



Review of NERC's 2026 Summer Reliability Assessment

Dr. Adria Brooks

July 2026

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

Table of Contents

1. [Executive Summary](#)
2. [Trends in NERC Assessment Forecasts](#)
3. [Peak Demand and Certain Resources](#)
4. [Typical Conditions and Extreme Events](#)
5. [New England](#)
6. [Northwest](#)
7. [Conclusions](#)

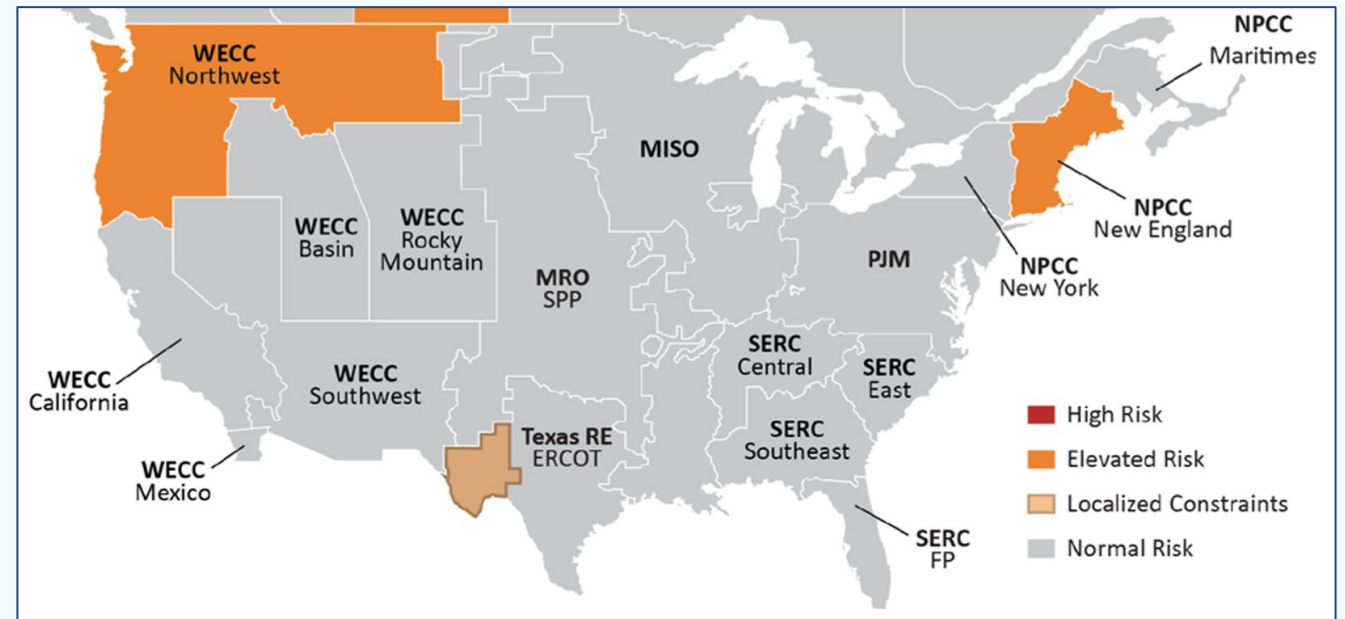
Executive Summary

The NERC Summer Reliability Assessments provide a summary of the potential reliability concerns for the upcoming summer. They help operators understand what existing operational tools may be needed to meet near-term demand.

NERC's Summer Reliability Assessments (SRA) evaluate potential reliability concerns for the upcoming summer. They provide practitioners with an understanding of what existing operational tools and external assistance may be needed to serve demand.

The SRAs consider two different load scenarios in determining reliability concerns. Normal load is the median (50%) of potential load conditions. Extreme load represents high load conditions that are less likely to occur (10%) of potential demand scenarios. Extreme load conditions represent once-in-a-decade events and are used to characterize the worst-case scenarios, not expected conditions for the coming summer.

In its 2026 SRA, NERC identified two U.S. regions—New England and Northwest—at “elevated risk.” Using industry-reported data, NERC finds the regions are resource adequate under expected seasonal conditions and may need to rely on operational mitigation procedures and non-firm imports—which are available to operators though not considered in resource adequacy calculations—to meet the once-in-a-decade extreme load conditions. However, other data suggests that the regions are also resource adequate under extreme conditions.



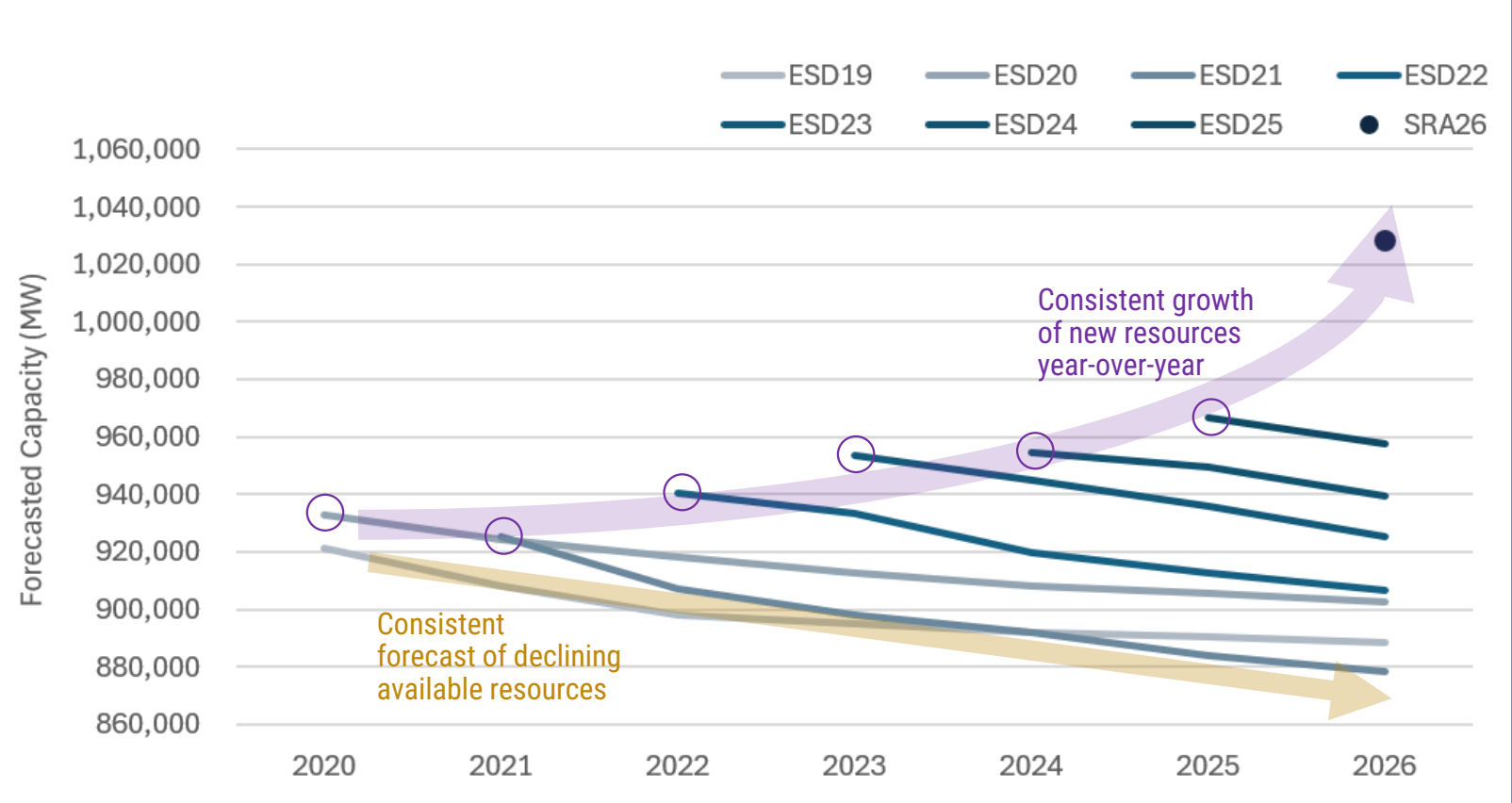
Main Takeaway: Resource projections reported to NERC consistently underestimate the growth of new resources. Use of this information alone paints an inaccurate picture of being unable to meet growing demand in future years.

Regional system planners report resource and demand projections to NERC. These industry projections of future resource capacity consistently underestimate the rapid growth of new additions while accurately capturing resource retirements. This combination paints an inaccurate picture of declining resource availability in a time of growing demand. By excluding likely-to-connect new resources, it appears that future generation will fall short of grid needs.

State regulators and wholesale power market price signals ensure the orderly replacement of retiring resources and correct any imbalances in expected electricity demand and generating supply (OMS).

Note: This takeaway and graph are more thoroughly explained on slides 9-14.

Forecasted certain on-peak resources | Sum of all regions



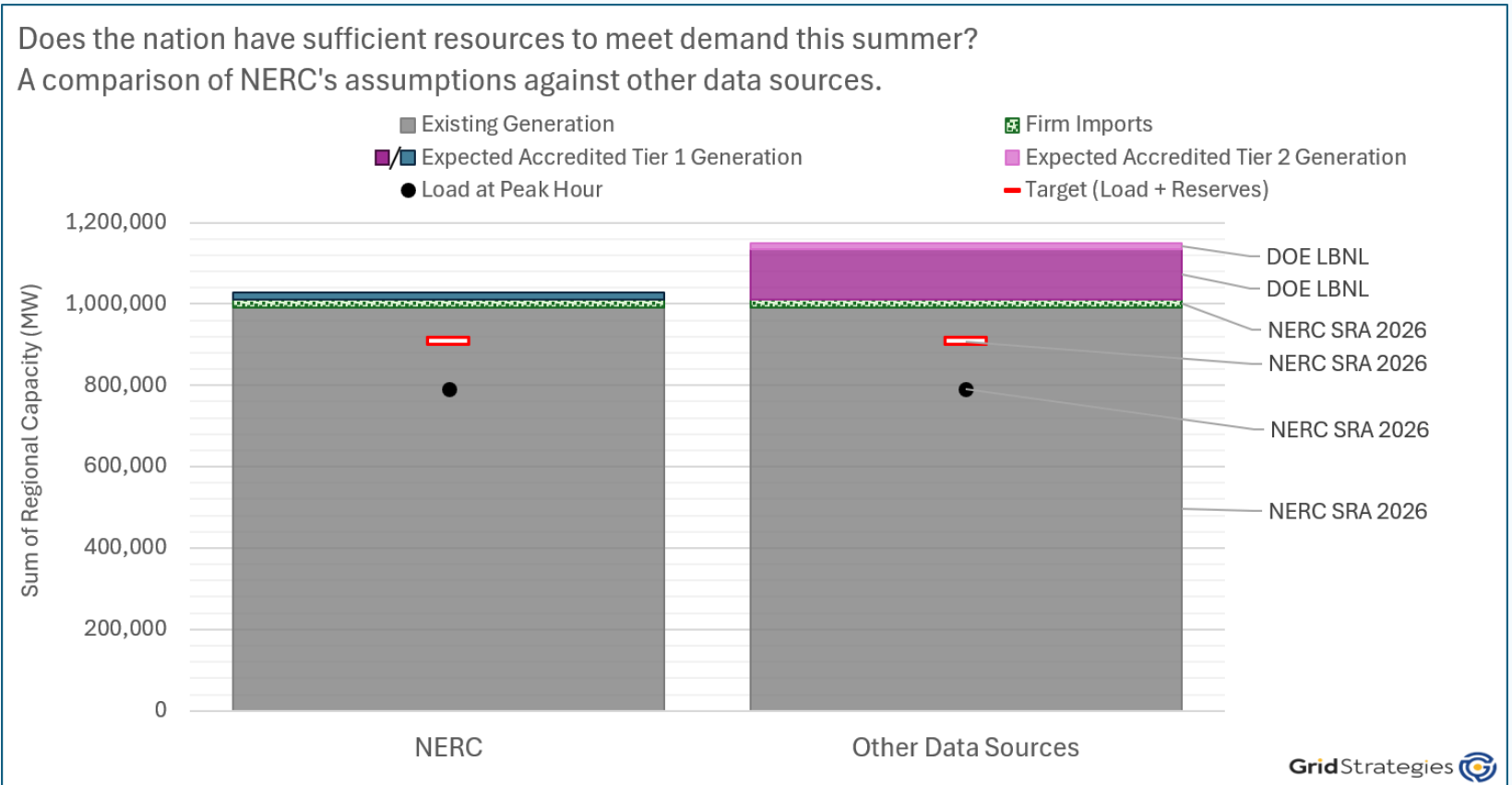
Main takeaway: 2026 summer resource availability exceeds NERC forecasts in all regions after accounting for likely-to-connect resources.

Given the consistent underestimate of new generation in industry-reported data, we supplement NERC's analysis with data supplied by other reputable federal sources.

The expected future resource availability is from a national laboratory repository of interconnection queue data across the United States. This queue data is adjusted downward to account for historic regional, resource type, queue study phase, interconnection trends to ensure that we are not overcounting.

This comprehensive picture of likely-to-connect resources shows that all regions have between 5% - 93% more reserves than their target reserve margin. When summed together (as shown in graph), resources exceed expected peak demand by 45%.

Note: This takeaway and graph are more thoroughly explained on slides 15-19.

