

Community Wildfire Safety Program

Webinar

August 2019

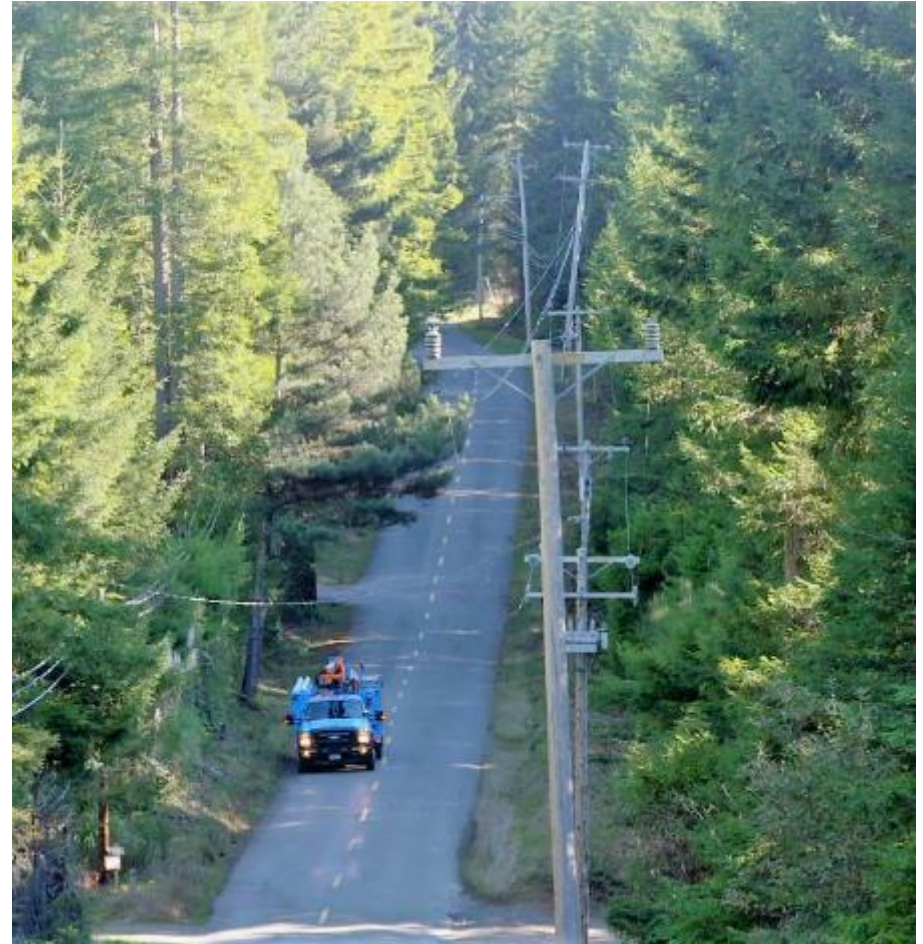
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What We'll Cover

- ✓ Safety Moment
- ✓ Introductions
- ✓ Community Wildfire Safety Program Overview
- ✓ Real-Time Monitoring and Intelligence
- ✓ Enhanced Vegetation Management
- ✓ Wildfire Safety Inspections
- ✓ System Hardening and Resiliency
- ✓ Public Safety Power Shutoff
- ✓ Q&A Session



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 (Public Safety Power Shutoff)** when gusty winds and dry conditions combine with a heightened fire risk



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** to provide electricity to central community resources during a Public Safety Power Shutoff event



