Community Wildfire Safety Program

Association of California Water Agencies

February 2019

Together, Building
a Better California

Community Wildfire Safety Program

REAL-TIME MONITORING AND INTELLIGENCE

- Coordinating prevention and response efforts by monitoring wildfire risks in real time from our **Wildfire Safety Operations Center**
- **Expanding our network of PG&E weather stations** to enhance weather forecasting and modeling
- Supporting the **installation of new high-definition cameras** in high fire-threat areas

NEW AND ENHANCED SAFETY MEASURES

- Further enhancing vegetation management efforts to **increase focus on vegetation that poses a higher potential for wildfire risk**
- **Conducting accelerated safety inspections** of electric infrastructure in high fire-threat areas
- **Disabling automatic reclosing of circuit breakers and reclosers** in high fire-risk areas during wildfire season
- **Proactively turning off electric power for safety** as a last resort when extreme fire danger conditions are forecasted

SYSTEM HARDENING AND RESILIENCY

- Installing **stronger and more resilient poles** and **covered power lines**, along with **targeted undergrounding**
- **Upgrading and replacing electric equipment and infrastructure** to further reduce wildfire risks
- Working with communities to **develop new resilience zones**

Following the wildfires in 2017 and 2018, some of the changes included in this presentation are contemplated as additional precautionary measures intended to further reduce future wildfire risk.

Real-Time Monitoring and Intelligence

MONITORING wildfire risks in real time from our

24/7 **Wildfire Safety Operations Center**

and coordinating **prevention and response efforts**

INSTALLING

~1,300 **new weather stations by 2022**

Data available at **mesowest.utah.edu**

SUPPORTING the installation of:

~600 **high-definition cameras by 2022**

Images available at **alertwildfire.org**

WILDFIRE SAFETY OPERATIONS CENTER

WEATHER STATION INSTALLATION

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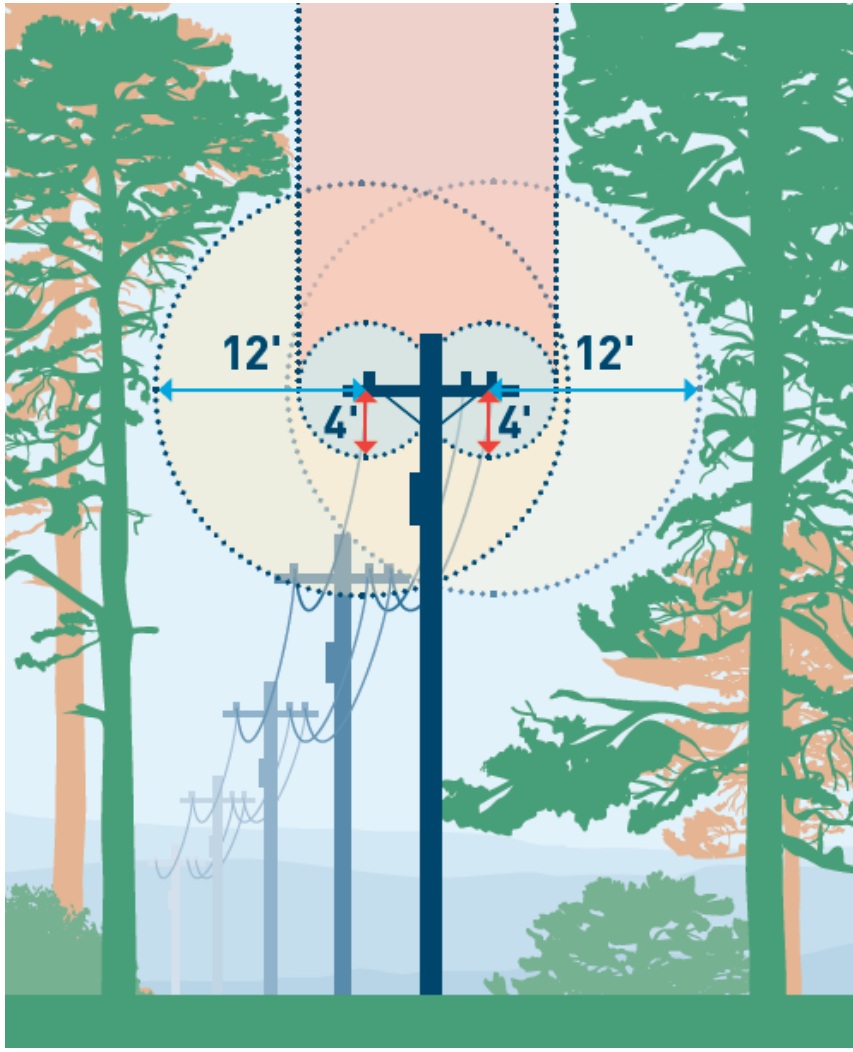
Enhanced Vegetation Management

We are increasing our focus on **addressing the vegetation that poses a higher potential for wildfire risk**.

