

Demand at Risk by Subregion

WECC's annual [Western Assessment of Resource Adequacy](#) (Western Assessment) examines resource-adequacy-related risks concerning the reliability of the Western Interconnection over the next 10 years. Through an energy-based probabilistic approach, WECC looks at the risks throughout the interconnection and five subregions (See Figure 1). This work is meant to help stakeholders target specific areas and topics for deeper evaluation and mitigation.

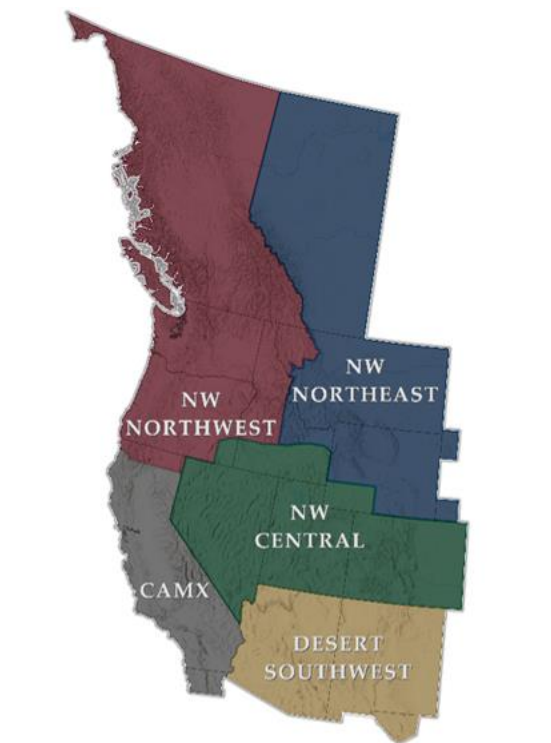


Figure 1: Map of the Western Interconnection with subregions

In the 2024 Western Assessment, WECC studied four resource addition scenarios. In the first scenario (All Additions), all planned resource additions come online in the year scheduled over the next 10 years. The remaining scenarios examine the effects on reliability if only 95%, 85%, and 55% of planned resource additions come online on schedule. This document provides noteworthy demand-at-risk takeaways within the subregions studied.

All Additions

There was demand at risk in one subregion, NW-Northwest, in the scenario in which all planned resource additions were made. A total of 89 demand-at-risk hours appeared in this scenario, with all but four of those hours occurring in the winter (See Figure 2). Most of the risk occurred in 2029 and later years, peaking at 26 hours in 2034.

