owned utilities, regional planning organizations, transmission operators, energy analytics experts at Pacific Northwest national laboratory, and other stakeholders to discuss the current, short-term, and long-term adequacy of energy resources to serve the state's electric needs, and address specific steps the utilities can take to coordinate planning in light of the significant changes to the Northwest's power system including, but not limited to, technological developments, retirements of legacy baseload power generation resources, and changes in laws and regulations affecting power supply options.

Id. § 19.280.065(1). The statute was updated in 2023 to explicitly "focus discussion on the extent to which proposed laws and regulations may require new state policy for resource adequacy." *Id.* § 19.280.065(2).

In 2025, the Washington Agencies hosted three separate meetings focusing on resource adequacy in Washington state: a June 5th meeting focused on summer readiness, a September 22nd meeting focused on long-term resource adequacy, and a November 4th meeting focused on winter readiness. See Ex. 1-155 (Washington Agencies Resource Adequacy Meeting Summaries (Compiled)). These meetings involved detailed reports from a mix of utilities, regional planning organizations, transmission operators, and regional energy experts. *Id.*

Additionally, electric utilities serving customers within Washington State are required to develop their own Integrated Resource Plans to plan for how the individual utility will meet future customer energy needs in both a cost-effective and reliable manner. WASH. ADMIN. CODE § 480-100-620. These plans must be updated every two years. *Id.* § 480-100-625. IRPs include resource adequacy analysis to ensure that, looking forward, the utility will be able to consistently meet varying load demands. *Id.* § 480-100-620(8). IRPs also provide a utility the opportunity to "show its work" regarding the conclusions the utility makes around resource acquisition needs. *Id.* § 480-100-620(11). IRPs are reviewed by the Washington Utilities and Transportation Commission and are subject to public comment. *Id.* § 480-100-620(17) (requiring utilities to summarize and respond to public comments received on draft IRPs); *id.* § 480-100-625 (requiring utilities to file work plans, draft IRPs, and progress reports to the Washington Utilities and Transportation Commission); *id.* § 480-100-630 (requiring utilities to demonstrate how advisory group input informed the final IRP). The Washington Department of Commerce summarizes the utilities' IRPs and reports to the state legislature. *E.g.*, Ex. 1-156 at 4 (Wash. Dep't of Commerce Summary of Utilities' 2024 IRPs (Dec. 1, 2025)).

Beyond IRPs, utilities must also develop Clean Energy Action Plans and Clean Energy Implementation Plans to identify how the utility will meet the statutory requirements of the Clean Energy Transformation Act. WASH. REV. CODE

§ 19.280.030 (Clean Energy Action Plans); *id.* § 19.405.060(1)-(2) (Clean Energy Implementation Plans). Clean Energy Action Plans are 10-year plans for how a utility will meet resource emission standards under CETA, while still accounting for resource adequacy. *Id.* § 19.280.030(1)(l), (2). Within the Clean Energy Action Plan, a utility must establish a resource adequacy requirement that will guide its resource planning and compliance. *Id.* § 19.280.030(2)(b). Clean Energy Implementation Plans are focused on shorter-term planning, where a utility sets forth specific actions it will meet in the next four years to ensure that it is on track to meet the statutory requirements of CETA. *Id.* § 19.405.060. This includes analysis of resource adequacy. *Id.* § 19.405.060(2)(a)(iv).

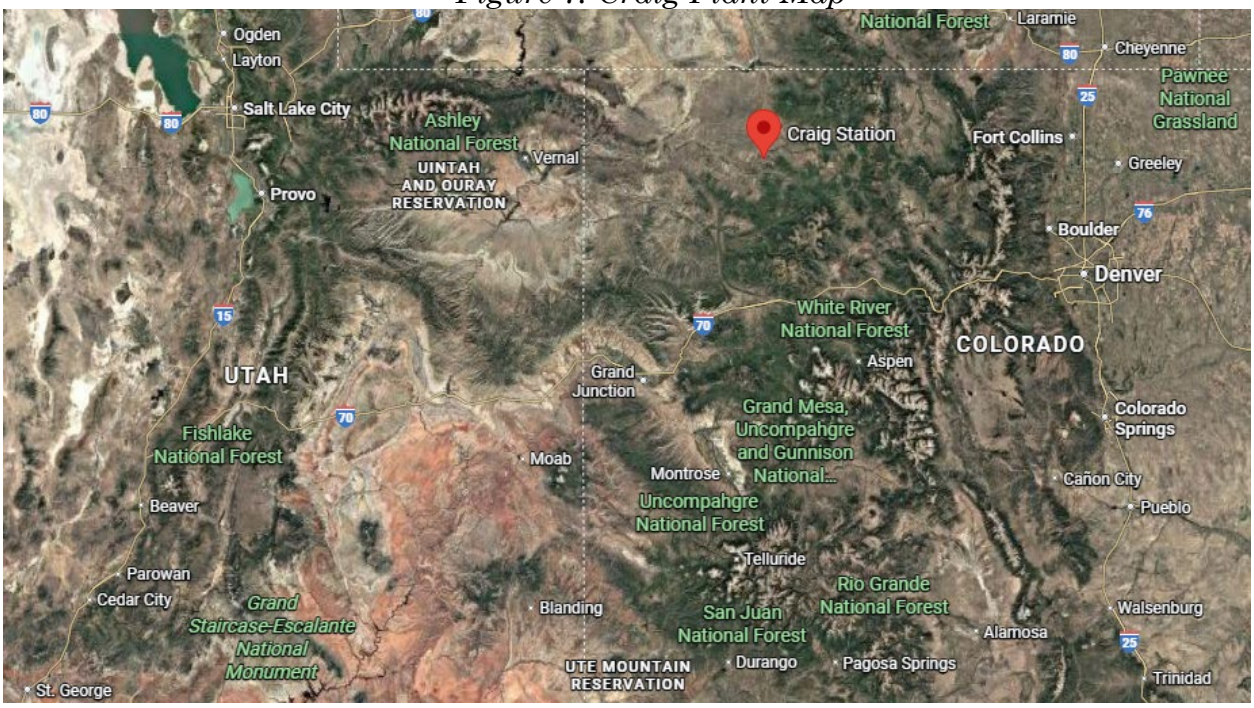
Utilities in the region also commissioned a consultancy, Energy and Environmental Economics ("E3"), to study resource adequacy in the Pacific Northwest. *See* Ex. 1-157 at 2 (E3 Resource Adequacy Phase 1 Presentation). E3 presented to the Washington Agencies at the agencies' Fall 2025 Resource Adequacy meeting focused on long-term resource adequacy in Washington State. *See id.* at 1. The E3 presentation has been independently evaluated, *see* Ex. 1-158 at *passim* (Sylvan & GridLab Independent Evaluation of E3 Presentation), and must be understood in the context of information from the principal author of the presentation, *see* Ex. 1-159 at *passim* (Email Correspondence with E3); Ex. 1-159a (E3's Attachment to Email Correspondence with E3); Ex. 1-159b (E3's Attachment to Email Correspondence with E3 (as transmitted in Excel form)).

B. Craig's Retirement Was Planned for a Decade by Utilities and State Regulators.

1. Craig Is a Power Plant in Colorado Originally Built in 1980.

Craig began operations in 1980. The generator is located in Craig, Colorado, approximately 200 miles northwest of Denver and 45 miles west of Steamboat Springs. Craig's location is shown in Figure 7 below.

Figure 7: Craig Plant Map



Source: Google Earth.

Craig Unit 1 is part of a three-unit coal-fired generating facility (collectively, and with associated facilities, the "Craig Plant"). The Craig Plant's three units all rely on burning coal to generate electricity. Tri-State has committed to retiring Craig Unit 2 by September 30, 2028, and Craig Unit 3 by January 1, 2028. Ex. 1-89 at 5 (Tri-State 2025 ERP Annual Progress Report).

Figure 8: Craig Plant Photograph



Source: Ex. 1-53 (Colorado Sun Article).

2. Tri-State Operates and Partially Owns Craig.

Tri-State serves as the operator of Craig. As the operating agent, Tri-State is responsible for the daily management, administration, and maintenance of the facility. Ex. 1-49 at 6 (Tri-State Revised ERP Assessment of Existing Resources).

Tri-State is also a partial owner of Craig, holding a 24% interest. Ex. 1-03 at 3 (Powers Decl.). The other Craig Co-Owners, along with their respective shares, are as follows: PacifiCorp owns 19.28%; Platte River owns 18%; Xcel owns 9.72%; and Salt River Project owns 29%. *Id.* at 3–4 (citing utility filings).

3. Craig Is Old, Unreliable, Inflexible, Dirty, and Expensive.

i. Craig Is Old and Unreliable.

Craig is *past* the typical operational life of coal units. Ex. 1-03 at 5 (Powers Decl.) (citing Ex. 1-48 at 18 (IEA Report); Ex. 1-47 at 127 (Palgrave Handbook)). Its production and reliability have declined with age.

Data from the U.S. Environmental Protection Agency's ("EPA") Air Markets database indicates that Craig's gross output declined by 27% from 2022 through 2024, the most recent year for which annual data is available. The values are shown in Figure 9 below.

Figure 9: Craig Output from 2022 through 2024

Year	Production (MWh)
2022	2,797,335
2023	2,015,029
2024	1,824,100

Ex. 1-113 (Craig Station, AMD data 2020 through 2024) (EPA Air Markets Database). MWh values rounded to nearest integer.

In recent years, Craig has experienced a sharp increase in outages, which reflect aged, worn components that are expensive and may be difficult to repair or replace. Ex. 1-03 at 5, 7–8, 14–15 (Powers Decl.). The outages at Craig demonstrate an increasing inability to perform consistently, even under normal conditions. In fact, when the Department issued the Order, Craig had a forced outage that began on December 19, 2025. Ex. 1-06 (Tri-State December 2025 Press Release) (explaining that the forced outage was a result of "a mechanical failure of a valve, and Tri-State and the other co-owners will need to take the necessary steps to repair the valve in a timely manner"). The December 2025 forced outage is characteristic of an old plant that is prone to mechanical failures. Ex. 1-03 at 7 (Powers Decl.).

Craig's December 2025 forced outage is consistent with recent trends. Outside of scheduled maintenance periods, Craig has been unable to produce power during

significant portions of recent years (known as the unit's "forced outage rate"). Ex. 1-03 at 7–8 (Powers Decl.) (citing Tri-State's filings with the Colorado Commission). For example, Craig experienced a sharp year-over-year forced outage rate increase between 2022 and 2023, increasing from 1.75 percent to 9.53 percent. *Id.* Craig's 9.53 percent forced outage rate translates into 835 hours that Craig could not operate in 2023, or approximately five weeks of forced unavailability. *Id.* Because of Craig's inconsistent and sharply increasing forced outage rate, it cannot meet the demands of an emergency.

Craig's recent forced outages are a direct result of significantly decreased capital expenditures and maintenance at Craig. *Id.* at 6–7. This is unsurprising, as the Craig Co-Owners announced the plant's retirement date in 2016. Because the co-owners anticipated that the plant would retire at the end of 2025, they did not undertake maintenance projects that they would have undertaken had they been expecting to operate the unit past 2025. *Id.* at 7. In fact, in response to the Order, Tri-State conceded that the "retirement decision has informed operational and maintenance decisions." Ex. 1-06 (Tri-State December 2025 Press Release). As evidenced by Craig's December 2025 outage, the plant requires additional investments in operations and maintenance because the Craig Co-Owners have been foregoing maintenance in recent years. *Id.*; Ex. 1-03 at 7 (Powers Decl.). Foregone maintenance makes Craig more prone to failure and more likely to need to go on outage to fix broken parts or maintain the unit. Ex. 1-04 at 4 (Grid Strategies Cost Report); *see also* Ex. 1-06 (Tri-State December 2025 Press Release).

Tri-State transitioned from a preventative approach to a "fix it if it breaks" approach at Craig. Ex. 1-03 at 6–7 (Powers Decl.). Tri-State utilizes a consistent approach with its investment strategy for early retirement of coal units. Tri-State stated that it "proactively works to reduce and eliminate capital expenses related to early retirement of resources as can be seen by the historical capital expense." Ex. 1-51 at 187 (Tri-State 2020 ERP). Tri-State's filings with the Colorado Commission further memorialize this "fix it if it breaks" approach for Craig. Tri-State represented that its "investments in [the Craig Plant] are being appropriately limited to only actions necessary for ensuring safe operations and regulatory compliance, given the impending retirement of these units." Ex. 1-50 at 10 (Insgold 2023 ERP Direct Testimony). As a result, "it is unlikely that Craig 1 can be depended upon to operate reliably." Ex. 1-03 at 5 (Powers Decl.).

ii. Craig Is Inflexible.

On top of Craig's reliability problems, the plant cannot respond to extreme peak demand on short notice. Ex. 1-03 at 8–9 (Powers Decl.). Coal units—including Craig—take a minimum of 12 hours to reach full load operation from a cold start. *Id.*; *see* Ex. 1-44 at PDF 3 (RMI Analysis of Coal Plants' Threats to Reliability); Ex. 1-33 at PDF 3 (IEA Flexibility Report). Even if Craig could provide power reliably—and it cannot—the unit's long start time means that the plant is ill-suited to provide

peaking power during periods of high demand. Ex. 1-03 at 8–9 (Powers Decl.). In other words, Craig is inflexible, and it is unsuitable for providing power during precisely the kind of periods the plant is supposed to be operating pursuant to the Order.

iii. Craig Is Dirty and Environmentally Harmful.

Additionally, Craig has been a significant source of pollution. If Craig continues operation in 2026 as it did in 2025, the unit will emit over one billion pounds of carbon dioxide ("CO_2") over one million pounds of nitrogen oxides ("NO_x"), and hundreds of thousands of pounds of sulfur dioxide ("SO_2") in just three months. Figure 10 below shows a projection of Craig's emissions during the first 90 days of 2026, if Craig were to generate at the same rate it did in 2025.

Figure 10: Projected 90-Day CO_2, SO_2, and NO_x Emissions of Craig

Month	Production (MWh)	CO_2 (lbs)	SO_2 (lbs)	NO_x (lbs)
Jan. 2026	174,089	438,258,940	102,016	479,093
Feb. 2026	124,764	306,919,440	73,112	343,351
Mar. 2026	161,356	396,935,760	94,555	444,052
Total:	**460,209**	**1,142,114,140**	**269,683**	**1,266,496**

Source: Ex. 1-03 at 12 (Powers Decl.).

Craig's air pollution results in several harms. NO_x and SO_2 both cause health concerns, including respiratory problems. Ex. 1-03 at 10 (Powers Decl.). And CO_2 is the primary cause of global warming. *Id.* at 11. Pollution from coal generation can have drastic and deadly health effects. *See, e.g.*, Ex. 1-121 at 2 (Mercury Mortality Risks of Coal); Ex. 1-123 at PDF 4–5 (EPA COBRA Health Effects Estimate). On an annual basis, air pollution from Craig causes an estimated 4 premature deaths, and this pollution increases the likelihood of emergency room visits, heart attacks, and asthma attacks. *Id.*; Ex. 1-160 at PDF 2–3 (Clean Air Task Force Toll from Coal). In total, the health harms from Craig's air pollution result in over $56 million in estimated costs each year. Ex. 1-123 at PDF 5 (EPA COBRA Health Effects Estimate).

Air pollution from the plant also clouds Colorado's treasured federal public lands in haze. Craig's operation impairs visibility in several national parks and wilderness areas in Colorado, including (among others) Rocky Mountain National Park, Flat Tops Wilderness Area, Eagles Nest Wilderness Area, Mount Zirkel Wilderness Area, and Rawah Wilderness Area. Ex. 1-03 at 11 (Powers Decl.) (citing Ex. 1-71 at 47–48 (BART CALPUFF)). Therefore, alongside the health burdens of the pollution, the continued operation of Craig will harm the people who visit and recreate at these iconic landscapes.

In addition to air pollution, continued operation of Craig will worsen water scarcity in the state and the region. Craig consumes approximately 250,000 gallons of water per hour of operation at its net capacity of 427 MW. *Id.* at 16 (citing Ex. 1-

88 at 19 (Tri-State 2023 ERP Modeling Assumptions)). All the while, Colorado, the river basin that shares its name, and the surrounding states are in a water crisis. *See* Ex. 1-52 at 3 (Colorado 2023 Water Plan). Water conservation remains a key priority for Colorado, especially as the region experiences population growth, long-term warming trends, major wildfires, aridification, and multi-year drought. *Id.* (Colorado 2023 Water Plan). The energy sector drives water overuse in the state, and coal-fired power plants are water consumptive compared to renewable sources of energy. *Id.* at 21.

Retiring Craig would eliminate the plant's environmental harms. Meanwhile, the ongoing operation of Craig will guarantee that the plant's harmful air pollution and wasteful water practices persist.

iv. Craig Is Expensive.

Craig is also an expensive plant to run. In 2024, Craig cost over $80 million to operate. Ex. 1-04 at 3 (Grid Strategies Cost Report). Over the period 2022 to 2024, operating Craig cost nearly $85 million per year. *Id.* Operating Craig at its average output from 2022 through 2024 will cost more than $20 million for each 90-day period.

Craig is an uneconomic source of electricity. The available data demonstrates that Craig's "cost of producing electricity is almost always higher than the value of that electricity." *Id.* at 6. Craig's fuel costs exceed the average market price, and considering variable costs makes Craig even more uneconomic. *Id.* at 3–4. All told, market prices do not cover Craig's variable costs in over ninety percent of hours. *Id.* at 6. In other words, the cost of producing electricity at Craig is overwhelmingly higher than the value of that electricity.

Further, Craig's foregone maintenance will exacerbate the plant's already high operating costs. As coal plants age, they require sustaining capital expenditures and increasing O&M costs over time. When coal plants reach an age of 40–50 years, they require a significant increase in capital expenditure. *Id.* at 4 (citing Ex. 1-162 at 29, 62 (EIA Generating Unit Annual Capital and Life Extension Costs Analysis). Recent forced shutdowns—including the shutdown that began in December 2025—demonstrate the need for maintenance costs at Craig. Ex. 1-06 (Tri-State December 2025 Press Release).

"All costs" incurred by the Craig Co-Owners to comply with the Order "end up on ratepayers." Ex. 1-163 at 1–2 (Trump Advisor Says Electricity Customers Pay for 202(c) Orders). Tri-State avers that "the order will likely require additional investments in operations, repairs, maintenance and, potentially, fuel supply, all factors increasing costs," and that the utility "is working to prepare filings in support of cost recovery." Ex. 1-166 at 1 (Tri-State January 2026 Press Release).

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These harms can be avoided by retiring Craig. As further discussed below, the Craig Co-Owners—Tri-State, the Salt River Project, the Platte River, PacifiCorp, and Xcel—wanted to retire the plant on December 31, 2025. Further, the state and federal regulators—including the Colorado Commission, the Colorado Department of Public Health and Environment, and the U.S. EPA— each approved the retirement. *See, e.g.,* Ex. 1-85 (Colorado Commission Decision in 20A-0528E) (approving resource plan where Craig ceases to generate electricity after 2025); Ex. 1-90 at 40 (Colorado Commission Decision No. C25-0612) (same); Ex. 1-65 (CDPHE Regulation No. 3); 83 Fed. Reg. 31332.

V. REQUEST FOR REHEARING

The Order is a manifestation of the Department's overarching policy to systematically misapply Section 202(c) of the Federal Power Act to preserve fossil-fueled power plants, including coal-fired plants, that otherwise would be retired. That policy aims to bolster the fossil energy industry, irrespective of need, expense, and harm. In its zeal to implement its policy through issuance of the Order, (1) the Department has exceeded the authority Congress gave it, using its "emergency" powers in the absence of any imminent shortfall to impose federal control over basic generation and supply decisions; and (2) the Department has done so without reasoned decision-making and on the basis of purported "facts" that are not supported by credible evidence. *See Michigan v. EPA*, 268 F.3d 1075, 1081 (D.C. Cir. 2001) (explaining that, absent statutory authorization, an agency's action is contrary to law); *Allentown Mack Sales & Serv., Inc. v. Nat'l Labor Rel. Bd.*, 522 U.S. 359, 374 (1998) (explaining agency obligation to undertake reasoned-decision-making); *Motor Vehicle Mfrs. Assn. of United States, Inc. v. State Farm Mut. Auto. Ins. Co.,* 463 U.S. 29, 43 (1983) (same); *Burlington Truck Lines, Inc. v. United States*, 371 U.S. 156, 168 (1962) ("The agency must make findings that support its decision, and those findings must be supported by substantial evidence."); *Butte Cnty. v. Hogen*, 613 F.3d 190, 194 (D.C. Cir. 2010) ("[A]n agency cannot ignore evidence contradicting its position."). Numerous examples of the Department's unreasoned and unlawful decision-making are described throughout this section V. The only plausible explanation for these repeated legal errors is that the Department has prioritized implementing its policy over compliance with the law.

Congress never conferred on the Department the broad authority over the country's mix of power generation resources that the Department seeks to wield under the pretense of responding to claimed "emergencies." To the contrary, Congress explicitly reserved authority over resource adequacy and grid reliability to the states, which operate independently and through an interstate compact known as the Northwest Power and Conservation Council; to FERC; and to NERC. *See, e.g.*, 16 U.S.C. §§ 824(a)–(b), 824o; *Pac. Gas & Elec. Co. v. State Energy Res. Conserv. & Dev.*

Comm'n, 461 U. S. 190, 205 (1983). Both the agency's new policy and the Order exceed the Department's authority and are therefore contrary to law.

Before tackling the Order's legal faults and issues, *see infra* secs. V.A through V.D, it is useful to understand the broader context of the Department's policy. The Department acknowledges that its Order is based on a government-wide policy—dictated by Executive Order—of promoting fossil-based energy through the use of any emergency powers executive departments and agencies could try to invoke. Order at 2. The Order relies upon the Energy Emergency Executive Order, 90 Fed. Reg. 8433, which directs the heads of all executive departments and agencies to use "emergency authorities" and "other lawful authorities" to facilitate the production, extraction, creation, and generation of coal and other fossil fuels. Order at 2 (relying on Ex. 1-36 (Energy Emergency EO)).

The Order also relies on another executive order, the Grid EO. *Id.* (relying on Ex. 1-37 (Grid EO)). The Grid EO was issued at the same time as three other executive actions aimed at giving a lifeline to the coal industry, and was announced at a White House political event focused on promoting coal. Ex. 1-38 (NY Times Coal Article). In essence, the Grid EO calls on the Department to assume the authority for resource adequacy and grid reliability decision-making that the Federal Power Act reserves to others, and to "systemize" the issuance of Section 202(c) orders for that improper purpose. *See* Ex. 1-37, 90 Fed. Reg. at 15521–22 (Grid EO) (directing the Department to "streamline, systemize and expedite" the issuance of Section 202(c) orders; to develop a "uniform methodology" for assessing reserve margins and a protocol to retain generators the Secretary deems critical to system reliability; and to prevent certain generators from leaving the bulk power system or converting to a different fuel source).

The Department's words and actions following issuance of the Grid EO reveal its efforts to unlawfully arrogate to itself others' lawful authority through systematic misapplication of Section 202(c) to prop up coal-burning power plants. The Department's initial steps included issuing a Section 202(c) order to prevent the well-planned retirement of the J.H. Campbell coal plant. *See* Order No. 202-25-3 at *passim*. The Department's order was clear on one point—Campbell cannot be allowed to retire—but left vague and unclear almost everything else. *See, e.g.*, *Consumers Energy Co. v. Midcontinent Indep. Sys. Op., Inc.*, 192 FERC ¶ 61,158, at PP 39–40 (2025) (recognizing the variety of interpretations of the Campbell order and settling on "the most reasonable reading of the DOE Order's intended scope"). The Campbell order failed to make clear even where the grid supposedly needed energy from Campbell, selectively quoted sources without examining their context and core findings, and flouted Congress' explicit limitations on the Department's Section 202(c) powers. *See* Motion to Intervene and Request for Rehearing and Stay of Sierra Club et al. at *passim* (June 18, 2025), https://www.energy.gov/sites/default/files/2025-07/PIO%20Request%20for%20Rehearing%20of%20Order%20No.%20202-25-3.pdf.

After preventing Campbell's retirement, the Department continued to implement its policy. In addition to the instant Craig order, the Department has issued Section 202(c) orders to prevent fossil-burning plant retirements in Pennsylvania, Order Nos. 202-25-4, 202-25-8, & 202-25-10, in Washington, Order No. 202-25-11, and in Indiana, Order Nos. 202-25-12 & 202-25-13.

Additionally, on July 7, 2025, the Department published the "methodology" required by the Grid EO, which the Department explained will "guide reliability interventions," including the use of Section 202(c) orders. Ex. 1-35 at vi (July Resource Adequacy Report); *see also* Ex. 1-39 at 3–4 (DOE July 7 Press Release) ("The methodology also informs the potential use of DOE's emergency authority under Section 202(c) of the Federal Power Act."). The report identifies no present or imminent emergency; at most, using deeply flawed methodology, it identifies a theoretical shortfall of generation in 2030.

Taken together, the Energy Emergency EO, Grid EO, July Resource Adequacy Report, and the Department's Section 202(c) orders reflect a policy to promote the long-term preservation of fossil-fueled electric generation, including coal-fired generation, by using the Department's emergency authority under Section 202(c). To the extent these actions left any room for doubt that the Department has such a policy, Energy Secretary Wright's own words have removed it. In his statement to the press when the Centralia Order issued, Secretary Wright emphasized, "The Trump administration will continue taking action to keep America's coal plants running." Ex. 1-118 (Department Press Release on Centralia Order); *see also* Ex. 1-34 (Secretary Wright's West Virginia Remarks) (reporting Secretary Wright's stated intention to stop the closure of coal plants and claimed authority to do so).

The Department has further reinforced this policy by applying it to Craig.

A. The Order Addresses Circumstances Beyond the Lawful Scope of an Emergency Under Section 202(c), and Fails to Provide Evidence or Reasoned-Decision-Making Substantiating the Existence of an Emergency that Can Come Within Section 202(c).

The Order claims an emergency exists within the WECC Northwest assessment area. Order at 1. The Order explains that "the WECC Northwest assessment area . . . includes Colorado, Idaho, Montana, Oregon, Utah, Washington, and Wyoming." *Id.* According to the Order, "the emergency conditions . . . will continue in the near term and are also likely to continue in subsequent years. *Id.* at 3. The Order then identifies the supposed emergency: "the loss of power to homes, and businesses in the areas that may be affected by curtailments or power outages, presenting a risk to public health and safety." *Id.*

As discussed below, the Order's determination of an emergency in the WECC Northwest assessment area (*i.e.*, in Colorado, Idaho, Montana, Oregon, Utah,

Washington, and Wyoming) exceeds statutory authority and is both unreasoned and without substantial evidence.[4]

1. *Legal Framework: Section 202(c) Empowers the Department to Respond Only to Imminent, Certain, and Unexpected Shortfalls in Electricity Supply.*

The Order invokes Section 202(c) of the Federal Power Act, which provides:

> During 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 of transmission of electric energy . . . the Commission shall have authority . . . with or without notice, hearing, or report, to require by order such temporary connections of facilities and such generation, deliver, interchange, or transmission of electric energy as in its judgment will best meet the emergency and serve the public interest.