- This enhanced focus includes the following:
  - **Meeting and exceeding state standards** for minimum clearances around the power line
  - **Addressing overhanging limbs and branches** directly above and around the lines
  - **Targeted removal of dead and dying trees** as well as certain species that pose an increased potential risk of falling into power lines
- We are working to complete this important safety work **in high fire-threat areas** over the next several years



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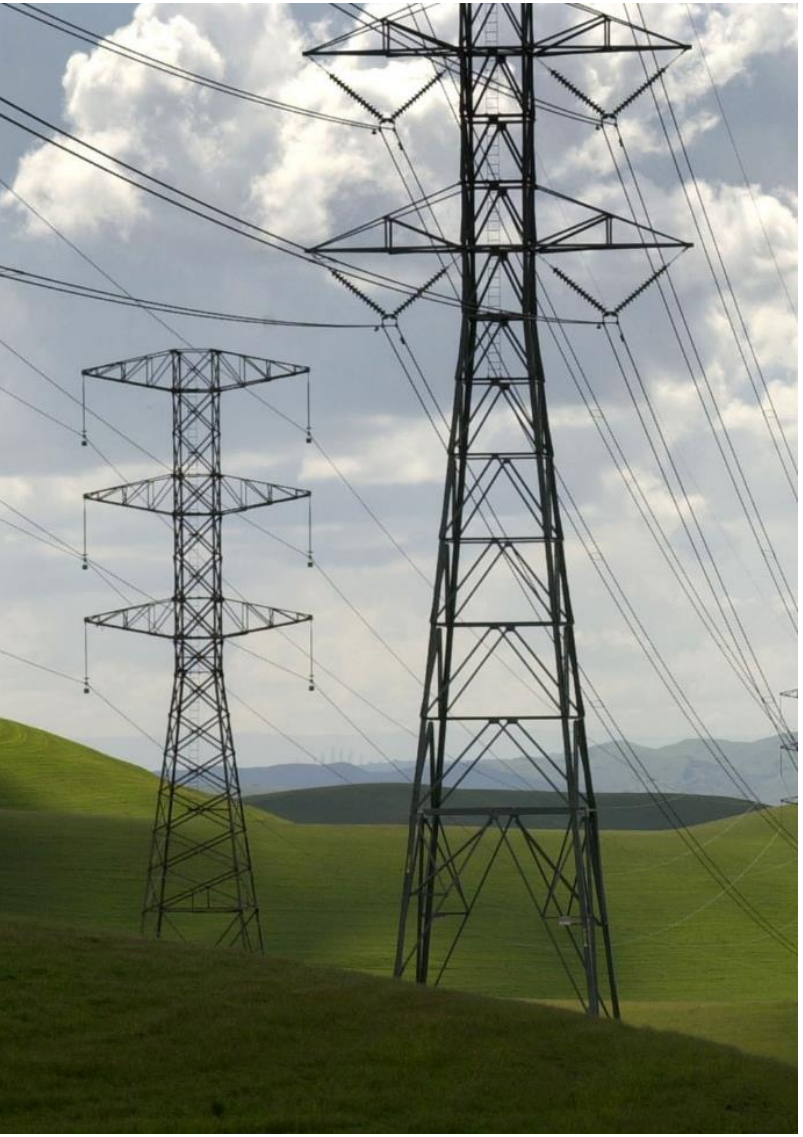
Wildfire Safety Inspections



As part of our enhanced wildfire safety efforts, implemented following the 2017 and 2018 wildfires as additional precautionary measures intended to further reduce wildfire risks, **we are conducting accelerated safety inspections of electric infrastructure in areas of higher wildfire risk** (Tier 2 and Tier 3).

- **We are conducting comprehensive inspections of electric towers and poles** through visual and aerial inspections.
- This work is being done as part of our Community Wildfire Safety Program, and is **in addition to our routine inspections and maintenance** programs.
- We have started inspecting **transmission and distribution lines** in high fire-threat areas, and plan to begin similar **inspections of substations** in high fire-threat areas **in March**.

