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Reliability Standard

The electricity metric of one loss of load event (LOLE) every 10 years, also referred to as the "1-in-10 standard," has emerged as a standard measure of electric system reliability.

Over time, engineers have developed more sophisticated methods to calculate LOLE. These calculations consider factors like power plant capacity, outage rates, weather and historical demand patterns. The 1-in-10 standard generally aligns with a well-designed electric system.

Many regulatory bodies overseeing electricity markets have adopted the 1-in-10 standard as a reliability target. This provides a clear benchmark to plan generation capacity and ensure system adequacy.

The standard has become an industry norm for resource adequacy planning in the U.S. power grid. Many regional grid operators utilize it as a benchmark for their reliability assessments.

While it is not a mandated standard, regulatory bodies often consider the 1-in-10 standard when evaluating resource adequacy.

With increasing extreme weather events due to climate change, the 1-in-10 standard should be reevaluated in a thoughtful and transparent manner that balances reliability and cost. A higher standard could be used to determine the appropriate size of contingency reliability reserve quantities that are outside of the wholesale energy markets.