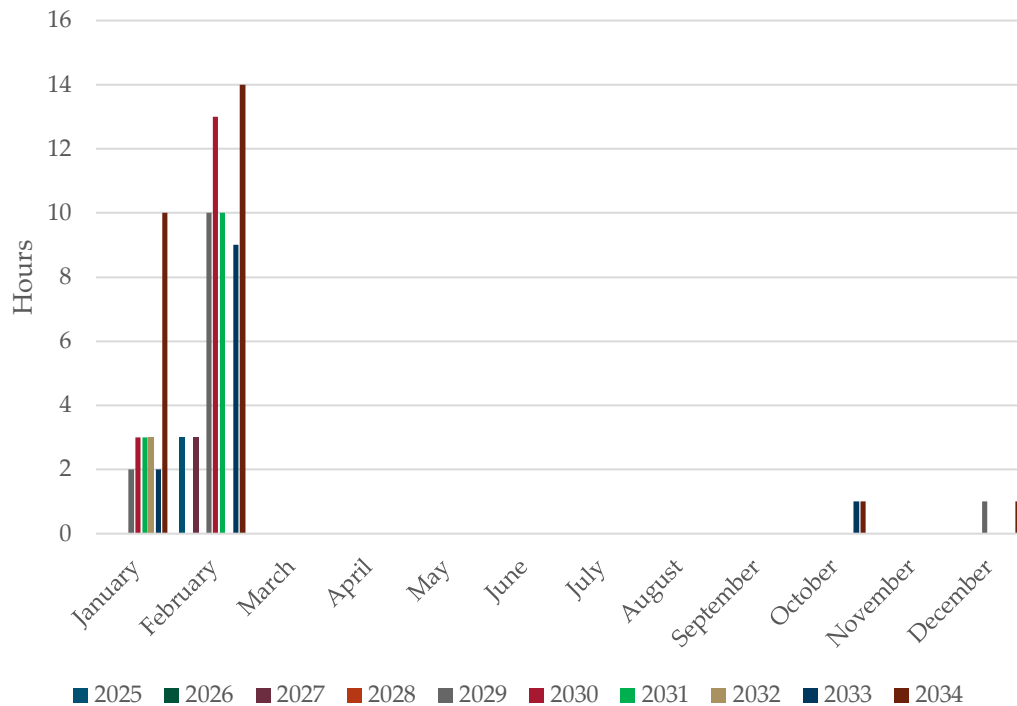


Figure 2: Demand-at-risk hours in the NW-Northwest subregion in the All-Additions scenario

95% Scenario

Demand at risk appeared in two subregions in this scenario: NW-Northwest and NW-Northeast. As in the 100% scenario, most of the demand at risk occurred in the winter months in the NW-Northwest (See Figure 3). In the NW-Northeast, all but four of the demand-at-risk hours occurred in August, beginning with one hour in 2027 and increasing to 51 hours in 2034 (See Figure 4).