16 U.S.C. § 824a(c)(1). That authority was transferred to the Department by the Department of Energy Organization Act. *See* 42 U.S.C. § 7151(b).

Section 202(c)'s text and context establish that an "emergency" enabling the Department to over-ride state and private decision-making must be an event that is imminent, certain, and unexpected. 16 U.S.C. § 824a(c). The constrained scope of Section 202(c)'s emergency authority is confirmed by the broader statutory context—in particular, the separate regime delineating federal authority over bulk-system reliability in Section 215 of the Federal Power Act, *id.* § 824o—as well the Department's regulations, caselaw applying Section 202(c), and the Department's consistent past practice.

[4] To the extent the Department claims an emergency in some region distinct from the WECC Northwest assessment area defined in the Order, the Department's emergency declaration still exceeds statutory authority and is both unreasoned and without substantial evidence, including (but not limited to) because the Order describes no such region, presents no reasoning associated with any such region, offers no credible evidence demonstrating an emergency in such region, and fails to examine the evidence detracting from an emergency determination in such region. Moreover, the Order is unreasoned and not based on substantial evidence in imposing requirements to best meet such an emergency and serve the public interest.

i. The Text and Context of Section 202(c) Confine an Emergency to Imminent, Certain, and Unexpected Events

Section 202(c)'s text empowers the Department to require generation only in an "emergency." *Id.* § 824a(c). Both the ordinary meaning of the term (which the statute does not expressly define) and statutory context limit the Department's emergency authority to imminent, unexpected, and certain events. At the time Congress enacted Section 202(c), Webster's New International Dictionary of the English Language (1930) defined "emergency" as, with emphasis added here, 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 similarly define "emergency" as demanding imminence: an emergency is "an *unforeseen* combination of circumstances or the resulting state that calls for *immediate* action." Merriam Webster's Dictionary 407 (11th ed. 2009) (emphasis added); *see* 3 Oxford English Dictionary 119 (1st ed. 1913) (defining emergency similarly as "a state of things *unexpectedly* arising, and urgently demanding *immediate* action" (emphasis added)); *see also* Benjamin Rolsma, *The New Reliability Override*, 57 Conn. L. Rev. 789, 812 n.147 (2025) (noting that dictionaries have given the term "emergency" the "same meaning for many years").

The remainder of Section 202(c) underscores the exigency inherent in the governing term "emergency." The authority granted by Section 202(c) is, in the first instance, a war-time power. 16 U.S.C. § 824a(c) (beginning with "[d]uring the continuance of any war in which the United States is engaged"); *see Jarecki v. G.D. Searle & Co.*, 367 U.S. 303, 307 (1961) (noting that statutory terms should be interpreted in the context of nearby parallel terms "in order to avoid the giving of unintended breadth to the Acts of Congress"). An "emergency" under the statute is limited to circumstances of similar urgency: "a *sudden* increase in the demand for electric energy," for example. 16 U.S.C. § 824a(c) (emphasis added); *see Richmond Power & Light v. FERC*, 574 F.2d 610, 615 (D.C. Cir. 1978) (holding that Section 202(c) "speaks of 'temporary' emergencies, epitomized by wartime disturbances"); S. Rep. No. 74-621, at 49 (1935) (explaining that Section 202(c) provides "temporary power designed to avoid a repetition of the conditions during the last war, when a serious power shortage arose").

The text's use of the present tense accentuates its focus on imminent and certain shortfalls: It empowers the Department to act only where "an emergency *exists*." 16 U.S.C. § 824a(c) (emphasis added). The Section's title and text both emphasize that it provides a "temporary" authority, further emphasizing that its emphasis on immediate—not distant—needs. *Id.* § 824a(c), (c)(1); *see Dubin v. United States*, 599 U.S. 110, 120–21 (2023) (cleaned up) ("The title of a statute and the heading of a section are tools available" to resolve "the meaning of a statute," and "a title is especially valuable where it reinforces what the text's nouns and verbs independently suggest."). That near-term focus precludes use of Section 202(c) to pursue broader or long-term energy-policy goals, such as a "fear of overdependence" on foreign oil

supplies, *Richmond Power & Light*, 574 F.2d at 617, or "energy independence," Ex. 1-35 at 1 (July Resource Adequacy Report); *see also Richmond Power & Light*, 574 F.2d at 614 (Section 202(c) "speaks of 'temporary' emergencies, epitomized by wartime disturbances, and is aimed at situations in which demand for electricity exceeds supply and not those in which supply is adequate but a means of fueling its production is in disfavor.").

Section 202's overall structure further highlights Section 202(c)'s emphasis on imminent, near-term concerns. The preceding subsections (202(a) and (b)) together define and limit the tools by which the federal government may pursue "abundant" energy supplies in the normal course. 16 U.S.C. § 824a(a) (seeking "abundant supply of electric energy" by directing the federal government to "divide the country into regional districts for the voluntary interconnection and coordination of facilities for the generation, transmission, and sale of electric energy"); *id.* § 824a(b) (allowing federal government to order "physical connection . . . to sell energy to or exchange energy" upon application, and after an opportunity for hearing). The resulting statutory "machinery for the promotion of the coordination of electric facilities" comprises the following: in subsection (a), an instruction to establish a general framework meant to facilitate "coordination by voluntary action;" in subsection (b), "limited authority to compel interstate utilities to connect their lines and sell or exchange energy," subject to defined procedural and substantive requirements, when "interconnection cannot be secured by voluntary action;" and in subsection (c), "much broader" but "temporary" authority "to compel the connection of facilities and the generation, delivery, or interchange of energy during times of war or other emergency." S. Rep. No. 74-651 at 49 (1935).

That tiered structure—placing primary emphasis on voluntary resource adequacy planning, 16 U.S.C. § 824a(a), specifying limited authority where that voluntary system fails, *id.* § 824a(b), and allowing for "temporary" central command-and-control only in case of an "emergency," *id.* § 824a(c)—requires that Section 202(c) remain narrowly confined to instances of an immediate and unavoidable "break-down in electric supply," S. Rep. No. 74-651 at 49 (1935), rather than a mere desire for more abundant supply in the future, *cf.* Order at 3 (emphasis added) (pointing to conditions that "will continue in the near term and are also *likely* to continue in *subsequent years*" that "*could* lead to the *potential* loss of power . . . in the areas that *may* be affected by curtailments or power outages, presenting a *risk* to public health and safety"). The tiered structure authorizes increasingly intrusive federal intervention, but under increasingly narrow circumstances. Interpreting Section 202(c)'s "emergency" powers to permit the Department to compel generation based on nothing more than the generalized challenges of operating a reliable bulk electric system in a transforming energy landscape, or concerns over longer-term resource adequacy, *see* Order at 1–3, would unwind the careful balance of voluntary, market-driven action and federal power set out in Sections 202(a) and 202(b). Such an interpretation cannot be squared with the statutory text and structure. *See Otter Tail Power Co. v. Fed. Power Comm'n*, 429 F.2d 232, 233–34 (8th Cir. 1970) (holding that Section 202(c)

"enables the Commission to react to a war or national disaster," while Section 202(b) "applies to a crisis which is likely to develop in the foreseeable future").

ii. Congress' Enactment of a Specific, Cabined Scheme to Address Reliability Concerns Confirms That Generalized or Long-Term Bulk Power System Reliability Concerns Are Not an "Emergency" Under Section 202(c).

That the Department's Section 202(c) emergency powers do not extend to general supervision of bulk power-system reliability is confirmed by Section 215 of the Federal Power Act—which specifically and directly delineates the scope of federal authority to enforce mandatory reliability requirements for the bulk power system. 16 U.S.C. § 824o. Congress added Section 215 to the Federal Power Act in 2005 precisely because the Act as it then existed—including Section 202—did not give the federal government the power to enforce measures designed to ensure bulk-system reliability. *See Rules Concerning Certification of the Elec. Reliab. Org.; and Procedures for the Establishment, Approval, and Enforcement of Elec. Reliab. Standards*, 70 Fed. Reg. 53117, 53118 (Sept. 7, 2005) ("In 2001, President Bush proposed making electric Reliability Standards mandatory and enforceable," leading to enactment of Section 215 in 2005); Ex. 1-119 at page 7-6 (2001 National Energy Policy) (noting that "[r]egional shortages of generating capacity and transmission constraints combine to reduce the overall reliability of electric supply in the country" and that "one factor limiting reliability is the lack of enforceable reliability standards" because "the reliability of the U.S. transmission grid has depended entirely on *voluntary* compliance," and then recommending "legislation providing for enforcement" of reliability standards (emphasis added)); S. Rep. No. 109-78 at 48 (2005) (stating that Section 215 "changes our current voluntary rules system" for bulk-system reliability "to a mandatory rules system"); *see also Alcoa, Inc. v. FERC*, 564 F.3d 1342, 1344 (D.C. Cir. 2009) (noting that prior to the Energy Policy Act of 2005, "the reliability of the nation's bulk-power system depended on participants' voluntary compliance with industry standards").

By enacting Section 215, Congress provided a comprehensive and carefully circumscribed scheme to empower the federal government to enforce bulk-system reliability requirements. That statutory scheme strikes a careful balance between state and federal authority, and between private, market-driven decisions and top-down control. Reliability standards are devised by NERC independent "of the users and owners and operators of the bulk-power system" but with "fair stakeholder representation." 16 U.S.C. § 824o(c)–(d); *see also id.* § 824o(a)(3) (defining reliability standards as "a requirement . . . to provide for reliable operation of the bulk-power system"). FERC may approve or remand those standards (but not replace them with its own) and is required to "give due weight" to NERC's "technical expertise" while independently assessing effects on "competition." *Id.* § 824o(d)(2)–(4). Section 215 provides specified enforcement mechanisms and procedures for reliability standards—which mechanisms conspicuously exclude the power to command specific generation resources to remain operational. *Id.* § 824o(e). And Section 215 carefully

preserves state authority over "the construction of additional generation" and in-state resource adequacy, establishing regional advisory boards to ensure appropriate state input on the administration of reliability standards. *Id.* § 824o(i)–(j).

Interpreting Section 202(c) to permit the Department to mandate generation based on its own unfettered assessment of bulk-system reliability needs would effectively allow the Department to bypass Section 215's procedural safeguards, constraints on federal authority, and protection of state power. Such a bypass would impermissibly "contradict Congress' clear intent as expressed in its more recent," reliability-specific legislation, enacted "with the clear understanding" that the Department had "no authority" to address long-term reliability through Section 202(c). *See FDA v. Brown & Williamson Tobacco Corp.*, 529 U.S. 120, 142 & 149 (2000); s*ee also Cal. Indep. Sys. Operator Corp. v. FERC*, 372 F.3d 395, 401–02 (D.C. Cir. 2004) ("Congress's specific and limited enumeration of [agency] power" over a particular matter in one Section of the Federal Power Act "is strong evidence that [a separate Section] confers no such authority on [agency]."). Congress has, in Section 215, directly established the mechanisms (and limitations) by which the federal government may compel action to ensure the reliability of bulk power electric system. In so doing, it has confirmed that the Department may not, through Section 202(c) "emergency" orders, use those reliability concerns to mandate the generation it views as required to address broad resource adequacy problems; the Department's emergency authority is confined to specific and imminent supply shortfalls requiring immediate response.

iii. The Department's Regulations Similarly Establish that Section 202(c) Emergency Authority Can Only Be Invoked to Address Imminent, Certain Supply Shortfalls Requiring Immediate Response.

The Department's regulations demonstrate its own long-standing understanding that Section 202(c)'s emergency authority is confined to imminent, certain, and otherwise unavoidable resource shortages, and does not provide a mechanism to address broad, long-term concerns as to the reliability of the bulk power system. The regulations recognize that an emergency under Section 202(c) requires, first, "a *specific* inadequate power supply situation." 10 C.F.R. § 205.371 (emphasis added). The Department's non-specific dissatisfaction with regional power planning does not, consequently, empower the Department to override that planning by emergency order. The need for both specificity and certainty is repeated in the Department's regulations defining an inadequate energy supply: "A system may be considered to have" inadequate supply when "the projected energy deficiency . . . *will* cause the applicant [for a 202(c) Order] to be unable to meet its normal peak load requirements based upon use of all of its otherwise available resources so that it *is* unable to supply adequate electric service to its customers." *Id.* § 205.375 (emphasis added). The same provision suggests that an emergency will generally exist only when "the projected energy deficiency . . . without emergency action by the [Department], will equal or exceed 10 percent of the applicant's then normal daily net energy for load." *Id.*

The regulations further recognize that Section 202(c) does not provide a means of planning against months-off expectations or risks. They define an emergency as "an *unexpected* inadequate supply of electric energy which may result from the *unexpected* outage or breakdown" of generating, transmission, or distribution facilities—not a tool to ensure future energy abundance, or override state and private planning that the Department deems inadequate. 10 C.F.R. § 205.371 (emphasis added). Emergencies are characterized by shortages produced by "weather conditions, acts of God, or unforeseen occurrences not reasonably within the power of the affected 'entity' to prevent." *Id.* Where the culprit is increased demand, it must be "a *sudden* increase in customer demand," *id.* (emphasis added), rather than demand projections producing non-immediate reliability concerns.

And while the regulations suggest that "inadequate planning or the failure to construct necessary facilities can result in an emergency," they recognize that the Department may not utilize a "continuing emergency order" to mandate long-term system planning. *Id.* The regulations also recognize that "where a shortage of electricity is projected due solely to the failure of parties to agree to terms, conditions, or other economic factors" there is no emergency "unless the inability to supply electric service is *imminent*." *Id.* (emphasis added). An emergency may exist where past planning failures produce an immediate, present-tense shortfall (that is where, a shortfall *results* from insufficient planning); the Department has no authority to commandeer bulk-system reliability planning merely because it deems current plans inadequate. *See* 10 C.F.R. § 205.375 (requiring present inability to meet demand to demonstrate inadequate energy supply). As the Department stated when it promulgated those regulations, the statute allows the Department to provide "assistance [to a utility] during a period of unexpected inadequate supply of electricity," but does not empower it to "solve long-term problems." *Emergency Interconnection of Elec. Facilities and the Transfer of Elec. to Alleviate an Emergency Shortage of Elec. Power,* 46 Fed. Reg. 39984, 39985–86 (Aug. 6, 1981).

iv. Courts Have Uniformly Held that Section 202(c) Can Be Invoked Only in Immediate Crises.

Caselaw applying Section 202(c) further supports the narrow circumstances under which it permits the Department to seize command of the power system. *Richmond Power and Light* arose out of the 1973 oil embargo. The Federal Power Commission responded to the embargo by calling for voluntary transfer of electricity from non-oil power plants to areas of the country that relied heavily on oil, such as New England. 574 F.2d at 613. The New England Power Pool was not convinced that the voluntary program would work and petitioned the Commission for a 202(c) order. *Id.* Rather than issue such an order, the Commission facilitated an agreement between state commissions and supplying utilities, which satisfied the New England Power Pool, leading it to withdraw its petition. *Id.* A dissatisfied utility sought judicial review of the Commission's decision to allow the withdrawal of the Section 202(c) petition. *Id.* at 614.

The court easily upheld the Commission's decision not to invoke Section 202(c). *Id.* Though the oil embargo had ended, the utility argued that the "high cost and uncertain supply of imported oil" justified an emergency order. *Id.* The Commission countered that the voluntary program had worked, the New England Power Pool never interrupted service, and there was no need for a Section 202(c) order. *Id.* at 615. The D.C. Circuit agreed. *Id.* The utility alternatively argued that "dependence on imported oil leaves this country with a *continuing* emergency." *Id.* (emphasis added). The court observed that Section 202(c) "speaks of 'temporary' emergencies, epitomized by wartime disturbances." *Id.* Interpreting this statutory language, the court upheld the Commission's view that Section 202(c) cannot be used when "supply is adequate but a means of fueling its production is in disfavor." *Id.*

Richmond Power and Light thus teaches that Section 202(c) is not an appropriate means to implement long-term national policy to switch fuels. The provision allows only a temporary fix for a temporary problem.

The Eighth Circuit has similarly held that Section 202(c) can only be used to respond to immediate crises. In *Otter Tail Power*, a utility insisted that the only way for the Federal Power Commission to properly order the utility to connect to a municipal power provider was to issue a Section 202(c) order. 429 F.2d at 234. Demand for electricity in the city had increased, and the peak load of the municipal power provider was getting to be so high that both of its two generators would likely need to be used simultaneously in the near future, "causing a possible loss of service should one malfunction during a peak period." *Id.* at 233–34. To avoid this possible loss of service, the Federal Power Commission issued a Section 202(b) order, requiring the utility to connect to the municipal power provider. *Id.* The utility argued that the Federal Power Commission used the wrong provision and should have used Section 202(c) instead. *See id.*

The court explained that Section 202(c) "enables the Commission to react to a war or national disaster" by ordering "immediate" interconnection during an "emergency." *Id.* at 234. For non-emergency situations, "[o]n the other hand, Section 202(b) applies," including when there is a "crisis which is likely to develop in the foreseeable future but which does not necessitate immediate action on the part of the Commission." *Id.* The court upheld the Commission's use of Section 202(b) instead of Section 202(c) because there was no immediate emergency. *See id.* The case law thus uniformly supports that Section 202(c) can only be used in short-term, urgent emergencies.

v. The Department's Prior Orders Recognize that Section 202(c) Does Not Confer Plenary Authority Over Bulk-System Resource Adequacy.

The Department's consistent application of Section 202(c) prior to 2025 further corroborates the urgency of the emergency conditions that are the necessary predicate for any Department intervention under that Section 202(c). *See Fed. Trade Comm'n*

v. Bunte Bros., Inc., 312 U.S. 349, 352 (1941) ("[J]ust as established practice may shed light on the extent of power conveyed by general statutory language, so the want of assertion of power by those who presumably would be alert to exercise it is equally significant in determining whether such power was actually conferred."). Since obtaining authority under Section 202(c) in the 1970s and prior to 2025, the Department has consistently used Section 202(c) to address specific, imminent, and unexpected shortages—not to address longer-term reliability concerns or demand forecasts. *See, e.g.*, Ex. 1-13 at 1 (DOE Order No. 202-22-4) (responding to ongoing severe winter storm producing immediate and "unusually high peak load" between Christmas Eve and Boxing Day); Ex. 1-16 at 1–2 (DOE Order No. 202-20-2) (responding to shortages produced by ongoing extreme heat and wildfires); Ex. 1-20 at 1 (DOE Order No. 202-08-1) (ordering temporary connection of facilities in response to "massive devastation caused by Hurricane Ike," leaving "large portions" of Texas "without electricity"); *see also* Rolsma, 57 Conn. L. Rev. at 803–04 (describing "sparing[]" use of Section 202(c) outside of war-time shortages during the twentieth century).[5] Public Interest Organizations are not aware of any instance in which, before 2025, the Department utilized Section 202(c) to mandate generation the Department viewed as necessary to ensure long-term resource sufficiency, or in response to generalized regional risks that had not produced any particular, defined generation shortfall, and for good reason: Any such use would exceed the Department's statutory authority.

2. The Order Primarily Focuses on Long-Term Bulk-System Reliability and Coal Plant Retirements, Neither of Which Is an Emergency Under Section 202(c), and Separately the Claimed Long-Term Emergency is Unreasoned and Not Based on Substantial Evidence.

The Department's determination that an emergency exists rests on its assertion that "increasing demand and shortage from accelerated retirement of generation facilities . . . could lead to the loss of power to homes, and businesses." Order at 3. This determination focuses on long-term concerns, noting that such conditions are "likely to continue in subsequent years" in concluding that an emergency designation is appropriate. *Id.* Those concerns—even if fully substantiated—would not be a basis

[5] The Department has also narrowly tailored the remedies in Section 202(c) orders before 2025 to ensure that the orders only address the stated emergency, to limit the order to the minimum period necessary, and to mitigate violations of environmental requirements and impacts to the environment. *See, e.g.*, Ex. 1-13 at 4–7 (DOE Order No. 202-22-4) (limiting order to the 3 days of peak load, directing PJM to exhaust all available resources beforehand, requiring detailed environmental reporting, notice to affected communities, and calculation of net revenue associated with actions violating environmental laws); Ex. 1-16 at 3–4 (DOE Order No. 202-20-2) (limiting order to the 7 days of peak load, directing CAISO to exhaust all available resources beforehand, requiring detailed environmental reporting).

to mandate Craig's continued operation. And they are not substantiated. Utilities and regulators have taken and are continuing to take steps to address longer-term concerns to ensure no resource shortfall arises.

i. Even Assuming Arguendo *Evidentiary Support, the Department's Long-Term Concerns, as Well as Its Concerns About Coal Plant Retirements, Are Not an "Emergency" Within the Meaning of 202(c).*

As an initial matter, even if the Order's claimed emergency conditions were established (they are not), reliability concerns arising beyond "the near term . . . in subsequent years," Order at 3, do not qualify as an emergency under Section 202(c). Such concerns are neither imminent nor unexpected. The Department's stated concerns cannot plausibly be characterized as a "*sudden* increase in the demand for electric energy" or a "shortage" in electric energy, generation, or transmission constituting an emergency. 16 U.S.C. § 824a(c)(1) (emphasis added).

At most, the Order describes long-term trends that may affect the reliability of the bulk power system in the future if left unaddressed. The Order's longer-term concerns are based on projections of demand increases, changes in the mix of power supply resources, challenges in resource development, and the Administration's view of foreign actors. *See* Order at 1–3.

While many of the Order's stated concerns are the province of state, regional, and private entities, Congress has provided certain mechanisms for the federal government to address the reliability concerns raised in the Order. The emergency provision in Section 202(c), along with the Department's claimed power to seize command-and-control authority over generating resources like Craig, are not among those mechanisms.

The congressionally provided mechanisms to the federal government include Section 202(a), which allows the federal government to pursue "an abundant supply of electric energy" but only by facilitating "*voluntary* interconnection and coordination of facilities for the generation, transmission, and sale of electric energy" 16 U.S.C. § 824a(a) (emphasis added). Additionally, under certain circumstances, Section 202(b) allows the federal government to require utilities to sell or exchange energy with other facilities, but only upon application and with "no authority to compel the enlargement of generating facilities for such purposes." *Id.* § 824a(b).

Another mechanism, Section 215, provides for mandatory, nationwide reliability standards developed and enforced by a federally certified but independent entity. 16 U.S.C. § 824o(d)–(e). "These standards," the Department explains, "ensure that all owners, operators, and users of the bulk-power system have an obligation to maintain system security and reliability." Ex. 1-120 at 7 (Department Export Authorization EA-365-C (Oct. 21, 2025)). The standards cannot be enforced by ordering generation facilities to operate, and Section 215 specifically disallows requiring the "construction

of additional generation" or "enforc[ing] compliance" with "adequacy" standards. 16 U.S.C. § 824o(e), (i)(2).

The Order purports to mandate generation based upon the Department's assessment of the bulk power system's long-term reliability needs, a power Congress chose not to provide *any* federal agency. *See* 16 U.S.C. § 824o(e) (specifying enforcement mechanisms for federal reliability standards). And what authority Congress has authorized to implement mandatory reliability standards it provided to FERC—not the Department. *Alcoa,* 564 F.3d at 1344. Reliability concerns in future years simply do not constitute an emergency within the meaning of Section 202(c).

Section 202(c) provides an explicitly "temporary" authority, 16 U.S.C. § 824a(c), preventing any interpretation of its terms that might encompass a potential longer term resource adequacy emergency in "subsequent years." Order at 3. The expansive interpretation of Section 202(c) implicit in the Order, stretching the meaning of "emergency" to cover resource planning concerns over "years" subsequent to the near term, is further precluded by the Federal Power Act's express background principles of permitting "Federal regulation" only of "matters which are not subject to regulation by the States," and disavowing "jurisdiction, except as specifically provided" over "facilities used for the generation of electric energy." 16 U.S.C. § 824(a), (b)(1); *see Duke Power Co. v. Fed. Power Comm'n,* 401 F.2d 930, 938 & 938 n.51 (D.C. Cir. 1968) (explaining that the Federal Power Act's policy declarations are "relevant and entitled to respect as a guide in resolving any ambiguity or indefiniteness in the specific provisions which purport to carry out its intent"). The Department knows that "resource adequacy planning and capacity requirements . . . have traditionally been the domain of state regulatory commissions, NERC-certified Regional Entities, and RTOs/ISOs," *i.e.*, not the Department. Ex. 1-120 at 5 n.4 (Department Export Authorization EA-365-C (Oct. 21, 2025)).

Through the Order, the Department expressly seeks to override the decisions of utilities and their regulators pursuant to the procedures established by Congress to ensure abundant electricity supplies and the reliability of the bulk-electric system. Section 202(c) does not permit that effort to transform the statutory scheme from one driven primarily by market- and state-based decision-making to one consolidating centralized command-and-control in the Department. And it especially does not permit that transformation in service of the Department's desire to dictate "how much coal-based generation there should be over the coming decades"—a power that the Supreme Court has found Congress "highly unlikely" to have left to agency discretion. *West Virginia v. EPA*, 597 U.S. 697, 729 (2022). The retirements of generators burning coal and other fossil fuels to which the Order devotes significant attention do not constitute an emergency under Section 202(c). *See, e.g.*, *Richmond Power & Light*, 574 F.2d at 614 (Section 202(c) "speaks of 'temporary' emergencies, epitomized by wartime disturbances, and is aimed at situations in which demand for electricity exceeds supply and not those in which supply is adequate but a means of fueling its production is in disfavor.").

ii. The Order Does Not Demonstrate Any Long-Term Resource Adequacy Concerns that Are Not Already Being Addressed Through the Appropriate Processes Under the Federal-State Balance of Responsibilities.

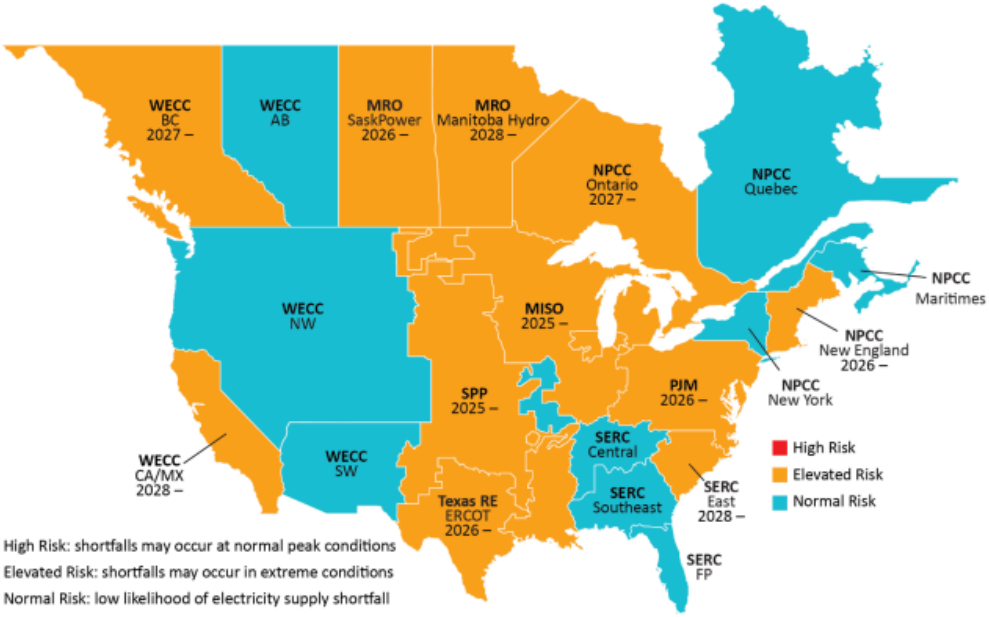
In addition to being an invalid basis for Department action under Section 202(c), the Order's discussion of long-term concerns is unreasoned and without substantial evidence, including because the Order both overestimates the potential of a shortfall and underestimates the ability of existing processes to address any projected shortfall. The Order discusses five sources touching on long-term issues: (1) the 2024 Long-Term Reliability Assessment; (2) the 2024 Western Assessment of Resource Adequacy; (3) data from the Energy Information Administration; (4) executive orders; and (5) DOE's July Resource Adequacy Report. None of these sources presents evidence of circumstances anywhere near an emergency in the region. And many other sources the Department knows or should know, yet fails to consider, further undermine the Department's claim.

