

Community Wildfire Safety Program

Mendocino County

August 27, 2019



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 in a Public Safety Power Shutoff** when gusty winds and dry conditions, combined with a heightened fire risk, are forecasted



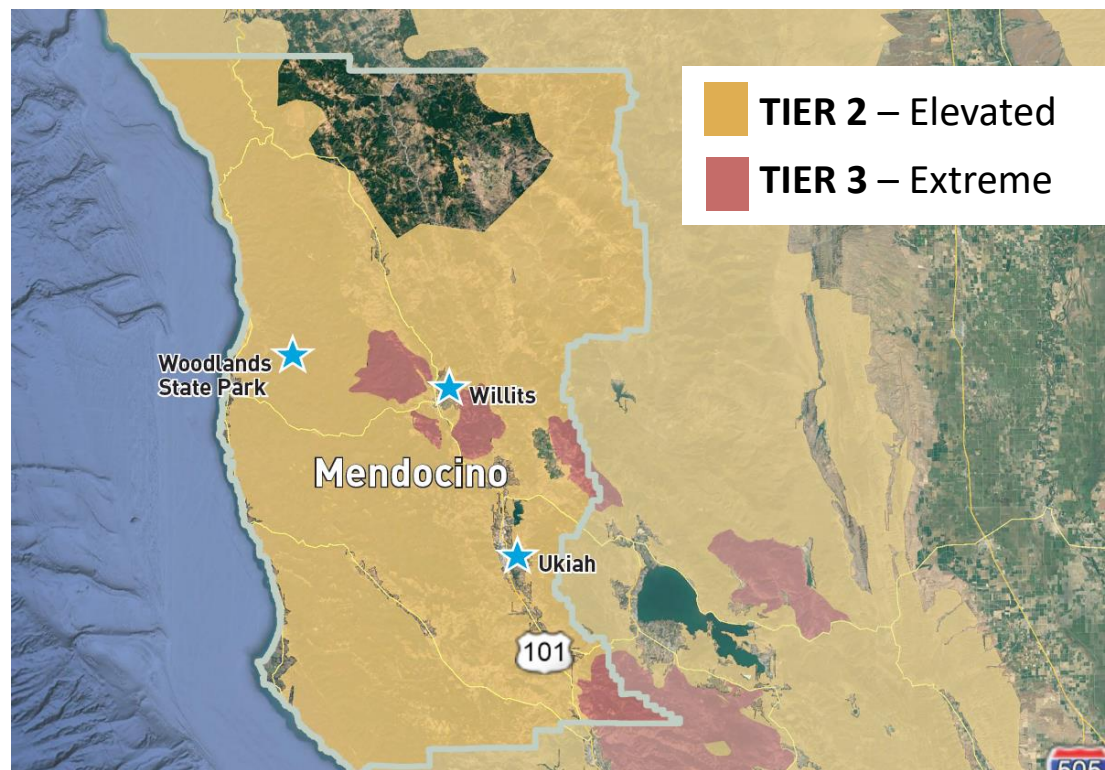
SYSTEM HARDENING AND RESILIENCY

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

CPUC High Fire-Threat District Map of the County

The most likely electric lines to be considered for shutting off for safety will be those that pass through **areas that are at elevated (Tier 2) or extreme (Tier 3)** risk for wildfire, as defined by the California Public Utilities Commission High Fire-Threat District Map.

(www.cpuc.ca.gov/firethreatmaps)



Because the energy system **relies on power lines working together** to provide electricity, **any of PG&E's more than 5 million electric customers could have their power shut off.**

Assets in the County

Distribution Lines in the County

1,980 / ~81,000

Total miles / PG&E total

140 / ~7,100

Tier 3 miles

1,250 / ~18,100

Tier 2 miles



Transmission Lines in the County

354 / ~18,000

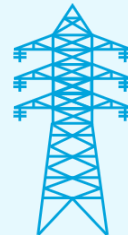
Total miles / PG&E total

16 / ~1,300

Tier 3 miles

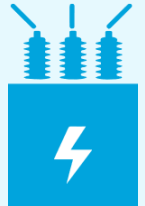
264 / ~4,200

Tier 2 miles



15 Substations Serving Mendocino County

- | | |
|----------------|-------------------|
| 1. Big River | 10. Mendocino |
| 2. Calpella | 11. Philo |
| 3. Covelo | 12. Point Arena |
| 4. Elk | 13. Potter Valley |
| 5. Fort Bragg | 14. Ukiah |
| 6. Garcia | 15. Willits |
| 7. Gualala | |
| 8. Hopland | |
| 9. Laytonville | |