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**



WILDFIRE SAFETY OPERATIONS CENTER

INSTALLING

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

Data available at mesowest.utah.edu



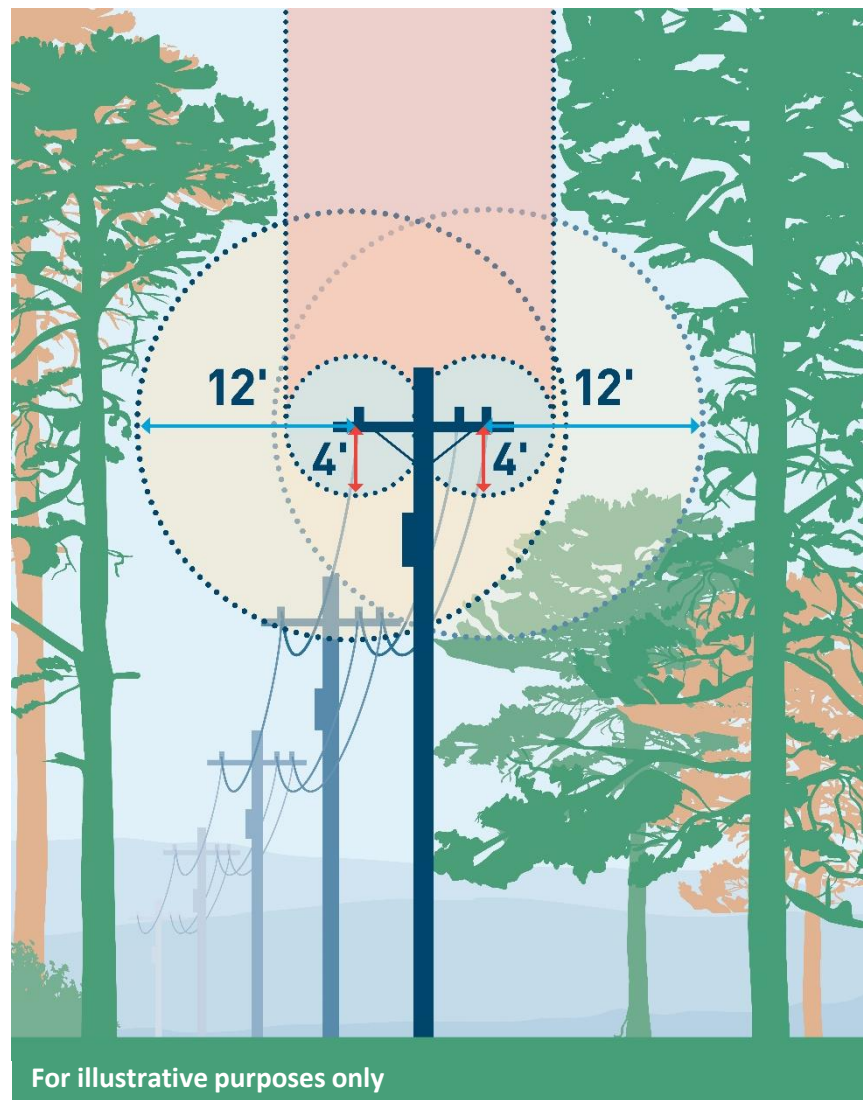
WEATHER STATION INSTALLATION

SUPPORTING the installation of
~600 high-definition cameras by **2022**
Images available at alertwildfire.org