The Order's first basis for finding a long-term emergency is the 2024 Long-Term Reliability Assessment. Order at 1–2. The Order cites passages from the assessment regarding "energy variability" due to the "large share of wind and hydro in the portfolio"; 5 GW of expected "baseload resource retirements" between 2024 and 2028 and the plan to replace them with solar, wind, and battery resources; and potential supply chain issues affecting battery resources. Order at 1–2 (discussing Ex. 1-07 at 129–30 (NERC 2024 Long-Term Reliability Assessment)).

The Order's reliance on the 2024 Long-Term Reliability Assessment is unreasoned. The Order cites statements that do state or even support the existence of an emergency under Section 202(c) while ignoring the remainder of the document, which undercuts the Department's claimed emergency.

The 2024 Long-Term Reliability Assessment examines a region it refers to as "WECC-NW," which encompasses and extends beyond the seven-state WECC Northwest assessment area. *See* Ex. 1-07 at 127 (NERC 2024 Long-Term Reliability Assessment) ("WECC-NW (Northwest) is a summer-peaking assessment area in the WECC Regional Entity. The area includes Colorado, Idaho, Montana, Oregon, Utah, Washington, and Wyoming and parts of California, Nebraska, Nevada, and South Dakota."). The 2024 Long-Term Reliability Assessment finds that the WECC-NW region has normal risk, as shown in Figure 11 below.

Figure 11: 2024 Long-Term Reliability Assessment Summary Map



Source: Ex. 1-07 at 6 (NERC 2024 Long-Term Reliability Assessment).

The 2024 Long-Term Reliability Assessment does not state that there is an energy or capacity shortfall between now and 2028; in fact, for 2028, the 2024 Long-Term Reliability Assessment finds no reliability metrics violations in the WECC-NW region. Ex. 1-01 at 14 (Current Energy Group Report). The assessment does identify that in 2031, five years from now, the region's anticipated planning reserve margin might fall below the reference level, but only by excluding from its calculations certain planned resources, known as "Tier 2 resources," that have made tangible progress in development and meet certain criteria. *Id.* When Tier 2 resources are included, the 2024 Long-Term Reliability Assessment finds that the reserve margin in the WECC-NW region remains above reference levels throughout the planning period (i.e., through 2034). *See id.* at 14–15; *see also* Ex. 1-02 at 7–8 (Grid Strategies Resource Adequacy Report). The 2024 Long-Term Reliability Assessment reaches this finding even while projecting demand growth of 18.7% in the WECC-NW region, more than double the 8.5% demand growth referenced in the Order. *See* Ex. 1-01 at 15 (Current Energy Group Report); Order at 2.

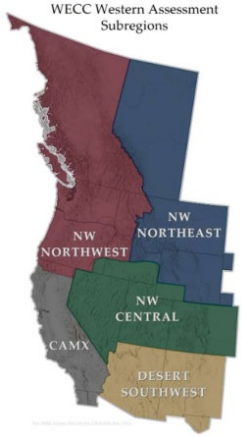
Thus, even with the planned retirements of multiple coal and natural gas units in the region and the potential for increased demand, the WECC Northwest assessment area is within a region that the 2024 Long-Term Reliability Assessment assesses as "begin[ning] from a position of strong resource adequacy" and "finds no evidence of medium-term resource adequacy crisis." Ex. 1-01 at 15 (Current Energy Group Report).

The Order's second basis for finding a long-term emergency is the 2024 Western Assessment of Resource Adequacy. The Order references isolated statements from this document: a forecast of peak demand growth in "WECC's Northwest-Central

subregion"; the fact that "most planned retirements are 'baseload generation, such as coal, natural gas, and nuclear'"; and the proposition that "571.3 MW of coal-fired generating capacity across six units at three locations have retired in Colorado." Order at 2.

To begin with, the "NW-Central" subregion examined in the 2024 Western Assessment of Resource Adequacy is another geographic mismatch to the footprint of the Order's claimed emergency. That NW-Central subregion reaches Nevada, while the Order's seven-state emergency does not. *Compare* Ex. 1-09 at 3 (2024 Western Assessment of Resource Adequacy) (showing map), *with* Order at 1 (identifying the seven-state footprint of the claimed emergency). The geographic borders of WECC's NW-Central subregion are shown in Figure 12 below.

Figure 12: 2024 Western Assessment of Resource Adequacy Subregions



Source: Ex. 1-09 at 3 (2024 Western Assessment of Resource Adequacy).

The Order's reliance on a mismatched geographic footprint—*e.g.*, its reliance on conditions outside of the areas in which the claimed emergency exists—is unreasoned and not based on substantial evidence.

The Order is also unreasoned and not based on substantial evidence in failing to consider the 2024 Western Assessment of Resource Adequacy. The document serves to inform planning and does not identify an existing crisis or call for extraordinary measures outside of the normal planning process. Ex. 1-01 at 11–12 & app'x A at 25–27 (Current Energy Group Report). Moreover, "[t]he study does not identify retirements as a primary cause of future reliability risks," including retirements of coal-burning generators like Craig. *See id.* at 12. Rather, according to the 2024 Western Assessment of Resource Adequacy, "the timely completion of new generation is the key medium-term requirement for maintaining resource adequacy." *Id.* And in fact, the 2024 Western Assessment of Resource Adequacy shows the active planning and resource deployment in the region:

> The 2024 Western Assessment of Resource Adequacy demonstrates that the region has been actively planning for plant retirements and load growth through increased planned resource additions, including new capacity (~15 GW of new batteries and ~3 GW of new natural gas by 2027), and by moderating previously-assumed retirements downward from 2022. Generation additions across the WECC subregions appear to be on track with the 2024 assessment's expectations. In 2025, approximately 9.4 GW of new batteries, 6 GW of solar, 1.7 GW of gas, and 2 GW of wind were deployed across the interconnection. Of this 19 GW, more than 4.7 GW has been deployed in Colorado, Nevada, Utah, Idaho, Washington, Oregon, Montana, and Wyoming as of the November report [from the Department's Energy Information Administration], and 2.1 GW in the same states is expected to be completed in December.

Id. (footnotes omitted).

In addition, the few specifics from the 2024 Western Assessment of Resource Adequacy discussed in the Order do not support the claimed emergency. Both as an evidentiary and as a logical matter, the Order's references to forecasted demand and forecasted retirements cannot together or by themselves demonstrate the existence of a shortfall in electricity or in electricity generation, including because those two data points are insufficient to assess whether the overall level of expected supply is sufficient to meet expected demand. The Order fails to address, for instance, that planned generator additions exceed planned retirements. *See id.* at 17–18; Ex. 1-02 at 8–9 (Grid Strategies Resource Adequacy Report). Moreover, utilities have already accounted for demand growth in their electric resource plans, and have determined that they will not have a shortfall even after Craig's retirement. *See* Ex. 1-02 at 9 (Grid Strategies Resource Adequacy Report).

The Order's third basis for finding a long-term emergency is data from the Department's Energy Information Administration. The Department here focuses its attention on retirements of generators burning coal and other fossil fuels in Colorado and the amount of wind-powered generation in the state. Order at 2.

The mix of generating resources in a state is not, standing alone, evidence of an emergency either within that single state or in the seven states on which the Order focuses. Merely tallying retirements of certain generator types, and calculating the amount of wind, does not indicate whether a particular state or states have a shortfall of energy or capacity. On this ground alone, the Order's reliance on the data from the Energy Information Administration is unreasoned and insubstantial.

The Order's reliance on the data from the Energy Information Administration is further problematic due to basic mathematical errors. The Order overstates the amount of planned coal retirements shown in the data for Colorado by more than

900 MW. Ex. 1-01 at 17–18 (Current Energy Group Report). The error is shown in Figure 13 below.

Figure 13: Discrepancies Between Order and EIA Data

	Order 202-25-14	EIA 860 M Data*	Discrepancy
Historical (2019-2024) Coal Retirements	571.3 MW	571.3 MW	None
Planned Coal Retirements by 2029	~3,700 MW[74]	2,789.6MW	~910 MW
Planned Natural Gas Retirements by 2029	656.8 MW	675.6 MW	18.8 MW

*As of November 2025 (released December 2025)

Source: Ex. 1-01 at 18 (Current Energy Group Report).

The Order also presents an incomplete picture in its reliance on the Energy Information Administration data. The Order "cites EIA data to identify planned generation retirements but does not acknowledge that the same EIA data also show substantial new generation additions in Colorado." *Id.* at 18. According to that data, the historical and planned additions of new generating resources far exceed the retirements in Colorado, *see id.*, as shown in Figure 14 below. The Order is unreasoned and not based on substantial evidence because a complete picture of both retirements and additions in Colorado shows that there will be a net increase in generating capacity of more than 6,000 MW through 2029.

Figure 14: Retirements and Deployments in Colorado

	Retirements (MW)	Deployments (MW)
Historical (2019-2024) Retirements	845.9	4,827.6
Planned Retirements by end of 2029	3,455	5,793.5
Total (2019-2029)	**4,300.9**	**10,621.1**

Source: Ex. 1-01 at 18 (Current Energy Group Report).

The Department fails to explain how this substantial net increase in generating capacity will not be sufficient to address the claimed future shortfall.

The Order's fourth basis for finding a long-term emergency are executive orders. The Order cites the Energy Emergency EO and the Grid EO claiming that there is an energy emergency and that the grid is being stressed by unprecedented demand. Order at 2. In the quoted passages from the Energy Emergency EO, the President offers his perspective on issues relating to the nexus between energy usage and "our Nation's economy, national security, and foreign policy." Ex. 1-36 at 90 Fed. Reg. at 8433–34 (Energy Emergency EO). In the Grid EO, the President adds his view on the nature and drivers of electricity demand in the country. Ex. 1-37 at 90 Fed. Reg. at 15521 (Grid EO).

Neither executive order supplies valid evidence of an actual energy emergency under Section 202(c) (this winter or any time). An emergency under Section 202(c) must be a specific inadequate power supply situation. *See supra* sec. V.A.1; *e.g.*, 10 C.F.R. § 205.371. Yet the executive orders cited in the Order provide no factual evidence applicable to the WECC Northwest assessment area for this winter or beyond. *See* Ex. 1-36 at *passim* (Energy Emergency EO); Ex. 1-37 at *passim* (Grid EO). The executive orders thus do not constitute useful evidence, much less substantial evidence. *See, e.g.*, *Chritton v. Nat'l Transp. Safety Bd.*, 888 F.2d 854, 856 (D.C. Cir. 1989) (defining substantial evidence). And reliance on the executive orders' unsupported, generalized conclusions is unreasoned. *Sinclair Wyo. Ref. Co. LLC v. EPA*, 114 F.4th 693, 714 (D.C. Cir. 2024).

Even if the declared national energy emergency were legitimate, a presidential declaration of an emergency does not unlock unlimited agency powers. *See Biden v. Nebraska*, 600 U.S. 477, 500–01 (2023) (presidential declaration of national emergency does not change the limitations on agency's emergency authority as written into statute). The Energy Emergency EO was issued pursuant to claimed authority from the National Emergencies Act.[6] Congress explained that the National Emergencies Act "is not intended to enlarge or add to Executive power. Rather, the statute is an effort by Congress to establish clear procedures and safeguards for the exercise by the President of emergency powers conferred on him by other statutes." S. Rep. No. 94-1168, 3 (1976) (emphasis added). And Section 202(c)'s authority is not triggered by a Presidential emergency declaration; the statute requires that "the Commission determine[] that an emergency exists." 16 U.S.C. § 824a (emphasis added).[7] Thus, the burden is on the Department (which stands in the shoes of the "Commission") to demonstrate that there is an emergency within the narrow terms of Section 202(c); simply pointing to the Energy Emergency EO or the Grid Reliability EO without providing actual evidence that an emergency exists cannot provide the substantial evidence needed to sustain the Order.

The Order's fifth basis for finding a long-term emergency is the Department's July Resource Adequacy Report. Order at 3 (citing Ex. 1-35 at 1 (July Resource Adequacy

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[6] Under the National Emergencies Act, no emergency powers unlocked by a Presidential declaration of a national emergency "shall be exercised unless and until the President specifies the provisions of law under which he proposes that he, or other officers will act." 50 U.S.C. § 1631 (emphasis added). The Energy Emergency EO does not adhere to this requirement. Ex. 1-36, 90 Fed. Reg. at 8434 (Energy Emergency EO) (generically directing agencies to "identify and exercise any lawful emergency authorities available to them, as well as all other lawful authorities they may possess, to facilitate the . . . generation of domestic energy resources.").

[7] The Department has exercised certain powers under Section 202(c) since the DOE Organization Act of 1977. *See* 42 U.S.C. § 7151(b).

Report)). But the Order's claim that there is an emergency in the WECC Northwest assessment area does not appear to be based on or informed by the Department's July 2025 Report, notwithstanding the Order's citation to that report. That is because the Order's discussion of the July 2025 Report is strictly limited to (1) mentioning that the report was issued pursuant to presidential directive and (2) inserting a conclusory quotation regarding "the Nation's power grid" found on page 1 of the report. *Id.*

Moreover, even granting for argument's sake that the July 2025 Report does not contain the myriad inaccurate assumptions and methodological flaws discussed below, the July 2025 Report undercuts the Order's emergency determination. The July 2025 Report depicts the "Washington Region" and the "Oregon Region" as some of the lowest risk areas of the country in 2030. *See* Ex. 1-35 at 6, 37 (July Resource Adequacy Report). And according to the July 2025 Report, the normalized unserved energy in 2030 in the "West Non-CAISO" region[8] is lower than any other region of the country. *See* Ex. 1-01 at 16–17 (Current Energy Group Report).

The lack of evidence for a long-term emergency is underscored by the fact that the Department's own analysis premises a resource adequacy shortfall on a type of demand increase (large load buildout), Ex. 1-35 at 2–3, 15–17 (July Resource Adequacy Report), that the July 2025 Report goes on to admit would likely never actually be allowed to destabilize the grid. Specifically, the report notes that its analysis "is not an indication that reliability coordinators would allow this level of load growth to jeopardize the reliability of the system." *Id.* at 14. In other words, even taking the report at face value, it does not identify a shortfall of a type and nature that could justify the invocation of the Department's Section 202(c) emergency authority. At best, the report highlights that data centers cannot be built at projected rates unless new generation is built, which is far from the type of emergency situation that could provide the basis for a Section 202(c) order.

The July 2025 Report does not credibly project conditions in 2030 because of its many inaccurate assumptions and methodological errors. *S*ee Ex. 1-02 at 9–10 (Grid Strategies Resource Adequacy Report). The Department is on notice of these flaws. *See, e.g.*, Ex. 1-40 at *passim* (PIOs' RFR of July Resource Adequacy Report); Ex. 1-40a at 2 (Department's Response to PIOs' RFR of July Resource Adequacy Report). Yet the Order cites the July 2025 Report without providing a reasoned explanation of how it could credibly rely on the report in light of the identified flaws.

Most glaringly, the Department's July 2025 Report overestimates demand growth and expected facility retirements while underestimating the likelihood of new entry.

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[8] The "West Non-CAISO" region is roughly, according to the report's delineations, the Western continental United States excluding the California Independent System Operator and nearby areas. *See* Ex. 1-35 at 6, 35, 37 (July Resource Adequacy Report).

This biases the entire report in the direction of over-identifying resource adequacy concerns. Ex. 1-41 at 21–25 (Inst. Pol'y Integrity Report); Ex. 1-42 at 2–4 (GridLab Report); Ex. 1-40 at 34–35 (PIOs' RFR of July Resource Adequacy Report) (citing multiple expert reports and initiatives demonstrating the potential for flexibility of large data center loads, including Ex. 1-43 (Duke University Rethinking Load Growth Study)).

The July 2025 Report also "departs from best [modeling] practices by using a deterministic modeling rather than a probabilistic approach," and thereby fails to account for necessary uncertainties. Ex. 1-41 at 19 (Inst. Pol'y Integrity Report). And in many places, the Department simply does not explain its own methodology. The report states that its model is derived from NERC's Interregional Transfer Capability Study, which is focused on the ability of the transmission system to transfer power between regions. Ex. 1-35 at 2 (July Resource Adequacy Report). However, the July 2025 Report inexplicably excludes new transmission projects from its analysis, ignoring that transmission improvements can be the most cost-effective way to improve grid reliability. The July 2025 Report also departs from sound statistical reasoning by, for instance, calling out PJM for failing loss-of-load criteria under one realization of a possible weather year that would include Winter Storm Elliott, without considering that a system's loss-of-load expectation is averaged across all simulated weather years. Ex. 1-41 at 19 (Inst. Pol'y Integrity Report); Ex. 1-35 at 7, 9, 27 (July Resource Adequacy Report). The report also added more "perfect capacity" (in megawatts) within its modeling than actually needed to bring regions to its targeted Normalized Unserved Energy level. Ex. 1-41 at 26 (Inst. Pol'y Integrity Report); Ex. 1-35 at 19, 27, 30, 32, 40 (July Resource Adequacy Report). These analytical failings in and of themselves disqualify the report as a viable source of evidence for an emergency finding.

Finally, on its opening page, the July 2025 Report acknowledges that its analysis is general in nature, looking at the country as a whole, and that the various "entities responsible for the maintenance and operation of the grid" have information "that could further enhance the robustness of reliability decisions" in the sections of the grid they administer. Ex. 1-35 at i (July Resource Adequacy Report). The report's generalized analysis based on incomplete information is simply insufficient to justify a Section 202(c) emergency finding for the WECC Northwest assessment area or any other specific region.

Additionally, the Order fails to consider many other facts and processes that undercut its emergency claim. Utilities engage in regular, periodic electric resource planning to acquire the resources they will need to meet future customer demand. *See, e.g.*, *infra* sec. V.A.3.iii; Ex. 1-01 at 3–8 (Current Energy Group Report); Ex. 1-02 at 1–2 (Grid Strategies Resources Adequacy Report); Ex. 1-05 at 7–9 (Telos Resource Adequacy Report). The Order does not provide any evidence that utility planning processes, as well as state public utility commissions' proceedings and oversight, are insufficient to address any need for resources in 2031 and beyond.

Electric utilities have experienced periods of increased demand before, and they have successfully dealt with forecasted increases in demand. For example, during the 1970s, many electric utilities expected increased demand, and thus a number of new generating facilities were built in the 1970s and 80s. Ex. 1-108 at 6–7 (UT Austin Article).

The mere fact that a resource assessment indicates the need for new resources several years ahead of time is not evidence of an energy emergency—instead, this is a feature of utility resource planning, which exists in part so that utilities can procure new resources to meet any increase in demand. Electric utilities throughout the WECC Northwest assessment area are engaged in ongoing efforts to procure new resources needed to come online in future years to meet customer demand. For example, Xcel currently has two proceedings pending before the Colorado Commission to acquire new utility-scale resources: the Near-Term Procurement, in which it has proposed to acquire over 4,900 MW of resources that would come online between 2027 and 2030, Ex. 1-93 at 4–5 (Xcel 2025 Near Term Procurement Report), and a separate procurement in Proceeding No. 24A-0442E in which Xcel will seek additional utility-scale generating resources with in-service dates through 2031, Ex. 1-94 at 154–73 (Xcel 2024 JTS, Volume 2 Technical Appendix) (showing the new resources that would be added for each of the portfolios that were modeled). Xcel's pending resource procurement proceedings focused extensively on load growth, and the procurement is designed to meet any need for new resources in light of load growth through 2031.

Utilities throughout the WECC Northwest assessment area have similar plans to procure new generating and storage resources through 2031 and beyond. As another example, PacifiCorp, which is one of the largest utilities in the West, has pending procurements in Oregon and Utah for new resources that would come online between now and 2030. Ex. 1-109 at 1 (2025 PacifiCorp Oregon RFP Update) (noting that as of October 2025, PacifiCorp has issued its request for proposals for new resources to serve Oregon customers); Ex. 1-110 at 1 (2025 PacifiCorp Utah RFP) (stating that PacifiCorp is soliciting requests for generation resources "to meet 600,000 MWhs of average annual forecasted demand" for customers in Utah).

In fact, each of the Craig Co-Owners already has a plan in place for procuring any incremental resources needed on a longer-term basis. Tri-State, the operator of Craig, has found that even after Craig retires, Tri-State does not have a need for any new generating resources until 2035. Ex. 1-89 at 8 (Tri-State 2025 Annual Progress Report) (showing that Tri-State does not have a need for additional capacity until 2035). Platte River, Xcel, Salt River Project, and PacifiCorp have identified a need for new resources at various points between the spring of 2026 and 2030, but have plans in place to procure those resources. Platte River's Board has adopted the preferred portfolio in its 2024 IRP, which entails acquiring new generating and storage resources through 2030. Ex. 1-92 (Platte River 2024 IRP). Xcel is currently engaged in two procurements (the Near Term Procurement and the Just Transition

Solicitation) to acquire new utility-scale generating and storage resources with in-service dates through 2030. Ex. 1-93 (Xcel 2025 Near Term Procurement Report); Ex. 1-97 (Colorado Commission Decision No. C25-0747). Salt River Project has an action plan to acquire new resources through 2030. Ex. 1-100a–b (Salt River Project 2023 IRP). PacifiCorp's 2025 IRP lays out an action plan to acquire new resources, including through its pending RFPs in Oregon and Utah. Ex. 1-99 (PacifiCorp 2025 IRP); Ex. 1-109 (PacifiCorp 2025 Oregon RFP); Ex. 1-110 (PacifiCorp 2024 URC RFP). Each utility's analysis shows that its planned acquisition of resources will fill any future resource needs, showing that none of the owners of Craig Unit 1 expects a shortage of energy or capacity that would necessitate keeping Craig Unit 1 available. This is to be expected, given that the utilities have been planning for the retirement of Craig Unit 1 since 2016.

Other utilities and actors are similarly planning and acting to ensure resource adequacy and reliability. The Order fails to consider documents and processes of the Power Council, the Western Power Pool, WECC, Bonneville, Washington State, and Puget Sound Energy. *See* Ex. 1-01 at app'x A at 11–33 (Current Energy Group Report) (collecting and examining studies). For instance, on November 19, 2025, the Washington Agencies reported to Governor Bob Ferguson that recent "[r]eliability assessments . . . indicated that the Northwest's electrical grid meets national resource adequacy criteria over the near and medium terms under a broad range of operating conditions." Ex. 1-155 at PDF 2 (Washington Agencies Resource Adequacy Meeting Summaries (Compiled)).

Another planning document, this one from E3, identifies resource gaps that are filled by planned resources in utilities' integrated resource plans. Ex. 1-159 at 4 (Email Correspondence with E3); Ex. 1-157 at 10, 21 (E3 Resource Adequacy Phase 1 Presentation). The E3 presentation thus demonstrates the traditional actors' role in planning to secure resource adequacy. Moreover, the E3 presentation assumes a static level of imports across all years that is below the studied region's demonstrated import capability; that level of imports "is not intended to represent the maximum import capability of the region E3 studied." Ex. 1-159 at 3 (Email Correspondence with E3).[9]

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[9] The E3 presentation's long-term projections are also subject to significant uncertainty. According to an independent evaluation of the E3 Presentation, "[t]he scale and nature of the winter resource adequacy challenge in the Pacific Northwest depends strongly on future load growth, which remains highly uncertain due to both data center demand and electrification trends," while "[l]arge load flexibility could mitigate most or all near-term winter resource adequacy needs under most load scenarios." Ex. 1-158 at 12–13 (Sylvan & GridLab Independent Evaluation of E3

The Order also fails to reconcile its findings with the Department's own findings elsewhere. For instance, according to the Department, "NERC's FERC-approved comprehensive enforcement mechanism ensures that bulk-power system owners, operators, and users have a strong incentive both to maintain system resources and to prevent reliability problems that could result from movement of electric supplies through export." Ex. 1-120 at 6 (Department Export Authorization EA-365-C (Oct. 21, 2025)).

Engaging in reasoned decision-making based on a planning document, such as the E3 presentation, necessitates following important basic principles. The fact that a study shows that, under certain conditions, a utility or region might, in a future year, fall below a specific resource adequacy goal that is based on a 1-in-10 LOLE standard does not by itself predict or guarantee that a loss of load event will actually occur. Instead, it indicates future conditions in which system planners might expect more than one shortfall per decade if both those future conditions materialize and if no actions are taken by the utilities and regional entities to address a potential, future shortfall. *See* Ex. 1-01 at 2–6 (Current Energy Group Report). Importantly, a small deviation below the resource adequacy goal will be associated with a small increase in this likelihood (and vice versa). This fact is relevant in the context of system planning because the tradeoff between grid reliability and energy costs is a core part of system planning: no system is ever 100% reliable, and ratepayers do not want to spend too much of their income on energy bills. *See id.* at 5; Ex. 1-159 at 4 (Email Correspondence with E3) ("Any electric system will have some level of resource adequacy risk."). Indeed, for this reason, both MISO and PJM have explicit conditions in their tariffs that allow for each grid operator to fall below the 1-in-10 LOLE threshold as part of their response to potential higher capacity prices. Thus, treating a potential short- or medium-term dip in the size of the planning reserve margin as an emergency belies both industry practice that explicitly allows for such dips and basic system planning principles.

In sum, even if there were a need for additional generating resources in some future year, the Order fails to consider that utilities have pending and scheduled procurements of new resources. There is no evidence that these pending and scheduled procurements will be insufficient to address any long-term resource needs. And in addition to the many relevant processes and sources the Order fails to consider, the Order is unreasoned in its reliance on the few sources it does cite. As

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Presentation). In fact, even assuming that only resources already in development come online by 2030, Sylvan and GridLab conclude that in 2030 "large load management could reduce average outages among other customers during critical winter weather conditions from 19 hours to 0.1 hours." *Id.* at 16, 41.

such, the Order's claimed long-term emergency is not based on reasoned decision-making and is not based on substantial evidence.

3. The Order Does Not, and Could Not, Provide Valid Evidence or Reasoned Decision-Making to Support Its Stated Near-Term Resource Adequacy Concerns.

