

2024 Resource Adequacy Assessment

Executive Summary

In 2011, the Northwest Power and Conservation Council adopted a resource adequacy standard to provide an early warning should resource development fail to keep pace with demand growth. The standard defines the regional power supply to be adequate when the likelihood of a shortfall or Loss-of-Load Probability (LOLP) is no more than 5 percent. Every year, the Council assesses resource adequacy five years into the future to give utilities time to acquire new resources, if needed.

By 2021, the Northwest power supply becomes inadequate, with an estimated LOLP of 7.5 percent, primarily due to the announced retirement of 1,619 megawatts of coal-fired generating capacity. Besides existing resources, the assessment only includes planned resources that are sited and licensed, and targeted future energy efficiency savings.

By 2024, with the planned retirement of an additional 127 megawatts of coal plant capacity, the LOLP grows to 8.2 percent. Load growth over the next five years is almost entirely met by targeted energy efficiency savings, with a net annual load growth of about 0.3 percent. Potential shortfall events in 2024 are more likely to occur during winter and are expected to last longer and have higher peak-hour shortfalls than summer events.

These results could change significantly if future load growth and/or market conditions change. For example, under a high load growth scenario (3 percent above medium) with a lower market supply (1,000 megawatts less), the 2024 LOLP grows to 21 percent. Under a low growth scenario (3 percent below medium) with a higher market supply (1,000 megawatts more), the LOLP drops to 2 percent. But the likelihood of a very low or very high load growth rate over the next five years is small.

By 2026, with another 804 megawatts of announced coal plant capacity retiring, the LOLP grows to 17 percent. And, with the planned retirement of an additional 1,060 megawatts of coal plant capacity by 2032, the region will be facing a very large resource gap to fill. However, these assessments do not include utilities' replacement plans.

The Council's next power plan is scheduled to be completed by 2021, giving the region time to develop an appropriate replacement strategy that will account for state-level legislation affecting future resource choices, climate change, and increasing renewable generation.

It should be emphasized that these results reflect the adequacy of the aggregate regional power supply. Individual utilities within the Pacific Northwest are facing a wide range of future resource needs and are preparing for those needs in their integrated resource plans.

Addendum

In October of 2019, PacifiCorp proposed moving up the retirement dates for several of its coal plants. The Jim Bridger 1 coal plant (530 megawatts), originally scheduled to be retired by 2028, is now under consideration to be retired by the end of 2023. The Jim Bridger 2 coal plant (530 megawatts), originally scheduled to be retired by 2032, is now under consideration to be retired by the end of 2028. Also, PacifiCorp is proposing divesting from the Colstrip 3 (518 megawatts) and Colstrip 4 (681 megawatts) coal plants by the end of 2027.

The earlier retirement of the Jim Bridger 1 coal plant increases the 2024 reference case LOLP from 8.2 percent to 12.8 percent and increases the 2026 LOLP from 17 percent to 26 percent. Between 2026 and 2028, the region could potentially lose an additional 1,729 megawatts of capacity if the Jim Bridger 2 and the Colstrip 3 and 4 coal plants are retired. The Council will keep abreast of any changes to resource availability or to regional demand and will continue to monitor the adequacy of the regional power supply during the development of its next power plan.