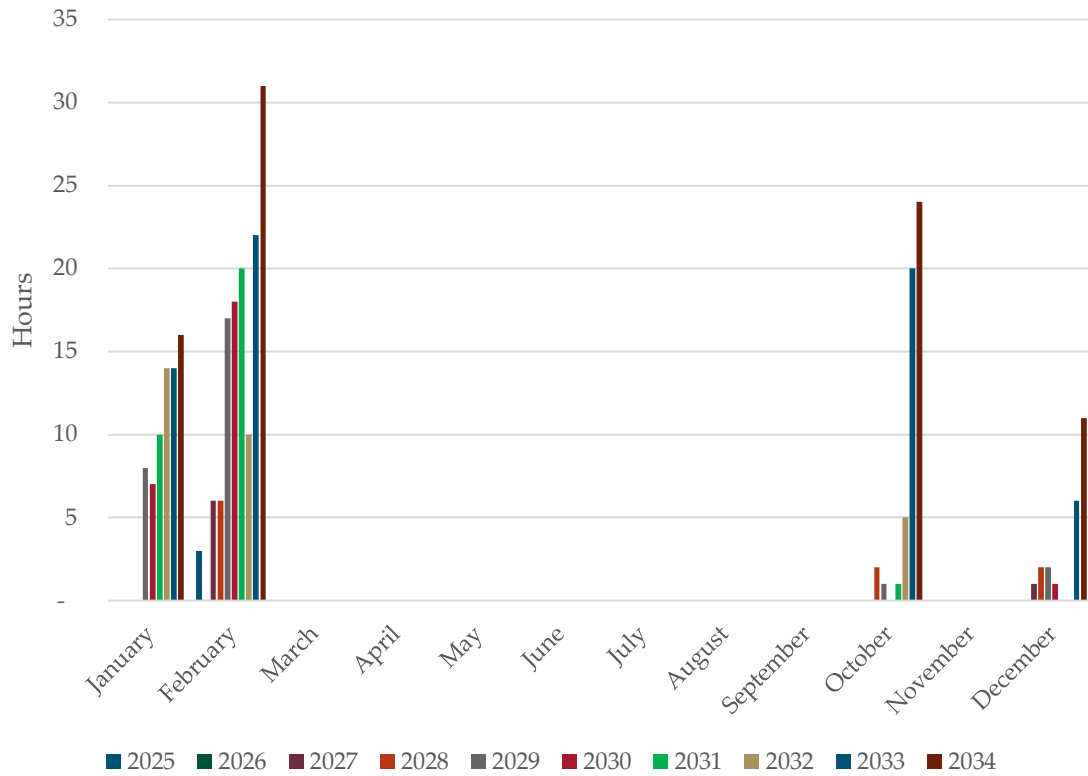


Figure 3: Demand-at-risk hours in the NW-Northwest subregion in the 95% scenario

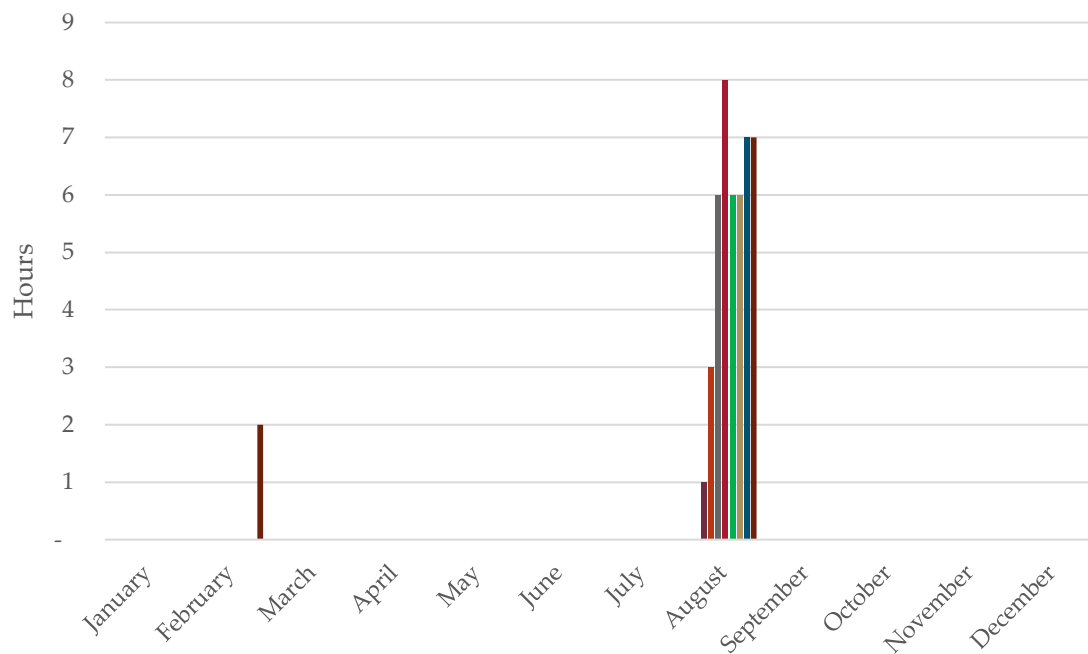


Figure 4: Demand-at-risk hours in the NW-Northeast subregion in the 95% scenario

85% Scenario

Demand at risk occurred in three subregions in this scenario: NW-Northwest, NW-Northeast, and NW-Central. Only one hour of demand at risk appeared in the NW-Northeast subregion (See Figure 6), in August 2034, while 94 hours appeared in the NW-Central (See Figure 7), all between June and September and with almost half of that in 2034. In the NW-Northwest, 311 demand-at-risk hours appeared in this scenario, most of that in the winter (See Figure 5).