The claimed near-term emergency in the Order is unspecific. And none of the sources cited in the Order, separately or together, establishes factual circumstances that come close to a near-term emergency or otherwise meeting the definition of "emergency" that permits Departmental action under Section 202(c). 16 U.S.C. § 824a(c)(1). The Order also relies on these sources in a vacuum, failing to consider many other analyses of which the Department is aware or should be aware (including the Department's own analysis) that undercut its near-term emergency claim. Planners in the WECC Northwest assessment area have already determined that near-term reliability and resource adequacy in the regional grid is secure (even with Craig's retirement). Utilities and other load-responsible entities in the WECC Northwest assessment area have prepared diligently for the retirement of Craig for nearly a decade. There is no factual or legal basis for the Order's declared near-term emergency. The Order's near-term emergency determination is unjustified, unreasoned, and not based on substantial evidence.

i. The Described Concerns Are Insufficiently Specific and Certain to Meet the Statutory Definition of an Emergency.

The Order is unreasoned, not based on substantial evidence, and otherwise contrary to law and regulation because the Order fails to provide any specific determination of the energy emergency that purportedly exists. Instead, the Order relies on vague and generalized assertions. The Order fails to provide any specific determinations as to the amount of claimed shortfall, the time period over which the claimed shortfall exists, and whether the claimed shortfall is for energy, capacity, or both.

First, the Order does not provide a specific, quantitative determination of the shortage of energy or capacity that allegedly exists. The Order does not say, for instance, whether the alleged shortage is for 1 MW, 100 MW, or 1000 MW. The Department does not even provide a range for the alleged shortage.

Second, the Order does not specify over what time period an energy emergency exists. The Order lasts for 90 days, but most or all of the Order's discussion of evidence for the claimed shortfall pertains to time periods much further in the future. Moreover, the Order does not specify whether the Department has determined that an emergency exists now, or merely that an emergency will exist at some future date. The Order is unclear, for example, whether the Department has ordered Craig to

remain available solely because the Department believes that an emergency may exist at some future date.

Third, the Order is not clear as to whether the purported shortfall is for energy, capacity, or both. In the electric utility industry, there is a fundamental distinction between energy and capacity. Energy refers to the electricity produced over a given period of time, such as kilowatt-hours or megawatt-hours. Meanwhile, capacity refers to the maximum output a facility can provide, under specific conditions, and at an instant in time. The distinction between energy and capacity runs throughout the electricity industry, informing how contracts are structured (e.g., different payments for energy versus capacity) and how markets are organized (e.g., there are separate energy and capacity markets). The Order is not clear on whether the Department believes that there is a shortfall in energy, capacity, or both.

In relying on generalized assertions and failing to identify the information above, the Order is unreasoned. *Ariz. Pub. Serv. Co. v. United States*, 742 F.2d 644, 649 n.2 (D.C.Cir.1984) ("[M]ere conjecture and abstract theorizing offered in a vacuum are inadequate to satisfy us that the agency has engaged in reasoned decisionmaking."). The Order is also inconsistent with the Department's applicable regulations, which provide that "[a]ctions under this authority are envisioned as meeting a specific inadequate power supply situation." 10 C.F.R. § 205.371.

ii. The Sources Cited in the Order Do Not Support the Existence of a Near-Term Emergency.

The Order's claimed near-term emergency is unreasoned and not supported by substantial evidence for many of the reasons discussed *supra* sec. V.A.2.ii. These reasons include the failure to grasp or even discuss the functions and conclusions of the sources cited in the Order; the focus on retirements without considering generator additions; the focus on projected demand growth without considering projected growth in supply; the mathematical mistakes and methodological errors committed by the Department; the geographic mismatches between the Order's claimed emergency footprint and the regions evaluated in the sources cited in the Order; and the reliance on executive orders containing no facts. *See id.*

There are additional aspects of the sources cited by the Order that undermine the claimed near-term emergency. As an example, for 2026, the 2024 Long-Term Reliability Assessment projects no unserved energy or loss-of-load hours in the "WECC-NW" region (which, again, includes and extends beyond the WECC Northwest assessment area defined in the Order), and projects that the on-peak reserve margin in that region exceeds the target reserve margin. Ex. 1-07 at 129 (NERC 2024 Long-Term Reliability Assessment). This is shown in Figure 15 below.

Figure 15: 2024 Long-Term Reliability Assessment Findings of "Negligible" Expected Unserved Energy and Loss of Load Hours Risk

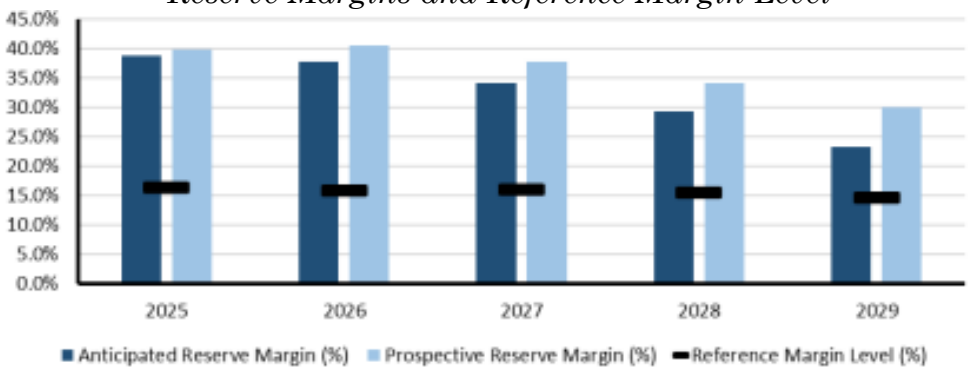
Base Case Summary of Results			
	2026*	2026	2028
EUE (MWh)	1,722	0	1
EUE (PPM)	4	0	0
LOLH (hours per year)	0.04	0	0
Operable On-Peak Margin	37.6%	36.1%	27.8%

* Provides the 2022 ProbA Results for Comparison

Source: Ex. 1-07 at 129 (NERC 2024 Long-Term Reliability Assessment).

As for capacity, the 2024 Long-Term Reliability Assessment estimates that the region would have enough capacity to meet target reserve margins in 2026 (and in subsequent years). *Id.* at 127. This is shown in Figure 16 below:

Figure 16: 2024 Long-Term Reliability Assessment Depiction of Reserve Margins and Reference Margin Level



Source: Ex. 1-07 at 127 (NERC 2024 Long-Term Reliability Assessment).

Thus, the 2024 Long-Term Reliability Assessment does not support the Order's determination of a near-term emergency. Instead, the assessment reaches the contrary conclusion: there is sufficient energy and capacity for the WECC Northwest region in 2026 (and in the following years until 2031). *See id.* at 127–29; Ex. 1-01 at 13–14 (Current Energy Group Report); Ex. 1-02 at 7–8 (Grid Strategies Resource Adequacy Report).

The 2024 Western Assessment of Resource Adequacy also includes additional information undermining the Order's claimed near-term emergency. Most glaringly, the study finds *no demand at risk hours in 2026 and almost none in 2027* in the three subregions that subsume (and extend beyond) the claimed emergency footprint. *See* Ex. 1-01 at 10–11 (Current Energy Group Report). This is shown in Figure 17 below.

Figure 17: Summary of Demand-at-Risk Hours Identified in 2024 Western Assessment of Resource Adequacy

Subregion	2026 Demand-at-Risk Hours in Most Extreme Scenario	2027 Demand-at-Risk Hours in Most Extreme Scenario
NW Central	0	0
NW Northeast	0	0
NW Northwest	0	~7

Source: Ex. 1-01 at 11 (Current Energy Group Report).

The Order also fails to come to grips with the 2024 Western Assessment of Resource Adequacy's anticipation of 10 GW of new generation in 2026, of which more than 4 GW is firm capacity, and the support for this anticipation in recent data from the Energy Information Administration. *Id.* at 11; *see also* Ex. 1-29 at 27–29 (FERC Staff Winter Reliability Assessment) (explaining that in the WECC region, 14.1 GW of nameplate capacity additions are completed or expected from March 2025 through February 2026, including roughly 7 GW of additions expected between October 2025 and February 2026). In addition, utilities have accounted for peak demand, including the possibilities of increases in peak demand, and concluded in their electric resource planning that they will not have an energy or capacity shortfall in the absence of Craig being available. *See* Ex. 1-02 at 2–5, 8–9 (Grid Strategies Resource Adequacy Report).

Regardless of the exact modeling software and reliability metrics used, standard approaches to assessing the probability of energy shortfalls consist of modeling utilities' available generating and storage resources in light of expected customer demand. *See, e.g.*, Ex. 1-01 at 3–8 (Current Energy Group Report). This typically includes a "de-rate" of resources based on the likelihood that a generator will be unavailable or produce less than its maximum potential output (*i.e.*, less than its "nameplate capacity") during a peak demand period, a computation whose result is known as "accredited capacity." *Id.* at 5. The Department does not attempt, on its own or based on the cited sources, to assess for Colorado or any other region the probability of shortfalls or the available resources in light of expected demand. Instead, the Department simply tallies retirements of certain types of resources, which logically and analytically cannot answer the question of whether the resources that actually exist today are adequate to serve electricity needs in 2026.

While the Department has failed to conduct any methodologically sound analysis of whether an energy shortfall exists in Colorado, Colorado's electric utilities have done such analyses. As further discussed *infra* sec. V.A.3.iii, Tri-State's analyses conducted in 2025 concluded that it would have no unserved energy and no loss of load hours in 2026, even without the availability of Craig, and Platte River reached a similar conclusion in 2024.

Finally, the Department's July 2025 report does not address whether an energy emergency exists prior to 2030, much less in the first three months of 2026. Thus, the report does not support the claimed near-term emergency either.

iii. Many Sources Not Cited in the Order Undercut the Claimed Near-Term and Long-Term Emergency.

The Department also fails to consider many sources undercutting the claimed near-term and long-term emergency. These include planning by the Craig Co-Owners and their state regulators and boards, as well as broader planning and monitoring from states, regional entities, and private utilities. The Order is, consequently, unreasoned and not based on substantial evidence.

a. Planning by Craig Co-Owners and Their State Regulators and Boards

In 2016, the Craig Co-Owners announced that Craig would close by December 31, 2025.[10] 83 Fed. Reg. 31332 (July 5, 2018) (approving Colorado's SIP revision establishing Craig's closure date); Ex. 1-65 at 183 at § F.VI.D.1 (CDPHE Regulation No. 3) (Colorado Regulation No. 3 provision regarding Craig's closure, which EPA approved). As discussed below, in the decade since they made that announcement, the Craig Co-Owners have built and contracted for new generation, storage, and transmission resources such that they do not need Craig after 2025 to reliably serve their customers. Three of the Craig Co-Owners (PacifiCorp, Tri-State, and Xcel) are regulated by state public utility commissions, while the remaining two (Platte River and Salt River Project) are governed by their respective boards. But regardless of the governance structure and regulatory status of the utility, each co-owner's regulator or board has approved resource plans that include retiring Craig by December 31, 2025. Each of the Craig Co-Owners has determined that it does not need the Unit over the next 90 days or on a longer-term basis.

Even if any short-term need for additional resources were to emerge during the 90-day period covered by this Order (and there is no evidence that any such need will arise), utilities like the Craig Co-Owners have processes in place for addressing any unexpected short-term need, and thus this Order is unnecessary. Utilities have multiple ways to acquire additional supply-side generating resources quickly. Reserve sharing arrangements are in place that allow utilities to call on resources on a short-term basis, including on a seasonal basis for the winter of 2025-2026. *See, e.g.*,

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[10] The Craig Co-Owners reached a settlement agreement, which was incorporated into Colorado's regional haze SIP and approved by EPA, in which they agreed to either close Craig Unit 1 by December 32, 2025 or cease burning coal at Craig Unit 1 by August 31, 2021 (with an option to convert the unit to burn natural gas by August 31, 2023). Of these two compliance pathways, the Co-Owners elected to close Craig Unit by December 31, 2025.

Ex. 1-94 at 118 (Xcel 2024 JTS, Volume 2 Technical Appendix) (describing Xcel's participation in a reserve sharing program). And utilities participating in the two energy imbalance markets operating in the West can use those markets to purchase any resources needed on an intra-hour basis. *See* Ex. 1-131 at 7–8 (FERC Western Energy Markets Explainer). Utilities also have a suite of demand-response programs, including from interruptible service contracts with large commercial customers that allow the utility to interrupt service to large customers under specific conditions, and comparable programs with individual residential customers allowing the utility to, for example, reduce demand from air-conditioning during summer peak hours. *See generally* Ex. 1-94 at 101, 135, 182–83 (Xcel 2024 JTS, Volume 2 Technical Appendix) (explaining how Xcel relies on demand response programs, including interruptible loads).

Tri-State

For Tri-State, the Colorado Commission has approved two electric resource plans that include retiring Craig by December 31, 2025. The Colorado Commission provided its final approval of Tri-State's 2020 resource plan in 2023, Ex. 1-85 at 34 (Colorado Commission Decision C23-0437), and the plan assumed that Craig would retire by the end of 2025, Ex. 1-86 at 20, 31, 43, 53, 64 (Tri-State 150-Day Implementation Report) (showing that in all portfolios, Craig ceases to generate electricity after 2025). Tri-State concluded in its 2020 resource plan that it could reliably operate its system after 2025 without Craig. *See id.*

Tri-State reached the same conclusion—that it does not need Craig for reliability purposes—in its 2023 resource plan. Each portfolio that Tri-State modeled in its 2023 resource plan was required to meet strict reliability criteria, including during extreme weather events, and every portfolio assumed that Craig retires at the end of 2025. Ex. 1-87 at 21–22, 31–32, 42–43, 54–55, 64–65, 75–76 (Tri-State 2023 ERP 120-Day Implementation Report) (showing that in all portfolios, Craig retires at the end of 2025). After assuming that Craig would not provide any energy or capacity after 2025, Tri-State found that each portfolio would be reliable because each portfolio met Tri-State's reliability and resource adequacy requirements. *Id.* at 95 ("Each of the portfolios met Level 1 and 2 Reliability Metrics.").

Tri-State does not have either a near-term or intermediate-term need for additional capacity or energy sources after 2025. Specifically, Tri-State recently found that it does not have a need for additional capacity until 2035, even assuming that Craig retires on December 31, 2025: "Tri-State stated within Phase I of the 2023 ERP that it did not forecast a capacity shortfall until 2029. With the updated load forecast, shown above, utilized in Phase II and Phase II preferred portfolio resources, a capacity shortfall is not forecasted to occur until 2035." Ex. 1-89 at 8 (Tri-State 2025 Annual Progress Report). The loads and resources table in Tri-State's 2025 Annual Progress Report shows that Tri-State will have surplus capacity from 2026 through

2034, even without Craig. *Id.* at 10. Note that the surplus is calculated relative to the total amount of resources needed to both meet peak demand and have planning and operating reserves. *See id.* Thus, the surplus shows Tri-State has sufficient capacity to meet its peak demand, plus additional capacity in the form of planning and operating reserves, and then has even more capacity beyond what is needed to meet peak demand and reserves. Furthermore, the loads and resources table in which Tri-State estimates a capacity surplus through 2034, *id.*, assumes that Tri-State makes no market purchases and instead is based solely on Tri-State's owned and contracted resources, *see id.* In addition, Tri-State conducted reliability analyses in 2025 to stress-test its system under extreme winter and summer weather (including by making multiple worst-case scenario assumptions related to reduced availability of resources during extreme weather events, length of extreme weather events, reduced availability of imports, etc.) and concluded that it has sufficient capacity for 2026 and beyond even under extreme winter and summer weather events. *See* Ex. 1-86 at 6–8, 14–15, 28, 40, 51 (Tri-State 150-Day Implementation Report); Ex. 168 at 1–4 (Tri-State Extreme Weather Event Modeling Assumptions) (listing all of the modeling assumptions that are a part of Tri-State's analysis of its system under extreme weather events).

The Colorado Commission approved Tri-State's 2020 and 2023 electric resource plans, which both included retiring Craig by December 31, 2025. Ex. 1-90 at 41 (Colorado Commission Decision No. C25-0612). In its August 2025 decision approving Tri-State's current resource plan, the Colorado Commission expressly found that Tri-State does not need Craig after 2025 to maintain a reliable electric system:

> Craig is not required for reliability or resource adequacy purposes based on the record in this ERP. Every portfolio that Tri-State modeled assumes that Craig retires at the end of 2025 and does not provide any energy or capacity after 2025. At the same time, Tri-State convincingly concludes that every portfolio meets all reliability metrics and is reliable.

Id. at 40.

Since 2016, Tri-State has acquired and/or built new generating, storage, transmission, and demand-response resources, and Tri-State's member cooperatives have also added their own resources (Tri-State allows member cooperatives to self-supply some of their electricity and procure the remainder from Tri-State). Ex. 1-89 at 12, Figure 4 (Tri-State 2025 ERP Annual Progress Report) (showing that, since 2016, Tri-State has added more than 600 MW of utility-scale and small-scale hydropower, wind, and solar); *id.* at 10–11 (stating that, as of December 2025, Tri-State had signed contracts for 500 MW of new storage resources and 200 MW of new wind resources, and is continuing contract discussions for additional resources).

Platte River

Platte River prepared a resource plan in 2020 that modeled several portfolios, each of which assumed that Craig would retire by December 31, 2025. Ex. 1-91 at 20, 26, 67, 87–90 (Platte River 2020 IRP). Platte River's Board then voted to approve a portfolio that included retiring Craig by December 31, 2025.

Platte River's current resource plan was developed in 2024. Like the 2020 plan, the 2024 plan included retiring Craig by December 31, 2025. Ex. 1-92 at 30, 106, 179 (Platte River 2024 IRP). Platte River's Board then voted to approve a portfolio from the 2024 resource plan that included retiring Craig by December 31, 2025. *Id.*, Appendix C at PDF 211–215.

Both the 2020 and 2024 plans contained action plans to procure additional generating and storage resources to meet electricity demand in Platte River's service territory. *Id.* at 176–79.

Platte River's 2020 and 2024 resource plans followed similar methodologies. *Compare* Ex. 1-92 at *passim* (Platte River 2024 IRP), *with* Ex. 1-91 at *passim* (Platte River 2020 IRP). Platte River's 2024 plan, for instance, contained forecasts of Platte River's expected load, including in 2026 and beyond, based on expected load growth in Platte River's service territory. Ex. 1-92 at 57–96 (Platte River 2024 IRP). Historically, Platte River has experienced its peak electricity demand in the summer, and it forecasts demand in summer to remain significantly higher than in winter through 2050. *Id.* at 61.

The 2024 plan analyzed reliability and resource adequacy using several metrics and by stress testing the portfolios under extreme weather scenarios. *Id.* at 120–31. In all of its modeling, Platte River concluded that it could maintain a reliable system after Craig closes at the end of 2025. *Id.* at 145–55. Platte River's electric resource plans indicate that Platte River does not have a near-term need for additional capacity or energy in the near-term or in the intermediate term.

Since 2016, Platte River has contracted for and/or built new generating, storage, transmission, and demand-response resources. Platte River added 30.5 MW of new solar in 2016, 225 MW of new wind resources in 2020, 22 MW of new solar in 2020, 1 MW of new storage in 2020, and 150 MW of new solar in 2025; and it plans on adding 150 MW of new solar and 25 MW of 4-hour storage in 2026. Ex. 1-92 at 106–08 (Platte River 2024 IRP). The 2024 IRP also calls for additional acquisitions from 2024 onward, including procuring up to 200 MW of additional thermal generation, additional storage capacity, and additional virtual power plants. *Id.* at 176–79.

Public Service Company of Colorado (Xcel)

In the years since 2016, Xcel has contracted for and/or built new generating, storage, transmission, and demand-response resources. The primary resource

solicitations were conducted in the 2016 and 2021 resource plans. In the 2016 electric resource plan, the Commission approved Xcel acquiring the following new resources: 1,100 MW of wind; up to 700 MW of solar; up to 275 MW of storage; and 383 MW of gas. Ex. 1-101 at PDF 1 (Xcel Information Sheet on Colorado Energy Plan).

Xcel filed its most recent regular electric resource plan in 2021 and has pending resource procurements underway currently. In all portfolios that it presented to the Colorado Commission for selection, Xcel's 2021 resource plan assumed that Craig would retire by the end of 2025; and in that proceeding, the Colorado Commission approved two portfolios that assumed that Craig would retire by the end of 2025. Ex. 1-164 at 125 (Colorado Commission Decision No. C24-0052); Ex. 1-165 at 70 (Colorado Commission Decision No. C25-0024).

In the 2021 electric resource plan, the Commission's Phase II decision approved the "Alternative Portfolio," consisting of 5,854 MW of new generating and storage resources (which included 669 MW of new gas). Ex. 1-102 at 92, 101 (Colorado Commission Decision No. C24-0052). The Company is on track to procure the new resources approved in its 2021 resource plan. Ex. 1-103 at 14–17 (2025 Xcel ERP Annual Progress Report). As noted above, Xcel also has two resource acquisitions pending in the Near-Term Procurement and the Just Transition Solicitation.

Currently, Xcel has two resource procurement dockets pending for its electric system. In the Near Term Procurement Report, Xcel has proposed to acquire approximately 4,900 MW of new resources that would come online between 2027 through 2030. Ex. 1-93 at 4 (Xcel 2025 Near Term Procurement Report). The load forecast for the Near Term Procurement Report assumes the retirement of Craig at the end of 2025. Xcel states in the report that it has executed short-term contracts for resources for 2026 to ensure that Xcel can meet peak load in 2026. *Id.* at 29. In combination with its owned and contracted resources, these short-term purchases will ensure that Xcel has sufficient resources to reliably serve load in 2026.

Xcel is also undertaking another procurement called the "Just Transition Solicitation" ("JTS") in which Xcel is separately seeking supply-side resources with in-service dates between now and the end of 2031. In all of the modeling undertaken for the JTS, Xcel assumed that Craig would retire by the end of 2025. Ex. 1-94 at 85 (Xcel 2024 JTS, Volume 2 Technical Appendix). In that proceeding, Xcel included multiple load forecasts, each of which accounted for expected load growth, including from large commercial customers such as data centers. Currently, Xcel's peak electricity demand occurs in summer. *Id.* at 52, 58. Xcel forecasts that its system will remain summer peaking through at least 2030. *See id.* Xcel found that all of the generic portfolios modeled in Phase I would be reliable, *see id.* at 121 (noting that "system reliability is factored into the development of portfolios in an iterative process that involves inputting various reliability requirements upfront into the EnCompass modeling process" to ensure that the portfolios are reliable), and all of these portfolios included retiring Craig by the end of 2025.

On August 12, 2025, the largest coal unit on Xcel's system, Comanche Unit 3, went out of service as a result of a forced outage. In November 2025, Xcel petitioned the Colorado Commission for a one-year variance from the requirement to retire Comanche Unit 2 by the end of 2025. The Colorado Commission granted the variance solely because of the outage at Comanche Unit 3 (Comanche Unit 3's approved retirement date is January 1, 2031). Ex. 1-95 at 25–26 (Colorado Commission Decision No. C25-0892). The Colorado Commission did not indicate there is a need to extend the life of any unit other than Comanche 2. *See id.* And the Petition did not request a variance from any retirement deadline other than a one-year extension for Comanche 2. *See* Ex. 1-96 (Comanche Unit 2 Variance Petition).

For the years after 2026, Xcel has a series of resource procurements through which it will meet any resource needs after 2026. Specifically, the Colorado Commission has scheduled the following procurements: the base solicitation in the Just Transition Solicitation in 2026; the supplemental solicitation in the Just Transition Solicitation in 2027; and Phase I of the electric resource plan in 2028. Ex. 1-97 at 50 (Colorado Commission Decision No. C25-0747).

Thus, if Xcel has any resource needs after 2026, the Colorado Commission has approved a schedule of procurements to fill any resource needs after 2026. Moreover, the Company regularly acquires short-term resources between scheduled procurements through short-term capacity purchases, as noted in the December 5, 2025 Near Term Procurement Report, and the Commission also approved an Incremental Need Pool process by which the Company can procure resources in-between scheduled procurements. *Id.* at 39–40, 44–45.

Xcel does not have a need for additional capacity or energy over the next 90 days, and there are multiple, established processes in place for Xcel to acquire resources over the next several years to meet any resource needs for future years.

PacifiCorp

PacifiCorp prepares IRPs roughly every two years. For the 2023 IRP Update, PacifiCorp assumed that Craig retires at the end of 2025 in all portfolios. Ex. 1-98 at 13, 88, 115 (PacifiCorp 2023 IRP Update). PacifiCorp prepared load forecasts covering the years 2026 and beyond that reflected anticipated load growth across its service territory. *Id.* at 39–51. PacifiCorp conducted extensive modeling of reliability and resource adequacy. In the 2023 IRP, PacifiCorp adopted a preferred portfolio that included retiring Craig at the end of 2025. PacifiCorp found that this portfolio would be consistent with maintaining the reliability of its system.

While PacifiCorp made certain methodological changes in its 2025 IRP and used different values for certain inputs, PacifiCorp's 2025 IRP was similar to its 2023 IRP in several important respects. The 2025 IRP contained forecasts of demand—which include forecasts of expected load growth—throughout PacifiCorp's service territory

for the years 2026 and beyond. Ex. 1-99 at 114–40 (PacifiCorp 2025 IRP). On the supply side, PacifiCorp assumed that Craig would close at the end of 2025 and thus not provide any capacity or energy to PacifiCorp's system after 2025. *Id.* at 13, 51, 287, 294. PacifiCorp evaluated reliability and resource adequacy using a variety of metrics, which included considering the impact of extreme weather events. *Id.* at 99–113, 192.

In its 2025 IRP, PacifiCorp reaffirmed its intent to close Craig by the end of 2025 and adopted a preferred portfolio that includes closing Craig by the end of 2025. PacifiCorp adopted its preferred portfolio in part because PacifiCorp found that the portfolio would ensure system reliability, finding that it had enough capacity to meet summer and winter peak demand in 2026 and 2027 without adding new resources. *Id.* at 136–39, *See also* Ex. 1-98 at 49–50 (PacifiCorp 2023 IRP Update). PacifiCorp's system currently has lower electricity demand in the winter than in summer, and experiences peak demand in the summer months; PacifiCorp forecasts that its system will remain summer peaking through 2045. Ex. 1-99 at 74, 106, 114, 132–35 (PacifiCorp 2025 IRP).

PacifiCorp's 2023 and 2025 IRPs each included an action plan that included building and procuring new generation and storage resources and transmission lines. *Id.* at 289–90. Since 2016, PacifiCorp has contracted for and/or built new generating, storage, transmission, and demand-response resources. In its 2015 IRP Update, PacifiCorp reported that for the year 2016, it would have a total of 10,131 MW of resources (both supply- and demand-side resources) across its entire system. Ex. 1-104 at 31 (PacifiCorp 2015 IRP Update). As of its most recent IRP, PacifiCorp reports that for the year 2026, it will have 11,859 MW of existing resources (owned by PacifiCorp or contracted to PacifiCorp) available to meet load in the summer, plus 3,103 MW of available market purchases. Ex. 1-105 at 132 (PacifiCorp 2025 IRP).