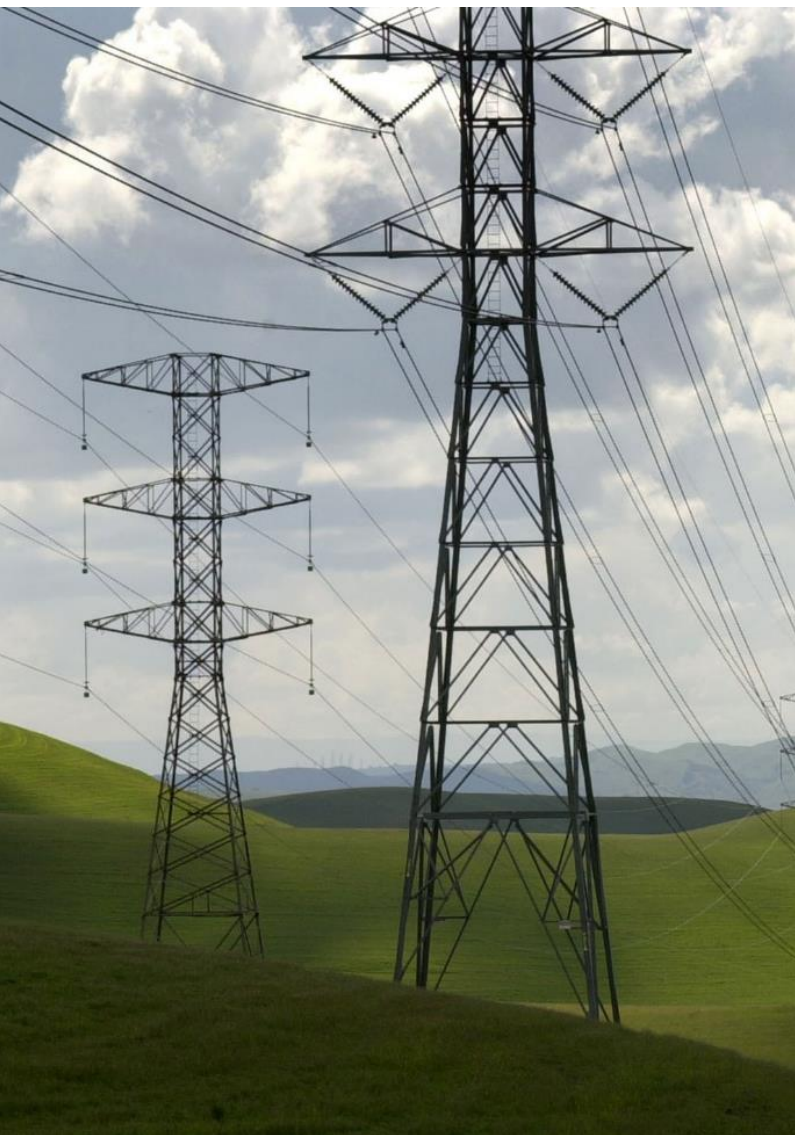
Enhanced Vegetation Management

We are **expanding and enhancing our Vegetation Management program** to further reduce wildfire risk

- Our enhanced vegetation management work includes the following:
 - ✓ **Meeting state standards** for minimum clearances around the power line
 - ✓ **Addressing overhanging limbs and branches** directly above and around the lines
 - ✓ **Removing hazardous vegetation such as dead or dying trees** that pose a potential risk to the lines
 - ✓ **Evaluating the condition of trees that may need to be addressed** if they are tall enough to strike the lines
- We are working to complete this important safety work **in high fire-threat areas** over the next several years



Wildfire Safety Inspections

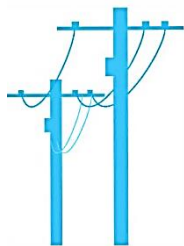


We are conducting accelerated safety inspections of electric infrastructure in areas of higher wildfire risk (Tier 2 and Tier 3).

As of June 30, 2019, through the Wildfire Safety Inspection Program (WSIP) inspections, we have completed:

- Inspections of **99.99%** of nearly 700,000 **distribution poles** in, or adjacent to, high fire-threat areas.
- Inspections of **97%** of nearly 50,000 **transmission structures** in, or adjacent to, high-fire threat areas.
- Inspections of **100%** of 222 **substations** in high fire-threat areas.

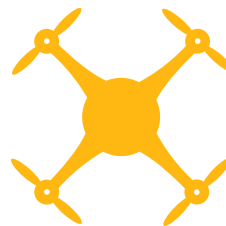
Inspections Overview



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



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



Aerial inspections by drones to complement and further enhance inspections



Helicopters for inspections and to deliver crews to remote locations

All inspection findings are documented with photographs and reviewed by a dedicated and experienced team to evaluate conditions for necessary repairs and timing.

Electric System Maintenance and Repairs

We are **evaluating inspection results to determine repair needs and associated timing**. For any issues 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 are following 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.