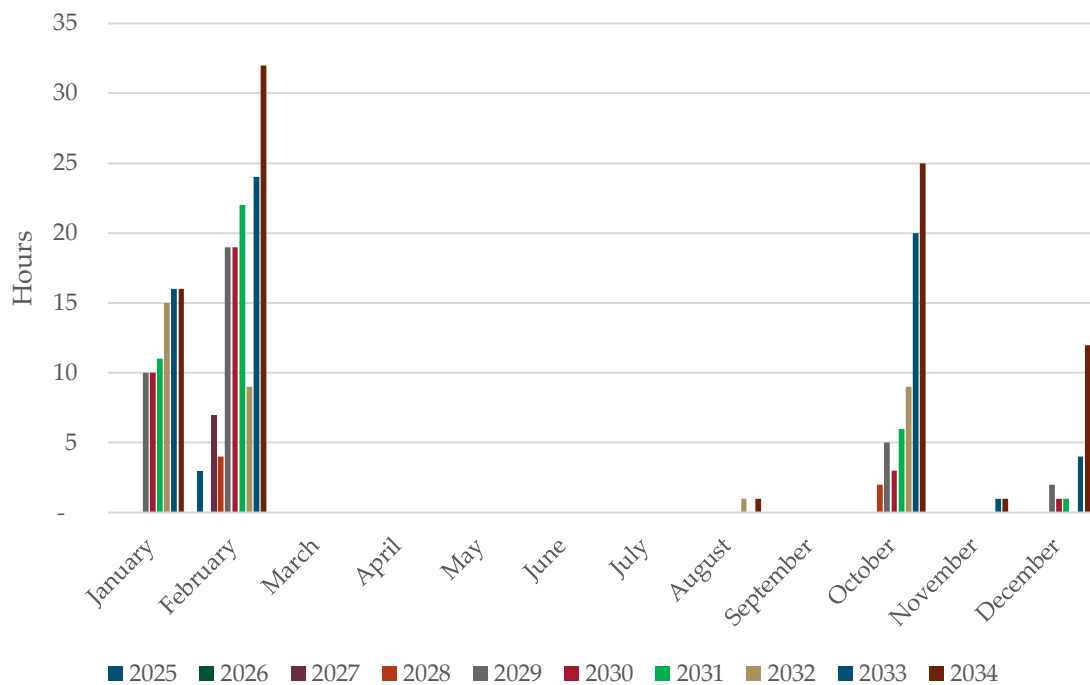


Figure 5: Demand-at-risk hours in the NW-Northwest subregion in the 85% scenario

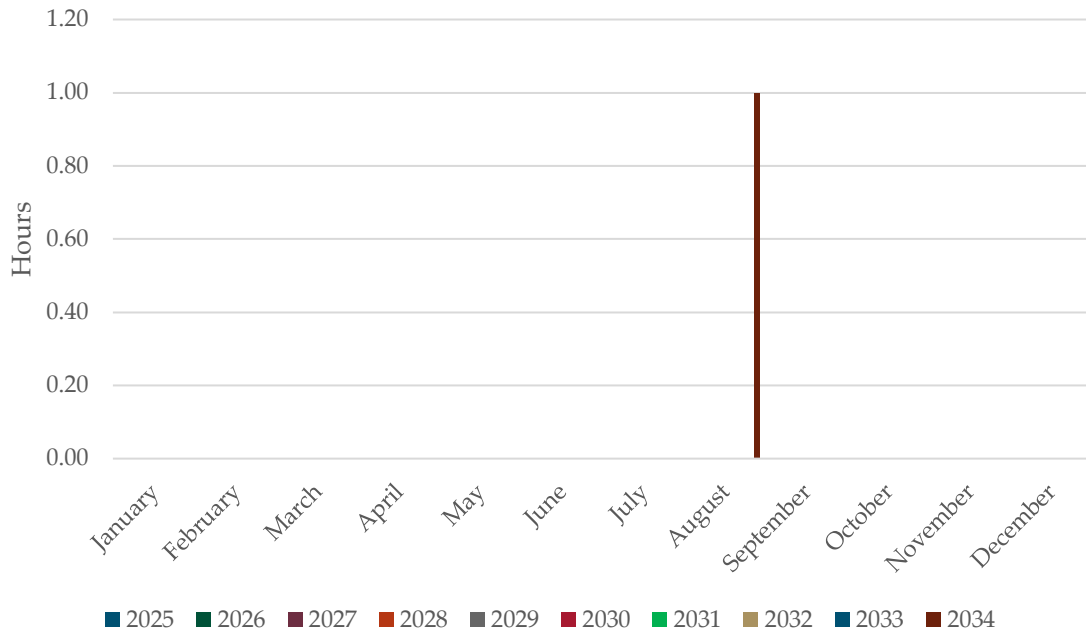


Figure 6: Demand-at-risk hours in the NW-Northeast subregion in the 85% scenario

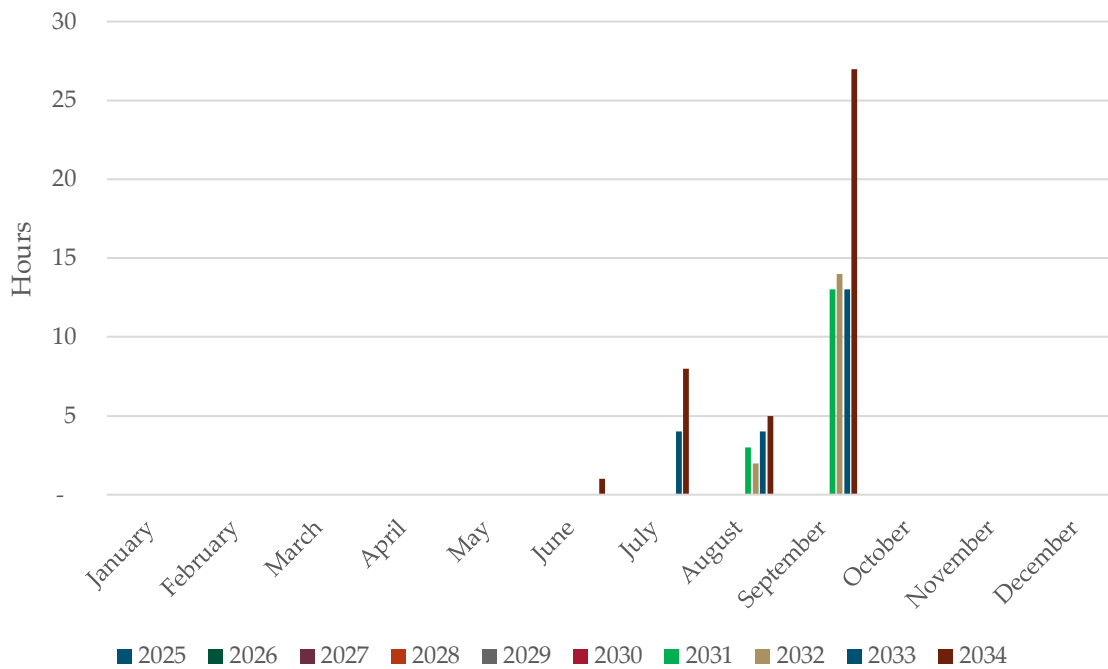


Figure 7: Demand-at-risk hours in the NW-Central subregion in the 85% scenario

55% Scenario