None of the state commissions that regulate PacifiCorp objected to PacifiCorp's decision to close Craig by the end of 2025. The most recent PacifiCorp IRP for which state commissions have issued final decisions after proceedings to review the resource plan is PacifiCorp's 2023 IRP. State commissions took various actions on PacifiCorp's 2023 IRP, but no commission expressed concern about retiring Craig by the end of 2025. *See* Ex. 1-128 at 5, 7 (Order No. 24-073_OR PUC on Pac 2023 IRP) (Oregon PUC issues a final order in PacifiCorp's 2023 IRP docket acknowledging PacifiCorp's plan to retire Craig Unit 1 by the end of 2025); Ex. 1-129 (Utah PSC on Pac 2023 IRP) (Utah PSC issues a final order in PacifiCorp's 2023 IRP, but does not mention any concerns with PacifiCorp's proposal to retire Craig Unit 1 by the end of 2025); Ex. 1-130 at 3 (Idaho PUC on Pac 2023 IRP) (Idaho PUC issues a final order finding that PacifiCorp's 2023 IRP, which proposed to retire Craig Unit 1 by the end of 2025, satisfies Idaho's IRP requirements and the PUC acknowledges the IRP).

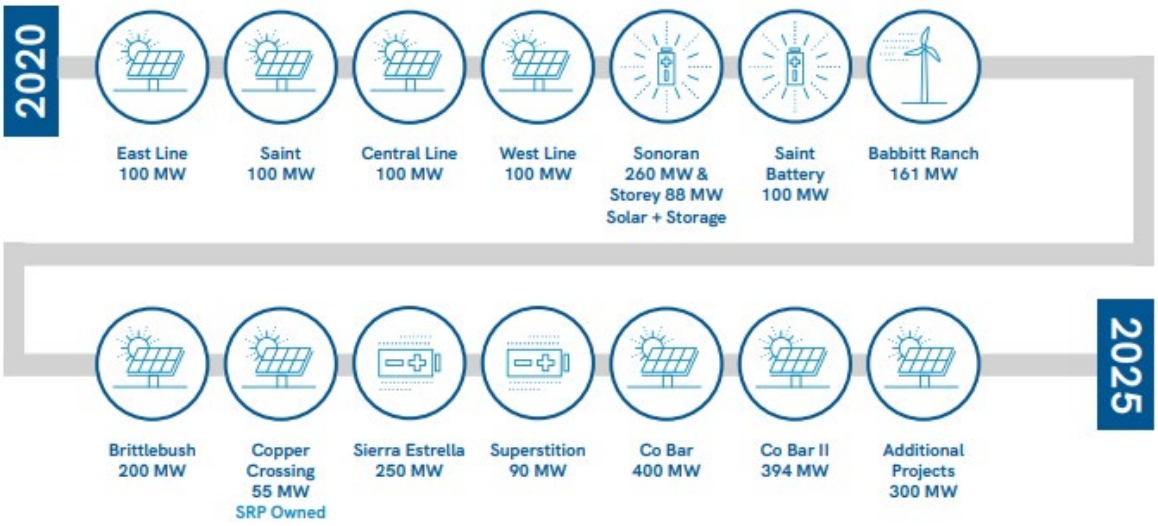
Thus, PacifiCorp does not need additional capacity and energy in the near term and has established processes in place for filling any longer-term resource need.

Salt River Project

Salt River Project's most recent resource plan, which it calls an Integrated System Plan, was prepared in 2023. On the demand side, Salt River Project forecasted its electricity demand for the years 2026 and beyond, and included expected load growth from large commercial customers. Ex. 100a at 68–71 (Salt River Project 2023 IRP). On the supply side, the 2023 ISP assumed that Craig retires at the end of 2025. *Id.* at 27. The 2023 ISP includes a preferred portfolio and action items that include procuring new generating and storage resources as well as new transmission lines. Ex. 100b at 68–71, 145–46, 149–50, 156–60 (Salt River Project 2023 IRP). Salt River Project concluded that the plan of action it identified in the ISP, which Salt River Project called the "Balanced System Plan," and which included retiring Craig by the end of 2025, would ensure system reliability. *Id.* at 158. Salt River Project's Board adopted the recommendations in the 2023 ISP.

Since 2016, Salt River Project has contracted for and/or built new generating, storage, transmission, and demand-response resources. For example, between 2020 and 2025, Salt River Project acquired additional capacity from nuclear, solar, and battery resources. Ex. 1-100a at 27 (Salt River Project 2023 IRP). This is shown in *Figure 18* below.

Figure 18: Salt River Project's Additional Capacity Acquired Between 2020 and 2025



Source: Ex. 1-100a at 27 (Salt River Project 2023 IRP).

Thus, Salt River Project does not need additional near-term capacity or energy, and has established processes in place for filling any longer-term resource need.

Colorado Generally

Within Colorado, the Energy Information Administration reports that the State's electric utilities added more than 3,000 MW of net summer capacity between 2019

and the end of 2024. *Compare* Ex. 1-106 at PDF 78 (Table 4.7.A) (EIA Annual 2024), *with* Ex. 1-107 at PDF 75 (Table 4.7.A) (EIA Annual 2019). This is shown in Figure 19 below.

Figure 19: Energy Information Administration Data on Colorado's Increases in Net Summer Capacity, 2019–2024

Net Summer Capacity, 2019 (MW)	Net Summer Capacity, 2024 (MW)	Differential, 2019–2024 (MW)
16,592	19,817	3,224

Sources: Ex. 1-106 at PDF 78 (Table 4.7.A) (EIA Annual 2024); Ex. 1-107 at PDF 75 (Table 4.7.A) (EIA Annual 2019).
MW values rounded to the nearest integer.

The values in Figure 19 do not account for the new resources that came online in 2025 or are planned to come online in 2026 and in future years. As explained in the attached Grid Strategies Report, there are at least 5,800 MW of resource additions planned for future years, through 2029, in Colorado. *See* Ex. 1-02 at 8–9 (Grid Strategies Resource Adequacy Report).

b. Planning and Monitoring from States, Regional Entities, and Utilities

The Department also ignores resource adequacy studies, reliability analyses, and planning documents from state regulators, regional entities, and other utilities that undercut the Department's emergency determination—including one determination that the Department *itself* made. The Department's failure to consider this cornucopia of conflicting and highly relevant evidence presents a textbook example of unreasoned decision-making that is not based on substantial evidence.

The first set of sources undercutting the claimed emergency comes from the Department. The Department has continued to grant entities the authority to export power from parts of the WECC Northwest assessment area (and other areas) into Canada. *See, e.g.*, Ex. 1-120 at 11 (Department Export Authorization EA-365-C (Oct. 21, 2025)) (authorizing exports from multiple interconnection points in Washington State owned by Bonneville); Dep't of Energy, Export Authorization Library (last visited Jan. 28, 2026), https://www.energy.gov/gdo/export-authorization-library.

Under Section 202(e), the Department shall approve an authorization to export power "unless, after opportunity for hearing, it finds that the proposed transmission would impair the sufficiency of electric supply within the United States or would impede or tend to impede the coordination in the public interest of facilities subject to the jurisdiction of the Commission." 16 U.S.C. § 824a(e). The Department interprets the "sufficiency" prong of Section 202(e) "to mean that sufficient generating capacity and electric energy must exist such that the export could be made without compromising the energy needs of the exporting region, including serving all load obligations in the region while maintaining appropriate reserve levels." Ex. 1-62 at

3–4 (Department Export Authorization EA-365-C (Oct. 21, 2025)). To address this prong, the Department "examines whether existing electric supply is available via market mechanisms, and whether potential reliability issues linked to supply problems are mitigated by reliability enforcement mechanisms." *Id.* at 4. The Department interprets the "coordination" prong of Section 202(e) "primarily as an issue of the operational reliability of the domestic electric transmission system" and, "[a]ccordingly, the export must not compromise transmission system security and reliability." *Id.*

The Department's authorizations to export power from portions of the WECC Northwest assessment area to Canada demonstrate the false basis of the Order's emergency determination. For instance, in its recent export authorization issued less than two months before the Order, the Department explains why allowing exports to Canada will not impair the sufficiency of domestic electric supply. "From an economic perspective," which the Department explains regards "the supply available to wholesale market participants," the Department "finds that the wholesale energy markets are sufficiently robust to make supplies available to exporters and other market participants serving United States regions along the Canadian and Mexican borders." *Id.* at 4. And from a reliability perspective, through which the Department "focuses on preventing problems that could result from inadequate supplies," the Department says nothing about possible inadequate supplies. *Id.* Instead, the Department recounts the multi-layered and "comprehensive" reliability processes that "ensure[] that bulk-power system owners, operators, and users have a strong incentive both to maintain system resources and to prevent reliability problems that could result from movement of electric supplies through export." *Id.* at 5–6; *see also id.* at 7–8 (explaining further some authorities of balancing authorities and reliability coordinators).

The Order does not reconcile the Order's emergency determination with the export authorizations' findings that markets in the area are sufficiently robust to make supplies available, and that multi-layered and comprehensive reliability processes incentivize maintenance of system resources. This is unreasoned and renders the decision not based on substantial evidence.

In addition to departing from the Department's own contemporaneous conclusions, the Order fails to address sources the Department cited just two weeks earlier in support of another (unlawful) Section 202(c) Order in the Western United States. *Compare* Order No. 202-25-11 at 1–2 (discussing the 2025–2026 Winter Reliability Assessment and the E3 Presentation), *with* Order at *passim* (failing to discuss the sources). These sources further undercut the Order's near-term emergency determination.

The 2025–2026 Winter Reliability Assessment evaluates conditions during the majority of the Order's duration, and particularly the coldest months, in three subregions (referred to in that assessment as WECC-Rocky Mountain, WECC-Basin,

and WECC-Northwest) roughly covering and extending beyond the WECC Northwest assessment area. Craig is located in the WECC-Rocky Mountain subregion. The 2025–2026 Winter Reliability Assessment does not identify any elevated reliability risks in the WECC-Rocky Mountain subregion; instead, NERC states that "[e]xpected resources meet operating reserve requirements under assessed scenarios." Ex. 1-08 at 38 (NERC 2025-26 Winter Reliability Assessment). Under "extreme" conditions—namely, "[a]bove-normal peak demand combined with high generator outages in extreme conditions—the WECC-Basin subregion needs only to rely on imports from neighboring regions to maintain reserves above reference level. *See id.* at 33. While the assessment suggests "[e]xternal assistance may not be available during region-wide extreme winter conditions," *id.* at 6, the assessment assigns no actual probability that this will occur and contains no details on the multiple necessary conditions that would need to occur for it to occur. *See id.* at 5–6, 33; *cf.* Ex. 1-02 at 6–7 (Grid Strategies Resource Adequacy Report) (explaining reasons that imports to WECC-Basin subregion are likely to be available). Moreover, the WECC-Basin subregion has, according to the assessment, the highest reference level of any WECC subregion and the second highest of any subregion evaluated in the assessment. *See* Ex. 1-08 at 44–49 (NERC 2025-26 Winter Reliability Assessment). And the assessment explains that "[t]he results of the probabilistic assessment reveal no [expected unserved energy] or [loss of load hours] for Winter 2025–2026" in the WECC-Basin subregion. *Id.* at 14. Meanwhile, in the WECC-Northwest subregion, "[o]perating reserve margins are expected to be met after imports in all winter scenarios." *Id.* at 37.

The E3 Presentation and associated evaluations also undercut the claimed near-term (and long-term) emergency as applicable to the Pacific Northwest. The actual and forecasted conditions this winter—both those currently existing and those available to the Department on December 30, 2025—show relatively strong hydrological conditions. *See* Ex. 1-01 at app'x A at 20–23 (Current Energy Group Report); Ex. 1-159 at 4 (Email Correspondence with E3). Additionally, the E3 Presentation and an independent evaluation demonstrate the role that imports play in maintaining reserves, and how they did so during the "Big Freeze" in 2024. Ex. 1-157 at 10 (E3 Resource Adequacy Phase 1 Presentation); Ex. 1-158 at 22–23 (Sylvan & GridLab Independent Evaluation of E3 Presentation); Ex. 1-159 at 3 (Email Correspondence with E3).

The Order also fails to address several other studies demonstrating that there is no reason to believe an emergency exists in the Pacific Northwest. *See* Ex. 1-01 at app'x A at *passim* (Current Energy Group Report) (discussing studies). Notably, each of these studies reached their conclusions even after factoring in scheduled retirements. *See id.* at app'x A at 2. The reports' conclusions complement and support the discussion above demonstrating that there is no basis for an emergency declaration in the WECC Northwest assessment area. *See supra* sec. V.A.2.ii, V.A.3.i–.iii.

Additionally, on November 4, 2025, the Washington Agencies held their 2025 winter preparedness resource adequacy meeting. The meeting notice, agenda, presentations, and video have been publicly available online since well before the Order issued on December 30, 2025. *See* Wash. Utils. & Transp. Comm'n., Resource Adequacy in Washington State (last visited Jan. 28, 2026), https://web.archive.org/web/20251109040601/https:/www.utc.wa.gov/regulated-industries/utilities/energy/resource-adequacy-washington-state (showing website as of November 9, 2025); UTC Resource Adequacy Meeting 11-04-2025, YouTube (last visited Jan. 28, 2026), https://www.youtube.com/watch?v=Ui5BW9RsfTU (containing a recording of the Washington Agencies' November 4, 2025 meeting and showing that the recording was posted on December 4, 2025); *see also* Resource Adequacy in Washington State, Wash. Utils. & Transp. Comm'n, https://www.utc.wa.gov/regulated-industries/utilities/energy/resource-adequacy-washington-state (last visited Jan. 28, 2026) (collecting materials). As the Washington Agencies explained in a letter to Governor Bob Ferguson, "[w]inter reliability assessments, presented by regional resource adequacy experts, [NERC] and [WECC], indicate the Northwest's electric grid meets national resource adequacy criteria under normal conditions this winter." Ex. 1-155 at PDF 17 (Washington Agencies Resource Adequacy Meeting Summaries (Compiled)). Moreover, the agencies explain that an elevated risk of short-duration outages in extreme weather occurs "absent additional measures, such as utilities following their emergency policies and procedures or firing up their backup generators." *Id.* In plain language, the Washington Agencies suggest that key actors do not believe an emergency exists: "The Bonneville Power Administration and Washington utilities do not forecast outages this winter." *Id.* The Department's failure to address the November 4, 2025 meeting and associated materials is another reason its Order is unreasoned and not based on substantial evidence.

The Washington Department of Commerce also reported to the state legislature on utilities' 2024 Integrated Resource Plans. Ex. 1-156 at 4 (Wash. Dep't of Commerce Summary of Utilities' 2024 IRPs (Dec. 1, 2025)). That report, released four weeks before the Order, explains that "[a]ssessments of resource adequacy from regional experts conclude the Northwest has adequate resources to meet current demand for electricity and does not face a significant risk of outages in the near term." *Id.* at 5.

The Department also fails to address Bonneville's resource adequacy assessment in its "White Book." Ex. 1-142 (2025 Bonneville "White Book"). Bonneville projects that the Pacific Northwest has an energy surplus from August 1, 2025, through July 31, 2027, assuming the availability of market purchases and resources from independent power producers. *Id.* at 32; *see* Ex. 1-01 at app'x A at 24 (Current Energy Group Report). In fact, Bonneville projected (based on a netting of its generating resources and power supply obligations) an energy surplus for the Pacific Northwest region in both 2026 and 2027 even under assumptions that water supplies for hydro facilities are in the bottom 10% of conditions (which is not reflective of actual expectations in 2026), and that wind power performs at its lowest historical level

every year. Ex. 1-142 at 7–8, 31 (2025 Bonneville "White Book"). And under median operating conditions, Bonneville projected surpluses through the end of 2032. *Id.* In short, Bonneville has not provided any reason in its recent assessments to be concerned about the adequacy of the region's supply in the near term.

B. The Order Is Not Based on Reasoned Decision-Making and Substantial Evidence in Imposing Requirements to Best Meet the Claimed Emergency and Serve the Public Interest.

The Order determines that, to best meet the claimed emergency and serve the public interest, "Tri-State and the co-owners[] shall take all measures necessary to ensure that Craig Unit 1 is available to operate at the direction of either Western Area Power Administration . . . in its role as Balancing Authority or the Southwest Power Pool (SPP) West in its role as the Reliability Coordinator, as applicable." Order at 3. But the Order provides no rational basis for that determination. There are at least two types of problems with the Order. First, the Order does not address Craig's shortcomings. These shortcomings include Craig's unreliability and technical capabilities. The Order does not explain how, considering the plant's unreliability and technical capabilities, Craig could meet the claimed emergency. Second, the Order does not discuss any alternatives to Craig for meeting the claimed emergency and ignores readily available and obvious alternatives that better address the claimed emergency. As a result, the Order is unreasoned and not based on substantial evidence.

1. Legal Framework: Section 202(c)(1) Authorizes the Department to Require Only Generation that Best Meets the Emergency and Serves the Public Interest.

Section 202(c)(1) authorizes the Department to impose only those requirements that (i) "best" (ii) "meet the emergency and" (iii) "serve the public interest." 16 U.S.C. § 824a(c)(1).

The term "best" demands a comparative judgment that there are no better alternatives. The word "best" is inherently a comparative term and means "that which is 'most advantageous.'" *Entergy Corp. v. Riverkeeper, Inc.*, 556 U.S. 208, 218 (2009) (*quoting* Webster's New International Dictionary 258 (2d ed.1953)); *cf. Sierra Club v. Env't. Prot. Agency*, 353 F.3d 976, 980, 983–84 (D.C. Cir. 2004) (explaining that statutory "best available control technology" requirement demands sources in a category clean up emissions to the level that peers have shown can be achieved). Consequently, the Department must, at minimum, consider alternatives and evaluate whether and to what extent a given alternative addresses the emergency

and serves the public interest, including deficiencies associated with the alternative.[11]

The Department's obligation to exercise reasoned decision-making further requires consideration of alternatives. The Department need not consider every conceivable alternative, but it must consider alternatives within the ambit of the regulatory context as well as alternatives which are significant and viable or obvious. *See Dep't of Homeland Sec. v. Regents of the Univ. of Calif.*, 591 U.S. 1, 30 (2020); *Motor Vehicle Manufs. Ass'n of the U.S. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 51 (1983); *Nat'l Shooting Sports Found., Inc. v. Jones*, 716 F.3d 200, 215 (D.C. Cir. 2013). Intervenors and the public may also introduce information that requires the Department to evaluate alternatives and reconsider its decision to impose or maintain a requirement. *See, e.g.*, *Chamber of Com. of the U.S. v. Secs. & Exch. Comm'n*, 412 F.3d 133, 144 (D.C. Cir. 2005) (evaluating agency failure to consider alternative raised by dissenting Commissioners and introduced by commenters); *cf.* 10 C.F.R. § 205.370 (stating ability to cancel, modify, or otherwise change an order).

The Department's regulations and practice identify relevant alternatives for its consideration. The regulations specify information the Department shall consider in deciding to issue an order under Section 202(c), and require an applicant for a 202(c) order to provide the information. 10 C.F.R. § 205.373. The specified information includes "conservation or load reduction actions," "efforts . . . to obtain additional power through voluntary means," and "available imports, demand response, and identified behind-the-meter generation resources selected to minimize an increase in emissions." *Id.* § 205.373(f)–(h); Ex. 5 at 4 (DOE Order No. 202-22-4).

The Department may then choose only the best alternative. The best alternative is the one that is most advantageous for meeting the stated emergency and serving the public interest.

The statutory command to take only measures that serve the public interest, including with respect to environmental considerations, further constrains the Department's authority. The public interest element demands that the Department advance, or at least consider, the various policies of the Federal Power Act. *Cf. Wabash Valley Power Ass'n*, 268 F.3d at 1115 (interpreting the "consistent with the public interest" standard in Section 203 of the Federal Power Act); *see Gulf States Utils. Co. v. Fed. Power Comm'n*, 411 U.S. 747, 759 (1973); *California v. Fed. Power Comm'n*, 369 U.S. 482, 484–86, 488 (1962). Primary policies of the Federal Power Act include protecting consumers against excessive prices; maintaining competition to

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[11] To be sure, the nature and extent to which the Department must consider alternatives depends on the emergency. An emergency that truly requires the Department to act within hours, for instance, permits a more abbreviated consideration than an emergency for which the Department has days to decide.

the maximum extent possible consistent with the public interest; and encouraging the orderly development of plentiful supplies of electricity at reasonable prices. *NAACP v. Fed. Power Comm'n*, 425 U.S. 662, 670 (1976) (orderly development); *Otter Tail Power Co. v. United States*, 410 U.S. 366, 374 (1973) (maintaining competition); *Pa. Water & Power Co. v. Fed. Power Comm'n*, 343 U.S. 414, 418 (1952) (excessive prices). And because Section 202(c) expressly protects environmental considerations, these are part of the public interest element too. See *NAACP*, 425 U.S. at 669 ("[T]he words 'public interest' . . . take meaning from the purposes of the regulatory legislation.").

2. The Order Fails to Address Craig's Shortcomings.

The Order fails to address the reasons that Craig is a poor fit to meet the claimed emergency. Craig is unreliable, and that unreliability hinders the plant from addressing the claimed emergency and actually poses risks to the grid. Moreover, Craig's technical capabilities are a mismatch to meet the claimed emergency.

The Order recognizes—without offering any evidence—significant shortcomings and weaknesses of "coal-fired facilit[ies]." Order at 1 n.5.[12] But the Order then stops short. It fails to engage in reasoned decision-making regarding how, given these shortcomings and weaknesses, the Department views Craig to be the best means to meet the claimed emergency.

To begin, at the time of issuing the Order, Craig had a forced outage due to a mechanical failure. Ex. 1-06 (Tri-State December 2025 Press Release). The notion that a broken plant can meet the claimed emergency is facially unreasoned, and the Order presents no supporting rationale.

Craig's unavailability is part of an alarming trend. From 2016 to 2020, Craig's forced outage rate was below 6%. Ex. 1-03 at 8 (Powers Decl.). Then, between 2022 and 2023, Craig's forced outage rate jumped from 1.75% to 9.53%. *Id.* A 9.53% forced outage rate translates to 835 hours that Craig could not operate in 2023. That means Craig was unavailable for approximately five weeks of the year, on top of any non-forced outages (such as planned outages taken for servicing the plant). *See id.*

Craig's unavailability and unreliability are likely to worsen beyond 2025. Tri-State—Craig's operator—has slowed capital expenditures and maintenance at Craig. Tri-State "proactively works to reduce and eliminate capital expenses" for retiring plants. *Id.* at 6 (discussing Ex. 1-51 at 187 (Tri-State 2020 ERP)). Tri-State's filings

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[12] To be sure, the Order does not offer any evidence for the premises in footnote 5. The footnote's conclusion—continuous operation is required so long as the Secretary determines a shortage exists and is likely to persist—is unreasoned and is not based on any substantial evidence in the footnote or the Order.

with the Colorado Commission memorialize this approach for Craig. In 2023, Tri-State witness Insgold testified that its "investments in [the Craig Plant] are being appropriately limited to only actions necessary for ensuring safe operations and regulatory compliance, given the impending retirement of these units." Ex. 1-50 at 10 (Insgold 2023 ERP Direct Testimony). Mr. Insgold's testimony reflects Tri-State's consistent and strategic decision to decrease capital expenditures and maintenance at retiring coal plants like Craig. *Id.* As a result, Tri-State did not undertake projects that it likely believed were necessary for reliable operation past the planned retirement date. Ex. 1-03 at 6–7 (Powers Decl.). Consequently, it is unlikely that Craig can be depended upon to operate reliably beyond December 2025. *Id.* at 5–6, 8 (Powers Decl.). "Craig 1 will be especially unreliable if the plant is required to run for extended periods of time, is required to stop and start numerous times, or attempts to start up at an accelerated rate in response to extreme demand conditions." *Id.* at 5; *see also* Ex. 1-26 at 59 (NERC 2024 Reliability Report) ("[R]educed investment in maintenance and abnormal cycling that are being adopted primarily in response to rapid changes in the resource mix are negatively impacting baseload coal unit performance.").

The Order also fails to address the dangers to grid reliability that it creates. An unreliable coal plant like Craig is likely to cause grid disturbances and the "loss of power to homes, and businesses in the areas that may be affected by curtailments or power outages." Order at 3.

> Cold snaps, heat waves, and storms have all exposed coal's fragility during grid stress events. Reliability is not just about being dispatchable, it's about delivering performance under stress. Coal plants struggle to do that consistently. For coal plants to truly meet the constant demands of data centers, they would need to run at high-capacity factors and avoid major outages, all of which fly in the face of current performance trends. If a large coal plant trips offline while supporting a cluster of data centers, the sudden loss of supply could lead to cascading failures across the grid. This is because generation must equal load at all times, datacenter or no datacenter. As a result, relying on coal plants to support these high-density digital loads doesn't enhance reliability, it endangers it. And it's not a matter of *if* the coal plant will fail, but *when*.

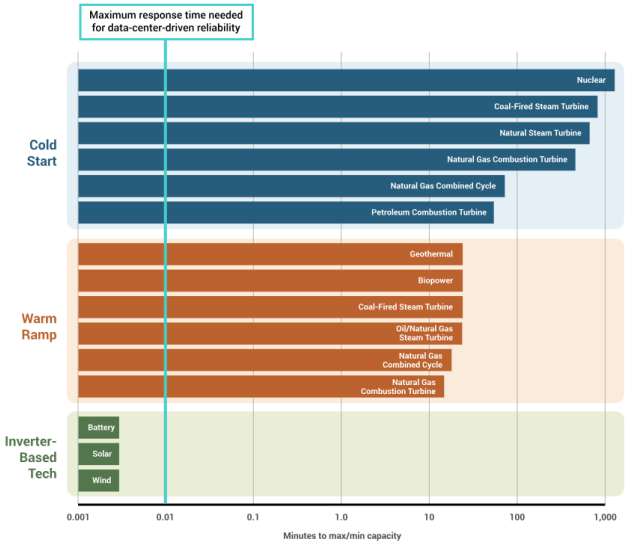
Ex. 1-44 at PDF 2–3 (RMI Analysis of Coal Plants' Threats to Reliability).

The Department avers that it is concerned with reliability, *see* Order at *passim*, yet puts forward no analysis to address the likelihood that it is actually creating the (otherwise unproven) problem it is supposedly trying to address. This ostrich-like approach to record evidence and public evidence is not reasoned decision-making. *Butte Cnty.*, 613 F.3d at 194; *cf. Ky. Mun. Energy Agency v. FERC*, 45 F.4th 162, 177 (D.C. Cir. 2022) (rejecting "ostrich-like approach" to agency decision-making).

Additionally, the Order provides no reasoned basis to conclude that Craig can meet the emergency given its technical capabilities. Craig is not designed to turn on quickly in response to times of extreme demand. Coal units like Craig usually require at least 12 hours to reach full load operation from a cold condition. Ex. 1-03 at 8–9 (Powers Decl.); Ex. 1-33 at 26 (IEA Flexibility Report); Ex. 1-44 (RMI Analysis of Coal Plants' Threats to Reliability); *see also supra* sec. IV.B.3.ii. Meanwhile, "utility-scale battery storage can dispatch from a cold start to full power in a matter of seconds." Ex. 1-03 at 9 (Powers Decl.).