System Hardening and Resiliency

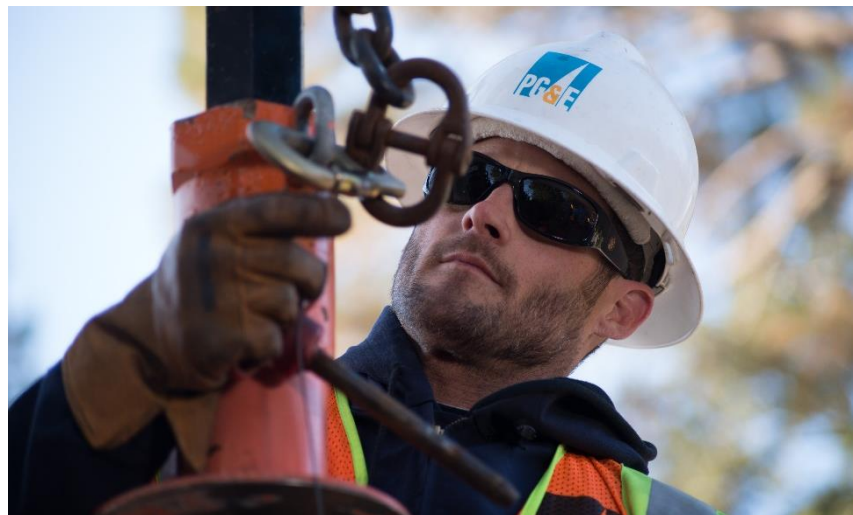
Installing stronger and more resilient poles and covered power lines across approximately 7,100 line miles of highest fire-risk areas

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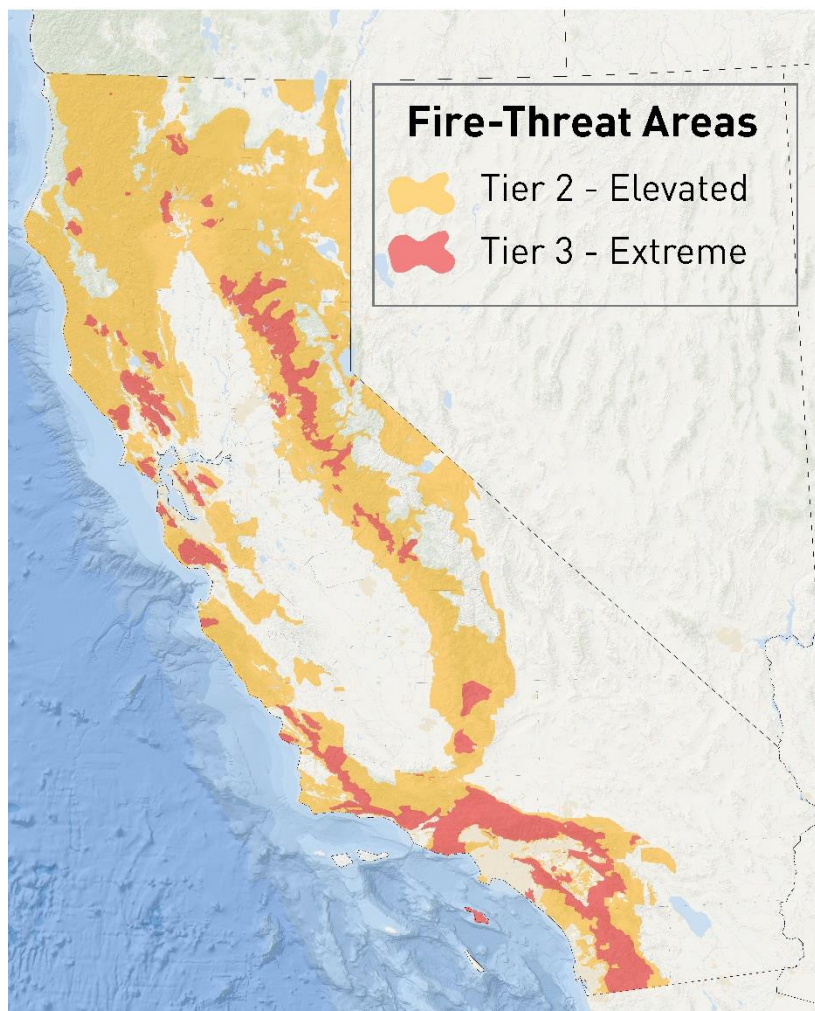
Replacing equipment to further reduce risk to our system and tailoring upgrades based on terrain and weather conditions using more granular analysis of fire-prone regions