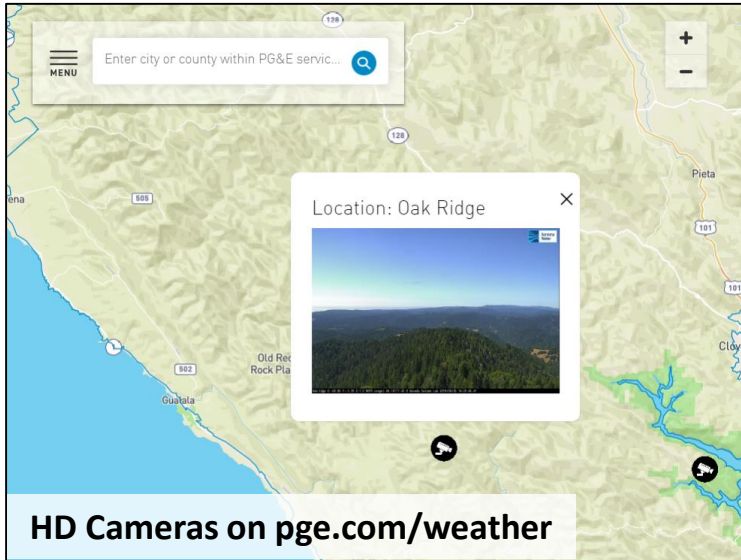
PG&E Real-Time Monitoring – Weather Stations



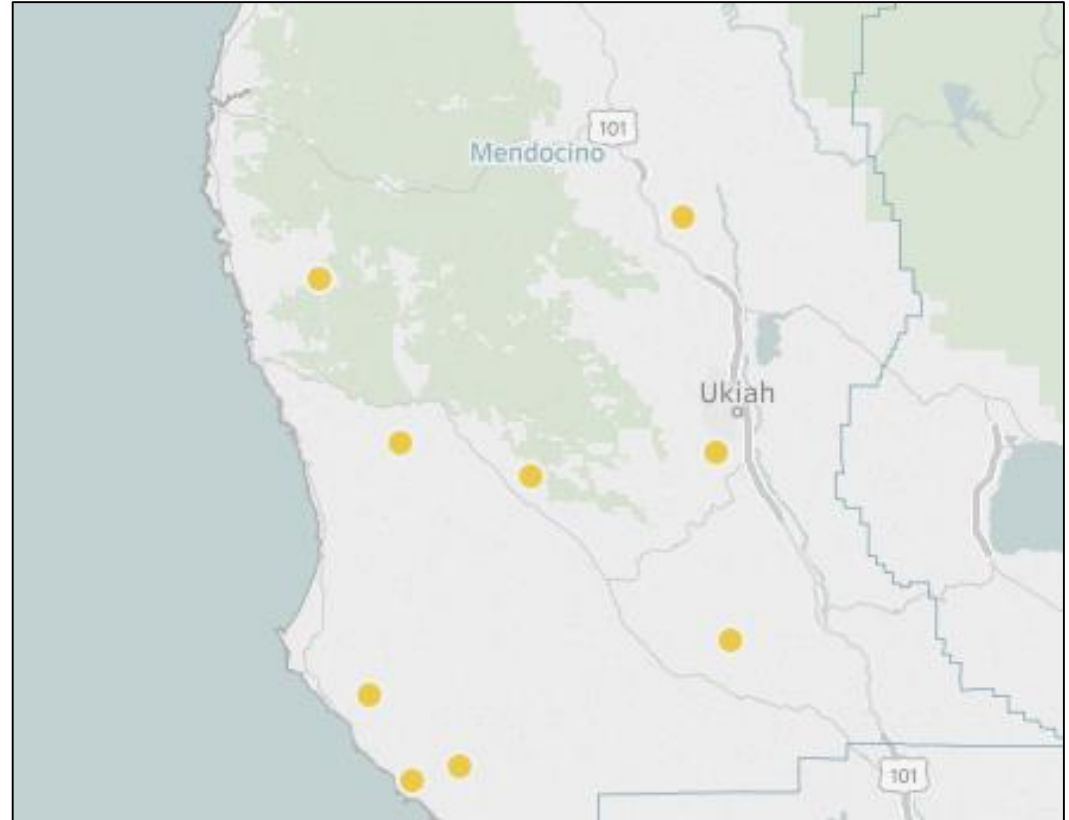
✓ **23 weather stations are installed** throughout the County.