Demand at risk increased to four of the interconnection's five subregions in this scenario. Again, the most demand at risk occurred in the NW-Northwest in this scenario (See Figure 9), beginning in 2025 with eight hours and increasing to almost 800 hours in 2034. Most of the demand at risk in the other subregions occurred in the summer (See Figure 8, 10, and 11).

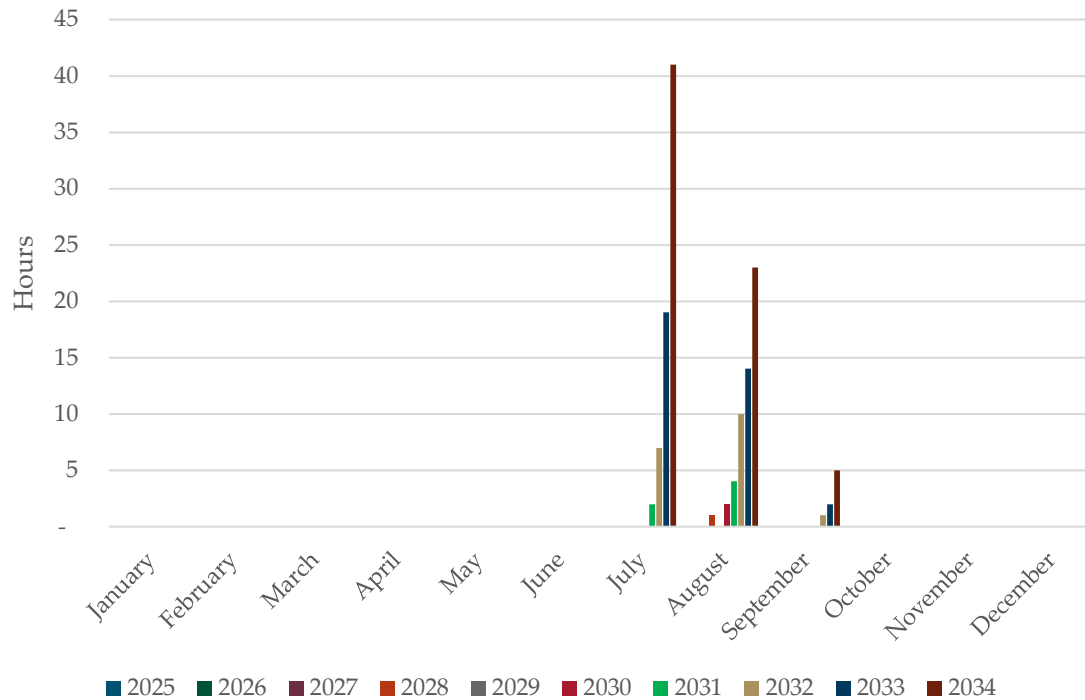


Figure 8: Demand-at-risk hours in the Desert Southwest subregion in the 55% scenario

