Community Wildfire Safety Program
PG&E Wildfire Safety Webinar and Safety Town Hall

August 26, 2020
Safety

We know that everyone is currently focused on the response to COVID-19.
We appreciate your participation during this challenging time and hope the following information is helpful in understanding how PG&E is working to reduce wildfire risk.
Some of the measures included in this presentation are contemplated as additional precautionary measures intended to further reduce the risk of wildfires.
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With the record-breaking heat, rotating power outages, calls for power conservation and destructive wildfires, the past week and a half has been extraordinarily difficult.

Our most important responsibility is the safety of our customers, employees and contractors.

We want to acknowledge that we have fallen short in the past and we continue to take comprehensive steps to improve our safety efforts.

In light of the COVID-19 pandemic, we are enacting strict practices and protocols to keep our communities and partners safe from COVID-19 exposures and promote a healthy workplace.
Community Wildfire Safety Program
Some of the measures included in this presentation are contemplated as additional precautionary measures intended to further reduce the risk of wildfires.

Wildfire Risks Across PG&E’s Service Area

The map can be accessed at: cpuc.ca.gov/FireThreatMaps

Numbers are approximate
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**Community Wildfire Safety Program**

### REDUCE WILDFIRE POTENTIAL
- Asset inspection and repair
- Enhanced vegetation management
- System automation
- System hardening
- Public Safety Power Shutoffs

### IMPROVE SITUATIONAL AWARENESS
- Weather stations
- High-definition cameras
- Wildfire Safety Operations Center (WSOC)
- Meteorology

### REDUCE IMPACT OF PSPS EVENTS
- Reduce impacted customers
- Reduce length
- Improve coordination with and support communities and customers
What Is A Public Safety Power Shutoff?
Some of the measures included in this presentation are contemplated as additional precautionary measures intended to further reduce the risk of wildfires.

**What Is A Public Safety Power Shutoff?**

High winds can cause tree branches or debris to contact energized electric lines, which could damage our equipment and cause a major wildfire. We may need to turn off power during severe weather for public safety to prevent such fires. This is called a Public Safety Power Shutoff (PSPS).

**Power lines travel long distances.** That means your power can be affected by high winds and severe weather that threaten the system miles away.

The most likely electric lines to be turned off for safety are those that pass through Tier 2 or Tier 3 areas.

**50+ MPH WIND GUSTS**

**TRANSMISSION LINES**

**SUBSTATION**

**DISTRIBUTION LINES**

**POWER IS OFF**

**5 MPH WIND GUSTS**
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### Why Power is Shut Off?
- The state’s grid operator, the California Independent System Operator (CAISO), determines there is insufficient energy supply vs. customer demand, generally due to statewide extreme heat events.

### How Will We Inform Customers?
- Where possible, advanced notification / Updates during outages:
  - Phone calls*
  - Emails
  - Texts
  - Social media
  - News releases
  - Local/Tribal gov outreach
- Updates after or during outages:
  - Phone calls
  - Texts
  - Emails

### Who Makes the Decision?
- CAISO, the state’s grid operator
- No single party or agency. Damage can impact the system at any time.
- CAL FIRE or first responder agencies

### Public Safety Power Shutoff
- Power is shut off for public safety during severe weather that includes a high fire risk:
  - Strong winds
  - Dry vegetation
  - Low humidity
  - Crew observations

### Other Safety-Related Outages

<table>
<thead>
<tr>
<th>Rotating Outages</th>
<th>Emergency Repairs</th>
<th>Active Wildfires</th>
<th>Public Safety Power Shutoff</th>
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<tbody>
<tr>
<td>Why Power is Shut Off?</td>
<td>Electric equipment may be damaged by extreme heat, lightning or other damage. Lines are de-energized while crews safely make repairs.</td>
<td>CAL FIRE or other fire agencies request a shutoff during an active wildfire for the safety of the public or first responders. Wildfires can also burn into and damage electric equipment.</td>
<td>Power is shut off for public safety during severe weather that includes a high fire risk:</td>
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<tr>
<td>How Will We Inform Customers?</td>
<td>Updates after or during outages</td>
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<td>- CBO** outreach</td>
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*Via interactive voice recordings (IVRs) **Community-based organization
As each weather situation is unique, we carefully review a combination of factors when deciding if power must be turned off. Some factors include:

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<th>LOW HUMIDITY LEVELS</th>
<th>FORECASTED WINDS</th>
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<td>generally 20% and below</td>
<td>above 25 mph and gusts above 45 mph</td>
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<tr>
<th>CONDITION OF DRY MATERIAL</th>
<th>A RED FLAG WARNING</th>
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<td>on the ground and live vegetation (e.g., moisture content)</td>
<td>declared by the National Weather Service</td>
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| ON-THE-GROUND, REAL TIME OBSERVATIONS |
PG&E analyzed 30 years of high-resolution data covering ~80 billion data points, as well as 26 years of wildfire data in our service area to help determine the average likelihood and frequency of a PSPS event.

The following weather model data points were analyzed:

- Wind Speed
- Relative Humidity
- Dead Fuel Moisture (4 Types)
- Wind Gust
- Precipitation
- Live Fuel Moisture
- Temperature
- Fosberg Fire Weather Index
- National Fire Danger Rating System Outputs (4 Main Outputs)

Regional webinars with county-specific maps can be accessed at: pge.com/firesafetywebinars
### How Are We Improving For This Year?