Weather Station Name	Approximate Location
Potter Valley	West of Highway 20, north of the Mendocino/Lake County border
Bald Mountain	Old Hopland Yorkville Road near Old Hopland 110 Road
Redwood Valley	Sweetland Road near West Road
Pine Mountain	Pine Mountain Road
Oak Knoll Road	Oak Knoll Road
Sherwood Road	Sherwood Road near Troll Road
Reynolds Highway	Reynolds Highway near Hearst Willits Road
Orr Springs Road	Orr Springs Road near Main Ranch Road
Blackhawk Drive	Williams Ranch Road near Blackhawk Drive
Pieta	Redwood Highway near Pieta (Unincorporated Community)
Blackhawk West	Blackhawk Drive near Bullivant Drive
Black Bart Trail	Black Bart Trail near Hell's Delight Canyon
Cloverdale Peak	At the end of Cloverdale Peak Road
Mountain View Road	Mountain View Road near Airport Road
Highway 128 Mendocino	Highway 128 near Greenwood Road
Laughlin Mountain	Mariposa Creek Road near Ridgewood Road
Green Road Alternate	Greenwood Road near Signal Ridge Road
Highway 101 Hilltop	Highway 101 near Commiski Road
Poonkinney Road	Poonkinney Road near Covelo Road
Underwood Lane	Underwood Lane near Highway 271
T-Line 70KV	Highway 20 near Irmulco Road
Laytonville North	Highway 101 near Hargus Road
Greenwood Roast West	Greenwood Road between Cameron Road and Signal Ridge Road

PG&E Real-Time Monitoring – HD Cameras



- ✓ We have **plans to install 9 cameras** in the County; general locations shown have been targeted but may be modified as field installation plans are determined

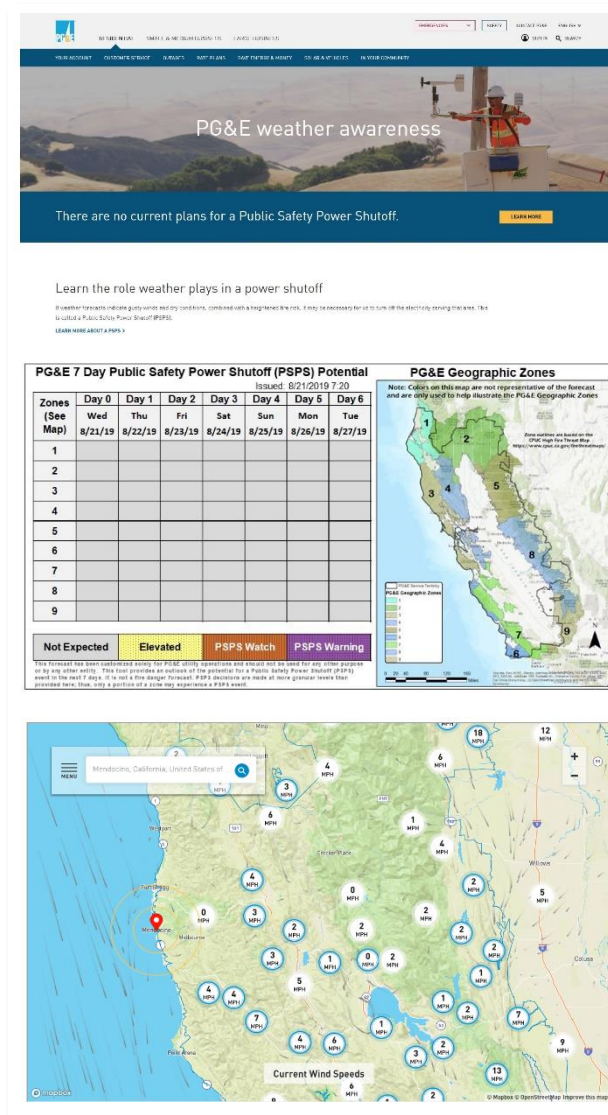


Laughlin Ridge	Ten Mile
Mathison Pk	Sanel
Robinson	Vale
Anderson Valley	Fish Rock
Clellan / Spanish	

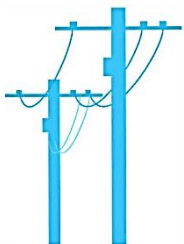
PG&E is making publicly available real-time weather information, live video and forecasts at [**pge.com/weather**](https://pge.com/weather), including:

PG&E Public Safety Power Shutoff 7-Day Forecast Geographical Zones Map: A forecast (updated daily) that provides a broad overview of potential wind-related damage, as well as fuel moisture content in dead and live vegetation, for areas that are at risk for a potential PSPS.