Western Assessment 2024

Demand at Risk by Subregion

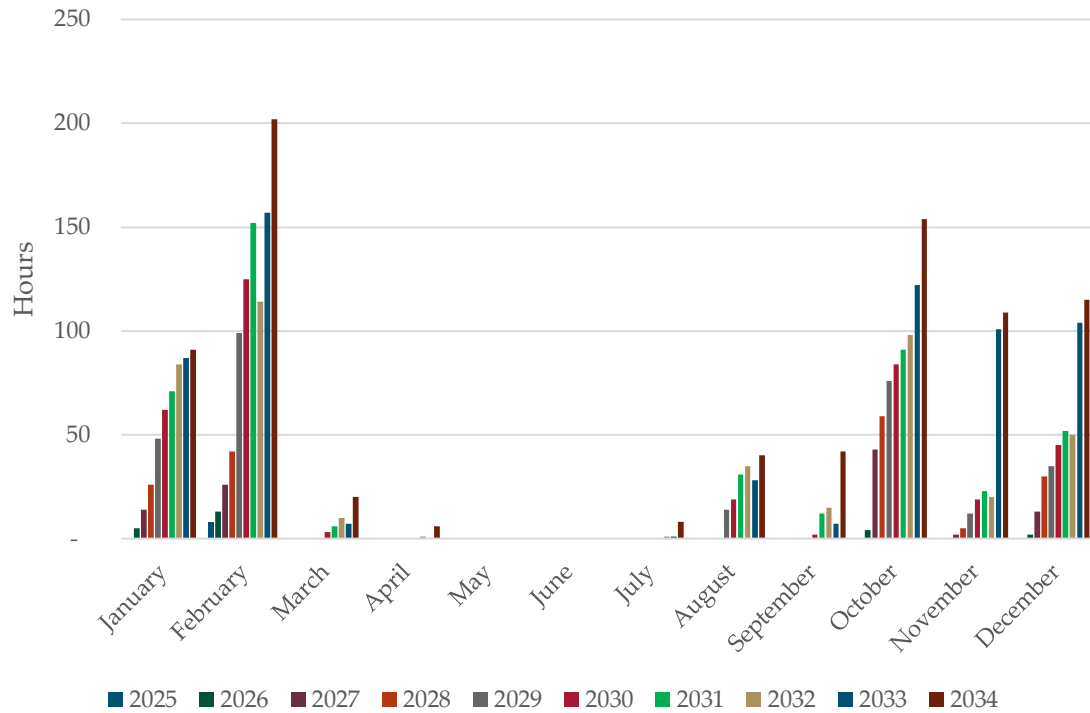


Figure 9: Demand-at-risk hours in the NW-Northwest subregion in the 55% scenario

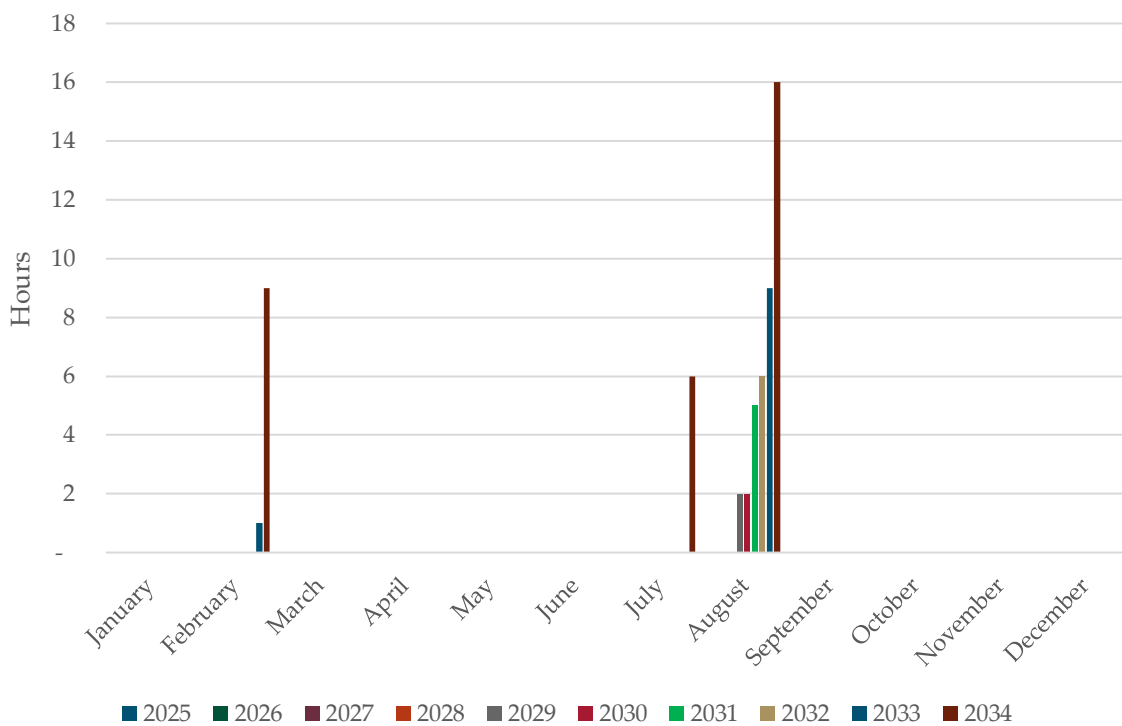