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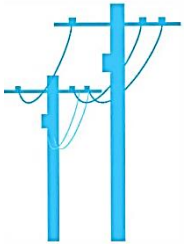
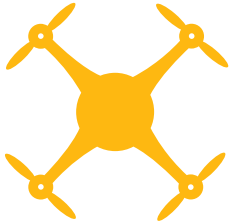
Inspections Overview

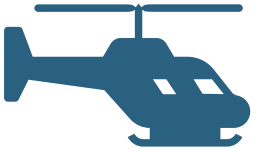


Accelerated inspections of transmission and distribution poles and towers as well as **substations** in high fire-threat areas

Visual inspections (ground and/or climbing) will be performed by crews of up to four people



Aerial inspections by drones will **complement and further enhance** inspections



Helicopters may also be used for inspections or to **deliver crews to remote locations**

We will take action right away to address any immediate risk to public safety found during the accelerated inspections

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Electric System Maintenance and Repairs

We will **evaluate inspection results** to **determine repair needs** and **associated timing.** If any issues are found during the accelerated inspections that pose an immediate risk to public safety, **we are taking action right away to address the issue**.

- When inspections determine that repairs are needed, but **there is not an immediate safety risk, we will follow our preventative maintenance procedures, consistent with state guidelines** for high fire-threat areas.
- **Repairs will depend on what we observe in the field but could range** from installing new signs or electrical components to replacing poles or towers.
- Where possible, **we will bundle work to minimize customer impact**, particularly if we need to de-energize the line to safely complete the repairs.

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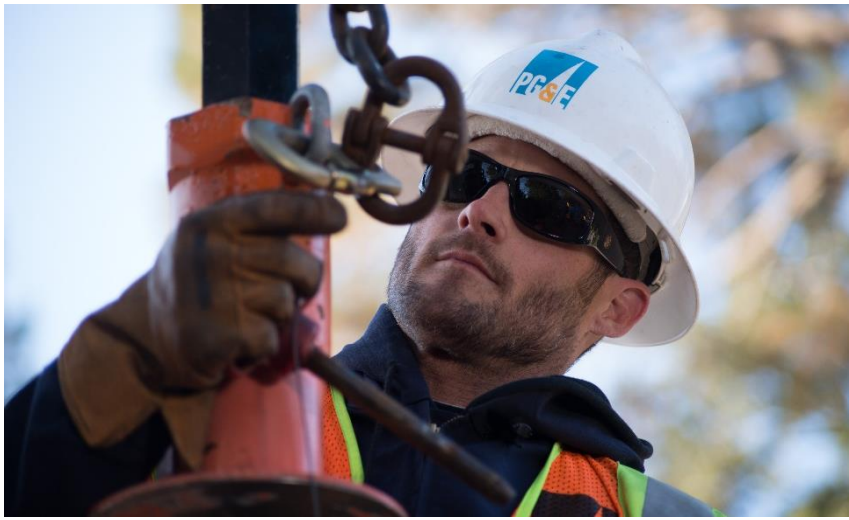
System Hardening and Resiliency

Installing stronger and more resilient poles and covered power lines across approximately 7,100 line miles of highest fire-risk areas

Replacing equipment to further reduce risk to our system and tailoring upgrades based on terrain and weather conditions using more granular analysis of fire-prone regions

Piloting new resilience zones to allow PG&E to provide electricity to central community resources serving local customers during a Public Safety Power Shutoff event



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Additional Safety Measures

To further reduce the risk of wildfires, we are **disabling automatic reclosing of circuit breakers and reclosers** on lines in high fire-risk areas during wildfire season.

Where we have remote control capability, we **disable reclosing based on a daily decision-making process during times of elevated risk.**