The Order suggests that projections of demand growth, including from "data centers driving artificial intelligence," justify the continued operation of Craig. Order at 3. Even assuming *arguendo* the Department has authority under Section 202(c) to address that claimed circumstance (it does not), coal plants' "always-on nature" and "rigidity" are "a poor match for the dynamic and often unpredictable nature of data center demand." Ex. 1-44 at PDF 3 (RMI Analysis of Coal Plants' Threats to Reliability); *see also* Ex. 1-45 at 3 (Energy Innovation Report) (explaining that data center loads "are not 24/7 blocks. Instead, they are choppy, with swings of hundreds of megawatts over short intervals, undermining assumptions of steady baseload behavior and potentially affecting the stability of the grid if safeguards are not put in place"); *see also* Ex. 1-32 at 16 (NARUC Coal Report) (discussing typical coal plants' startup and cycling costs); Ex. 1-33 at 26 (IEA Flexibility Report) (discussing coal plant start-ups). "[L]arge, voltage-sensitive loads like data centers require flexible, responsive grid solutions, not slow-ramping generators that can take 12 or more hours to come online." Ex. 1-44 at PDF 3 (RMI Analysis of Coal Plants' Threats to Reliability) (relying on NERC).

Figure 20: Minutes Needed for a Power Plant to Reach Max/Min Capacity



Source: Ex. 1-44 at PDF 3 (RMI Analysis of Coal Plants' Threats to Reliability).

In short, the Order fails to examine the inherent mismatch between the problem it diagnoses and the mandate it imposes. Thus, the Order does not reflect reasoned decision-making.

Additionally, the Order provides no reasoned basis for determining that Craig best meets the claimed emergency that may arise years into the future (which, again, the Department does not have authority to address under section 202(c)). Transmission and myriad other facilities are available alternatives over the multi-year span addressed by the Order. And the Order fails to identify a resource shortfall that is imminent and specific enough to identify any best-placed resource; the Order is unreasoned in failing to address how Craig is capable of meeting the generalized, uncertain claimed emergency. *See, e.g.*, *supra* sec. V.A.3.i; Ex. 1-02 at 10 (Grid Strategies Resource Adequacy Report). Additionally, the Order, like the Department's Section 202(c) orders to other plants, causes economic damage by, *inter alia*, crowding out otherwise competitive resources, disrupting planning, and creating policy-driven uncertainty. *See* Ex. 1-46 at PDF 2–3 (R Street Institute Commentary: *DOE "Zombies" Are Eating Competitive Power Markets*); Ex. 1-01 at 4 (Current Energy Group Report) ("The [reviewed] studies do not support a proposition that extraordinary federal interventions into established processes are necessary to address the challenges in the latter part of the decade. Rather, federal intervention sends mixed and counterproductive signals to the market that undermine existing planning and procurement practices."). Additionally, Craig's operations cause significant environmental harm, a factor the Department does not evaluate in reflexively selecting Craig to meet its (unproven) emergency. For all these reasons, too, the Order is without support in the record and unreasoned.

3. The Order Fails to Address or Reflect Consideration of Alternatives.

Other alternatives are available that meet the claimed emergency. The Department's failure to consider these alternatives is unreasoned and further shows that the Order is based on insubstantial evidence.

Hydropower, battery storage, demand response, and combustion gas turbines are all better suited to addressing rapidly varying, peak demand conditions. Ex. 1-03 at 9, 15 (Powers Decl.). As previously explained, *supra* sec. V.A.3.iii, Colorado utilities have collectively built thousands of megawatts of new resources that are now online and provide generating capacity. For example, in 2026, Tri-State will have at its disposal a total of 717 MW of gas and oil-fired generation, 516 MW of hydropower, and 134 MW of demand response to address fast-changing demand on its system. Ex. 1-89 at 10 (Tri-State 2025 ERP Annual Progress Report). Further, Tri-State will have surplus capacity from 2026 through 2034, even without Craig. *Id.* But the Order fails to address—or even mention—these other readily available alternatives.

The Order also fails to address imports to the WECC Northwest assessment area as an alternative to Craig to meet the purported emergency. The WECC Northwest

assessment area has access to significant import capability. *See, e.g.*, Ex. 1-01 at 12–13 (Current Energy Group Report); Ex. 1-02 at 6–7 (Grid Strategies Resource Adequacy Report); Ex. 1-158 at 6, 9, 22 (Sylvan & GridLab Independent Evaluation of E3 Presentation).

Section 202(c) specifically identifies "delivery, interchange, or transmission of electric energy" as among the alternatives available to meet a claimed emergency. 16 U.S.C. § 824a(c)(1). And the Department's regulations provide for consideration of available resources, including power transfers. 10 C.F.R. §§ 205.373(f), 205.375.

Further, the Department has long recognized that power pools and utility coordination "are a basic element in resolving electric energy shortages." *Emergency Interconnection of Elec. Facilities and the Transfer of Elec. to Alleviate an Emergency Shortage of Elec. Power,* 46 Fed. Reg. 39984, 39984–86 (Aug. 6, 1981). Recent history demonstrates the important role of transmission connectivity along with imports and exports. *See, e.g.*, Ex. 1-30 at 64 (Winter Storm Elliott System Operations Inquiry) ("Despite tightening conditions on the MISO system . . . MISO maintained steadily increasing exports to TVA throughout the day."); Ex. 1-31 at 43, 83–84 (PJM Elliott Report) (describing PJM exports); *see also* Ex. 1-15 at PDF 2 (DOE Order No. 202-02-1) (providing for usage of interregional transmission). According to NERC, starting in summer 2029, "imports may be necessary if new resources were to be significantly delayed." Ex. 1-07 at 128 (NERC 2024 Long-Term Reliability Assessment). The Department offers no reasonable basis to question the availability of resources from neighboring regions. But even if there were barriers to transmission from those regions, the Department has not (and likely could not) explain why the Order provides a better means of ensuring resource sufficiency than addressing those barriers directly through its power to require "interchange" and "transmission" of electric energy from those neighboring regions. 16 U.S.C. § 824a(c)(1).[13]

In fact, the first three weeks of the Order's duration prove that other alternatives can meet the (unreasoned, unsubstantial, and unlawful) claimed emergency. Craig broke and went out of service on December 19, 2025, almost two weeks before the Order issued, and stayed that way until January 20, 2026. *See* Ex. 1-166 at 1 (Tri-State January 2026 Press Release); Ex. 1-06 (Tri-State December 2025 Press Release). There is no evidence of an increase in adverse resource adequacy or reliability events during that time period. Supply and demand were balanced by

[13] The Department must also incorporate demand-side resources as a condition precedent to, or an alternative to, circumstances calling for generation by a polluting resource like Craig (and in determining whether an emergency exists), a requirement consistent with Departmental practice. *See* 16 U.S.C. § 824a(c)(1)–(2); 10 C.F.R. § 205.375; *e.g.*, Ex. 1-16 at 3 (DOE Order No. 202-20-2); Ex. 1-17 at 4–5 (DOE Order No. 202-22-2); Ex. 1-18 at 2–3 (DOE Order No. 202-21-1).

alternatives to Craig. The Department must consider the proven alternatives to reach a reasoned decision based on substantial evidence.

C. The Order Exceeds Other Limits on the Department's Authority.

1. The Department Lacks Jurisdiction to Impose the Availability Requirements.

In directing the Craig Co-Owners to take "all measures" to ensure that Craig is "available to operate," Order at 3, the Department exceeds its authority under Section 202(c) of the Federal Power Act and impermissibly intrudes on the authority over generating facilities that Section 201(b) of the statute reserves to the states, 16 U.S.C. §§ 824(b)(1), 824a(c)(1). The sweeping language in the Department's Order would encompass physical and all other changes necessary to revive a generating plant undergoing closure pursuant to a state-approved retirement process. The Federal Power Act's language, structure, legislative history, and interpretation by the courts all confirm that the Department's Order is unlawful.

The structure and language of the Federal Power Act reflect Congress's deliberate choices to preserve the states' traditional authority over generating facilities and to circumscribe the Department's emergency authority in light of the states' role. The first sentence of the Federal Power Act declares that federal regulation extends "only to those matters which are not subject to regulation by the States." *Id.* § 824(a). Section 201(b)(1) states that, except as otherwise "specifically" provided, federal jurisdiction does not attach to "facilities used for the generation of electric energy." *Id.* § 824(b)(1). The courts have held that Section 201(b)(1) reserves to the states authority over electric generating facilities, *see, e.g., Hughes v. Talen Energy Mktg., LLC*, 578 U.S. 150, 155 (2016), including the authority to order their closure, *Conn. Dep't of Pub. Util. Control v. FERC*, 569 F.3d 477, 481 (D.C. Cir. 2009) (explaining that under Section 201(b), states retain the right "to require the retirement of existing generators" or to take any other action in their "role as regulators of generation facilities"). Congress also recognized the states' exclusive authority over generating facilities in Section 202(b), which provides that FERC's interconnection authority does not include the power to "compel the enlargement of generating facilities for such purposes." 16 U.S.C. § 824a(b).

There is a clear distinction between authority to regulate generation facilities and the Department's authority under Section 202(c) to require generation of electric energy. Electric energy is an electromagnetic wave, and its "generation, delivery, interchange, and transmission" is the creation and propagation of that wave. *See* Brief *Amicus Curiae* of Electrical Engineers, Energy Economists and Physicists in Support of Respondents at 2, *New York v. FERC*, 535 U.S. 1 (2002); *see also* Edison Electric Institute Glossary of Electric Utility Terms (1991 ed.) (defining electric generation as "the act or process of transforming other forms of energy into electric energy"). Section 202(c)(1), like the rest of the Federal Power Act, is written "in the technical language of the electric art" and federal jurisdiction generally "follow[s] the

flow of electric energy, an engineering and scientific, rather than a legalistic or governmental test." *Conn. Light & Power v. Fed. Power Comm'n*, 324 U.S. 515, 529 (1945); *see also Fed. Power Comm'n v. Fla. Power & Light Co.*, 404 U.S. 453, 454, 467 (1972).

The scope of the Department's emergency power under Section 202(c) is bounded both by the provision's specific language and Congress's clear intention and repeated direction in the Federal Power Act to respect the states' authority over generating facilities. When an actual emergency exists, Section 202(c)(1) authorizes the Department to order only two specific things: (1) "temporary connections of facilities" and (2) "generation, delivery, interchange, or transmission of electric energy." *Id.* § 824a(c)(1). The only reference to "facilities" in the authorizing provision of Section 202(c)(1) appears in the clause relating to temporary connections, not in the clause pertaining to "generation" of electric energy. And that clause only authorizes connections "of" facilities; it does not provide authority to regulate the facilities. The differences in Congress's word choice in these clauses—referencing "facilities" in one authorizing provision but not the other—must be given effect. *See, e.g.*, *Gallardo v. Marstiller*, 596 U.S. 420, 430 (2022); *Gomez-Perez v. Potter*, 553 U.S. 474, 486 (2008).

Given Congress's use of the term "generating facilities" elsewhere in the statute, if it had intended to give the Department authority over generating facilities in Section 202(c)(1), it would have done so explicitly. Instead, the provision conspicuously excludes authority to manage the physical characteristics of power plants. Congress purposely limited and particularized the Department's emergency powers, carefully avoiding intrusion on the states' authority over generating facilities recognized in Section 201(b)(1). *See* S. Rep. No. 74-621, at 19 (explaining that the emergency powers in Section 202(c)(1) "which were indefinite in the original bill have been spelled out with particularity"); *compare* S. 1725, Cong. Tit. II § 203(a) (providing in original, unenacted bill that control of the production and transmission of electric energy "except in time of war or other emergency declared to exist by proclamation of the President, shall, as far as practicable, be by voluntary coordination"), *with* 16 U.S.C. § 824a(c)(1) (providing particularized, specific authorities and circumstances in which the authorities may be exercised).

In certain circumstances, the Department may require generation of electric power, and a utility may properly take steps at the facility to produce the power. It is commonplace in the electric sector for the federal regulator properly acting within its authority to cause effects in a state regulator's jurisdictional sphere, and vice versa. *See Elec. Power Supply Ass'n*, 577 U.S. at 281. But the federal regulator may neither directly regulate generation facilities nor impose requirements aimed at the facilities, even if nominally regulating within its sphere. *See id.* at 281–82; see also *Hughes*, 578 U.S. at 164–65. Such encroachment is impermissible, even in a real emergency or in a wrongly claimed one. *See Conn. Light & Power*, 324 U.S. at 530 ("Congress is acutely aware of the existence and vitality of these state governments. It sometimes is moved to respect state rights and local institutions even when some degree of

efficiency of a federal plan is thereby sacrificed."). Thus, the Department may not require generation that necessitates the utility taking steps reserved to state authority, such as building a new generating unit or refurbishing a broken one.

The Federal Power Act does not give the Department sweeping authority to order "all measures" needed to make a generation facility "available to operate." 16 U.S.C. § 824a(c)(1). Nowhere does the statute empower the Department to order "all" steps that may be needed to ensure Craig's availability, which could include repairs or modifications to physical facilities and other measures going far beyond electric power generation. Because the plant is at the end of its useful life, with years of forgone maintenance and capital expenditures, rendering it capable of meeting a short-term supply shortfall could essentially require rebuilding significant parts of the plant. On its face, the Department's Order is *ultra vires*. The Order also contravenes the Federal Power Act's repeated direction to respect the states' authority over generating facilities, which includes the authority that Colorado exercised in providing and planning for Craig's closure. *See, e.g.,* COLO. REV. STAT. §§ 40-2-125.5 (requiring retail utilities to submit joint electric resource and clean energy plans for Colorado Commission approval), 40-2-137 (allowing investor-owned utilities to submit resource portfolios that retire existing electric generating facilities), 40-2-134 (requiring wholesale electric cooperatives to submit electric resource plans for Colorado Commission approval); *see also* 4 COLO. CODE REGULS. 723–3:3600–723–3:3619; 40 C.F.R. § 51.308 (providing states' requirements and authority under the regional haze program). The Order, therefore, is unlawful and should be withdrawn.[14]

2. The Department's Capacity Decree Is Not the Product of Reasoned Decision-Making and Beyond the Department's Authority.

The Order includes a cryptic statement that further undermines its legality. It decrees that, "[b]ecause this order is predicated on the shortage of facilities for generation of electric energy and other causes, Craig Unit 1 shall not be considered a capacity resource." Order at 4. The Order provides no further explanation of the import of this direction.

The statement is not the product of reasoned decision-making. The Order does not indicate what "capacity resource" means in this context and who is governed by this direction and toward what end. The Order also fails to tie this direction to the purported emergency underlying the Order. Nor does the Order articulate any rational connection between this direction and the Department's limited authority to

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[14] A utility that takes steps subject to state authority cannot point to a Section 202(c) order as the basis for a right to recover associated costs. *See* 16 U.S.C. § 824a(c)(1) (providing for compensation or reimbursement to be paid based on just and reasonable terms for carrying out an authorized order).

"order such temporary connections of facilities and such generation, delivery, interchange, or transmission of electric energy as in its judgment will best meet the emergency and serve the public interest." 16 U.S.C. § 824a(c)(1).

To the extent this direction is meant to govern ratemaking matters, it is beyond the Department's authority under Section 202(c). Under Section 202(c), "the Commission . . . may prescribe by supplemental order such terms as it finds to be just and reasonable." *Id.* The Department of Energy Organization Act transferred some authorities of the Federal Power Commission to the Department, except as provided in 42 U.S.C. subchapter IV. 42 U.S.C. § 7151(b). And that subchapter transfers to and vests in the Federal Energy Regulatory Commission "the establishment, review, and enforcement of rates and charges for the transmission or sale of electric energy." 42 U.S.C. § 7172(a).

Additionally, to the extent the decree is directed to state and local officials, the Order violates the Tenth Amendment by commandeering state and local officials to implement a federal program. *See, e.g.*, *Printz v. United States*, 521 U.S. 898, 933 (1997).

D. The Order Fails to Provide the Conditions Required Under Section 202(c) to Lessen Conflicts with Environmental Standards and Minimize Environmental Harm.

Where an order "may result in a conflict with a requirement of any Federal, State, or local environmental law or regulation," Section 202(c) imposes several requirements. 16 U.S.C. § 824a(c). The Department must "ensure" that the order "requires generation, delivery, interchange, or transmission of electric energy only during hours necessary to meet the emergency and serve the public interest." *Id.* The Department must also "ensure," "to the maximum extent practicable," that the order "is consistent with any applicable Federal, State or local environmental law or regulation." *Id.* Additionally, the Department must ensure that the order minimizes any adverse environmental impacts, regardless of the facility's compliance (or non-compliance) with environmental standards. *See id.*

1. Legal Framework: Section 202(c) Further Limits the Department's Authority and Mandates Affirmative Steps to Maximize Environmental Compliance and Minimize Environmental Harm Where the Order "May Result in a Conflict" with a Federal, State, or Local Environmental Law or Regulation.

The Federal Power Act obligates the Department to include precautions in a Section 202(c) Order where the order "may result in a conflict" with environmental

laws or regulations. This is a forward-looking inquiry with a low threshold.[15]

The word "may" in this context denotes a mere possibility, not a certainty. This is especially apparent when matched against the term "shall" used in Section 202(c)(2) and the other provisions added to Section 202(c) at the same time. *See* Fixing America's Surface Transportation Act of 2015, Pub. L. No. 114-94, 129 Stat. 1312 § 61002 (codified at 16 U.S.C. § 824a). Congress' use of the two disparate terms must be given effect. *See, e.g.*, *Kingdomware Techs., Inc. v. United States*, 579 U.S. 162, 172 (2016) (discussing significance of the words "may" and "shall" in the same statutory provision).

Moreover, the consequences need not be "noncompliance" or "violation" of environmental law, both of which are terms Congress also used in 2015 adding other provisions to Section 202(c). A potential "conflict" suffices. *Cf. Crosby v. Nat'l Foreign Trade Council*, 530 U.S. 363, 372–73 (2000) (explaining that courts find "conflict" in the preemption context where, for instance, a law or order "stands as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress"). Taken together, anytime a Department order creates circumstances that might obstruct the accomplishment or execution of environmental laws or regulations, Section 202(c)(2) imposes duties on the Department to maximize compliance with the law and minimize adverse environmental effects.

Congress adopted the requirements of Section 202(c)(2) to address environmental issues arising in response to emergencies on the grid. Congress was well aware of environmental issues stemming from 202(c) orders when it imposed the requirements in Section 202(c)(2). *See, e.g.*, Rolsma, 57 Conn. L. Rev. at 807–09 (discussing prior incidents of tension between environmental requirements and responses to emergencies on the grid, and congressional hearings addressing the matter as part of the passage of Section 202(c)(2)). Congress struck a reasonable balance requiring that environmental concerns not be left by the wayside while the Department responds to actual emergencies. Rather than requiring the Department to engage in a probing review of environmental laws and permits at all levels of our federalist system before acting, Congress set a low threshold for imposition of the mandatory Section 202(c)(2) duties to minimize conflicts with state environmental laws and environmental harms flowing from a Section 202(c) order.

2. The Order May Result in a Conflict with a Federal, State, or Local Environmental Law or Regulation.

Here, the Department implicitly acknowledges the possible conflict. The Order is limited to a 90-day duration. Order at 3–4. That temporal limitation exists for a

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[15] If actual noncompliance with environmental laws and regulations occurs to carry out the order, the statute provides a safe harbor. 16 U.S.C. § 824a(c)(3).

Section 202(c) order that may result in a conflict with environmental requirements. 16 U.S.C. § 824a(c)(4). And in imposing the 90-day duration, the Department relies on the statutory limitation for an order that may result in a conflict with environmental requirements. Order at 3.

Here, the evidence shows that the Order results in an actual conflict with state and federal environmental regulations: the provision in Colorado's federally-approved Clean Air Act State Implementation Plan ("SIP") that requires Craig to close on or before December 31, 2025. 83 Fed. Reg. 31332 (July 5, 2018) (approving Colorado's SIP revision establishing Craig's closure date); Ex. 1-65 at 183 at § F.VI.D.1 (CDPHE Regulation No. 3) (Colorado Regulation No. 3 provision regarding Craig's closure, which EPA approved). This SIP provision addresses Colorado's legal obligations under the Clean Air Act's regional haze program, which Congress created to combat the negative effects of air pollution on visibility and treasured scenic vistas in federal "Class I" areas (i.e., listed national parks and wilderness areas). *See generally* 42 U.S.C. § 7491. Congress determined that these areas should enjoy the highest level of air quality and set a national goal of eliminating all human-caused visibility impairment. *Id.* §§ 7491(a)(1); 7472(a). Under the Clean Air Act and EPA's Regional Haze Rule, states must periodically revise their SIPs to continue making progress toward Congress's national visibility goal. *Id.* § 7491(b)(2); 40 C.F.R. § 51.308(b), (f), (g). Once EPA approves a state's SIP, it becomes enforceable under federal law. 42 U.S.C. § 7413(a)(1)–(2).

In developing its SIP for the regional haze first implementation period, Colorado determined that air pollution from the Craig Plant contributes to visibility impairment in several Colorado Class I areas, including (among others) Rocky Mountain National Park, Flat Tops Wilderness Area, Eagles Nest Wilderness Area, Mount Zirkel Wilderness Area, and Rawah Wilderness Area. Ex. 1-03 at 11 (Powers Decl.); Ex. 1-71 at 47–48 (BART CALPUFF). These areas are shown in Figure 21 below.

Figure 21: Map of Colorado Class I Areas Affected by Visibility Impairment



Source: Google Earth.

Colorado revised its air pollution control regulations and submitted a SIP revision to EPA in 2017, which established two compliance pathways for Craig: (1) closure by December 31, 2025; or (2) conversion to natural gas-firing by August 31, 2023, coupled with more stringent NO_x emission limits. 83 Fed. Reg. 31332. EPA approved the SIP revision, thereby incorporating by reference the compliance requirements for Craig into the Code of Federal Regulations. *Id.* at 31333. The owners of Craig elected to close the facility by December 31, 2025, and have not converted it to natural gas-firing. The closure deadline is also contained in Craig's air permit. Ex. 1-73 at 23 (Craig Station Operating Permit) (condition 1.10.1 of Craig air permit). Therefore, the Order's mandate for Craig to continue operating beyond December 31, 2025 directly conflicts with state and federal environmental regulations.

In addition to flouting Craig's enforceable closure deadline, the Order may result in a conflict with other environmental requirements. Craig's air permit contains emission limits for NO_x, PM, and SO_2, pollutants that harm human health and contribute to haze formation. Ex. 1-03 at 11 (Powers Decl.); Ex. 1-73 (Craig Station Operating Permit) (sec. II of Craig air permit). The facility operates pollution control equipment to achieve compliance with those limits: ultra-low NO_x burners with overfire air for NO_x control; wet limestone scrubbers for SO_2 control; and pulse jet fabric filters (baghouse) for PM control. Ex. 1-03 at 11 (Powers Decl.). The air permit requires the facility to properly maintain and operate pollution control equipment to achieve compliance with emission limits and to minimize air pollution from the facility. *Id.* at 13. Failure to install, maintain, and operate these air pollution controls in a satisfactory manner can increase emissions, creating a risk that the facility will violate its emission limits. *Id.* at 9, 13–14. For example, over time, fly ash erodes and plugs the bags used in pulse jet fabric filters, causing the bags to degrade and potentially to rupture. *Id.* at 14. Regular bag replacement is necessary for satisfactory performance. *Id.* Similarly, wet limestone scrubbers often suffer from scale formation,

poor utilization of reagent, and inadequate spray nozzle efficiency. *Id.* And ultra-low NO_x burners can be degraded by erosion at the burner tip and wear in the coal pulverizers, requiring regular maintenance to minimize NO_x in the boiler. *Id.* There is no information in the public record indicating that the pollution control equipment at Craig has been maintained in a manner that would support operational integrity beyond the facility's planned closure date. *Id.* at 14–15. Therefore, it cannot be assumed that Craig's pollution control equipment is in good working order and will operate reliably to control the facility's air emissions beyond December 2025. *Id.* at 15.

3. The Order Lacks the Conditions Required by Section 202(c).

i. The Order's Terms Must Be Clarified; Alternatively, Its Terms Fail to Require Generation Only During Hours Necessary to Meet the Purported Emergency.

The Order instructs the Craig Co-Owners to ensure Craig is available to operate at the direction of either of two entities, Western Area Power Administration or SPP West. The Order's instruction must be clarified.

The law requires the Department to "ensure" that it "requires generation . . . only during hours necessary to meet the emergency and serve the public interest." 16 U.S.C. § 824a(c)(2). And the emergency nominally described by the Order is "the loss of power to homes, and businesses in the areas that may be affected by curtailments or power outages." Order at 3. Thus, Craig may be compelled to operate only when it is necessary to address an actual risk of a "loss of power to homes, and businesses." *Id.*

This also means that the Department must clarify that Western Area Power Administration or SPP West may direct the Craig Co-Owners to generate electric energy from Craig only as necessary to address a "loss of power to homes, and businesses" that would occur absent Craig's generation. Public Interest Organizations move the Department to provide that clarification. 18 C.F.R. § 385.212; Ex. 1-12 at PDF 2 (DOE 202(c) Webpage) (providing that "[a]ll . . . requests related to FPA section 202(c) should be sent via email to AskCR@hq.doe.gov").

Without the necessary clarification requested above, the Order's terms fail to ensure that Craig does not generate electric energy when other resources are available to prevent the claimed emergency, placing the Department in breach of its obligation to "ensure" that it "requires generation . . . only during hours necessary to

meet the emergency and serve the public interest."[16] 16 U.S.C. § 824a(c)(2). This is because the Order fails to provide *any* limitations on when generation from Craig is required. The absence of such limitations differentiates the Order from Section 202(c) orders issued before 2025, *see, e.g.*, Ex. 1-14 at 9 (DOE Order No. 202-17-4 Summary of Findings) ("authorizing operation of" units subject to emergency order "only when called upon . . . for reliability purposes," according to "dispatch methodology" approved by the Department), and even certain orders issued by this Department after the Craig Order, *see* Ex. 1-21 at 7 (Department Order No. 202-26-01) (authorizing specified entities "to direct [certain] backup generation resources . . . to operate as a last resort before declaring an Energy Emergency Alert (EEA) 3 (i.e., before firm load interruption) or during an EEA 3"); Ex. 1-22 at 7 (Department Order No. 202-26-01A) (authorizing specified entities "to direct [certain] backup generation resources . . . to operate after ERCOT deploys all available market services, except for frequency responsive services, before declaring an Energy Emergency Alert (EEA) 3 (i.e., before firm load interruption) or during an EEA 3"); *cf.* Ex. 1-23 at 3 (Department Order No. 202-26-03) ("In the event that ISO-NE determines that generation from the Specified Resources is necessary to meet the electricity demand that ISO-NE anticipates in its service territory, I direct ISO-NE to dispatch such unit or units and to order their operation only as needed to maintain reliability."). And the Order's further instructions—limiting "operation of Craig Unit 1 to the times and within the parameters established in paragraph A," Order at 4—do not provide the necessary limitation either; they simply repeat that initial instruction without any further limitation.[17]

ii. The Order Fails to Ensure Maximum Practicable Consistency with Environmental Rules and to Minimize Adverse Environmental Impacts.