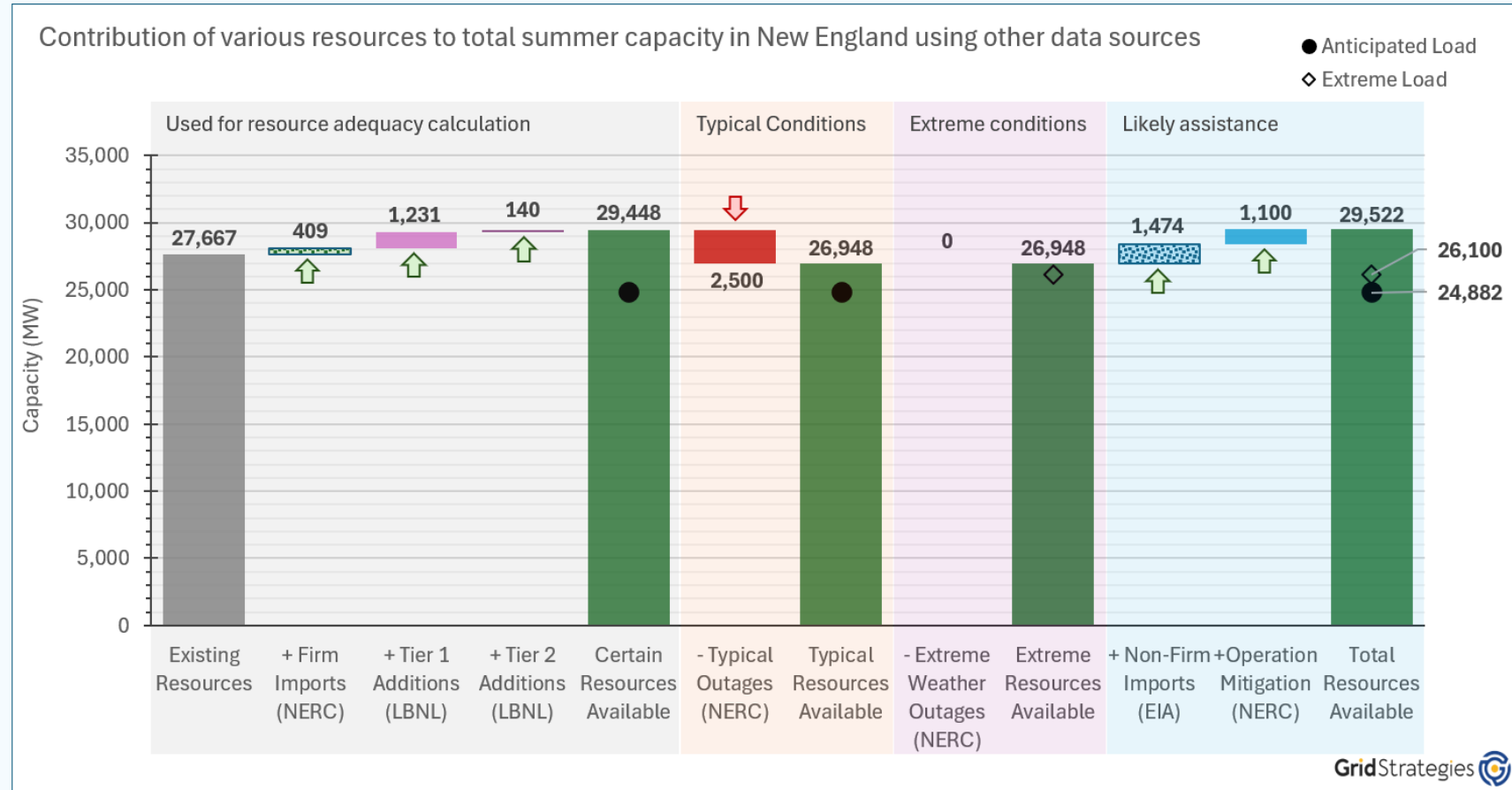


Main takeaway: New England has sufficient resources to meet summer 2026 load. Operational mitigation procedures and increased import capability further strengthen the region's ability to serve load reliably.

NERC data show that New England has enough resource capability to serve its load under both typical and extreme conditions, so long as operational mitigation strategies are employed as designed. This headroom to serve load increases when considering likely-to-connect resources from the interconnection queues, even without operational mitigation. Finally, additional non-firm imports from Canada are available to serve load.

Taken together, these resources provide New England with a comfortable reserve margin above its target to serve load this summer.

Note: This takeaway and graph are more thoroughly explained on slides 24-29.



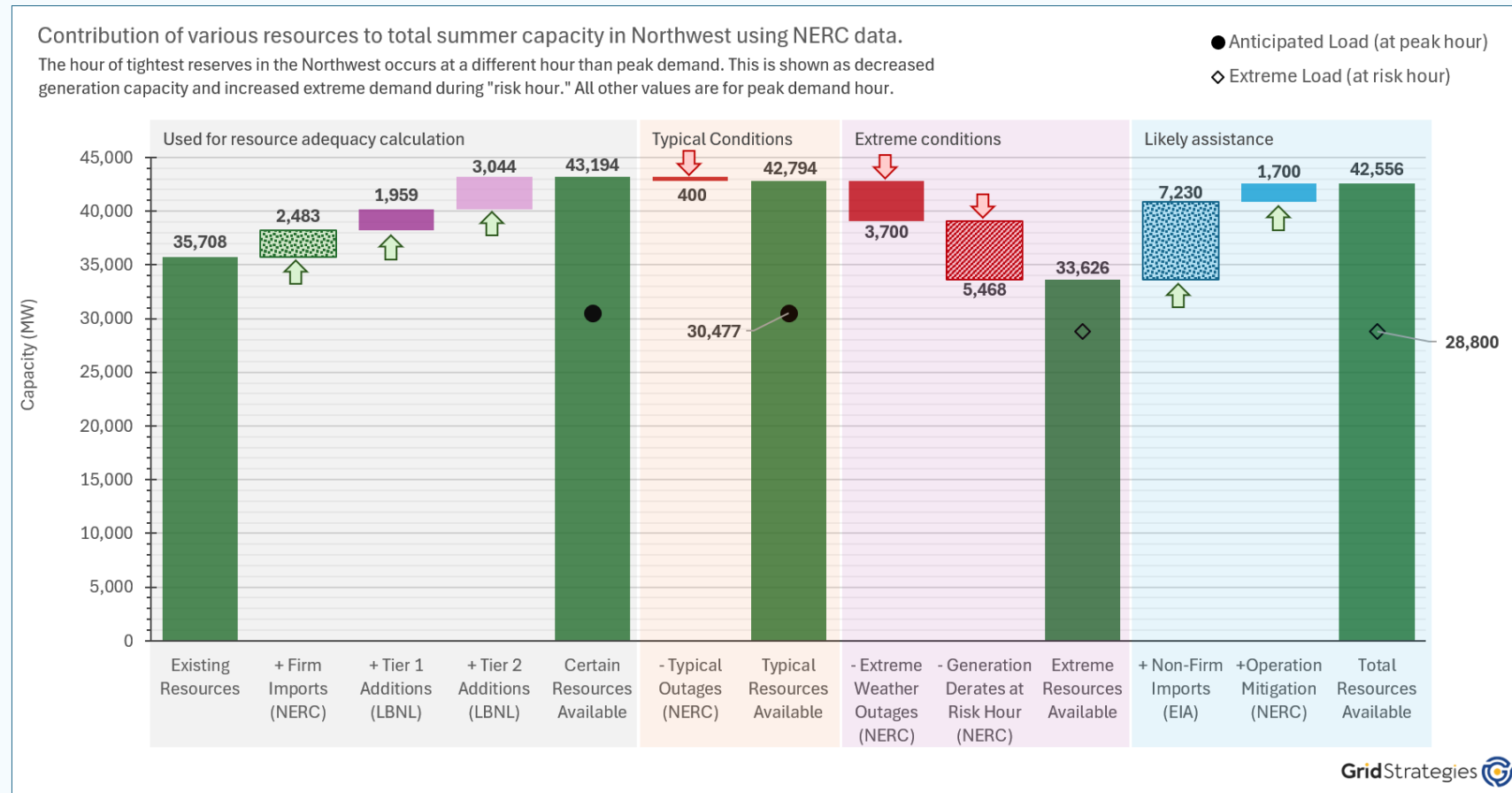
Main takeaway: The Northwest has sufficient resources to meet summer 2026 load. The combination of operational mitigation, high import assistance from neighbors, and El Niño weather conditions further reinforce the region’s capacity reserves.

NERC data show that the Northwest has enough resource capability to serve its load under both typical and extreme conditions. This is true even in circumstances with high generator outages (i.e., lower supply than typical) and high load (i.e., higher demand than typical).

This headroom increases when considering likely-to-connect resources from the interconnection queues. In the event of extreme events that stress the grid, significant additional non-firm imports from neighboring regions would likely be available to serve load. Finally, additional rainfall from this summer’s El Niño is expected to strengthen hydroelectric reserves in the Northwest.

Taken together, the Northwest has a comfortable reserve margin above its target to serve load this summer.

Note: This takeaway and graph are more thoroughly explained on slides 30-35.



Year-Over-Year Trends in NERC Assessment Forecasts

New generation resources added to the grid continue to surpass NERC reliability assessment expectations year after year.

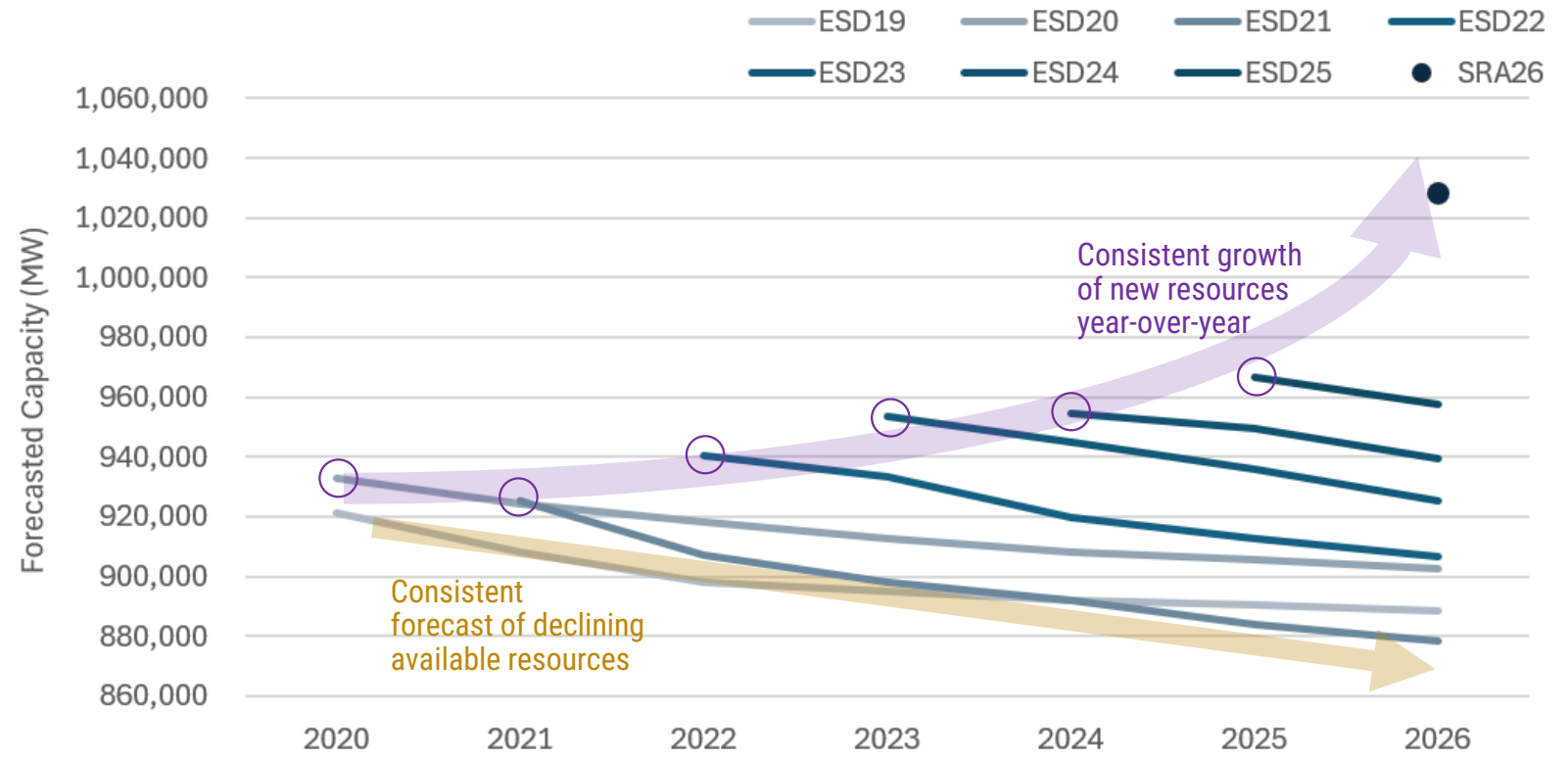
Each year NERC compiles regional planners' future projections for resource capacity added to or removed from the grid. NERC's reliability assessments assess resource adequacy using projected *certain** generation capability in future years.

NERC assessments have shown the same trend for the last 7 years in a row: anticipated future capacity is always projected to decline, even though each subsequent year's assessment consistently shows an increase in available capacity.

The NERC assessments fail to capture the year-over-year growth of "certain" resources available to meet demand.

*NERC considers any in-service generation and Tier 1 resources (those with signed interconnection agreements) to be "certain." NERC does not re-categorize any amount of Tier 2 resources (generators in advanced stages of interconnection study) as "certain" in future years, thereby missing large amounts of generation growth.