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



Public Safety Power Shutoff (PSPS)



Source: California Public Utilities Commission

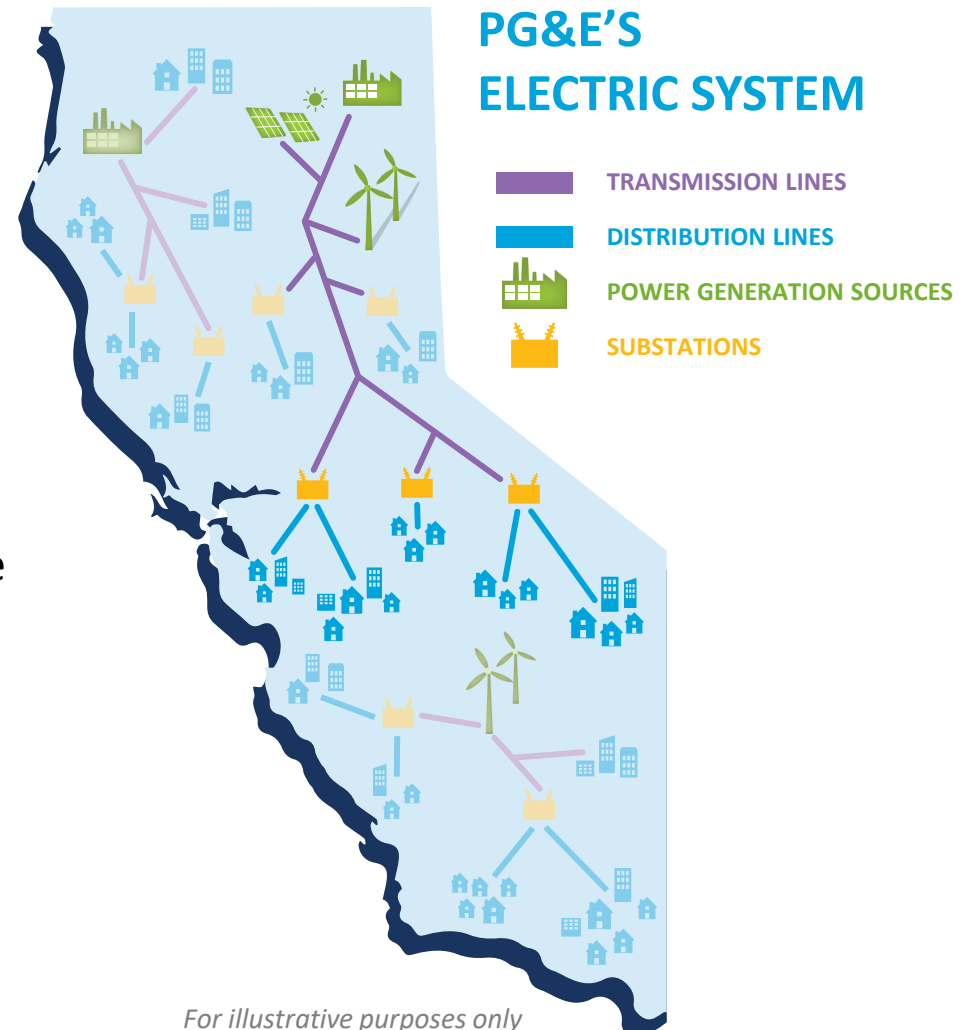
- Beginning with the 2019 wildfire season, we are expanding our Public Safety Power Shutoff program to include **all electric lines that pass through high fire-threat areas – both distribution and transmission.**
- The most likely electric lines to be considered for shutting off for safety will be those that pass through **areas that have been designated by the CPUC as at elevated (Tier 2) or extreme (Tier 3) risk for wildfire.**

Why Everyone Should Be Prepared

PG&E's energy system relies on power lines working together to provide electricity across cities, counties and regions.