PG&E Live Weather Map for the County:
Provides up-to-date information from weather stations and cameras – that can zoom in on the County.



Wildfire Safety Inspections Overview & Findings



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

	Distribution			Transmission			Substation			%
	Repaired	Open	Total	Repaired	Open	Total	Repaired	Open	Total	Repaired
A Tags	14	0	14	0	0	0	1	0	1	100%
B Tags	90	9	99	324	91	415	15	0	15	81%
Inspections	~31,000			~3,100			8			

PG&E categorizes high-priority corrective actions as:

- “A” conditions are those that require immediate action. All “A” tags have been repaired, made safe or are being actively worked on.
- “B” conditions are those that generally need to be addressed within 3 months from the date a condition is identified.

Data shown, and available on www.pge.com/wildfireinspections, is through the end of June

System Hardening & Sectionalizing

System hardening projects include:

- Installing **stronger and more resilient poles** and covered power lines.
- **Replacing equipment** to further reduce risk to our system.

Two 2019 system hardening projects in the County:

- **0.57 miles** completed 8/23 in **Potter Valley**
- **0.36 miles** planned for **Fort Bragg**



PG&E is working to **install additional automated reclosing devices** to safely keep power on in certain regions or communities during a PSPS.

- ✓ There are **140 total automated reclosing devices** on distribution lines in the County.
- ✓ 90% of the reclosing devices have remote control capabilities (i.e., are SCADA-enabled).

Public Safety Power Shutoff (PSPS)

We **monitor conditions** across our system and evaluate whether to proactively turn off electric lines for safety **when gusty winds and dry conditions combine with a heightened fire risk.**