Forecasted certain on-peak resources | Sum of all regions

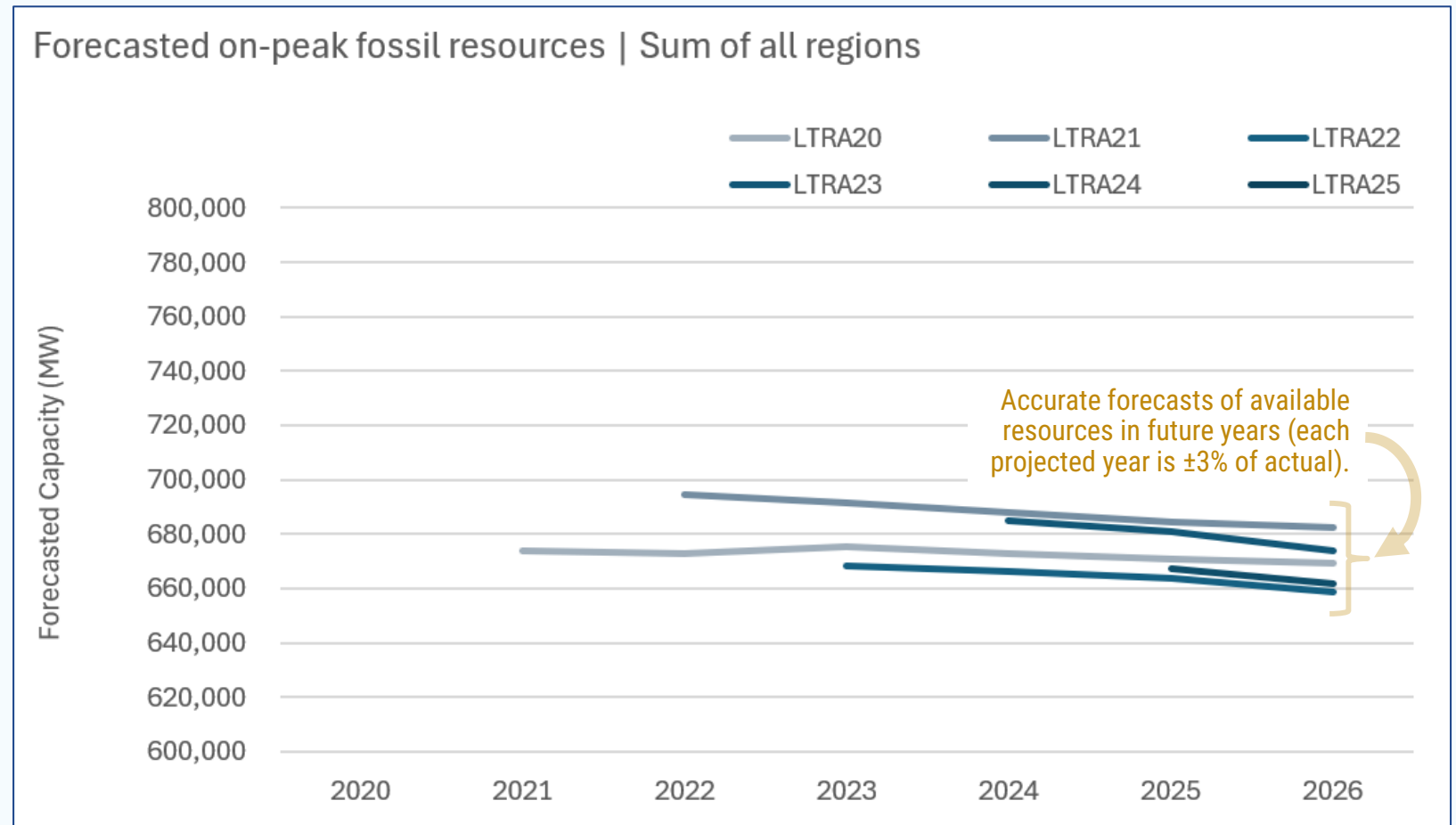


NERC assessments accurately capture resource retirements.

“Certain” resources do capture generation retirements, which appear to dominate the trends in declining future resources shown on the previous slide. Industry projections of future fossil fuel resources (coal, petroleum, and natural gas) have been roughly accurate to actualized plant availability: forecasts of future fossil fuel resource capacity are consistently within ± 20 GW ($\pm 3\%$) of the capacity that is realized in that year.

Since the decline of fossil fuel resources are accurately captured in the reliability assessments, the persistent underestimate of available future resources must instead be due to inaccuracies in industry projections for new generation being added to the grid.

Note: The y-axis has changed from the previous chart, but the range of the axis (200,000 MW) and gridline intervals (20,000 MW) are the same for comparison.

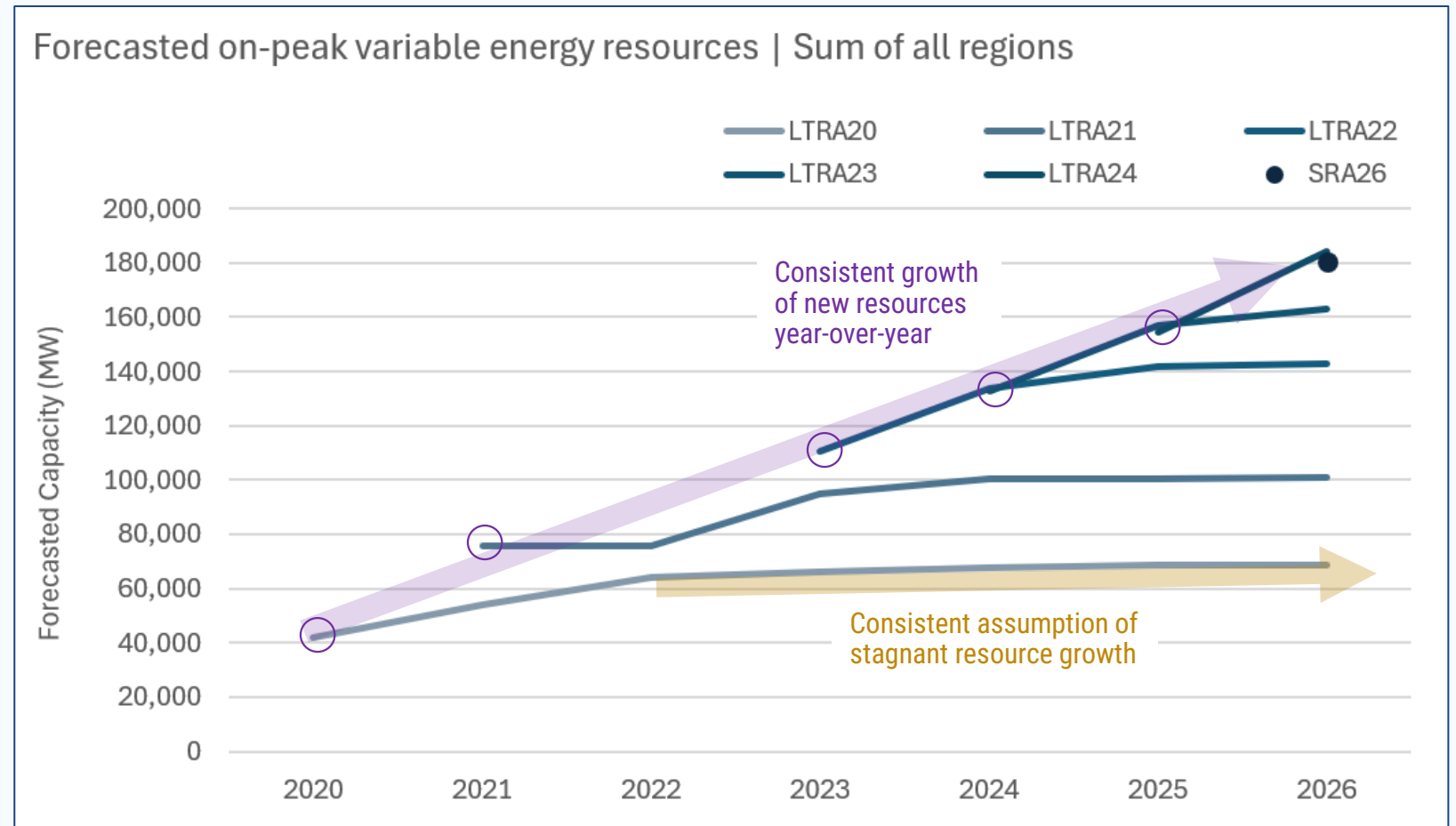


Missing from the future resource capacity forecasts are new generation additions. NERC reliability assessments consistently underestimate the pace of new generation added to the grid.

NERC assessments consistently underestimate the growth of new resources, particularly for solar, wind, and batteries. Forecasts show growth in these resources for a couple of years, but then stagnation. This is likely due to NERC's practice of only considering existing and Tier 1 resources as "certain," rather than including a portion of Tier 2 resources that are likely-to-connect. Tier 2 resources are in the interconnection queue but have not yet signed an interconnection agreement.

As a result, NERC assessments fail to capture the rapid growth of renewable energy and battery resources. A look at the resources which have been put in service each year (first data point of each line to right) shows that **new resource additions outpace both expectations and resource retirements.**

Note: The y-axis has changed from the previous chart, but the range of the axis (200,000 MW) and gridline intervals (20,000 MW) are the same for comparison.

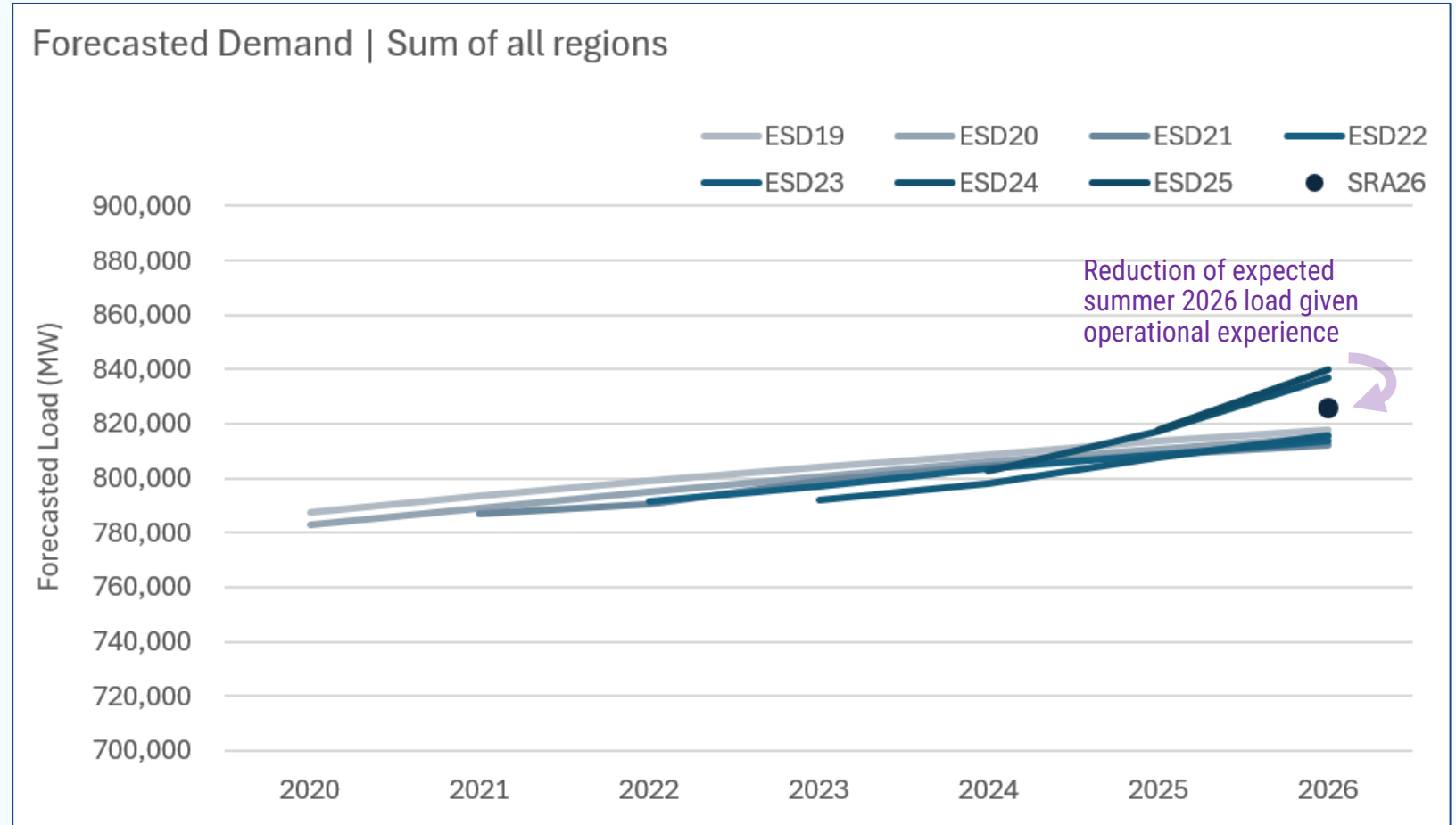


Demand growth is well-captured in NERC assessments.

NERC assessments have done a good job of estimating future load growth. There was a major change in the load growth forecasts reported to NERC in 2024 given the rise in high-electricity use industries, notably data centers.

The combination of expected milder summer 2026 weather conditions, slower pace of large load interconnections, and the operational use of data center curtailment—as highlighted by NERC in the 2026 SRA—resulted in a reduction of the expected peak load for the upcoming summer. This alleviates stress on the grid.

Note: The y-axis has changed from the previous chart, but the range of the axis (200,000 MW) and gridline intervals (20,000 MW) are the same for comparison.



Main Takeaway

By failing to capture continued growth in new generation additions—notably of solar, wind, and batteries—while accurately capturing resource retirements, industry projections of resource availability underestimate future anticipated resource capacity.

This paints an inaccurate picture of declining resource availability in a time of growing demand.