The Order further fails to "ensure" that Craig operates, "to the maximum extent practicable," consistent with applicable environmental rules. Order at 4; 16 U.S.C. § 824a(c)(2). The Order paraphrases the statutory text—that "operations of Craig Unit 1 must comply with applicable environmental requirements . . . to the maximum extent feasible," but fails to specify *who* bears that responsibility or *what* such operation entails. Order at 4. It imposes no further conditions beyond stating that the Order provides no relief from any obligation to "pay fees or purchase offsets or allowances for emissions." *Id.* The direction to "comply . . . to the maximum extent feasible" is, as a result, wholly unenforceable; the Order provides no basis for the

[16] Absent the necessary clarification, the Order also risks further increasing the cost to comply with the Order. *Cf.* Ex. 1-04 (Grid Strategies Costs Report) (estimating that the 90-day costs for Craig to operate at its average output from 2022 through 2024 is $20.9 Million).

[17] That direction further fails to conform to the statute's command to compel only the generation that will "best meet the emergency." 16 U.S.C. § 824(c)(1).

Department, or anyone else, to determine whether the plant is in fact complying or who might face the consequences of any failure to do so. *Cf.* Ex. 1-13 at 5–7 (DOE Order No. 202-22-4) (requiring, *inter alia,* reporting of "number and actual hours each day" of operation "in excess of permit limits or conditions," and information describing how generators met requirement to comply with environmental requirements to maximum extent feasible). As such, the Order does not meet the Department's statutory obligation to "*ensure*" the maximum feasible consistency with applicable environmental standards—an obligation that requires the Department to offer some discrete direction as to the plant's operations, rather than merely parroting the statutory text. 16 U.S.C. § 824a(c)(2) (emphasis added).

The most definitive way to maximize consistency with state and federal environmental laws and regulations would be to limit Craig's generation to the as-needed basis discussed in the motion for clarification *supra* sec. V.D.3.i. That clarification would reduce air pollution that contributes to visibility impairment in Colorado Class I areas, a problem the closure of Craig was intended to address pursuant to the Clean Air Act's regional haze requirements.

In addition, the Order fails to "minimize[] any adverse environmental impacts." 16 U.S.C. § 824a(c)(2). That mandate is textually and substantively distinct from the Department's (also unfulfilled) obligation to ensure maximum practicable compliance with environmental standards. *Id.*

The Order claims to minimize impacts by "limit[ing] operation of Craig Unit 1 to the times and within the parameters established" in the Order's "Paragraph A." Order at 4. But Paragraph A contains only a command that the Craig Co-Owners "take all measures necessary to ensure that Craig Unit 1 is available to operate" at the direction of the Western Area Power Administration or SPP West. *Id.* at 3.[18] An instruction demanding availability has no rational relationship to a requirement to minimize environmental harm. And the Order includes no measures that would mitigate impacts when compliance with environmental standards proves impracticable—measures that have been routinely included in past orders. *See, e.g.*, Ex. 1-14 at 9 (DOE Order No. 202-17-4 Summary of Findings) (permitting non-compliant operation only during specified hours, and requiring exhaustion of "all

[18] To the extent the Order allows the Western Area Power Administration or SPP West to independently devise conditions limiting environmental impacts, that mere possibility, first, cannot satisfy the Department's own statutory obligation to "ensure" that its "order" minimizes environmental impacts (and limits hours to those necessary to meet the emergency, and mandates the maximum practicable compliance). 16 U.S.C. § 824a(c)(2). And even if it could, the Order requires Tri-State to "ensure that Craig Unit 1 is available to operate," Order at 3, a direction that is inconsistent with the statute's requirements to minimize the plant's adverse environmental impacts.

reasonably and practically available resources," including demand response and identified behind-the-meter generation resources selected to minimize an increase in emissions); Ex. 1-13 at 7 (DOE Order No. 202-22-4) (requiring "reasonable measures to inform affected communities" of non-compliant operations).

The Order makes no attempt to minimize adverse environmental impacts. As stated above, the clearest way to minimize adverse environmental impacts would be to limit Craig's generation to the as-needed basis discussed in the motion for clarification *supra* sec. V.D.3.i. Without that clarification, the Order allows Craig to emit air pollution during operations that are not needed to meet the Department's claimed (and unsupported) emergency. Craig is a significant emitter of NO_x, PM, SO_2, and CO_2. Ex. 1-03 at 11-13 (Powers Decl.). That air pollution is likely to harm human health and the environment and to adversely affect air quality in the state's widely visited national parks and wilderness areas. At a minimum, minimizing adverse environmental impacts would require verification of the good working order of Craig's pollution control equipment, given Tri-State's lack of investment in the unit in preparation for its intended closure. *Id.* at 13-15.

Moreover, the statute requires the Department to include sufficiently detailed reporting obligations to ascertain what impacts result from emergency operations; without such reporting, the Department has no ability to "ensure" that adverse impacts are minimized. *See, e.g.*, Ex. 1-24 at 5 (DOE Order No. 202-24-1) (requiring detailed data on emissions of pollutants). The Order here instead only requires "such additional information" as the Department, in the future, may (or may not) "request[] . . . from time to time." Order at 4. That possibility of future, unspecified inquiry cannot satisfy the statute's demand that the Department "ensure" that its Order minimizes environmental impacts. 16 U.S.C. § 824a(c)(2).

VI. REQUEST FOR STAY

Public Interest Organizations further move the Department for a stay of the Order until the conclusion of judicial review. 18 C.F.R. § 385.212.[19] The Department has the authority to issue such a stay under the Administrative Procedure Act and should do so where "justice so requires." 5 U.S.C. § 705. In deciding whether to grant a request for stay, agencies consider (1) whether the party requesting the stay will suffer irreparable injury without a stay; (2) whether issuing a stay may substantially harm other parties; and (3) whether a stay is in the public interest. *Nken v. Holder*, 556 U.S. 418, 434, 436 (2010); *Ohio v. EPA*, 603 U.S. 279, 291 (2024); *see, e.g.*, *Midcontinent Indep. Sys. Operator, Inc.,* 184 FERC ¶ 61,020, at P 41 (2023); *ISO Eng.*

[19] Pursuant to FPA Section 313(c) and Rule 713(e) of the applicable rules, the filing of a request for rehearing does not automatically stay a Department Order. 16 U.S.C. § 825*l*(c); 18 C.F.R. § 385.713(e).

Inc., 178 FERC ¶ 61,063, at P 13 (2022), *rev'd on other grounds sub nom. In re NTE Conn., LLC*, 26 F.4th 980, 987–88 (D.C. Cir. 2022).

Injuries under this standard must be actual, certain, imminent, and beyond remediation. *Mexichem Specialty Resins, Inc. v. EPA*, 787 F.3d 544, 555 (D.C. Cir. 2015); *Wis. Gas Co. v. FERC*, 758 F.2d 669, 674 (D.C. Cir. 1985); *ANR Pipeline Co.*, 91 FERC ¶ 61,252, at 61,887 (2000); *City of Tacoma*, 89 FERC ¶ 61,273, at 61,795 (1999) (recognizing that, absent a stay, options for "meaningful judicial review would be effectively foreclosed"). Financial injury is only irreparable where no "adequate compensatory or other corrective relief will be available at a later date, in the ordinary course of litigation." *Wis. Gas Co.*, 758 F.2d at 674 (*quoting Va. Petroleum Jobbers Ass'n v. Fed. Power Comm'n*, 259 F.2d 921, 925 (D.C. Cir. 1958)); *see also In re NTE Conn., LLC*, 26 F.4th 980, 991 (D.C. Cir. 2022). Environmental injury, however, "can seldom be adequately remedied by money damages and is often permanent or at least of long duration, *i.e.*, irreparable. If such injury is sufficiently likely, therefore, the balance of harms will usually favor the issuance of an injunction to protect the environment." *Amoco Prod. Co. v. Vill. of Gambell*, 480 U.S. 531, 545 (1987).

Under those standards, a stay of the Order is appropriate.

A. Intervenors Will Suffer Irreparable Harm Without a Stay of the Order.

A stay is necessary to protect Public Interest Organizations, their members, and the public from harm from continued coal-fired power operations at Craig caused by the Department's Order. As noted *supra* sec. IV.B.3.iii, Craig emits health- and environment-harming air pollutants like NO_x, PM, SO_2, and VOCs. In just three months, Craig could emit over one million pounds of NO_x, hundreds of thousands of pounds of SO_2, and thousands of pounds of PM. Ex. 1-03 at 12–13 (Powers Decl.). Air pollution from Craig is harmful to human health, and these harms would not occur if the plant shut down. *Id.* These air pollutants also contribute to visibility impairment at several national parks and wilderness areas in Colorado, including Rocky Mountain National Park, Flat Tops Wilderness Area, Eagles Nest Wilderness Area, Mount Zirkel Wilderness Area, and Rawah Wilderness Area. *See supra* sec. V.D.2. The health and environmental harms from this pollution flow directly from the Department's Order and are actual, specific, and imminent, and can be deadly. *See, e.g.*, Ex. 1-121 at 2–3 (Mercury Mortality Risks of Coal); Ex. 1-123 at PDF 5–6 (EPA COBRA Health Effects Estimate); Ex. 1-160 at PDF 2–3 (Clean Air Task Force Toll from Coal).

Additionally, without a stay, the Order creates other injuries, too. It needlessly forces the Craig Co-Owners to divert attention and investment dollars away from their electric resource and clean energy plans, thereby denying Public Interest Organizations' members the benefits of Colorado and other state energy policies designed to benefit them and the public. *See supra* sec. V.A.3.iii. In addition, in

forcing ratepayers to pay for the availability and generation of a coal-burning facility that the State, stakeholders, and operator want to close, the Department's Order jeopardizes the diversification of generating resources that the Department itself has said increases grid reliability and will inherently and unjustifiably add to ratepayer costs. Ex. 1-122 at PDF 2–3 (*Energy Reliability and Resilience*).

B. A Stay Would Not Result in Harm to Any Other Interested Parties.

No other interested parties would be harmed by a stay. The issuance of a stay would not harm end-use electricity consumers because the lack of an actual emergency means that a stay would not disrupt the provision of electricity. *See, e.g.*, *supra* sec. V.A. Furthermore, because the Craig Co-Owners have already planned for the plant's closure and continue to plan for resource adequacy, a stay would only have the effect of relieving them of the administrative, compliance, and planning burdens imposed by the Order. *See supra* sec. V.A.3.iii. On the balancing of equities, there is therefore no meaningful countervailing harm that would follow from a stay.

C. A Stay Is in the Public Interest Given the Significant Evidence Demonstrating There is No Factual or Legal Support for the Order and Given the Harm it Produces to the Broader Public.

There is no public interest served by the Order, and a stay will only benefit the public. First, the Order exceeds the Department's authority; it has provided no reasonable grounds to substantiate any near-term or imminent shortfall in electricity supply that would justify Craig's continued operation. *See League of Women Voters v. Newby*, 838 F.3d 1, 12 (D.C. Cir. 2016) (noting "there is a substantial public interest 'in having governmental agencies abide by the federal laws that govern their existence and operations'") (quoting *Washington v. Reno*, 35 F.3d 1093, 1103 (6th Cir. 1994)). Second, the Order overrides Colorado's exercise of its "authority to choose [its] preferred mix of energy generation resources." *Citizens Action*, 125 F.4th at 239. By doing so, it unlawfully intrudes into states' reserved authority over in-state "facilities used for the generation of electric energy." 16 U.S.C. § 824(b)(1); *see Pac. Gas & Elec.*, 461 U. S. at 205 ("Need for new power facilities, their economic feasibility, and rates and services, are areas that have been characteristically governed by the States."); *see also Hughes*, 578 U.S. at 154 (cleaned up) ("Under the [Federal Power Act], FERC has exclusive authority to regulate the sale of electric energy at wholesale in interstate commerce. . . . But the law places beyond FERC's power, and leaves to the States alone, the regulation of any other sale—most notably, any retail sale—of electricity."). And third, a stay would protect the broader public—beyond Public Interest Organizations and their members—from the onerous costs and dangerous pollution produced by Craig's unnecessary operation and availability.

VII. CONCLUSION

For the reasons set forth above, the undersigned Public Interest Organizations respectfully request that the Department grant intervention in the proceedings over the Order; stay the Order; grant clarification of the Order; grant rehearing of the Order; rescind the Order (and any renewals of the Order); and allow Craig to retire.

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GLOSSARY OF TERMS

Shortened Term	Long Description
Department	Department of Energy or DOE
Order	Department of Energy Order No. 202-25-14
Colorado Commission	Colorado Public Utilities Commission
Craig	Craig Unit 1
Craig Co-Owners	The five co-owners of Craig Unit 1
Craig Plant	The entire Craig facility
EPA	United States Environmental Protection Agency
FERC	Federal Energy Regulatory Commission
NERC	North American Electric Reliability Corporation
Platte River	Platte River Power Authority
RTO	Regional Transmission Organization
SIP	Clean Air Act State Implementation Plan
SPP	Southwest Power Pool
Tri-State	Tri-State Generation and Transmission Association
WECC	Western Electricity Coordinating Council
Xcel	Public Service Company of Colorado or Xcel Energy

INDEX OF EXHIBITS

No.	Exhibit Name	Document Name	URL
1-01	Current Energy Group Report	Current Energy Group Report, *Resource Adequacy in the Mountain West* (Jan. 2026)	
1-02	Grid Strategies Resource Adequacy Report	Michael Goggin, Grid Strategies, *Craig Unit 1 is Not Needed for Electric Reliability* (Jan. 2026)	
1-03	Powers Decl.	Declaration of Bill Powers (Jan. 24, 2026)	
1-04	Grid Strategies Costs Report	Michael Goggin, Grid Strategies, *The Economic Cost of a DOE Mandate for the Craig Unit 1 Coal-Burning Generator to Continue Operating* (Dec. 2025)	
1-05	Telos Resource Adequacy Report	Telos Energy, *Resource Adequacy Planning in Colorado* (2025)	
1-06	Tri-State December 2025 Press Release	Tri-State, *U.S. DOE Orders Tri-State to keep Craig Generating Station Unit Operating for Next 90 days* (Dec. 31, 2025)	https://tristate.coop/us-doe-orders-tri-state-keep-craig-generating-station-unit-operating-next-90-days
1-07	NERC 2024 Long-Term Reliability Assessment	N. Am. Electric Reliability Corp., *2024 Long-Term Reliability Assessment* (July 11, 2025)	
1-08	NERC 2025-26 Winter Assessment	North American Electric Reliability Corp., *2025-2026 Winter Reliability Assessment* (Nov. 2025)	https://www.nerc.com/globalassets/our-work/assessments/nerc_wra_2025.pdf

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1-09	2024 Western Assessment of Resource Adequacy	WECC, *2024 Western Assessment of Resource Adequacy* (last visited Jan. 28, 2026)	https://feature.wecc.org/wara/
1-10	Cooke Email to Alle-Murphy	Email from Lot Cooke, DOE to Linda Alle-Murphy Re: Rehearing procedures for DOE Order No. 202-05-3 (Dec. 30, 2005)	https://www.energy.gov/oe/articles/question-and-answer-procedural-questions-application-rehearing-order-no-202-05-02?nrg_redirect=397676
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1-12	Department 202(c) Webpage	U.S. Dep't of Energy, *DOE's Use of Federal Power Act Emergency Authority* (last visited Jan. 28, 2026)	https://www.energy.gov/ceser/does-use-federal-power-act-emergency-authority
1-13	Department Order No. 202-22-4	U.S. Dep't of Energy, Order No. 202-22-4 (Dec. 24, 2022)	https://www.energy.gov/sites/default/files/2022-12/PJM%20202%28c%29%20Order.pdf
1-14	Department Order No. 202-17-4 Summary of Findings	U.S. Dep't of Energy, Summary of Findings DOE Order No. 202-17-4 (Sept. 14, 2017)	https://www.energy.gov/sites/default/files/2017/09/f36/Order%20202-17-4%20Summary%20of%20Findings.pdf
1-15	Department Order No. 202-02-1	U.S. Dep't of Energy, Order No. 202-02-1 (Aug. 16, 2002)	https://www.energy.gov/sites/default/files/202%28c%29%20order%20202-02-1%20August%2016%2C%202002%20-%20CSC.pdf
1-16	Department Order No. 202-20-2	U.S. Dep't of Energy, Order No. 202-20-2 (Sept. 6. 2020)	https://www.energy.gov/oe/articles/federal-power-act-section-202c-caiso-september-2020?nrg_redirect=454296
1-17	Department Order No. 202-22-2	U.S. Dep't of Energy, Order No. 202-22-2 (Sept. 4, 2022)	https://www.energy.gov/ceser/federal-power-act-section-202c-banc-september-2022

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1-18	Department Order No. 202-21-1	U.S. Dep't of Energy, Order No. 202-21-1 (Feb. 14, 2021)	https://www.energy.gov/oe/articles/federal-power-act-section-202c-ercot-february-2021?nrg_redirect=364318
1-19	FERC Energy Primer	FERC, *Energy Primer: A Handbook of Energy Market Basics* (Dec. 2023) (excerpt).	https://www.ferc.gov/media/energy-primer-handbook-energy-market-basics
1-20	Department Order No. 202-08-1	U.S. Dep't of Energy, Order No. 202-08-1 (Sept. 14, 2008)	https://www.energy.gov/sites/prod/files/202%28c%29%20order%20202-08-1%20September%2014%2C%202008%20-%20CenterPoint%20Energy.pdf
1-21	Department Order No. 202-26-01	U.S. Dep't of Energy, Order No. 202-26-01 (Jan. 24, 2026)	https://www.energy.gov/documents/order-no-202-26-01-ercot
1-22	Department Order No. 202-26-01A	U.S. Dep't of Energy, Order No. 202-26-01A (Jan. 25, 2026)	https://www.energy.gov/documents/amended-order-no-202-26-01a
1-23	Department Order No. 202-26-03	U.S. Dep't of Energy, Order No. 202-26-03 (Jan. 25, 2026)	https://www.energy.gov/documents/order-no-202-26-03-iso-ne
1-24	Department Order No. 202-24-1	U.S. Dep't of Energy, Order No. 202-24-1 (Oct. 9, 2024)	https://www.energy.gov/sites/default/files/2024-10/Duke%20202%28c%29%20Order_100924%20FINAL_JMG%20signed.pdf
1-25	MISO LOLE Presentation	MISO, *LOLE 101: Probabilistic Analyses* (May 8, 2018)	https://cdn.misoenergy.org/LOLE%201011%20Training624875.pdf
1-26	NERC 2024 Reliability Report	NERC, *2024 State of Reliability* (June 2024)	

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1-27	NERC 2025 Summer Reliability Assessment	NERC, *2025 Summer Reliability Assessment* (May 2025)	https://www.nerc.com/globalassets/programs/rapa/ra/nerc_sra_2025.pdf
1-28a	2019–24 NERC Summer Reliability Assessments	NERC, *Summer Reliability Assessments for 2019-2025* (compiled)	2019 Reliability Assessment: https://www.nerc.com/globalassets/programs/rapa/ra/nerc_sra_2019.pdf 2020 Reliability Assessment: https://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/NERC_SRA_2020.pdf 2021 Reliability Assessment: https://nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/NERC%20SRA%202021.pdf 2022 Reliability Assessment: n/a 2023 Reliability Assessment: https://www.nerc.com/globalassets/programs/rapa/ra/nerc_sra_2023.pdf 2024 Reliability Assessment: https://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/NERC_SRA_2024.pdf
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			2024 Reliability Assessment: https://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/NERC_SRA_2024.pdf
1-28c	2019–24 NERC Summer Reliability Assessments	NERC, *Summer Reliability Assessments for 2019-2025* (compiled)	2019 Reliability Assessment: https://www.nerc.com/globalassets/programs/rapa/ra/nerc_sra_2019.pdf 2020 Reliability Assessment: https://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/NERC_SRA_2020.pdf 2021 Reliability Assessment: https://nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/NERC%20SRA%202021.pdf 2022 Reliability Assessment: n/a 2023 Reliability Assessment: https://www.nerc.com/globalassets/programs/rapa/ra/nerc_sra_2023.pdf 2024 Reliability Assessment: https://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/NERC_SRA_2024.pdf
1-29	FERC Staff Winter Reliability Assessment	Office of Technical Reporting & Office of Electric Reliability, *Winter Energy Market and Electric Reliability Assessment 2025–2026: A Staff Report to the Commission*, FERC (Nov. 20, 2025)	https://www.ferc.gov/news-events/news/2025-2026-winter-energy-market-and-reliability-assessment
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1-31	PJM Elliott Report	PJM, *Winter Storm Elliott: Event Analysis and Recommendation Report* (July 17, 2023)	https://www.pjm.com/-/media/DotCom/library/reports-notices/special-reports/2023/20230717-winter-storm-elliott-event-analysis-and-recommendation-report.pdf?ref=blog.gridstatus.io

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1-32	NARUC Coal Report	Phillip Graeter & Seth Schwartz, *Recent Changes to U.S. Coal Plant Operations and Current Compensation Practices*, Nat'l Assoc. of Regulatory Util. Commissioners (Jan. 2020) (excerpt)	https://www.osti.gov/servlets/purl/1869928
1-33	IEA Flexibility Report	Colin Henderson, *Increasing the Flexibility of Coal-Fired Power Plants*, International Energy Agency Clean Coal Centre (Sept. 2014) (excerpt)	https://usea.org/sites/default/files/092014_Increasing%20the%20flexibility%20of%20coal-fired%20power%20plants_ccc242.pdf
1-34	Secretary Wright's West Virginia Remarks	Charles Young, *Energy Secretary Chris Wright: Future of U.S. Coal is 'long and bright'*, West Virginia News (July 5, 2025)	https://www.wvnews.com/news/wvnews/energy-secretary-chris-wright-future-of-u-s-coal-is-long-and-bright/article_948eb88e-2509-42a3-b985-07c47f1ee151.html
1-35	July Resource Adequacy Report	U.S. Dep't of Energy, *Resource Adequacy Report: Evaluating the Reliability and Security of the United States Grid* (July 2025)	https://www.energy.gov/sites/default/files/2025-07/DOE%20Final%20EO%20Report%20%28FINAL%20JULY%207%29.pdf
1-36	Energy Emergency EO	Exec. Order No. 14,156, 90 Fed. Reg. 8433, Declaring a National Energy Emergency (Jan. 29, 2025)	https://www.federalregister.gov/documents/2025/01/29/2025-02003/declaring-a-national-energy-emergency
1-37	Grid EO	Exec. Order No. 14,262, 90 Fed. Reg. 15521, Strengthening the Reliability and Security of the U.S. Electric Grid (Apr. 14, 2025)	https://www.federalregister.gov/documents/2025/04/14/2025-06381/strengthening-the-reliability-and-security-of-the-united-states-electric-grid
1-38	NY Times Coal Article	Brad Plumer & Mira Rojanasakul, *Trump Signs Orders Aimed at Reviving a Struggling Coal Industry*, NY Times (Sept. 3, 2025)	https://www.nytimes.com/2025/04/08/climate/trump-order-coal-mining.html
1-39	DOE July 7 Press Release	U.S. Dep't of Energy, *Department of Energy Releases Report on Evaluating U.S. Grid Reliability and Security* (July 7, 2025)	https://www.energy.gov/articles/department-energy-releases-report-evaluating-us-grid-reliability-and-security

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1-40	PIOs' RFR of July Resource Adequacy Report	*Motion to Intervene and Request for Rehearing of Nat. Res. Def. Council, the Ecology Ctr., Envtl. Def. Fund, Envtl. Law and Pol'y Ctr., Pub. Citizen, Sierra Club, and Vote Solar*, U.S. Dep't of Energy Resource Adequacy Report (Aug. 8, 2025)	https://sustainableferc.org/wp-content/uploads/2025/08/2025-08-06_NRDC-et-al-Request-for-Rehearing-DOE-Resource-Adequacy-Report.pdf
1-40a	Department's Response to PIOs' RFR of July Resource Adequacy Report	Letter from Tina Francone, Acting Director, Grid Deployment Office, Dep't of Energy, to Caroline Reiser et al., Nat. Res. Def. Council, RE: August 8, 2025 Submission (Sept. 5, 2025)	
1-41	Inst. Pol'y Integrity Report	Jennifer Danis, Christopher Graf & Matthew Lifson, *Enough Energy: A Review of DOE's Resource Adequacy Methodology*, Inst. Pol'y Integrity (July 2025)	https://policyintegrity.org/files/publications/IPI_EnoughEnergy_FinalReport.pdf
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1-45	Energy Innovation Report	Eric G. Gimon, *Dodging the Firm Fixation for Data Centers and the Grid*, Energy Innovation (Nov. 2025)	https://energyinnovation.org/wp-content/uploads/Dodging-the-Firm-Fixation-for-Data-Centers-and-the-Grid.pdf

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1-47	Palgrave Handbook	Manfred Hafner & Giacomo Luciana, *Palgrave Handbook of International Economics*, Palgrave Macmillan (2022) (excerpt)	https://link.springer.com/book/10.1007/978-3-030-86884-0
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1-49	Tri-State Revised 2020 ERP Assessment of Existing Resources	Tri-State, *ERP Assessment of Existing Resources* (Aug. 3, 2020)	
1-50	Insgold 2023 ERP Direct Testimony	Barry Insgold, *Direct Test., Rev. 1* (Dec. 1, 2023)	
1-51	Tri-State 2020 ERP	Tri-State, *2020 ERP* (Dec. 1, 2020)	
1-52	2023 Colorado Water Plan	Colo. Water Conservation Bd., *Colorado Water Plan* (2023)	
1-53	Colorado Sun Article	Brittany Peterson and Jennifer McDermott, *In Colorado town built on coal, some families are moving on, even as Trump tries to boost industry* (Dec. 8, 2025)	https://coloradosun.com/2025/12/08/colorado-coal-transition-jobs/.
1-54	PacifiCorp FERC Form 1	PacifiCorp, *FERC Form 1* (April 14, 2025)	
1-55	Platte River Power Authority Coal Energy	Platte River Power Authority, *Coal Energy*	https://prpa.org/generation/coal/

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1-57	2018 SIP Element Adopted	Docket No. EPA-R08-OAR-2018-0015, Environmental Protection Agency, *SIP Element Adopted* (April 26, 2018)	
1-58	Lisa Tiffin 2020 ERP Direct Testimony	Colorado PUC Proceeding No. 20A-0528E, *Lisa Tiffin Direct Testimony* (December 1, 2020)	
1-59	Intertek Reliability Study	Intertek, *Update of Reliability and Cost Impacts of Flexible Generation on Fossil-fueled Generators* (May 12, 2020)	
1-60	SRP Power Generation Sources	Salt River Project, *SRP Power Generation Sources* (last visited Jan. 27, 2026)	https://www.srpnet.com/grid-water-management/grid-management/power-generation-stations
1-61	2023 ERP Phase II Modeling Assumptions	Colorado PUC Proceeding No. 23A-0585E, Phase II Implementation Report, Attachment B, *Modeling Assumptions* (April 11, 2025)	
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1-63	GE LM6000 Information	General Electric, *Get to know the LM6000* (last visited Jan. 27, 2026)	https://www.gevernova.com/gas-power/products/gas-turbines/lm6000
1-64	Tri-State SPP West Press Release	Tri-State, *Benefits of SPP RTO West participation highlighted in filing with Colorado PUC* (June 17, 2025)	https://tristate.coop/benefits-spp-rto-west-participation-highlighted-filing-colorado-puc
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1-66	83 Fed. Reg. 31332	83 Fed. Reg. 31332 (July 5, 2018)	