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

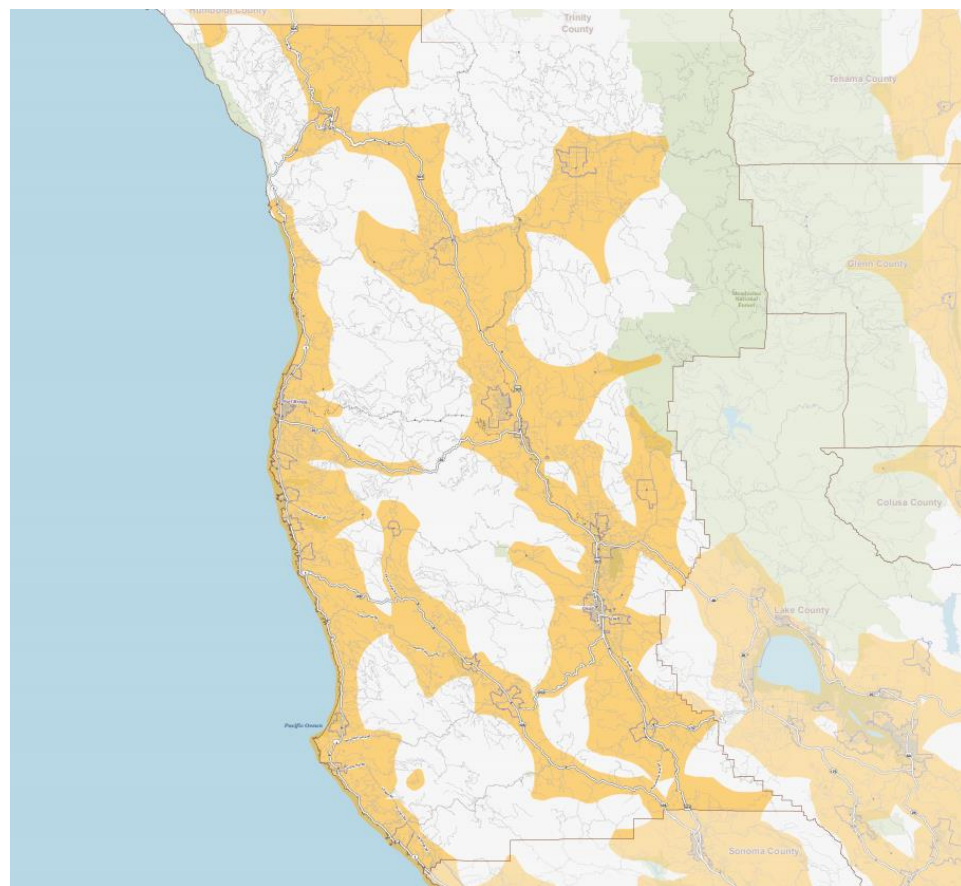
PSPS Planning and Event Maps

Customers in high fire-threat areas are more likely to experience a PSPS event.

- PSPS planning maps currently available on pge.com/pspsseventmaps show the areas that are more likely to be shut off.
- These are for **planning purposes only** and provide a **general estimate regarding potential locations**.
- These maps will be **replaced by event-specific information** when there is a potential PSPS event or a PSPS in progress.
- **Actual outage areas for a PSPS will be based on conditions existing during a particular event.**

Please note, any of PG&E's more than 5 million electric customers could have their power shut off.