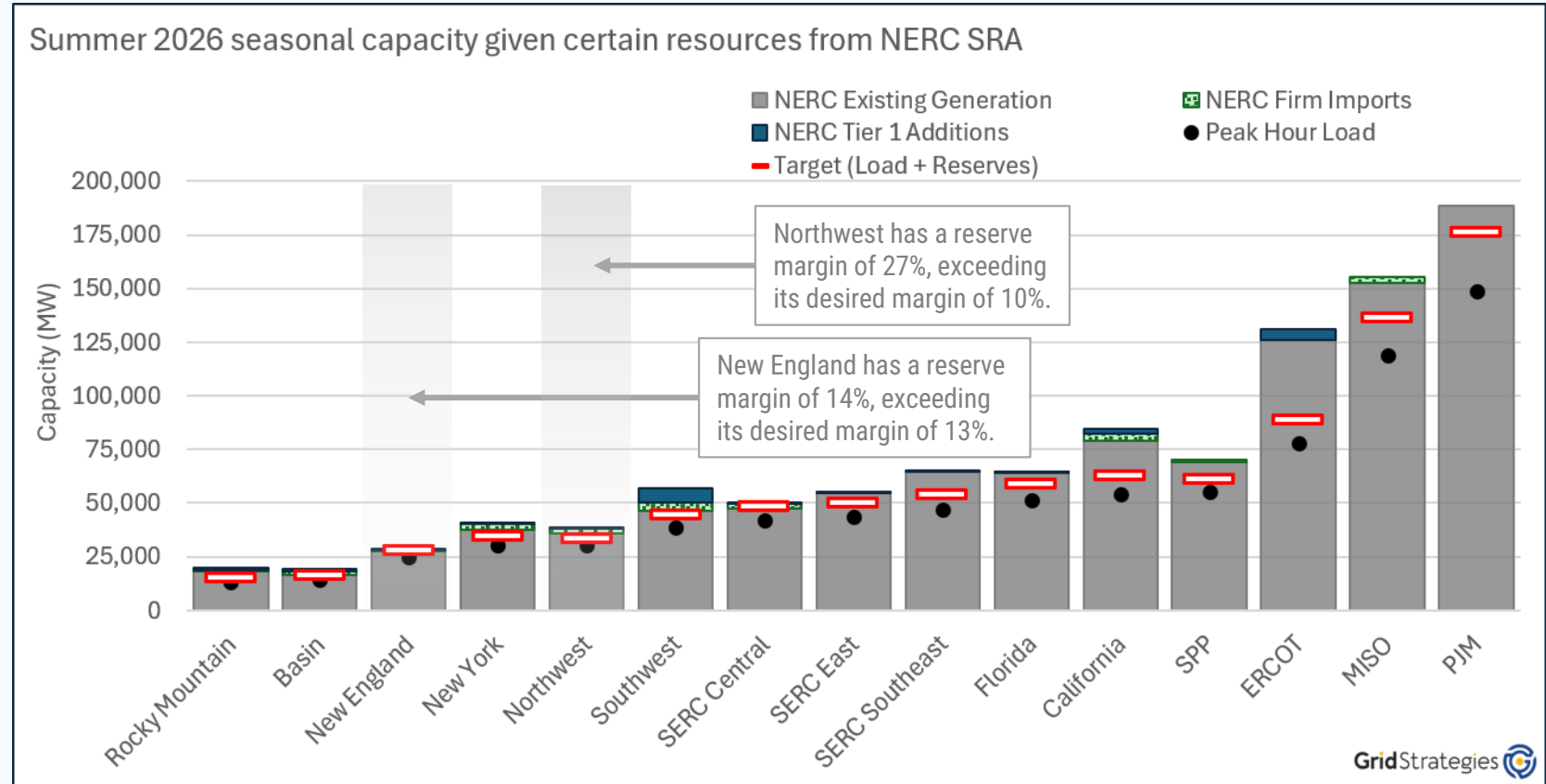
Summer 2026 Resource Adequacy Given Peak Demand and Certain Resources

NERC finds that all regions have sufficient generation capacity to exceed their target reserve margin at the highest risk hour.

NERC data shows that all regions have sufficient resources to meet their expected summer 2026 demand.

To be resource adequate, a region must have enough **existing**, **future**, and **imported** generation capacity to meet their combined load and reserve margins (labeled as “**target**” in the figures). The target is calculated using peak load. NERC only considers Tier 1 resources—those generators with signed interconnection agreements—toward “certain” future resource capacity, the implications of which are discussed on the next slide.

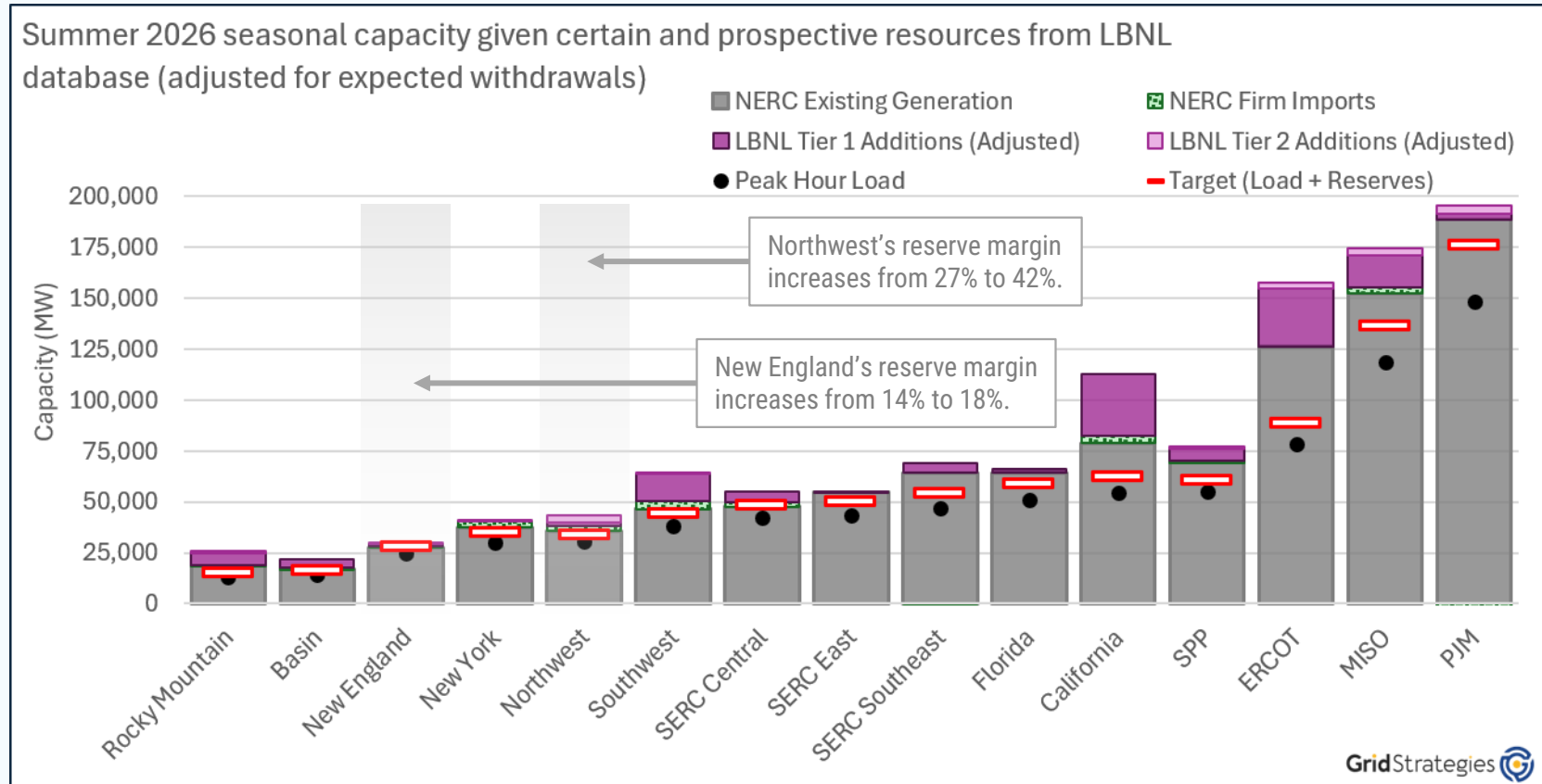
NERC identifies two U.S. regions—New England and Northwest—as having elevated risk of unserved load in summer 2026. These potential shortfalls are modeled despite having adequate resources available at peak load hour. We will explore these two regions in more detail in subsequent slides.



Using future capacity data informed by historic trends from LBNL, the amount of excess capacity at peak demand hour in each region further increases.

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 by NERC, though regional allocations vary. LBNL data also includes **Tier 2** capacity—generation progressing through the interconnection queues but without a signed agreement.

Rather than count all potential Tier 1 and omit all Tier 2 resources (as done by NERC), we apply historic regional- and queue phase-specific withdrawal rates to both resource classes from the LBNL data to estimate how much new capacity will likely come online by summer 2026.* We also cut the Tier 2 capacity in half to further discount resources likely-to-connect by summer instead of year end. This paints a more accurate picture of what capacity can be expected.



*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. See [Brooks, Goggin, Wilson \(2026\)](#) for more information.

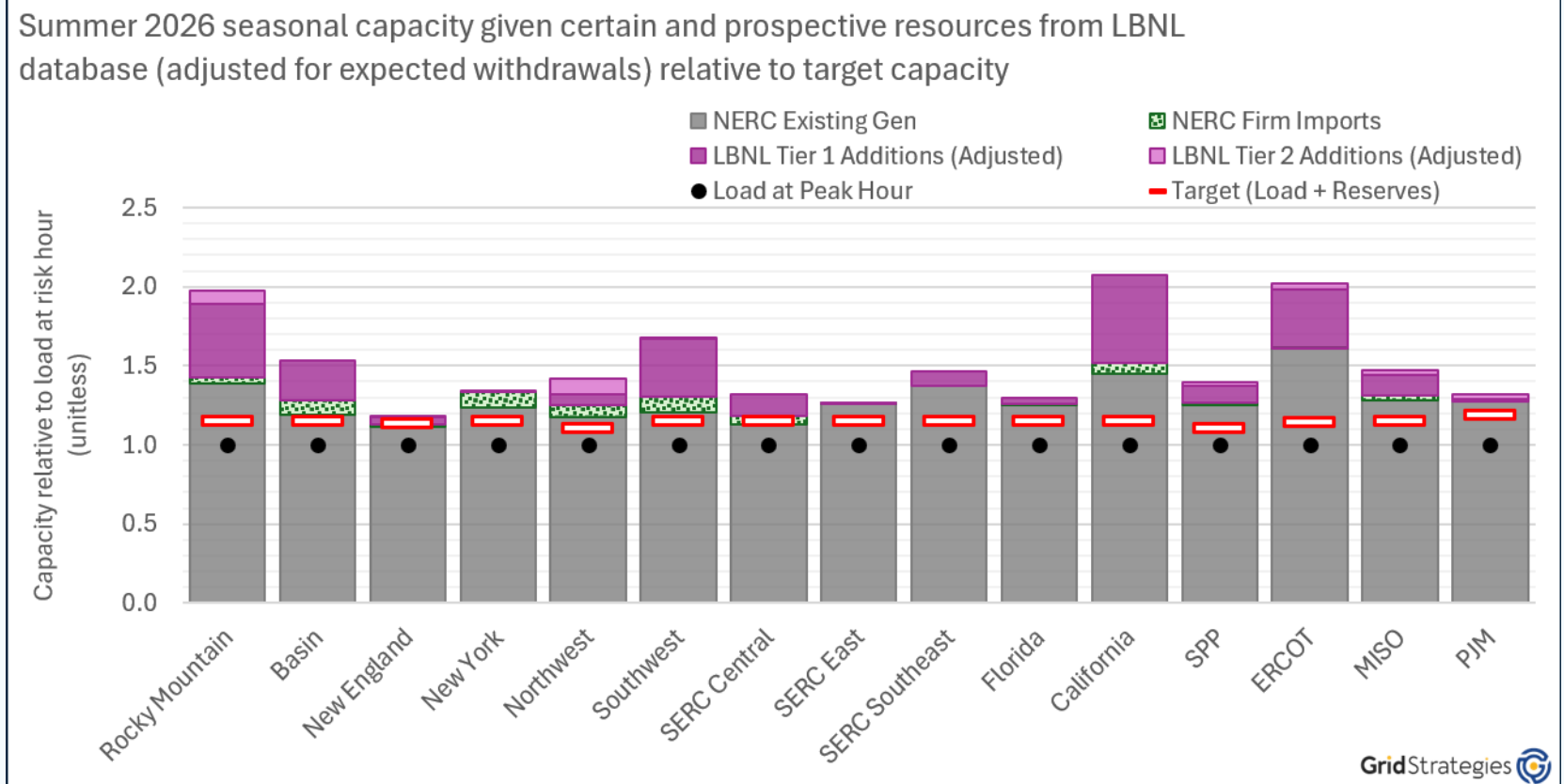
Using future capacity data informed by historic trends from LBNL, the amount of excess capacity at peak demand hour in each region further increases.

This view provides the same information as on the preceding slide, but with a better look at headroom above target resource capacity in each region.

This chart normalizes all regional resource capacity by the peak demand. In this view, peak load is set to 1 across all regions. The sum of stacked resources above the red line indicates extra available capacity above the target amount.

At the low end, New England has 5% more headroom than its target margin of 13% while, at the high end, California has 93% more headroom than its target reserve margin of 15%.

Consideration of likely-to-connect resources shows that all regions surpass their desired target capacity by comfortable margins.