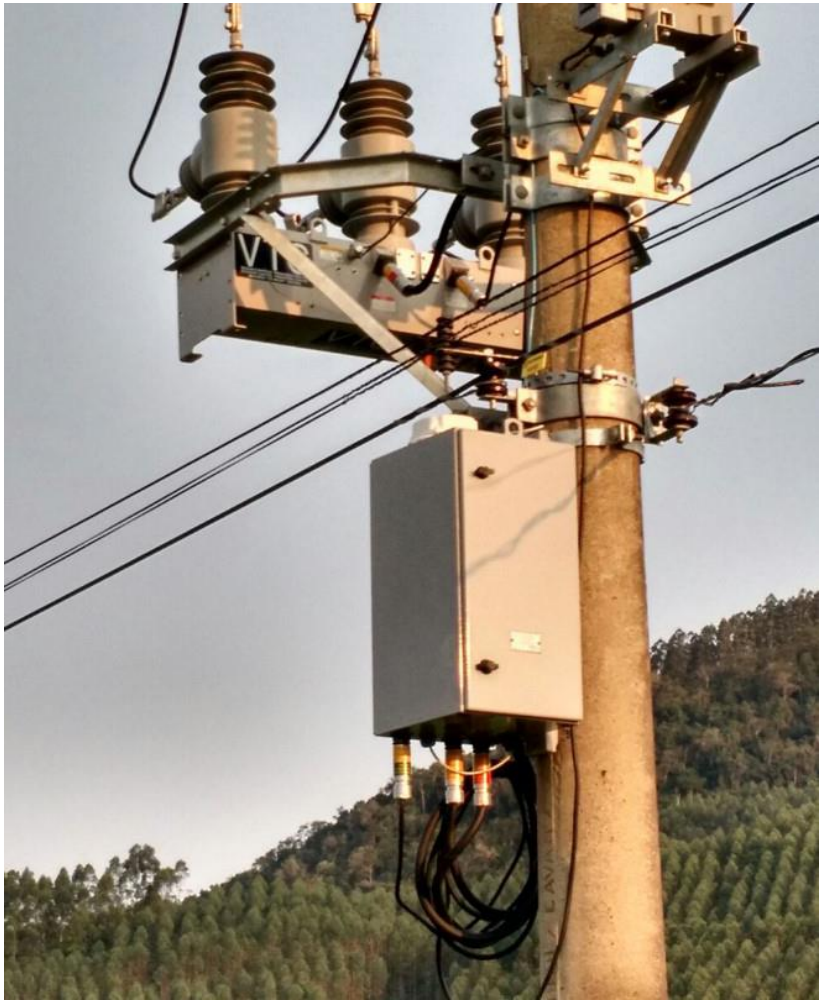
ENABLED

450 **reclosing devices with remote capabilities in 2018**

WORKING to enable nearly

300 **additional reclosing devices with remote capabilities**

in advance of the **2019 wildfire season**



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Public Safety Power Shutoff (PSPS)

We monitor conditions across our system and evaluate whether to proactively turn off electric lines, as a last resort, in the interest of safety.

While no single factor will drive a Public Safety Power Shutoff, some factors include:

A Red Flag Warning declared by the National Weather Service

Low humidity levels, generally 20% and below

Forecasted sustained winds generally above 25 mph and **wind gusts in excess of approximately 45 mph**, depending on **location and site-specific conditions** such as temperature, terrain and local climate

Condition of dry fuel on the ground and live vegetation (moisture content)

On-the-ground, real-time observations from PG&E's Wildfire Safety Operations Center and field observations from PG&E crews

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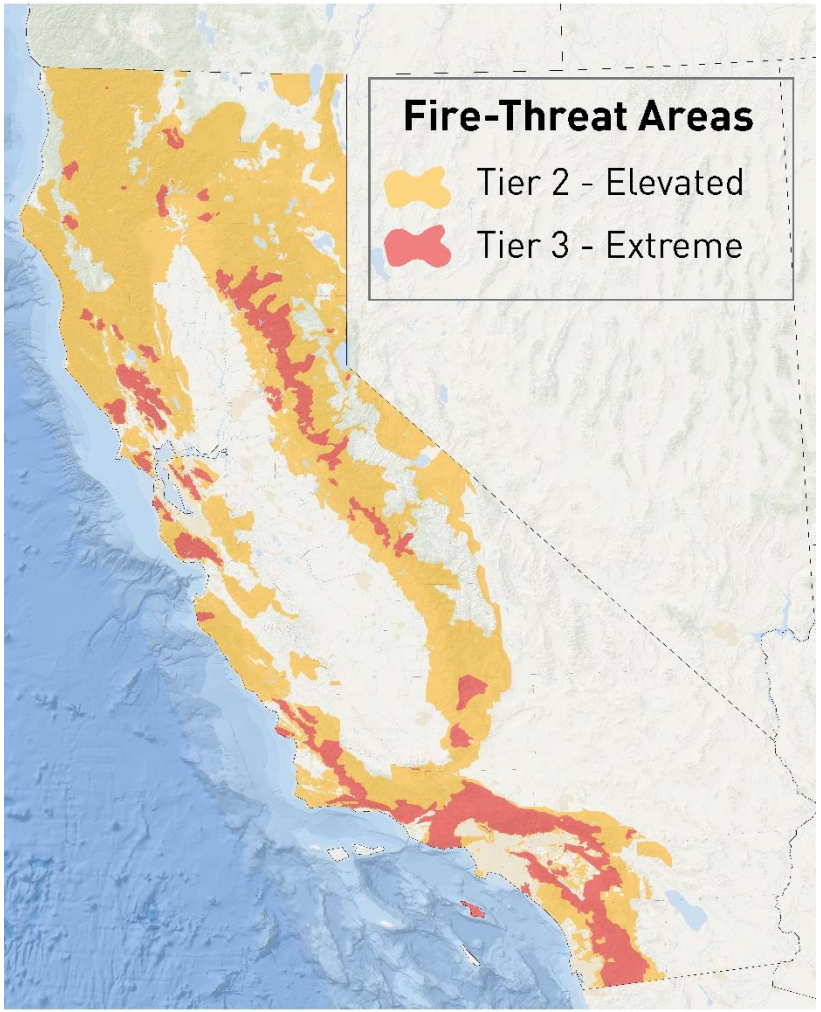

