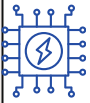


# Why and When Power is Reduced or Shutoff

**Your OK PUD is always working to ensure that the electrical grid is in good operational order and that their electric supply meets the demands of the community. However, there are certain unexpected (and uncontrollable) events like sudden spikes in demand or severe weather that can cause service interruption.**

## BROWNOUT



A brownout occurs when the voltage drops below the required level. It is like a blackout but involves a partial loss of power instead of a complete loss. This happens when there is an interruption of the electrical supply or when your service is experiencing a problem. If a brown out last too long an intentional black out will occur.

## BLACKOUT



A blackout is a complete loss of power in a specific service area. It happens when the electrical system is interrupted by external forces or when the utility company needs to repair or replace failed or aging equipment. During a blackout, all appliances and electronics in your home will stop working.

## CURTAILMENT



Energy curtailment may be implemented during high-load scenarios when energy usage is at its peak. It is a temporary measure used to alleviate the load on a transmission facility or generator. Curtailment may be necessary if the demand for power exceeds the supply. During peak usage, additional power must be purchased in real time. If large geographic areas are all experiencing the same peak and purchasing from the same power markets, there is the potential for a lack of power supply. This means that energy usage would need to be reduced to the original nominal load use. Curtailment done voluntarily by customers' shutting off unnecessary loads, or it may be forced by turning off power lines or substations. Curtailments are initiated by authorities such as Transmission Operators, Balancing Authorities or Reliability Coordinators to ensure the stability of the electric grid in the region.

OK PUD prioritizes ensuring that hospitals, businesses, and essential services are the last to be affected by curtailment operations.

## LOAD SHEDDING



Load Shedding is a pre-planned reduction in load by means of a blackout. This can occur automatically or manually. This is a method of last resort to reduce overloaded equipment or to balance electric demand with the available supply.

## PUBLIC SAFETY POWER SHUTOFF PSPS



PSPS is a fire prevention tool that could be used by the BPA during the fire season to minimize potential ignitions, as well as prevent further damage to lines that are threatened by fire. In these situations, the BPA would de-energize specific lines. Certain weather conditions must exist, such as wind gusts greater than 60 mph, or red flag warnings. Fortunately, Okanogan PUD has multiple sources of power and transmission lines that feed into our system, other than the BPA. Therefore, if the BPA instituted a PSPS, it is highly unlikely that OK PUD customers would be affected at all. [BPA PSPS](#)

## MITIGATION



Mitigation occurs nearly every day, as a technique for stabilizing power systems. As loads increase and decrease, power is transferred throughout the system without losses. Mitigation is used to maintain and improve system behavior and ensure energy demands are met. Customers are rarely affected by these mitigation techniques.