Main Takeaway

We repeated NERC's resource adequacy analysis using expected future resource capacity from a reputable national laboratory database. To be conservative, we adjusted those capacities downward to account for historic regional, resource type, queue study phase, and interconnection trends.

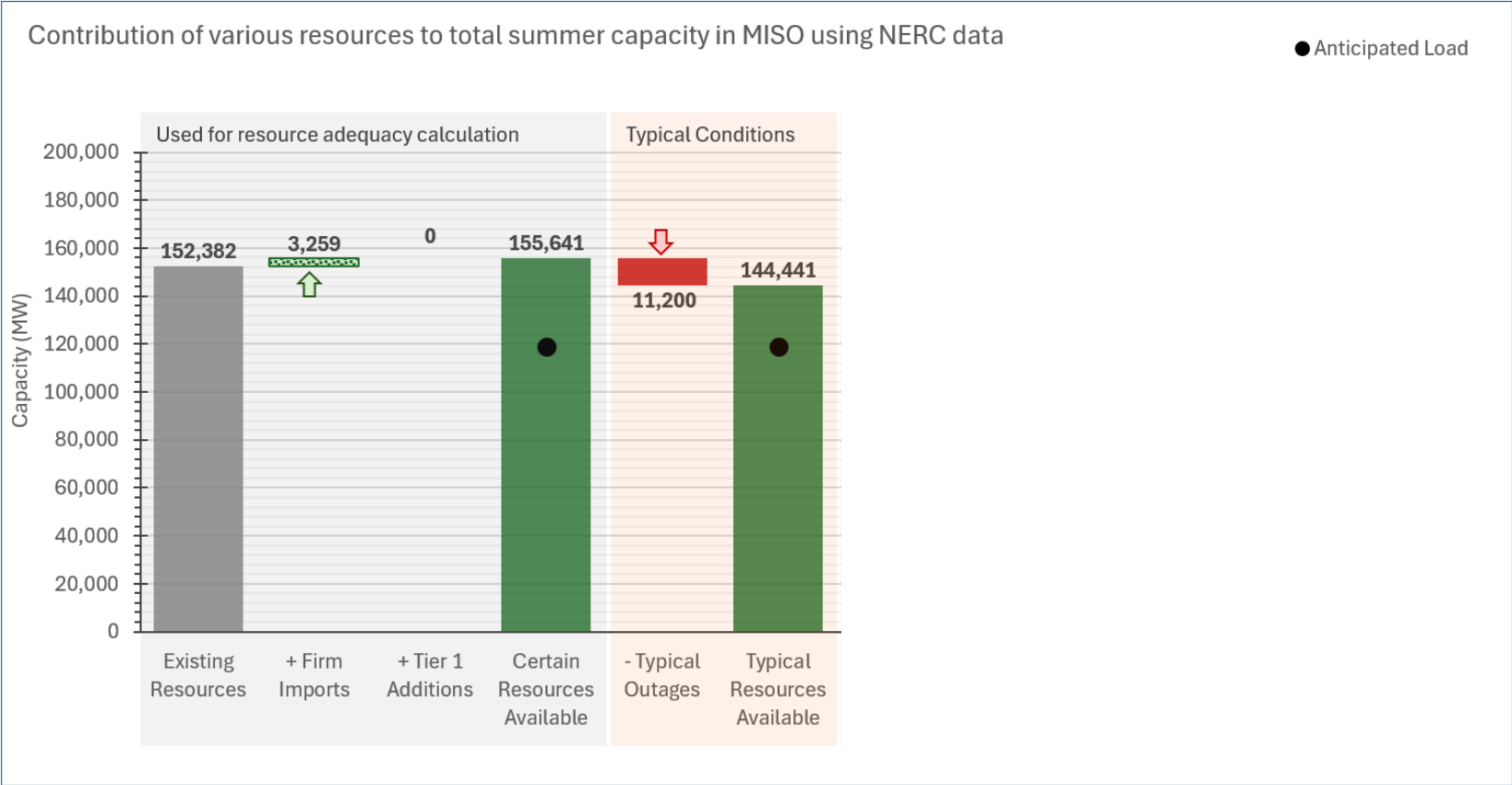
This comprehensive picture of likely-to-connect resources shows that all regions have between 5% - 93% *more* reserves than their target reserve margin.

Summer 2026 Resource Adequacy Given Typical Conditions and Extreme Events

NERC calculates anticipated reserve margin based on certain resources and peak demand. To get a more complete picture, NERC also considers typical outages and other potentially available resources to the system.

As demonstrated on the previous slides, typical resource adequacy evaluations only consider the amount of certain generation capacity against load at peak demand hour. This is highlighted to the right for an example region (MISO) as a waterfall chart. The combination of **existing** resources, **firm import** additions, and **tier 1 capacity** additions make up the “**certain**” resources, which should exceed **peak demand** (●).

But the system is rarely operating with only these resources available to it. To better demonstrate typical operating conditions, NERC also assesses a reduction in expected capacity from **typical generation outages**. The combined impact of these changes should still leave enough resource capacity to meet expected peak demand.



Extreme events further stress system adequacy. The impacts of extreme events can be tested in much the same way as typical conditions.

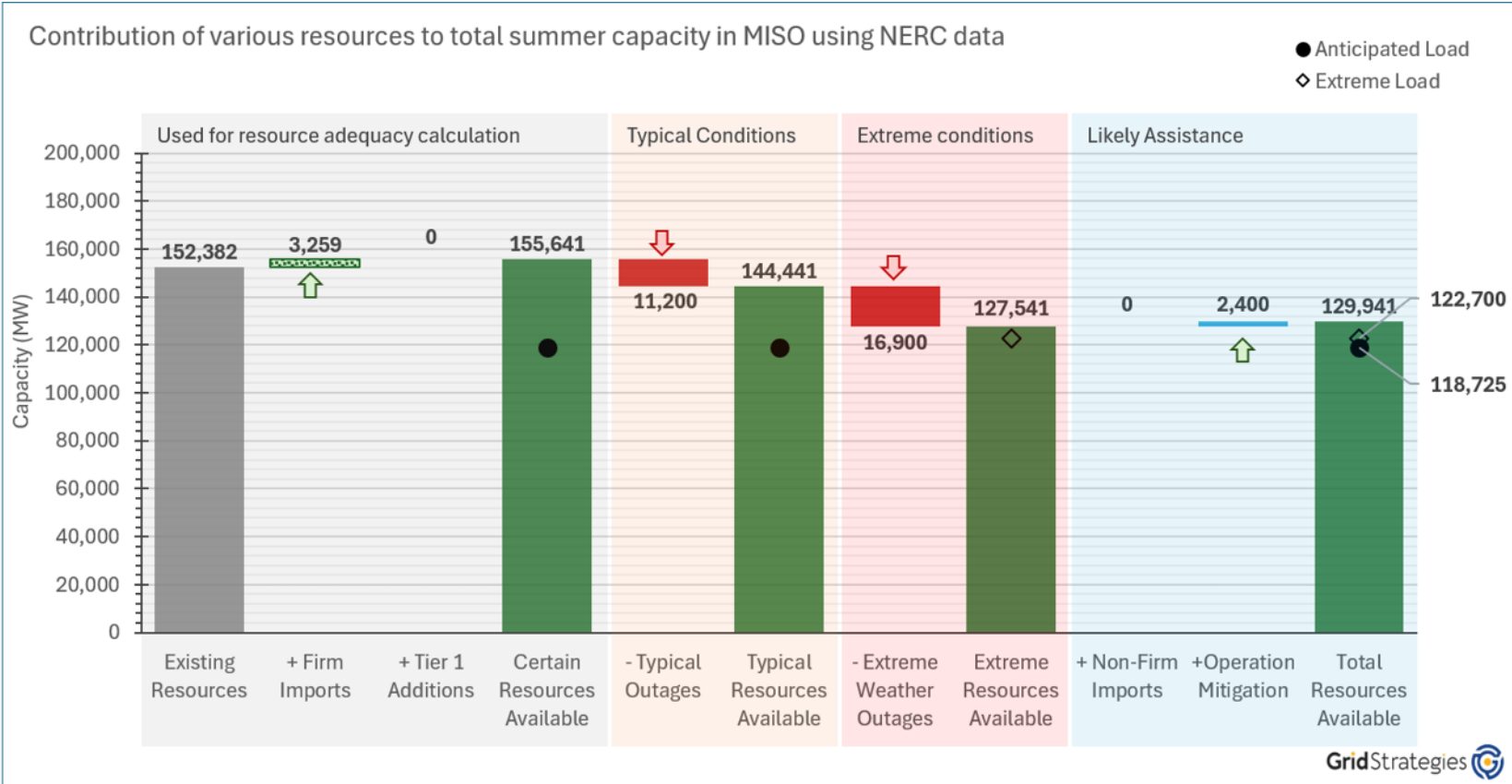
Extreme weather events stress the system in two ways: they further reduce generation availability (e.g., fuel supply freezes during a cold snap) and increased electricity demand (e.g., increased residential heating load during the same cold snap).

These impacts can be modeled as a reduction in capacity from **extreme weather outages** and as an increase in **demand** (◊). Extreme demand modeled here represents a once-in-a-decade event.

To help combat these stress impacts, operators get assistance from **non-firm imports** and **operational mitigation strategies**—such as curtailment of interruptible load and voltage reduction—to increase capacity. Though operational mitigation is only used during times of grid stress, these are common tools available to all system operators in grid stress events.

The combination of these resources should provide enough capacity to meet extreme load. The primary reason grid planners maintain reserve margins above expected peak demand is to ensure reliability even with interannual variability in demand and generation.

In this example, MISO has sufficient resources to meet both load conditions for summer 2026. This same analysis is performed for all regions to evaluate summer reliability risk.

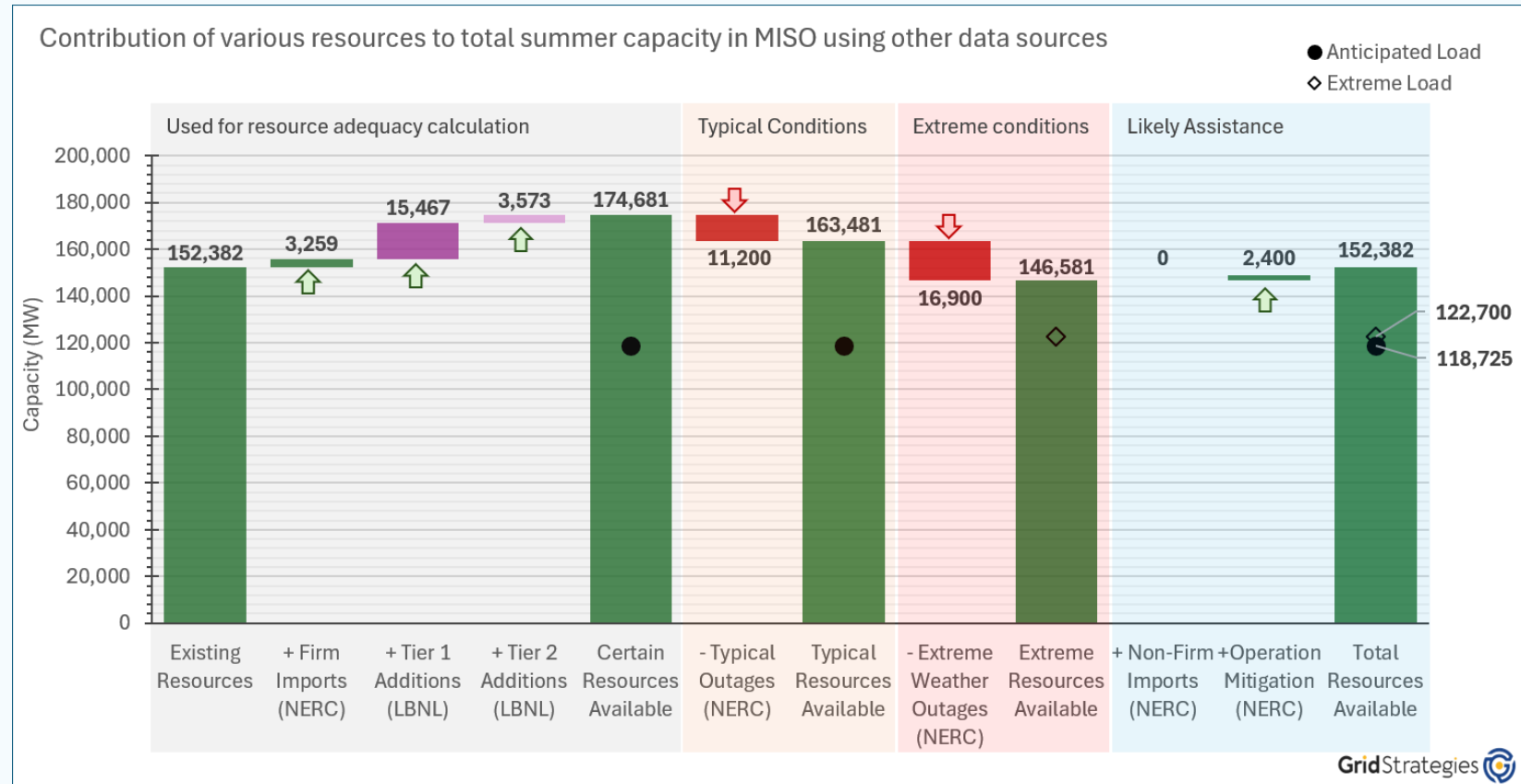


Extreme events further stress system adequacy. The impacts of extreme events can be tested in much the same way as typical conditions.

In order to better capture new generation resources that are consistently missed in the resource projections reported to NERC, we combine likely-to-connect resources from the LBNL interconnection queue data. Most data in the chart to the right remains unchanged from the resource and outage projections used by NERC, except for the **Tier 1** and **Tier 2** resource capacity data from LBNL.