Source: California Public Utilities Commission

- Beginning with the 2019 wildfire season, we are expanding our Public Safety Power Shutoff program to include **all electric lines that pass through high fire-threat areas – both distribution and transmission.**
- The most likely electric lines to be considered for shutting off for safety will be those that pass through **areas that have been designated by the CPUC as at elevated (Tier 2) or extreme (Tier 3)** risk for wildfire.
- While customers in **high fire-threat areas are more likely to be affected, any of PG&E's more than 5 million electric customers could have their power shut off** due to the interconnected nature of the electric grid.

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PSPS Event Notifications

Extreme weather threats can change quickly. **When and where possible, we will provide customers with advance notice prior to turning off power.** We will also provide updates until power is restored.

Timing of Notifications (when possible)

- **~48 HOURS** before electricity is turned off
- **~24 HOURS** before electricity is turned off
- **JUST BEFORE** electricity is turned off
- **DURING THE PUBLIC SAFETY OUTAGE**
- **ONCE POWER HAS BEEN RESTORED**

Customer Notifications

We will attempt to reach customers through **calls, texts and emails**. We will also use **social media** and keep **local news** and **radio outlets** informed and updated.

City/County/Agency Notifications

If possible based on conditions, we will **provide notice in advance of notifying customers** through:

- **Phone calls/emails** to primary contacts
- **Automated notifications** to send alerts through multiple channels
- **Provide customer alerts** to share via channels, such as city or county website, Nixle, Nextdoor and Reverse 911

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Working to Restore Power

We will only restore power when we are certain it is safe to do so. For planning purposes, we suggest customers **prepare for multiple-day outages**.

WEATHER ALL CLEAR	PATROL & INSPECT	ISOLATE & REPAIR DAMAGE	RESTORE POWER	NOTIFY CUSTOMERS
After the extreme weather has passed and it's safe to do so, our crews begin **patrols and inspections**.	Crews **visually inspect every mile** of the lines to **look for potential weather-related damage to the lines, poles and towers.** This is done by vehicle, foot and air.	Where damage is found, **crews work to isolate the area** so other parts of the system can be restored. Crews work **safely and as quickly as possible** to make repairs.	Once it is safe to energize, **a call is made to the PG&E Control Center** to complete the energization process. **Power is then restored to customers.**	Customers are **notified that power has been restored**.

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Working With Our Customers to Prepare

We are continuing to **reach out to our customers and communities** about wildfire safety and steps they can take to prepare.

- **Reaching out to customers** and asking them to update their contact information at **pge.com/mywildfirealerts**
- **Engaging with organizations for our customers who have specific needs** to explore ways we can partner
- **Partnering with community leaders, first responders, and public safety authorities** around PSPS preparedness and coordination
- **Holding answer centers and open houses** (as needed) in advance of and during wildfire season
- **Doing additional outreach to Medical Baseline and Medical Baseline-eligible customers** in high fire-threat areas
- **Continuing to share information** through pge.com/wildfiresafety

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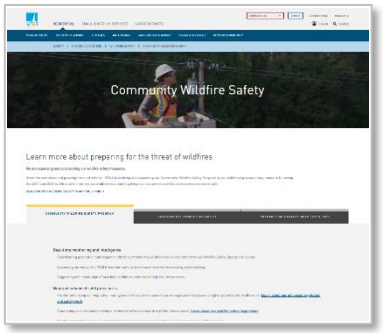
Learn More

For questions regarding PG&E's Community Wildfire Safety Program, please direct customers to:

- Call us at **1-866-743-6589**
- Email us at **wildfiresafety@pge.com**
- Visit **pge.com/wildfiresafety**



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