Mendocino County PSPS Planning Map



Mendocino County
PSPS Circuits BaseLine 0715 2100 Buffer



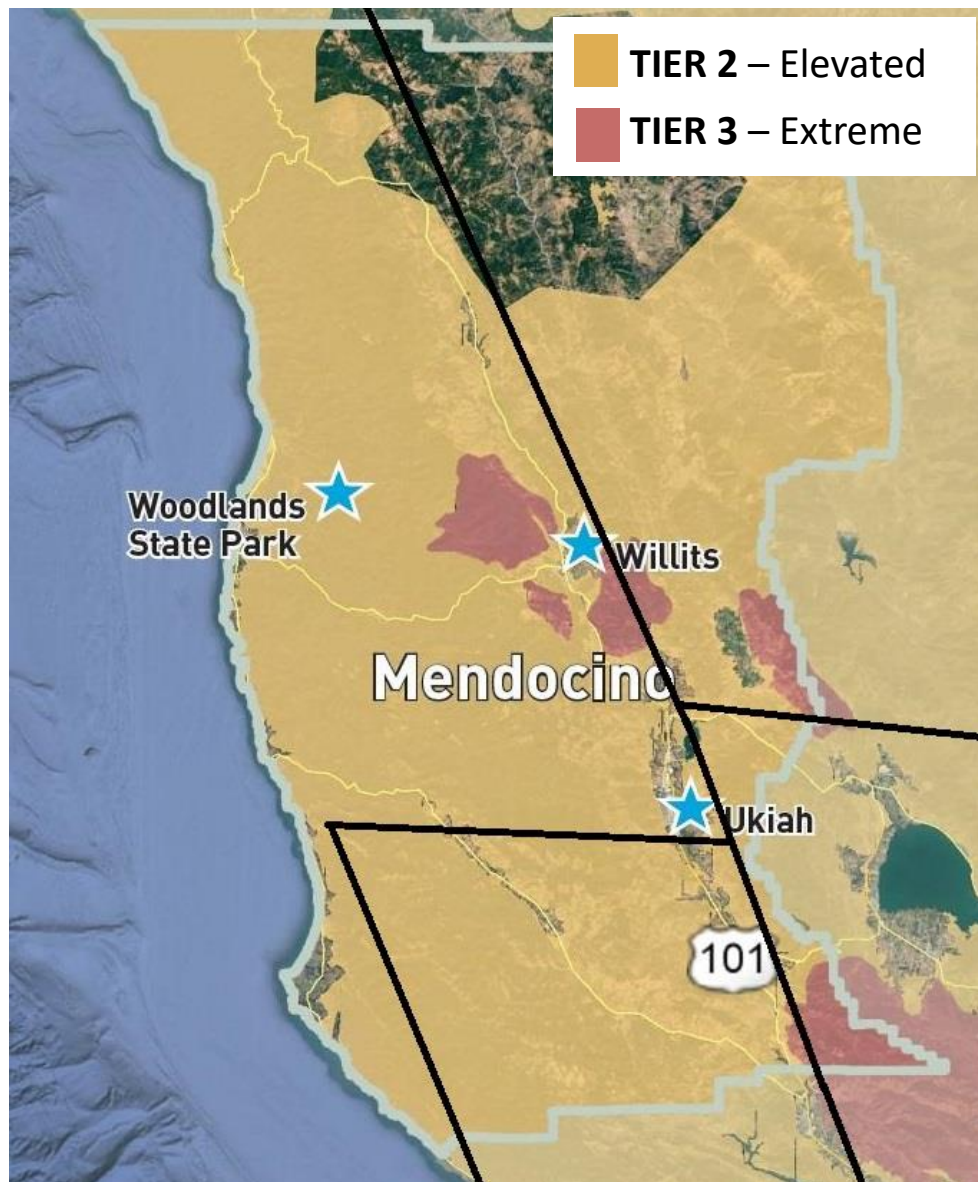
0 4.5 9 Miles

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.**

The generic **overview of the Electric Transmission lines that serve Mendocino county** is shown here.



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

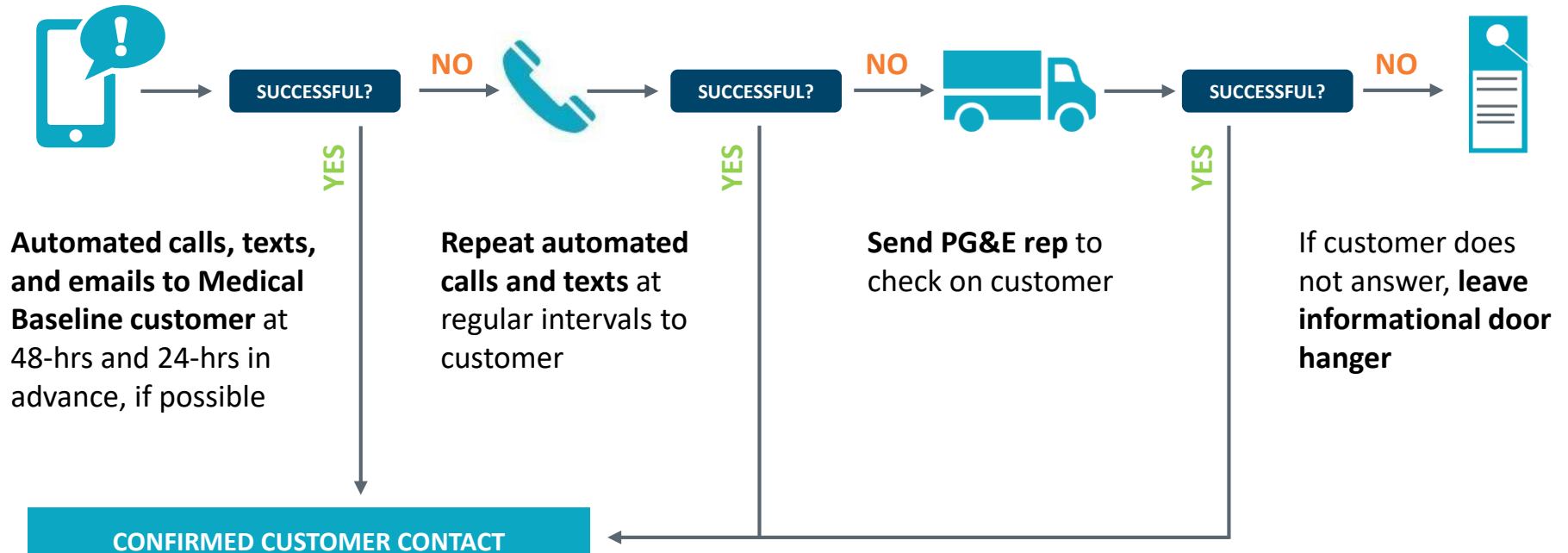
We will attempt to reach customers through **calls, texts and emails**. We will also use **social media** and keep **local news** and **radio outlets** informed and updated.

Medical Baseline Outreach



In the event that we need to turn off power for safety, **we will take additional steps to reach customers who are enrolled in our Medical Baseline program.**

During an Event:



PG&E rep will notify customer of Public Safety Power Shutoff and encourage them to spend time with a friend or family member, if needed. If customer is experiencing a medical emergency, PG&E rep will offer to dial 911 and wait with the customer until emergency services arrive.