Both Tier resource additions are derated using historic regional- and queue phase-specific withdrawal rates. We also cut Tier 2 capacity in half to only account for those resources that would be available by summer instead of year-end.

The available capacity in MISO increases from just under 130GW to over 152GW given this more comprehensive picture of summer resource availability.



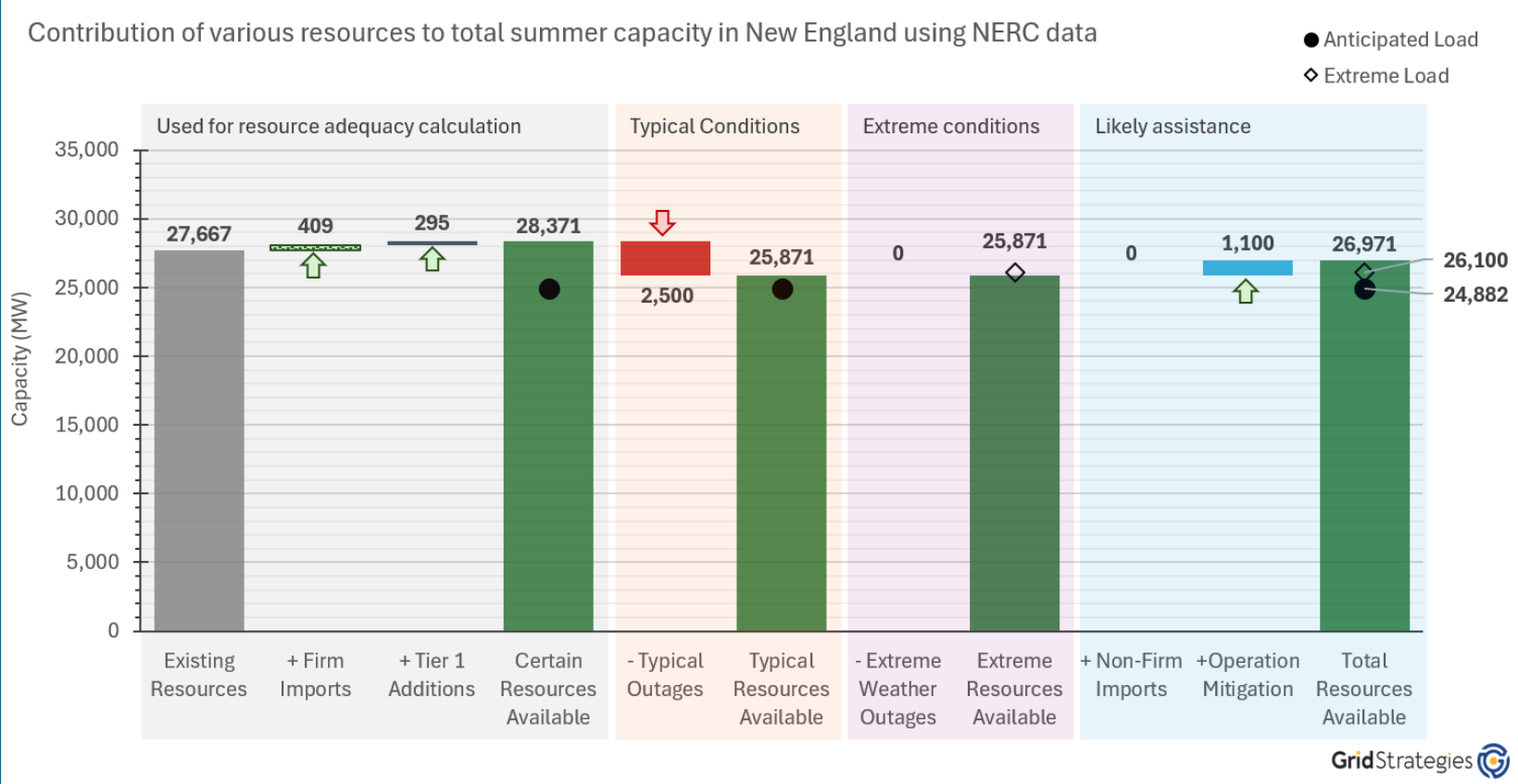
Summer 2026 System Adequacy in New England

System adequacy analysis using industry-reported data shows New England has sufficient resources to meet load under both typical and extreme weather conditions, so long as operational mitigation is employed.

NERC identified New England as at elevated risk for summer 2026, namely during extreme load conditions in June and July. NERC assigned this risk designation because resources available during typical conditions would fall 200 MW short of extreme load conditions, *absent operational mitigation*. The Northeast Power Coordinating Council (NPCC) notes that New England has between 1,145 and 4,020 MW of operational mitigation available for use this summer (NPCC, 2026). NERC only included the lower end of this range in its analysis, so even more capacity is likely to be available if needed. Operational mitigation techniques are an important tool for operators to overcome high impact and low frequency grid stress events, such as the once-in-a-decade extreme load conditions modeled here.

When operational mitigation practices are included—as they should be, especially in extreme conditions—New England has sufficient resources to meet both peak and extreme load.

All available resources exceed extreme weather-driven load by nearly 900 MW.

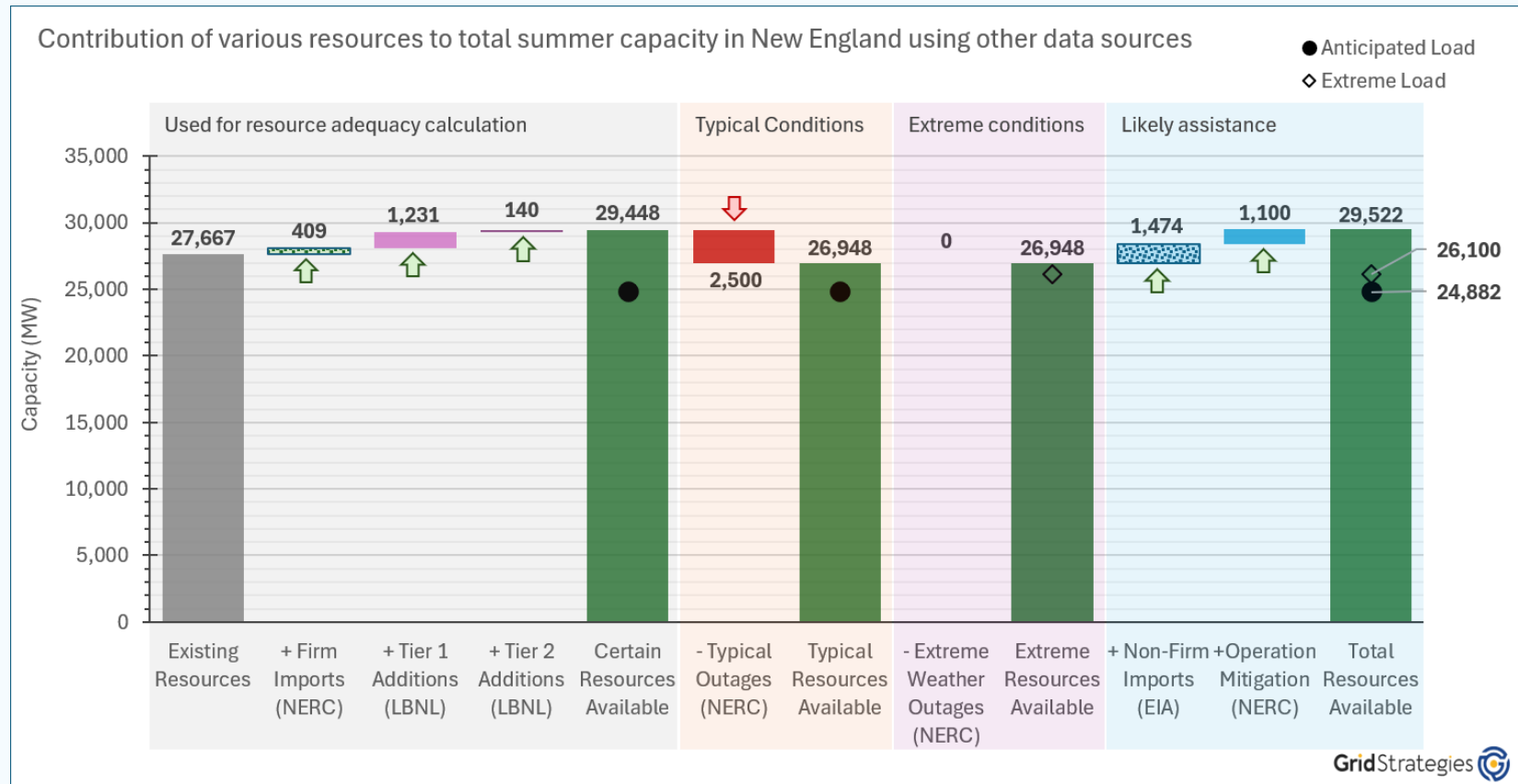


System adequacy analysis using other data sources show enough resource capacity to cover both load conditions in New England, even if operational mitigation is omitted.

When NERC data is combined with likely-to-connect **Tier 1** and **Tier 2** resources from the LBNL interconnection queue data and historic **non-firm imports** from the U.S. Energy Information Administration (EIA),* the headroom available to serve New England load increases further.

This analysis shows that New England has nearly 2,100 MW of resource headroom under typical conditions and 900 MW under extreme conditions, even without additional assistance. This headroom increases to 4,600 MW and 3,400 MW, respectively, once likely assistance is included.

New England has sufficient resources to serve its load even if operational mitigation procedures and additional non-firm imports were unavailable.

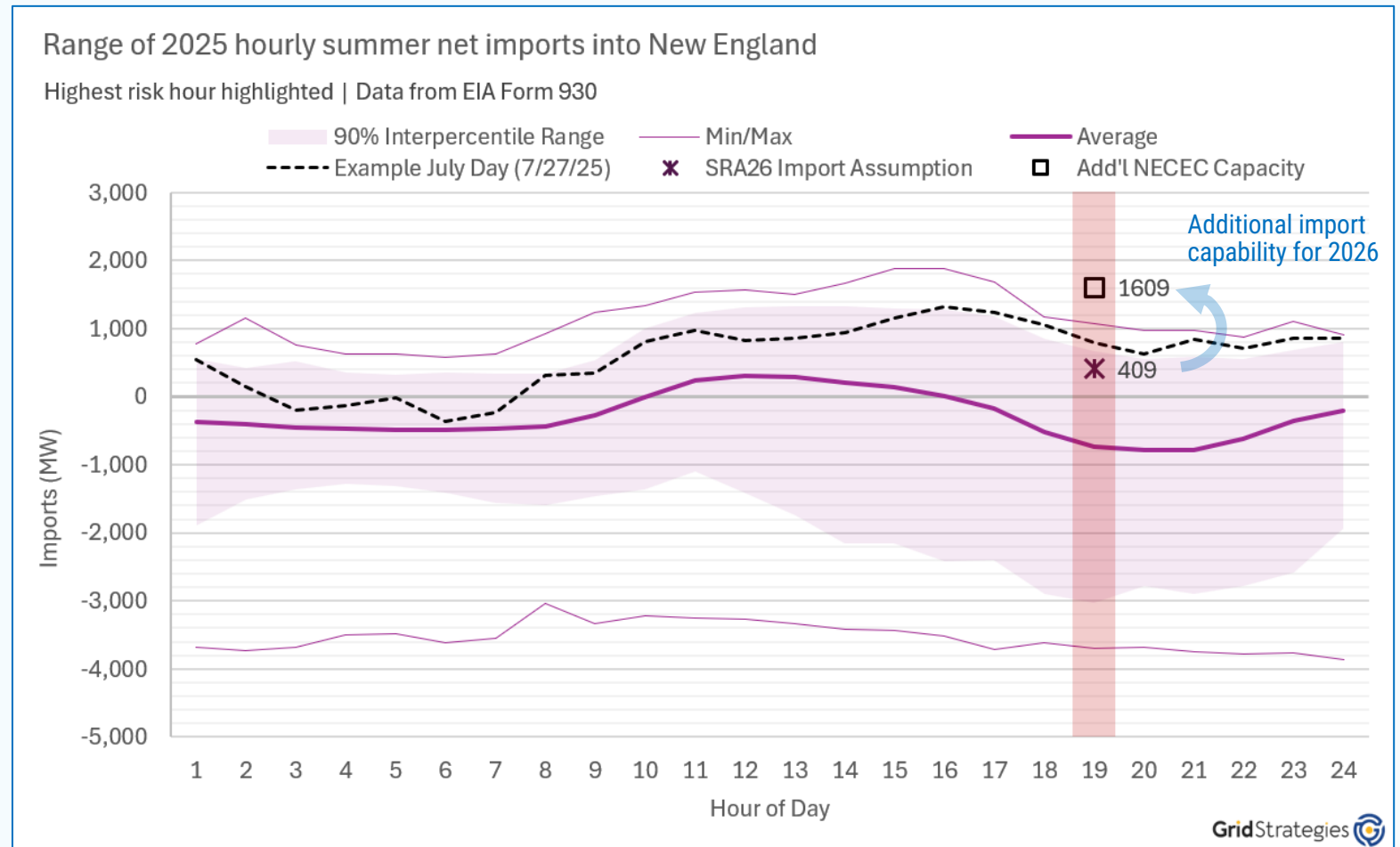


*We derate LBNL's interconnection queue data using historic regional- and queue phase-specific withdrawal rates. Tier 2 additions are further reduced by half. Non-firm imports reflect the maximum coincident import into New England summer months between 2022 and 2025, less NERC reported firm imports.

New England import assumptions used in the 2026 Summer Reliability Assessment are lower than what is likely available from neighboring regions given the recent addition of new transfer capability.

