

# FASTER GRID PROTECTION SETTINGS

Utilities use protection settings on protective devices across the entire electric system to maintain the reliability of power and prevent damage to equipment caused by an electrical disruption or fault, such as a tree branch falling on a power line. This is done by detecting the fault and then isolating the impacted area so that the remaining system operates normally and fewer customers are impacted by an outage. Examples of protective devices include relay and circuit breakers at substations and remotecontrolled automatic reclosers and fuses on distribution lines.



## WHAT ARE FASTER GRID PROTECTION SETTINGS?

Faster grid protection settings reduce the response time of protective devices when an issue is detected.

Protective devices can act like ground fault circuit interrupter (GFCI) outlets found in home wiring systems. GFCI outlets in the home detect and automatically turn off power when they detect a hazard, such as a malfunctioning kitchen appliance or hair dryer.

Similarly, faster grid protection settings in Southern California Edison's high fire risk areas act more quickly during hazardous scenarios like tree branches or windblown debris that can get into power lines and reduces the risk of an ignition. Protection settings are similar to ground fault circuit interrupter (GFCI) outlets in high-risk areas at home, such as kitchens and bathrooms



## WHEN AND WHY ARE FASTER GRID PROTECTION SETTINGS IMPLEMENTED?

Equipment enabled with faster grid protection settings can automatically turn off power much faster than during normal operating conditions.

This difference in timing is critical to reducing ignition potential during a fault on our system in high fire risk areas. If these faults, and the resulting outages, were to occur during elevated fire conditions, the faster grid protection settings will help reduce ignition risk.

SCE's ongoing grid hardening work, including installation of covered conductor, as well as coordination of protection devices such as sectionalizing devices and fuses, will help minimize the number and impact of outages. During elevated fire conditions, our crews thoroughly inspect and patrol affected lines for damage after any outage before safely restoring power which could lead to longer outage times. However, this is done to ensure public safety and minimize wildfire risk for our communities during those heightened weather conditions.



# WHEN DID SCE START USING FASTER GRID PROTECTION Settings and what changes are taking place?

SCE began using faster grid protection settings in high fire risk areas in 2018 as part of a suite of wildfire mitigation measures to reduce ignition risk. About 85% of our 1,070 circuits in high fire risk areas have circuit breaker relays or remote-controlled automatic reclosers with this faster capability. We plan to deploy this capability to nearly all our circuits in high fire risk areas by the end of 2023.

In 2022, we have refined our faster grid protection settings strategy by adjusting the sensitivity and responsiveness of the protective devices. On a select number of circuits in our highest fire risk areas, we are piloting settings that provide even faster responsiveness to assess additional ignition risk reduction benefits.

### ARE OUTAGE ALERTS PROVIDED FOR OUTAGES RELATED TO FASTER GRID PROTECTION SETTINGS?

Outages that occur due to faster grid protection settings are not planned. They occur automatically when a fault is detected on a power line or equipment. These are repair outages and customers will receive repair outage alerts and updates through their preferred channel.



#### **Customers can:**

- Sign up for outage alerts at <u>sce.com/outagealerts</u>
- Look up outage details at <u>sce.com/outagemap</u>
- Learn more about customer resources and programs at <u>sce.com/customerresources</u>