This means power may be shut off, **even if you do not live or work in an area experiencing extreme weather conditions.**

While the most likely electric lines to be considered for shutting off for safety will be those that pass through high fire-threat areas, any of PG&E's more than 5 million electric customers could be impacted and should be prepared.



Public Safety Power Shutoff Criteria

We will call a Public Safety Power Shutoff when gusty winds combine with a heightened fire risk. We monitor conditions across our system and evaluate whether to proactively turn off electric lines.

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

PSPS Event Notifications

Extreme weather threats can change quickly. **Our goal, dependent on weather, is to 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**



City/County/Agency Notifications

We will **make every attempt to 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

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.

Working to Restore Power

We will only restore power when we are certain it is safe to do so. We expect to be able to visually inspect for damage and restore power to most of our customers within 24 to 48 hours after extreme weather has passed.



WEATHER ALL CLEAR

After the weather has passed and it's safe to do so, our crews begin **patrols and inspections**.



PATROL & INSPECT

Crews **visually inspect** our electric system to **look for potential weather-related damage to the lines, poles and towers**. This is done by vehicle, foot and air during daylight hours.



ISOLATE & REPAIR DAMAGE

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.



RESTORE POWER

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.**



NOTIFY CUSTOMERS

Customers are **notified that power has been restored**.

Because weather can last several hours or days, for planning purposes, we suggest customers prepare for outages that could last longer than 48 hours.

Working With Our Customers to Prepare



Reaching out to approximately 5 million customers and asking them to update their contact info at **pge.com/mywildfirealerts**



Holding answer centers and open houses (as needed) in advance of and during wildfire season



Mailing postcards to customers that do not have contact information on file



Providing tenant education kits to Master Meter customers



Conducting additional outreach to customers in high fire-threat areas through direct mail, preparedness checklist and email campaign



Placing calls and doing additional outreach to Medical Baseline and Medical Baseline-eligible customers in high fire-threat areas



Launching broad public safety advertising campaign



Continuing to share information through **pge.com/wildfiresafety**



Partnering with community leaders, first responders and public safety authorities around PSPS preparedness and coordination



Engaging with organizations for our customers who have specific needs to explore ways we can partner

Preparing for Public Safety Power Shutoffs

The threat of extreme weather and wildfires continues to grow. Start preparing your plan using the checklist below:

PLANNING BASICS:

✓ **Update your contact information**

Visit pge.com/mywildfirealerts or call us at 1-866-743-6589.

✓ **Keep a hard copy of emergency phone numbers on hand**

✓ **Build or restock your emergency supply kit**

Stock supplies to last a week — include flashlights, fresh batteries, first aid supplies, food, water and cash.

✓ **Designate an emergency meeting location**

✓ **Practice manually opening your garage door**



We welcome your feedback and input

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

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

Wildfire safety

Do we have your current phone number and email address?

Before, during and after a wildfire

Public Safety Power Shutoff (PSPS)

Before, during and after a Public Safety Power Shutoff

SAFETY ALERT. WHY PG&E MIGHT TURN OFF POWER DURING EXTREME FIRE THREAT

FIRE DANGER TODAY

WE'LL BE IN YOUR COMMUNITY WORKING TO REDUCE WILDFIRE THREATS.

ACCELERATED SAFETY INSPECTIONS

ENHANCED VEGETATION WORK

REAL-TIME MONITORING OF FIRE CONDITIONS

Visit pge.com/wildfiresafety for more information and steps you can take to prepare for the growing threat of wildfires.

Q&A