To better understand 2026 import capabilities, it is instructive to consider hourly net imports into New England during the summer months in 2025. The dotted black line shows hourly imports on an example July day. If hourly imports of every day in June – September 2025 were plotted, those values would all fall between the thin purple minimum and maximum lines, and the middle 90% of all values would fall within the purple envelope (90% interpercentile range, IPR). The average of all daily imports is shown as the thick line. The shaded red bar highlights peak summer demand hour.

NERC identified 409 MW of firm imports that would be available during highest risk hour in 2026. This value well aligns with what could have been expected in 2025 on a high import day (towards the upper end of the 90% IPR). As NERC highlights, however, this value does not include the 1,200 MW of new import capability added with the completion of the New England Clean Energy Connect (NECEC) line to Hydro-Québec (HQ). **This additional non-firm import capability further increases the headroom available to New England, by as much as the operational mitigation techniques.**



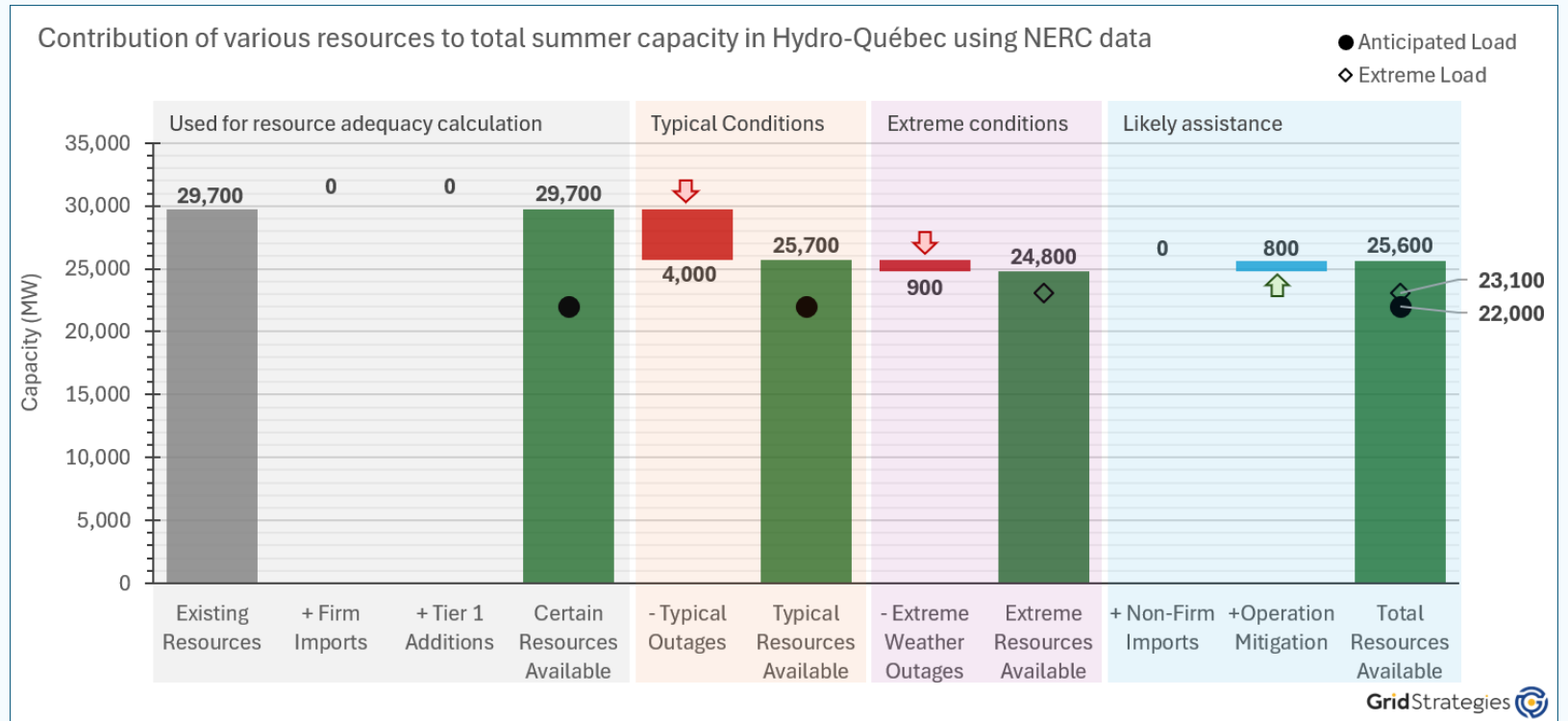
New England import assumptions used in the 2026 Summer Reliability Assessment are lower than what is likely available from neighboring regions given the recent addition of new transfer capability.

The additional 1,200 MW of import capability into New England supplied by NECEC will be useful so long as there is available generation on the other side of the facility to import.

Resource availability in Hydro-Québec was also analyzed in the 2026 Summer Assessment. NERC data shows that HQ will have 3,700 MW of excess availability under typical conditions and 1,700 MW under extreme conditions, absent operational mitigation. The NPCC identifies HQ's export capability as a key contributor to wide-area 2026 summer reliability, including in New England (NPCC, 2026).

Even under the worst case that HQ experiences extreme conditions when New England desires additional imports, NERC data shows that HQ will have enough resources to meet its own needs and export excess power to the U.S.

Notably, HQ exports power to both New York and New England. NERC found that New York has normal risk this summer, without additional non-firm import assistance. This should ease any need for HQ to export excess power to both U.S. regions in the event of coincident extreme events, prioritizing more assistance for New England.



Region	2024 Import Capability from HQ (NERC, 2024)	Additional 2026 Import Capability from HQ (NERC, 2026)	Combined Import Capability from HQ
ISO-NE	1000	1200	2200

Main Takeaway

NERC data shows that New England has enough resource capability to serve its load under both typical and extreme conditions, so long as operational mitigation strategies are employed as designed. This headroom to serve load increases when considering likely-to-connect resources from the interconnection queues, even without operational mitigation. Finally, additional imports from Canada will be available to serve load this summer.

Taken together, these resources provide New England with a comfortable reserve margin above its target to serve load this summer.

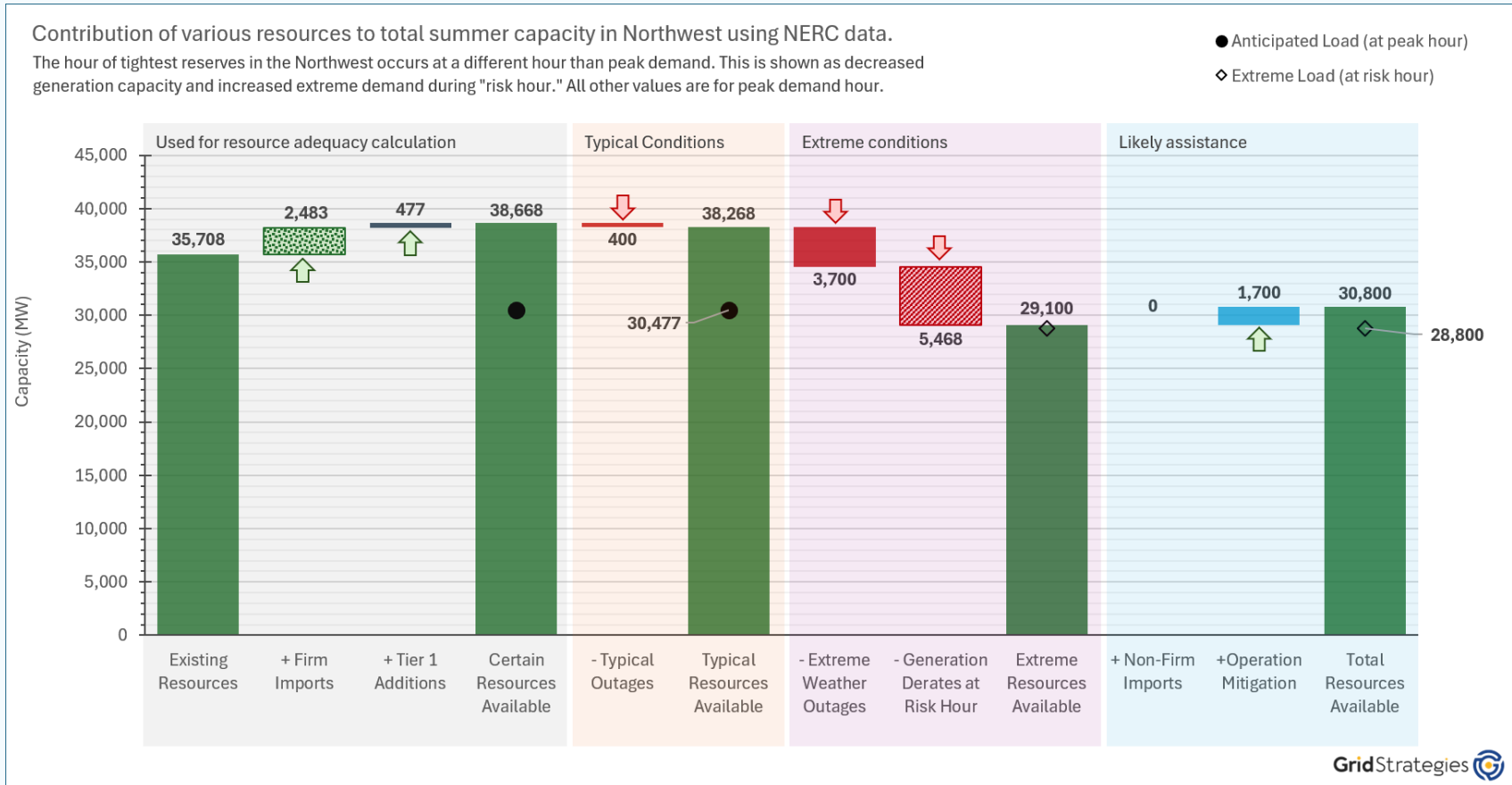
Summer 2026 System Adequacy in the Northwest

Capacity adequacy analysis using industry-reported data shows the Northwest has sufficient resources to meet load under both typical and extreme weather conditions.

Resource projections reported to NERC show the Northwest has ample resources—over 8,000 MW—to serve peak load. Under extreme load conditions, reported data shows this headroom reduces to 300 MW, absent usage of other available tools not already included in that calculation. Given this low headroom during extreme conditions at risk hours,* NERC identified that a small amount of unserved energy is possible and designated the region as elevated risk for summer 2026.

Like in New England, the low headroom during extreme, once-in-a-decade load conditions is only present absent operational mitigation. Industry-reported data indicates the addition of operational mitigation increases this headroom to 2,000 MW.

Even at highest risk hour, industry-reported data shows that the Northwest has sufficient resources to meet load under both typical and extreme conditions, especially given operational mitigation.



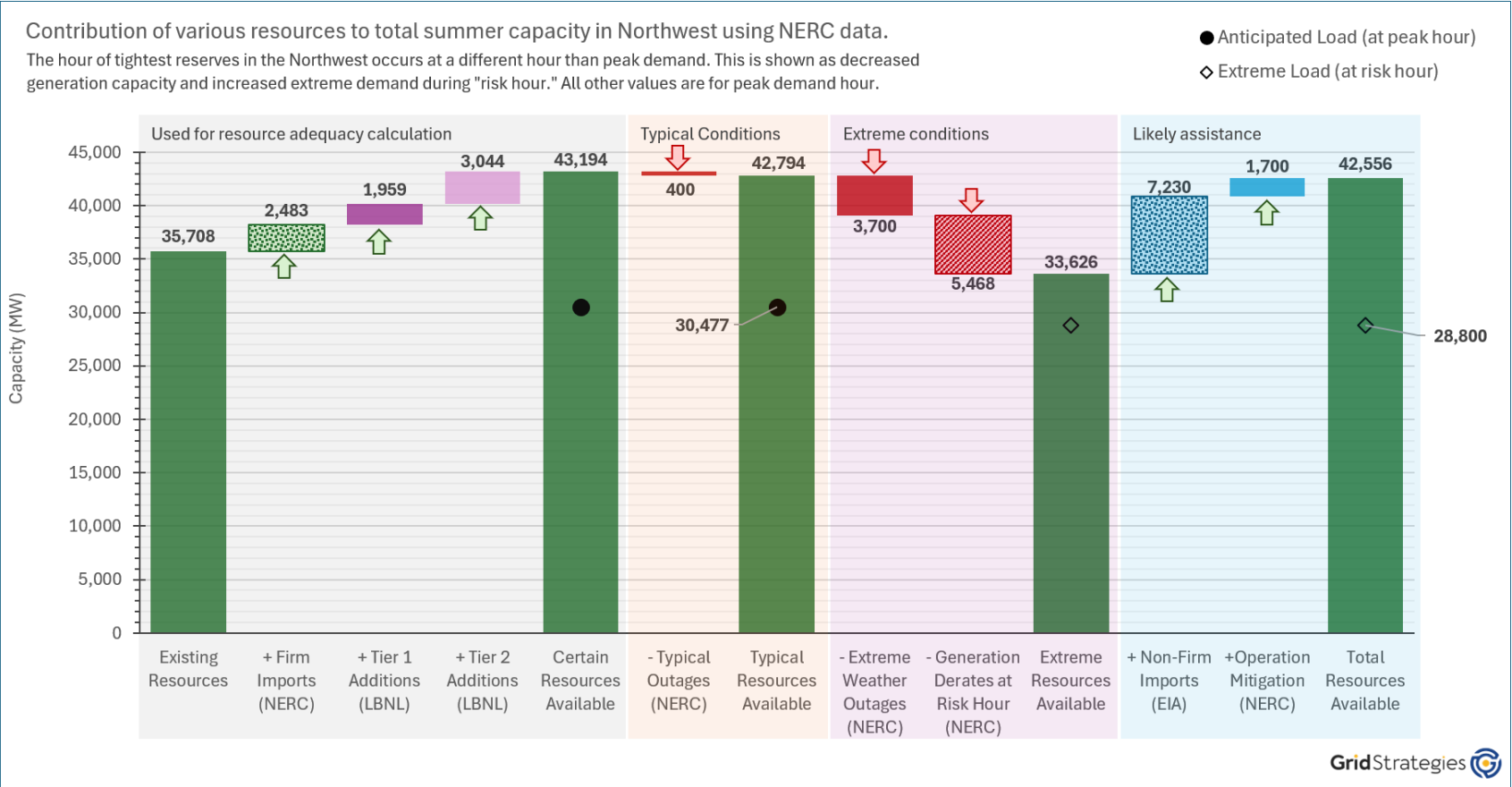
*Unlike other regions, high risk hours in the Northwest occur at times other than peak demand. Expected load at risk hour under typical conditions was not reported by NERC, so we can only assess typical conditions at peak load hour and extreme conditions at risk hour.