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

Backup Generation – Customer Guidance

We are providing resources to help customers determine if generators are right for them as part of their preparedness plan. This includes:

A **dedicated website** (pge.com/backupgeneration) and **fact sheet** that include:

- ✓ **Tips for assessing energy needs** and choosing the right generator for customers' homes and/or businesses
- ✓ **Guidance for how to safely use** portable and permanent stand-by generators
- ✓ **A marketplace to search all major retailers** and find energy efficient products
- ✓ **Financing options** including a list of available resources

➔ Operating a generator may be subject to Air Quality regulations; we are directing customers to visit arb.ca.gov/app/dislookup/dislookup.php for information

What You Need to Know About Backup Generation

July 2019

Power outages can happen at any time

Backup electric generators can be a part of any preparedness plan. Backup electric generators can operate as a stand-alone power source and some require interconnection to PG&E's electric grid. Backup power is typically fueled by solar plus storage, batteries, natural gas, gasoline, propane or diesel fuel.

Determining if a generator is right for you

Electric backup generators can keep the lights on, help appliances stay running, save perishable food, and power essential equipment and electronics during a power outage. Generators can also be expensive, noisy, and can pose safety hazards. It's important to understand how to safely operate your generator before an emergency occurs. This means doing regular safety checks and being sure you have enough fuel to last a few days.

Also, please be aware that operating a generator may be subject to Air Quality regulations. To find the air quality regulator serving your area and obtain more information please visit: arb.ca.gov/app/dislookup/dislookup.php.

Consider these factors when deciding whether you need a generator:

- ENERGY NEEDS** | Do you own certain devices or equipment that need to keep functioning in the event of a loss of power? How crucial is it for you to have power during an extended outage? This is especially important for customers who are dependent on life-support equipment or require special heating or cooling needs for a medical condition.
- NOISE** | Are there community ordinances where you live or work that restrict or limit the decibel level allowance for outdoor equipment?
- COST** | Generators can cost thousands of dollars. Take any immediate needs into consideration as you examine which generator option may be the best choice for you.

Choosing the right generator

If you decide to purchase a generator, explore what kind of generator will work for you.

Factors to consider include:

YOUR ENERGY NEEDS

Generators can produce enough electricity to power your phone and laptop or your whole home. Consider what critical items, appliances and equipment you would need during an outage.

FUEL PREFERENCES

Your preference may be determined by environmental concerns, accessibility, affordability, and available space for secure generator storage. Some fuel types are: gasoline, propane, natural gas, diesel and renewable energy.

INSTALLATION REQUIREMENTS

No matter what type of generator you have, whether small-battery operated, portable or permanent standby, always consult the owner's manual for detailed instructions and safety guidelines prior to operation.

Visit pge.com/backupgeneration for more information

RESIDENTIAL SMALL & MEDIUM BUSINESS LARGE BUSINESS

YOUR ACCOUNT CUSTOMER SERVICE OUTAGES RATE PLANS SAVE ENERGY & MONEY

SAFETY > ELECTRIC SAFETY > ELECTRIC GENERATOR SAFETY

Backup generators

Power outages can happen at any time

Backup electric generators can be a part of any preparedness plan. Find out what you need to know about using a generator.

Community Resource Centers

To help affected communities during a PSPS event, PG&E will open Community Resource Centers (CRC).

CRCs will provide:

- **A safe, energized location** to meet basic power needs, such as charging cell phones, laptops and basic medical equipment, where possible.
- **Up-to-date information.**

Our goal is to open CRCs as soon as possible after the start of a PSPS outage.

- **Each location will be open from 8 a.m. to 6 p.m.** depending on forecasted weather conditions.
- **Location and hours of operation will be posted on pge.com.** We will reach out to customers in impacted communities via social media, local news and radio.



CRC Exterior Concept

CRC in Mendocino County

- We have executed an agreement for a potential CRC site located in Ukiah.
- Please note: location is an example for planning purposes and subject to change.

Resilient Communities Grant Program

- To promote local resilience to climate change, **PG&E plans to invest \$2 million over five years in shareholder-funded grants** through the Better Together Resilient Communities grant program to **support local climate resilience initiatives.**
- **PG&E will fund four \$100,000 grants that build community capacity to reduce wildfire risk** and support healthy and resilient forests and watersheds.
- **Priority will be given to projects located in elevated or extreme fire risk areas** and to those that address the needs of environmental and social justice communities.

**Applications are
due by Friday,
September 6, 2019.**

Visit pge.com/resiliencegrants for more information, including how to apply.



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