Figure 10: Demand-at-risk hours in the NW-Northeast subregion in the 55% scenario

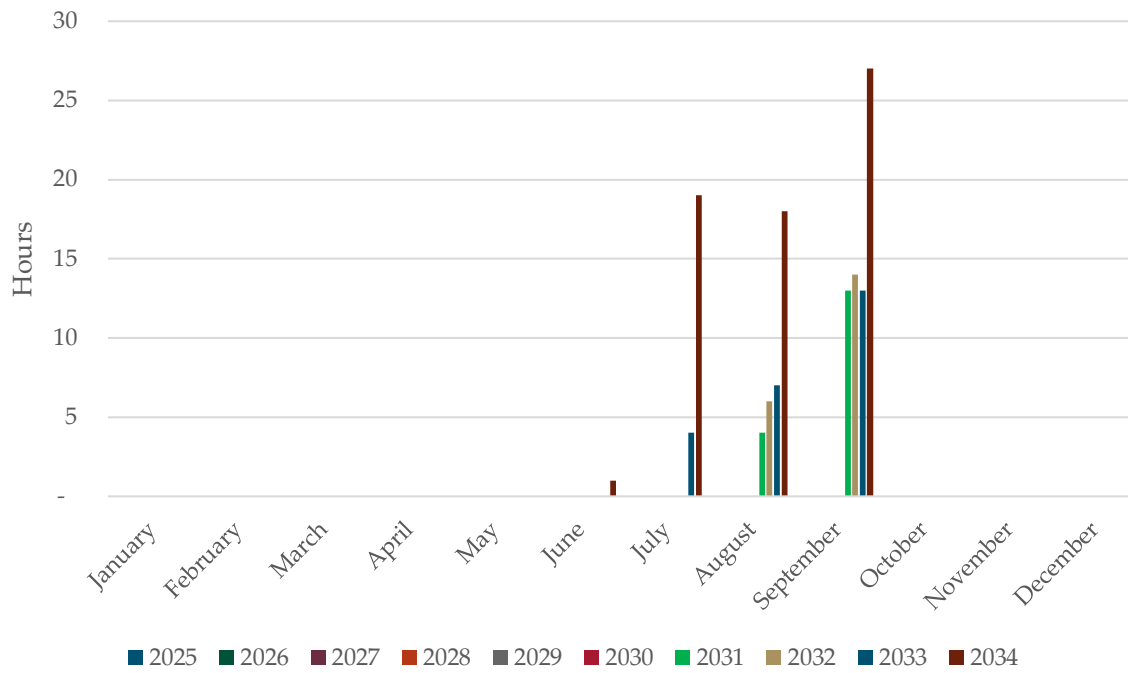


Figure 11: Demand-at-risk hours in the NW-Central subregion in the 55% scenario