System adequacy analysis using other data sources shows enough resource capacity to cover both load conditions in the Northwest, even if operational mitigation is omitted.

When NERC data is combined with likely-to-connect **Tier 1** and **Tier 2** resources from the LBNL interconnection queue data and historic **non-firm imports** from EIA,* the headroom available to serve the Northwest load increases further.

This analysis shows that the Northwest has over 12,300 MW of resource headroom to serve peak load under typical conditions and over 4,800 MW under extreme conditions at highest risk hour, even without additional assistance. This headroom under extreme conditions at peak hour increases to over 13,700 MW once likely assistance from non-firm imports and operation mitigation is included.

When NERC assumptions are combined with likely-to-connect resources from the LBNL interconnection queue database and historic imports from EIA, the Northwest is shown to have ample resource capability to meet all load conditions.



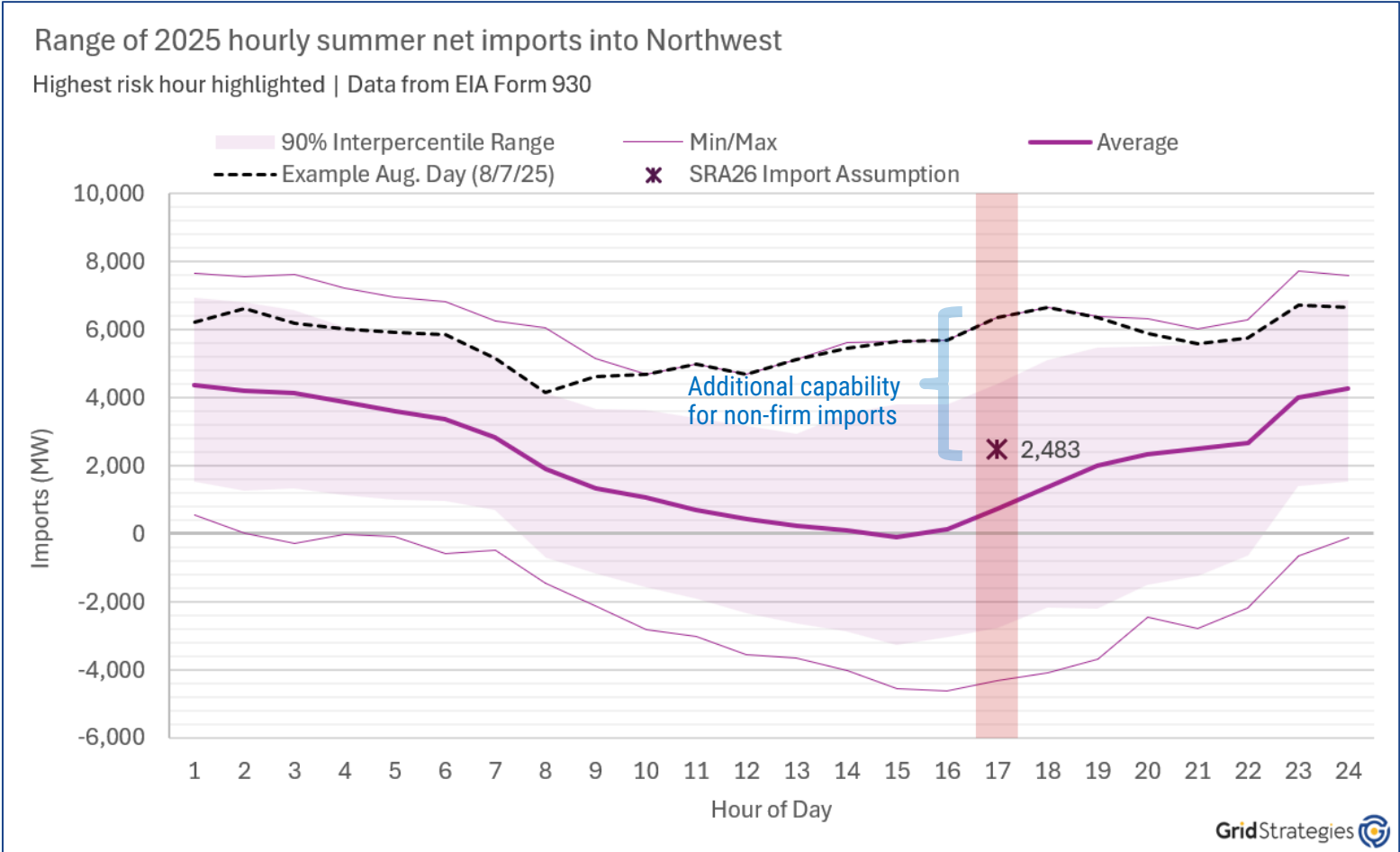
*We derate LBNL's interconnection queue data using historic regional- and queue phase-specific withdrawal rates. Tier 2 additions are further reduced by half. Non-firm imports reflect the maximum coincident import into the Northwest during summer months between 2022 and 2025, less NERC reported firm imports.

Northwestern import assumptions used in the 2026 Summer Reliability Assessment is lower than what may be available from neighboring regions.

The figure to the right describes the full range, 90% interpercentile range, and average net hourly imports into the Northwest for every summer day (June – September) in 2025. The daily hourly imports for the August 2025 day with highest afternoon imports is also shown as an example. This captures both firm and non-firm imports. High risk hour (17:00) is highlighted.

NERC assumes just shy of 2,500 MW of firm imports will be available to the Northwest this summer. This is significantly lower than the 6,350 MW of resources imported by the Northwest at risk hour in August 2025. This suggests that a significant amount of non-firm imports are likely to be available to the Northwest, depending on the conditions in neighboring regions.

As previously shown, NERC’s assessment of neighboring Western regions all show ample resource capability this summer, with reserve margins between 28% and 54% under typical conditions, well above target margins. Import assistance from these regions should be available up to the historic import limit. The addition of large quantities of solar and batteries in California should also increase its ability to export to the Northwest during the highest risk hour.

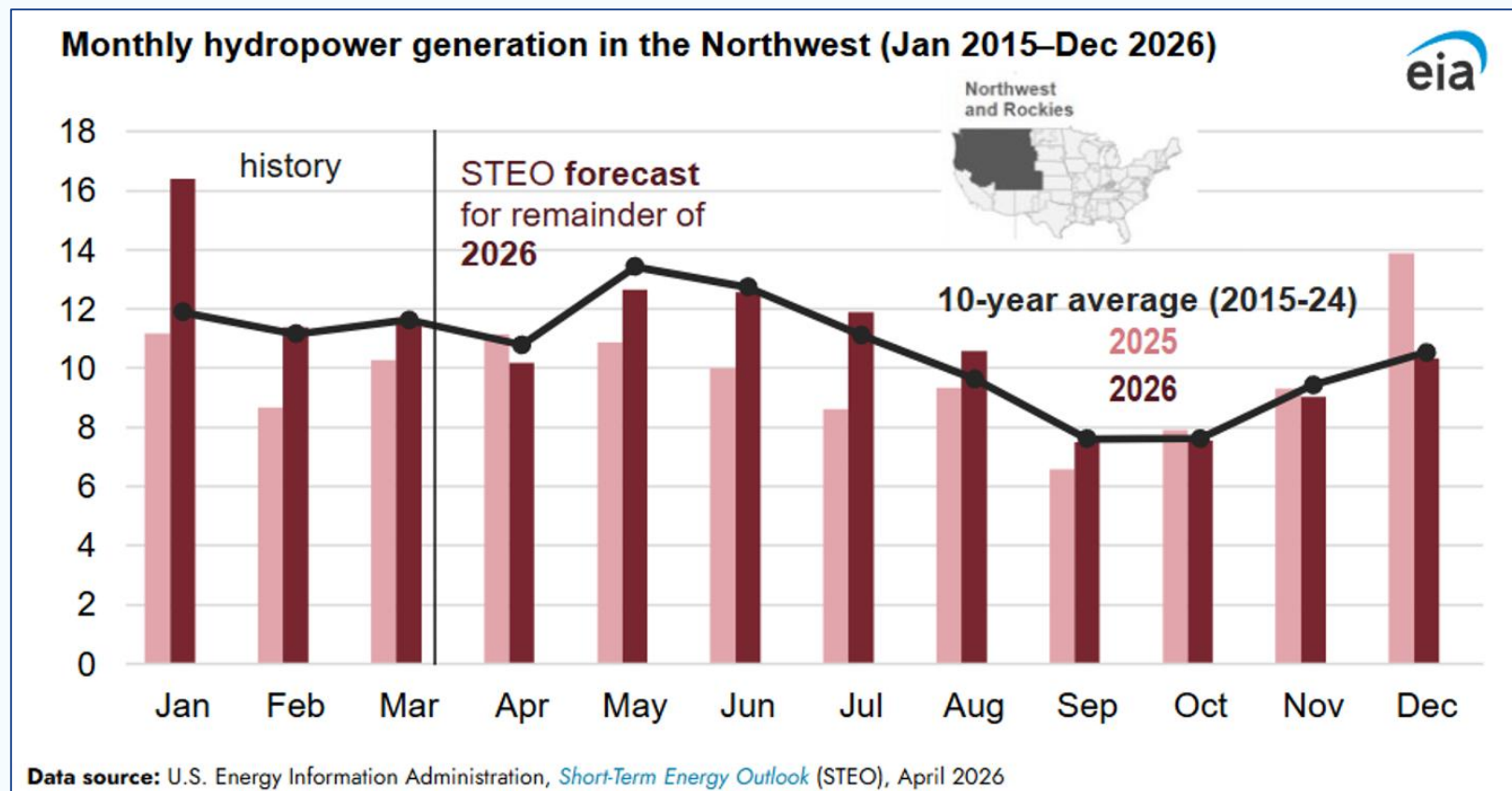


Hydroelectric resource availability may not be as bad this year as forecasted in the 2026 Summer Reliability Assessment.

As NERC notes, the combination of historic drought and increased ambient temperatures resulted in little snowpack during the 2025/2026 winter, which typically recharges hydroelectric reserves in the spring and summer as it melts. This led NERC to forecast low hydroelectric activity for the Northwest in the 2026 SRA.

An El Niño weather event was predicted but not yet certain when the 2026 SRA was released. Since then, the National Oceanic and Atmospheric Administration (NOAA) has confirmed that we are experiencing an El Niño (NOAA, 2026a). In the near-term, NOAA and EIA anticipate the El Niño will bring near average precipitation through summer and fall, partially restoring reserves for at least the upcoming season (NOAA, 2026b)(EIA, 2026).

The EIA expects the combination of high 2025/2026 winter rainfall and forecasted high summer 2025 rainfall (see chart to right) to restore hydroelectric reserves in northwestern dams to their 30-year averages, including in August and September, the months identified by NERC as highest concern (EIA, 2026).



Main Takeaway

Industry-reported data shows that the Northwest has sufficient resource capability to serve its load under both typical and extreme conditions, especially when operation mitigation procedures are included. This headroom increases when considering likely-to-connect resources from the interconnection queues. In the event of extreme events that stress the grid, significant additional non-firm imports from neighboring regions should be available to serve load. Finally, El Niño conditions this summer are likely to restore historically low hydroelectric reserves to 30-year averages.

Taken together, these resources provide the Northwest with a comfortable reserve margin above target capacity to serve load this summer.

Conclusions and Solutions

All regions have sufficient resources to meet 2026 summer load, including the two regions NERC identified as at elevated risk. The combination of regional resources, imports, and operational mitigation enables sufficient capacity across the board.



- NERC data shows that all regions have sufficient capacity—regional generation, imports, and operational mitigation procedures—to meet load under both typical and extreme conditions.
- Resource capacity forecasts compiled by NERC persistently underestimated the rate of new generation additions, especially for renewable energy resources.
- When NERC’s forecasts of new capacity additions are replaced with historically-informed data from the interconnection queues, the headroom of available capacity increases to well above target reserve margins in all regions.
- While hydropower availability under historic drought conditions should not be ignored in the long-term, hydroelectric conditions in the Western U.S. are likely to return to 30-year averages this summer.



- Implementing operational mitigation procedures during grid stress conditions is standard practice and should not be overlooked when assessing system adequacy.
- As NERC highlights in the 2026 SRA, calling on large loads to reduce their demand is another important tool to overcoming grid stress conditions. Grid operators can look for opportunities to increase the number of large load customers contracted to provide this service.



- NERC capacity assessments do not include non-firm imports from neighbors that regularly occur during both typical and grid stress conditions. A look at historic imports from neighboring regions with excess generation capacity suggests that plenty of non-firm assistance will be available to the regions with tighter reserve margins.