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1-71	BART CALPUFF	Colorado Department of Public Health and Environment, *BART CALPUFF Class I Federal Area Individual Source Attribution Visibility Impairment Modeling Analysis for Tri-State Generation & Transmission Association Craig Station Units 1 and 2 (Revised)*, (Mar. 3, 2006)	
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1-73	Craig Station Operating Permit	Colorado Department of Public Health and Environment, *Craig Station Operating Permit* (July 1, 2021)	
1-74	March 2025 Field Inspection Report	Colorado APCD, *Field Inspection Report – Craig Generating Station* (March 25, 2025)	
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1-78	Power Magazine Pulverizers Article	Power Magazine, *To optimize performance, begin at the pulverizers* (February 2007)	https://www.powermag.com/to-optimize-performance-begin-at-the-pulverizers/
1-79	Riley Power Low NOx Burner Performance Article	Riley Power, *Advanced Erosion Protection Technology Provides Sustained Low NOx Burner Performance* (April 2024)	
1-80	Neundorfer Fabric *Filter Design*	Neundorfer, *Lesson 5 - Fabric Filter Design Review* (April 2016)	
1-81	Norman Kapala 2021 Consumers IRP Direct Testimony	Michigan PSC Case No. U-21090, *Revised Direct Testimony* of Norman J. Kapala (October 2021)	
1-82	2011 BART	Docket No. EPA-R08-OAR-2011-0770, Colorado Department of Public Health and Environment, Air Pollution Control Division, *Best Available Retrofit Technology (BART) Analysis – Tri-State Craig Station Units 1&2* (March 26, 2012)	
1-83	2025 EIA Form 923	U.S. Department of Energy, *EIA Form 923, Page 4 Generator Data* (2025)	
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1-86	Tri-State 150-Day Implementation Report	Colorado PUC Proceeding No. 20A-0528E, *Tri-State's 150-Day Implementation Report* (2023)	
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1-88	Tri-State 2023 ERP Modeling Assumptions	Colorado PUC Proceeding No. 23A-0585E, Tri-State's Hearing Exhibit 101 LKT-1 - Attachment B - Public - *Modeling Assumptions* (2023)	
1-89	Tri-State 2025 ERP Annual Progress Report	Colorado PUC Proceeding No. 23A-0585E, *Tri-State's 2025 Annual Progress Report* (Dec. 1, 2025)	
1-90	Colorado Commission Decision No. C25-0612	Colorado PUC Proceeding No. 23A-0585E, *Decision No. C25-0612* (August 26, 2025)	
1-91	Platte River 2020 IRP	Platte River Power Authority*, 2020 Integrated Resource Plan* (2020)	
1-92	Platte River 2024 IRP	Platte River Power Authority, *2024 Integrated Resource Plan* (2024)	
1-93	Xcel 2025 Near Term Procurement Report	Public Service Company of Colorado, *Near Term Procurement Report* (2025)	

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1-95	Colorado Commission Decision No. C25-0892	Colorado PUC Proceeding No. 25V-0480E, *Decision No. C25-0892* (Dec. 10, 2025)	
1-96	Comanche Unit 2 Variance Petition	Colorado PUC Proceeding No. 25V-0480E, *Joint Petition* (2025)	
1-97	Colorado Commission Decision No. C25-0747	Colorado PUC Proceeding No. 24A-0442E, Decision No. C25-0747 (November 6, 2025)	
1-98	PacifiCorp 2023 IRP Update	PacifiCorp, *2023 Integrated Resource Plan Update* (2024)	
1-99	PacifiCorp 2025 IRP	PacifiCorp, *2025 Integrated Resource Plan, Volume I* (Mar. 31, 2025)	
1-100a	Salt River Project 2023 IRP	Salt River Project, *Integrated System Plan* (2023)	
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1-101	Xcel Information Sheet on Colorado Energy Plan	Xcel, *Information Sheet on Colorado Energy Plan* (2019)	

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1-103	2025 Xcel ERP Annual Progress Report	Xcel, Colorado PUC Proceeding No. 21A-0141E, *2021 Electric Resource Plan & Clean Energy Plan Annual Progress Report* (Mar. 31, 2025)	
1-104	PacifiCorp 2015 IRP Update	PacifiCorp, *Integrated Resource Plan Update* (2015)	
1-105	PacifiCorp 2025 IRP	PacifiCorp, *Integrated Resource Plan* (2025)	
1-106	EIA Annual 2024	EIA, *2024 EIA Annual* (2025)	
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1-108	UT Austin Article	University of Texas at Austin Energy Institute, *The History and Evolution of the US Electricity Industry* (2016)	https://energy.utexas.edu/sites/default/files/UTAustin_FCe_History_2016.pdf
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1-110	PacifiCorp 2024 URC RFP	PacifiCorp, *2024 Utah Renewable Communities Request for Proposals, "2024 URC RFP"* (2025)	

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1-112	WEIS Southwest Power Pool	SPP, *Western Energy Imbalance Service Market*, (last visited Jan. 27, 2026)	https://spp.org/western-services/weis/
1-113	Craig Station, AMD data 2020 through 2024	EPA, Enforcement and Compliance History Online, *Air Pollutant Report*, (last visited Jan. 27, 2026)	https://echo.epa.gov/air-pollutant-report?fid=110041086393
1-114	Tri-State Members	Tri-State Gen. & Transm. Ass'n, Inc., *What It Means To Be a Member* (last visited Jan. 19, 2026)	https://tristate.coop/members
1-115	Department Explainer on Balancing Authorities	Dep't of Energy, *How It Works: The Role of a Balancing Authority* (2022)	https://www.energy.gov/sites/default/files/2023-08/Balancing%20Authority%20Background_2022-Formatted_041723_508.pdf
1-116	EIA Explainer on Balancing Authorities	Sara Hoff, U.S. Energy Info. Admin., U.S. Dep't of Energy, *U.S. Electric System Is Made up of Interconnections and Balancing Authorities* (July 20, 2016)	https://www.eia.gov/todayinenergy/detail.php?id=27152
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1-118	Department Press Release on Centralia Order	U.S. Dep't of Energy, *Energy Secretary Ensures Washington Coal Plant Remains Open to Ensure Affordable, Reliable and Secure Power Heading into Winter* (Dec. 17, 2025)	https://www.energy.gov/articles/energy-secretary-ensures-washington-coal-plant-remains-open-ensure-affordable-reliable-and

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1-120	Department Export Authorization EA-365-C (Oct. 21, 2025)	Research Power Corp., *Order No. EA-365-C* (Oct. 21, 2025)	https://www.energy.gov/gdo/ea-365-c-research-power-corporation
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1-123	EPA COBRA Health Effects Estimate	Envtl. Prot. Agency, *COBRA Web Edition* (last visited Jan. 22, 2025)	Go to https://cobra.epa.gov/. In Step 1.A, select Colorado and "Moffat" county. In Step 1.B, select "Fuel Combustion: Industrial." In Step 1.C, input reduce SO2 by 335.43 tons and reduce NOx by 2,211.57 tons (based on Craig-specific data for annual emissions from 2024, available at https://campd.epa.gov/data/custom-data-download). In Step 1.C, also input reduce PM2.5 by 13 tons (based on Craig-specific 2020 National Emissions Inventory ("NEI") data for annual PM2.5 Filterable emissions, scaled by the ratio of Craig's 2024 SO2 and NOx emissions to their 2020 NEI SO2 and NOx emissions. NEI 2020 data is available at https://www.epa.gov/air-emissions-inventories/2020-national-emissions-inventory-nei-data). Use a 2% discount rate and run scenario.

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1-125	Service Area and Territory (Electric Power and Water) SRP	SRP, "Service Territory" (2025)	https://www.srpnet.com/about/service-area-territory
1-126	Xcel, List of Towns Receiving Electric Service in Colorado	Xcel, *Colorado Communities Served by Xcel Energy* (2024)	https://xcelnew.my.salesforce.com/sfc/p/#1U0000011ttV/a/8b000002Y8vy/cDTZ25fPv.NuR_sx_peANfpfaxL47xQXr7fhoTJZoOw
1-127	Who we serve - Platte River Power Authority	Platte River Power Authority, *Who We Serve* (last visited Jan. 26, 2026)	https://prpa.org/about-prpa/who-we-serve/
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1-131	FERC Western Energy Markets Explainer	Office of Public Participation, FERC, *Western Energy Markets Explainer* (last visited Jan. 2, 2026)	https://ferc.gov/OPP/western-markets-explainer
1-132	Power Council Overview	Northwest Power and Conservation Council, *Overview* (last updated July 2025)	https://www.nwcouncil.org/fs/19572/2025overview.pdf

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1-134	Overview of Power Council's Resource Adequacy Approach	Northwest Power and Conservation Council, *Resource Adequacy* (last visited Jan. 12, 2025)	https://www.nwcouncil.org/energy/energy-topics/resource-adequacy/
1-135	Overview of Power Council's Approach to Load Forecasting	Northwest Power and Conservation Council, *Explaining How the Council Forecasts Load Growth for the Pacific Northwest Power System* (Mar. 20, 2025)	https://www.nwcouncil.org/news/2025/03/20/explaining-pacific-northwest-load-forecasting/
1-136	WECC Explainer	Western Elec. Coordinating Council, *WECC ODITY Threshold Interpretations* (Oct. 25, 2022)	https://www.wecc.org/sites/default/files/documents/program/2024/WECC%20One-day-in-ten-year%20metric%20explanation.pdf
1-137	Power Council 2029 Power Supply Adequacy Assessment	Northwest Power and Conservation Council, *Pacific Northwest Power Supply Adequacy Assessment for 2029* (Aug. 2024)	https://www.nwcouncil.org/fs/18853/2024-4.pdf
1-138	Bonneville 2024 Fact Sheet	Bonneville Power Administration, *BPA Facts* (Oct. 2025)	https://www.bpa.gov/-/media/Aep/about/publications/general-documents/bpa-facts.pdf
1-139	Bonneville Day-Ahead Market Policy	Bonneville Power Administration, *Day-Ahead Market Policy* (May 9, 2025)	https://www.bpa.gov/-/media/Aep/projects/day-ahead-market/20250509-dam-final-policy.pdf
1-140	2023 Bonneville "White Book"	Bonneville Power Admin., *2023 Pacific Northwest Loads and Resources Study* (Apr. 2023)	https://www.bpa.gov/-/media/Aep/power/resource-program/2023-white-book.pdf

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1-144	Power Council 2024 Resource Program Results	Northwest Power and Conservation Council, *Bonneville's 2024 Resource Program Results* (Jan. 7, 2025)	www.nwcouncil.org/fs/19031/2025_01_4.pdf
1-145	Western Pool Reserve Sharing Program	Western Power Pool, *Northwest Power Pool Reserve Sharing Program Documentation* (effective Oct. 1, 2025)	https://www.westernpowerpool.org/private-media/documents/NWPP_RSG_Program_Doc_-_RSGC_Approved_effective_10.1.2025.pdf
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1-147	WRAP Tariff	Western Power Pool, *Western Resource Adequacy Program Tariff* (effective Mar. 16, 2025)	https://www.westernpowerpool.org/private-media/documents/WRAP_Tariff_Effective_3.16.25.pdf

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1-149	"About WECC" Webpage	Western Elec. Coordinating Council, *About WECC* (last visited Jan. 2, 2026)	https://www.wecc.org/about/about-wecc
1-150	NERC Rules of Procedure	N. Am. Elec. Reliab. Corp., *Rules of Procedure* (effective Nov. 28, 2023)	https://www.nerc.com/globalassets/who-we-are/rules-of-procedure/nerc-rop-effective-20231128_with-appendicies.pdf
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1-154	Wash. Commerce Util. Res. Planning Report (Compiled 2022 & 2024)	Wash. Dept. of Commerce, Energy Policy Office, *Washington State Electric Utility Resource Planning, Report to the Legislature* (2022, 2024)	2022: https://app.leg.wa.gov/ReportsToTheLegislature/Home/GetPDF?fileName=Washington%20State%20Electric%20Utility%20Resource%20Planning%202022%20Report%20-%20FINAL_6eb6fc4a-487b-483b-b5ae-d622e9bd2a0b.pdf 2024: https://app.leg.wa.gov/ReportsToTheLegislature/Home/GetPDF?fileName=Washington%20State%20Electric%20Utility%20Resource%20Planning%202024%20Report_FINAL_2be3ab47-13c7-45fc-a113-808ee29dbc69.pdf

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1-155	Washington Agencies Resource Adequacy Meeting Summaries (Compiled)	Wash. Utils. & Transp. Comm'n. & Wash. Dep't of Comm., *Letter to the Governor Re: Summary of the 2025 Long-Term Resource Adequacy Meeting* (Nov. 19, 2025) Wash. Utils. & Transp. Comm'n. & Wash. Dep't of Comm., *Letter to the Governor Re: Summary of the 2025 Summer Resource Adequacy Meeting* (July 30, 2025) Wash. Utils. & Transp. Comm'n. & Wash. Dep't of Comm., *Letter to the Governor Re: Summary of the 2025 Winter Preparedness Resource Adequacy Meeting* (Dec. 31, 2025)	Long Term RA Meeting: https://apiproxy.utc.wa.gov/cases/GetDocument?docID=121&year=2021&docketNumber=210096 Summer Readiness RA Meeting: https://apiproxy.utc.wa.gov/cases/GetDocument?docID=73&year=2021&docketNumber=210096 Winter Readiness RA Meeting: https://apiproxy.utc.wa.gov/cases/GetDocument?docID=125&year=2021&docketNumber=210096
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1-157	E3 Resource Adequacy Phase 1 Presentation	Arne Olson et. al., Energy and Envtl. Economics, Inc., *Resource Adequacy and the Energy Transition in the Pacific Northwest: Phase 1 Results* (Sept. 22, 2025)	https://www.utc.wa.gov/sites/default/files/2025-10/Revised%20V3%20E3%20Presentation%20RA%20Study%20September%2022%20WA%20RA%20Meeting.pdf

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1-159a	E3's Attachment to Email Correspondence with E3	E3's Attachment (in PDF form) to Email Thread in Ex. 1-159	
1-159b	E3's Attachment to Email Correspondence with E3 (as transmitted in Excel form)	E3's Attachment (as transmitted in Excel form) to Email Thread in Ex. 1-159	
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1-164	Colorado Commission Decision No. C24-0052	Colorado PUC Proceeding No. 21A-0141E, *Decision No. C24-0052* (2024)	
1-165	Colorado Commission Decision No. C25-0024	Colorado PUC Proceeding No. 21A-0141E, *Decision No. C25-0024* (2025)	
1-166	Tri-State January 2026 Press Release	Tri-State, *Tri-State Makes Craig Generating Station Unit 1 Available to Operate in Compliance with DOE Emergency Order* (Jan. 23, 2026)	https://tristate.coop/tri-state-makes-craig-generating-station-unit-1-available-operate-compliance-…
1-167	SPP Markets+ Website	SPP, *Markets+* (last visited Jan. 27, 2026)	https://www.spp.org/marketsplus
1-168	Tri-State Extreme Weather Event Modeling Assumptions	Colorado PUC Proceeding No. 23A-0585E, 2023 ERP Phase II Implementation Report, Attach. B-5, *Extreme Weather Event Modeling Assumptions*	

BEFORE THE UNITED STATES DEPARTMENT OF ENERGY

Federal Power Act Section 202(c) Emergency Order: Tri-State Generation and Transmission Association, Platte River Power Authority, Salt River Project, PacifiCorp, and Xcel Energy	)

Exhibit to
Motion to Intervene and Request for Rehearing and Stay of
Public Interest Organizations

Exhibit 2-187
Department Order No. 202-22-2 Amendment No. 1

Department of Energy
Washington, DC 20585

Amendment Number 1 to Order No. 202-22-2

On September 4, 2022, because of a shortage of currently operational electric generating facilities, high demand for electricity, and other adverse conditions resulting from the extreme heat event in California, I issued Order No. 202-22-2. Order No. 202-22-2 authorized the Balancing Authority of Northern California (BANC) to direct the identified electric generating resource (Covered Resources) to operate in BANC's Balancing Authority Area (BAA), under specified conditions, to prevent or mitigate potential power disruptions and provide relief to the bulk power system during stressed grid conditions caused by extreme heat until September 8, 2022. Order No. 202-22-2 expires at the end of the day on September 8, 2022, by its own terms.

On September 7, 2022, BANC submitted a *Request for Extension and Limited Amendment of Emergency Order Pursuant to Section 202(c) of the Federal Power Act* (Renewal Application) to the Department. In its Renewal Application, BANC requests an extension of Order 202-22-1 through September 11, 2022 and certain modifications to the run time hour limitations contained in Order No. 202-22-2. On September 8, 2022, BANC filed a Revised Request for *Request for Extension and Limited Amendment of Emergency Order Pursuant to Section 202(c) of the Federal Power Act* in response to questions from DOE.

Emergency Situation

In its Renewal Application, BANC states that "the actual heat event has been more severe and records loads have been experienced." The emergency conditions brought about by the ongoing extreme heat event in California have continued and worsened and the supply of electricity is at increased risk for meeting system demand. As stated in its Renewal Application, BANC established a new record peak of approximately 4943 MW on September 6. BANC entered into an EEA-2 as of 1330 hours that same day. During this period BANC had forced outages of significant generation but was able to return units to service in approximately 90 minutes. It is believed that BANC members Roseville and Modesto exceeded their all-time peaks. Consequently, BANC requests the expiration date of Order No. 202-22-2 be extended through September 11, 2022.

In addition to the extension of Order No. 202-22-2, BANC has requested that the Order be modified to remove the 2 PM to 10 PM run time limitation so as to allow additional operational flexibility. BANC specifically requests that the Covered Resource be allowed to run during anytime that they have received notice of an Energy Emergency Alert Level 2 (EEA2) condition or greater. The practical impact of this will be to allow the Covered Resource more notice to follow their protocols for ramping up their diesel-fired generator units. In addition, BANC has requested the ramp down of the Covered Resource could extend beyond the period in which the EEA 2 condition exists. Specifically, the ramp down would commence at the time the EEA 2 condition is declared ended and should be completed as soon as possible consistent with good utility and operational

Consultation

In considering renewal or reissuance of an order under FPA section 202(c) that may conflict with an environmental law or regulation, DOE is required to "consult with the primary Federal agency with expertise in the environmental interest protected by such law or regulation" and to include "conditions as such Federal agency determines necessary . . . to the extent practicable." 16 U.S.C. § 824a(c)(4). The Environmental Protection Agency (EPA) is the primary federal agency in this case with expertise in the protected environmental interest, specifically Title V of the Clean Air Act and the Department consulted with EPA after receiving the Renewal Application and EPA did not request any additional conditions be included in this Order. Email from Acting Assistant Administrator Larry Starfield, EPA Office of Enforcement and Compliance Assurance to Kathleen Hogan, Acting Under Secretary for Infrastructure for DOE, September 7, 2022.

Based on the information submitted to the Department, I have determined that an emergency continues to exist in California due to a shortage of electric energy. I find that the issuance of this Order will help to meet the emergency conditions and serve the public interest as required by FPA section 202(c).

ORDER

For the reasons set forth above, pursuant to Section 202(c) of the FPA, I hereby grant BANC's Renewal Application and issue this Order, with modifications as explained below, to extend the expiration date of Order No. 202-22-2 through September 11, 2022.

1. Ordering Paragraph A appearing on page 4 of Order No. 202-22-2 is hereby deleted and replaced in its entirety by the following:

   A. From September 8, 2022, to September 11, 2022, in the event that BANC determines that generation from the Covered Resource is necessary to preserve the reliability of the bulk electric power system in California, I direct BANC to dispatch such unit or units and to order their operation solely under the following conditions: the notification of an Energy Emergency Alert Level 2[1] condition or greater after exhausting all reasonably and practically available resources, together with such reasonable and limited time as is necessary for a Covered Resource to ramp down following an Energy Emergency Alert Level 2 or greater, consistent with good utility practice as directed by the BANC with the goal of limited operation outside of an Energy Emergency Alert Level 2 or greater to the greatest extent possible.

[1] For the purposes of this Order, "Energy Emergency Alert Level 2" has the meaning set forth in Section 3.6.3 of the California ISO System Emergency Operating Procedure, Procedure No. 4420, Version 14.0, Effective Date May 1, 2022 (CAISO Emergency Operating Procedure).

2. The date September 8, 2022 where it appears in Ordering Paragraphs D and H of Order No. 202-22-2 is hereby replaced by the date September 11, 2022.

3. All other terms of Order No. 202-22-2 remain the same and in effect, including Ordering Paragraphs A-H, except as modified herein.

4. This Amendment Number 1 to Order No. 202-22-2 shall be effective upon its issuance, and shall expire at 23:59 Pacific Time on September 11, 2022.

Issued in Washington, D.C. at 16:38 Eastern Time on this 8th day of September, 2022.



Kathleen Hogan
Acting Under Secretary for
Infrastructure

BEFORE THE UNITED STATES DEPARTMENT OF ENERGY

Federal Power Act Section 202(c) Emergency Order: Tri-State Generation and Transmission Association, Platte River Power Authority, Salt River Project, PacifiCorp, and Xcel Energy	)

Exhibit to
Motion to Intervene and Request for Rehearing and Stay of
Public Interest Organizations

Exhibit 2-188
Department Order No. 202-22-1 Amendment No. 2

Department of Energy
Washington, DC 20585

Amendment Number 2 to Order No. 202-22-1

On September 2, 2022, because of a shortage of currently operational electric generating facilities, high demand for electricity, and other adverse conditions resulting from the extreme heat event in California, I issued Order No. 202-22-1. Order No. 202-22-1 authorizes the California Independent System Operator Corporation (CAISO), to direct the operation of the Covered Resources identified in Order No. 202-22-1 and on the terms set forth therein. On September 7, 2022, because of the continuing shortage of electric energy and the need for continued operation of the two units at Calpine's Greenleaf Unit 1 site in Yuba City, California (Greenleaf Units), I issued Amendment No. 1 to Order No. 202-22-1. Amendment No. 1 to Order No. 202-22-1 added the Greenleaf Units as Covered Resources subject to the terms of Order No. 202-22-1, except that the Greenleaf Units may be operated through September 9, 2022. By its terms, Order No. 202-22-1 as amended by Amendment No. 1 expires at the end of the day on September 8, 2022 with respect to the Covered Resources other than the Greenleaf Units, and at the end of the day on September 9, 2022 with respect to the Greenleaf Units. Order No. 202-22-1 as amended by Amendment No. 1 is sometimes referred to herein as Amended Order No. 202-22-1.

On September 7, 2022, CAISO submitted a *Request for Extension of Emergency Order Pursuant to Section 202(c) of the Federal Power Act* (Renewal Application) to the Department. In its Renewal Application, CAISO requests an extension of the expiration date of Order No. 202-22-1 through September 12, 2022.

Emergency Situation

In its Renewal Application, CAISO states that California is experiencing extreme heat, which the CAISO forecasts to continue through at least September 9, 2022. Further, CAISO explains that unpredictable conditions could exacerbate grid reliability issues at any time. The threat of wildfire to the reliable operation of the bulk power system remains significant, and drought conditions are affecting the availability of hydroelectric power. Ambient conditions facing generating facilities are causing de-rates at some units and forcing other units offline. Wildfire threats arising from the extreme heat event are unpredictable and could force transmission and resources out of service. Consequently, the CAISO believes it prudent to ask that the expiration date of Order No. 202-22-1 be extended through September 12, 2022.

Consultation

In considering renewal or reissuance of an order under FPA section 202(c) that may conflict with an environmental law or regulation, DOE is required to "consult with the primary Federal agency with expertise in the environmental interest protected by such law or regulation" and to include "conditions as such Federal agency determines necessary . . . to the extent practicable." 16 U.S.C. § 824a(c)(4). The Environmental

Protection Agency (EPA) is the primary federal agency in this case with expertise in the protected environmental interest, specifically Title V of the Clean Air Act and the Department consulted with EPA after receiving the Renewal Application and EPA did not request any additional conditions be included in this Order. Email from Acting Assistant Administrator Larry Starfield, EPA Office of Enforcement and Compliance Assurance to Kathleen Hogan, Acting Under Secretary for Infrastructure for DOE, September 7, 2022.

Based on the information submitted to the Department, I have determined that an emergency continues to exist in California due to a shortage of electric energy. I find that the issuance of this Order will help to meet the emergency conditions and serve the public interest as required by FPA section 202(c).

ORDER

For the reasons set forth above, pursuant to Section 202(c) of the FPA, I hereby grant CAISO's Renewal Application and issue this Order to extend the expiration date of Amended Order No. 202-22-1 through September 12, 2022.

1. In accordance with the foregoing, (a) the date September 8, 2022 where it appears in Ordering Paragraphs A, D, and H of Order No. 202-22-1 is hereby replaced by the date September 12, 2022, and (b) the date September 9, 2022 where it appears in the Ordering Paragraph of Amendment No. 1 to Order No. 202-22-1 is hereby replaced by the date September 12, 2022.

2. All other terms of Amended Order No. 202-22-1 remain the same and in effect, including Ordering Paragraphs A-H, except as modified herein.

3. This Amendment Number 2 to Order No. 202-22-1 shall be effective upon its issuance and shall expire at 23:59 Pacific Time on September 12, 2022.

Issued in Washington, D.C. at 15:52 Eastern Time on this 8th day of September, 2022.



Kathleen Hogan
Acting Under Secretary for
Infrastructure

BEFORE THE UNITED STATES DEPARTMENT OF ENERGY

Federal Power Act Section 202(c)	)
Emergency Order: Tri-State	)
Generation and Transmission	)
Association, Platte River Power	)
Authority, Salt River Project,	)
PacifiCorp, and Xcel Energy	)

Exhibit to
Motion to Intervene and Request for Rehearing and Stay of
Public Interest Organizations

Exhibit 2-189
Starfield email to Hoffman

From: Starfield, Lawrence <Starfield.Lawrence@epa.gov>
Date: Monday, Sep 11, 2017, 11:27 AM
To: Hoffman, Patricia <Pat.Hoffman@hq.doe.gov>
Cc: Lucas, John T. <John.T.Lucas@hq.doe.gov>, Minoli, Kevin <Minoli.Kevin@epa.gov>, Kelley, Rosemarie <Kelley.Rosemarie@epa.gov>, Chapman, Apple <Chapman.Apple@epa.gov>
Subject: DOE section 202(c) order

To: Pat Hoffman, DOE Acting Under Secretary for Science and Energy

On August 24, 2017, PJM submitted a renewal application requesting a 90-day renewal of the Order issued on June 16, 2017, by the Secretary of Energy. This email confirms that the Department of Energy (DOE) consulted with the Environmental Protection Agency (EPA), the primary Federal agency with expertise in the Mercury and Air Toxics Standard and section 316(b) of the Clean Water Act, with respect to a renewal order under Section 202(c) of the Federal Power Act related to Virginia Electric and Power Company's Units 1 and 2 at its Yorktown Power Station, near Yorktown, Virginia. See 16 U.S.C. § 824a(c)(4)(B) (Federal Power Act, Section 202(c)(4)(B)). DOE's proposed operational conditions for the order are generally consistent with EPA's Administrative Compliance Order, AED-CAA-113(a)-2016-002, as amended.

Thank you for your coordination on this matter.

Larry Starfield
Acting Assistant Administrator
Office of Enforcement and Compliance Assurance
U.S. EPA
Washington, DC

(202) 564-2440 (office)
(202) 564-8179 (direct)