<table>
<thead>
<tr>
<th>GOAL</th>
<th>INITIATIVES</th>
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<td><strong>SMALLER IN SIZE</strong></td>
<td>Reduce the number of customers affected by a PSPS event by one-third compared to last year</td>
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<td></td>
<td>• Installing <strong>sectionalizing devices</strong> that limit the size of outages</td>
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<td></td>
<td>• Installing <strong>microgrids</strong></td>
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<td>• <strong>Placing lines underground</strong> in targeted locations</td>
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<td></td>
<td>• Using better <strong>weather monitoring technology</strong> and installing new weather stations</td>
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<td><strong>SHORTER IN LENGTH</strong></td>
<td>Restore customers twice as fast after severe weather has passed</td>
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<td>• Deploying <strong>more PG&amp;E and contactor crews</strong> for inspection and restoration efforts</td>
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<td>• Expanding <strong>helicopter fleet</strong> and using two new airplanes for aerial line inspections</td>
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<td>• Utilizing <strong>infrared equipment</strong> to inspect at night</td>
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<tr>
<td><strong>SMARTER FOR CUSTOMERS</strong></td>
<td>Provide better information and additional resources</td>
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<td></td>
<td>• Improving PG&amp;E’s <strong>website bandwidth</strong></td>
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<td></td>
<td>• Improving <strong>customer notifications</strong></td>
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<td></td>
<td>• Improving <strong>Community Resource Centers</strong></td>
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<td></td>
<td>• Working more collaboratively with local agencies and critical service providers</td>
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<td></td>
<td>Provide more assistance before, during and after a PSPS event</td>
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<td>• Working with <strong>community-based organizations</strong> to support customers with medical needs</td>
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<td>• Making it <strong>easier for eligible customers to join and stay in the Medical Baseline Program</strong></td>
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<td>• Providing <strong>emergency information</strong> in 13 languages</td>
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Wildfire Safety Progress In 2020
Advanced weather stations allow us to better understand and track how severe weather can impact our system.

**2020 TARGET**

400 WEATHER STATIONS

**2020 PROGRESS**

206 WEATHER STATIONS*

*Installed

**MAP LEGEND:**

- PG&E weather station installed
- Remote Automated Weather Stations (RAWS) within PG&E’s service area

Data is publicly available:

- mesowest.utah.edu
- pge.com/weather

To sign up for daily email notifications regarding PSPS, visit [cloud.em.pge.com/PSPS-7day-Signup](http://cloud.em.pge.com/PSPS-7day-Signup).

All data is preliminary and based on early 2020 work planning. Data as of July 2020.

Some of the measures included in this presentation are contemplated as additional precautionary measures intended to further reduce the risk of wildfires.
New high-definition cameras in high fire-threat areas allow PG&E and first responders to monitor wildfires in real time.

**2020 TARGET**

200 CAMERAS

**2020 PROGRESS**

91 CAMERAS*

*Installed

**MAP LEGEND:**

- PG&E high-definition camera installed
- Non-PG&E camera that looks into PG&E’s service area

Images are publicly available:

- alertwildfire.org
- pge.com/weather

All data is preliminary and based on early 2020 work planning. Data as of July 2020. Some of the measures included in this presentation are contemplated as additional precautionary measures intended to further reduce the risk of wildfires.
Sectionalizing devices separate the grid into smaller parts to reduce the number of customers affected during a PSPS event.

**2020 TARGET** 600 DEVICES

**2020 PROGRESS** 531 DEVICES*

*Installed

For illustrative purposes only

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**Temporary Microgrids**

Temporary microgrids can utilize backup generation sources to keep communities energized.

**62** sites currently being prepared across PG&E’s service area

**2020 PROGRESS**  
**54 SITES READY**

The ability to energize these substations with temporary generation during a PSPS event will be subject to the specific circumstances of each event, and the available supply of temporary generation.

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*All location icons are approximate*
Strengthening the electric system to further reduce wildfire risk and better withstand severe weather.

- Installing stronger and more resilient poles
- Replacing bare conductors
- Installing more poles than previously needed
- No longer using trees to support infrastructure
- Adding down guys and anchors
- Placing lines underground

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Enhanced Vegetation Management Work

Addressing vegetation that poses a higher potential for wildfire risk to maximize the safety of our customers and communities.

Our enhanced vegetation management work includes:

- **Exceeding state standards for minimum clearances** around power lines
- **Conducting additional inspections**, beyond routine patrols, **to remove hazardous vegetation**

2020 TARGET  **1,800 LINE MILES**

2020 PROGRESS **1,464 LINE MILES**

All data is preliminary and based on early 2020 work planning. Data as of July 2020.
What Resources Are Available For Public Safety Power Shutoffs?
Customers can expect advance notice prior to turning off power and updates until power is restored. This year, notifications will include more details about when it’s anticipated that the power will be shut off and restored.

Timing of Notifications (when possible)

- **2 days** before power is turned off
- **1 day** before power is turned off
- **Just before** power is turned off
- **During** the PSPS event
- **Once** power has been restored

Notifications will provide an estimated window of time when the power will be shut off and restored.

Direct Customer Notifications
We will attempt to reach customers through automated calls, texts and emails.

Additional Updates
We will also use social media and keep local news and radio outlets informed and updated.

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This is PG&E calling with a PSPS outage alert. On 10/5/20, your power may be shut off for safety. To continue in English press 1. To replay this message at any time, press #.

Due to current weather forecasts, 1234 EL ANYWHERE COURT is currently under a Watch for a Public Safety Power Shutoff. Weather forecasts including high winds and dry conditions may require us to turn off your power to help prevent a wildfire.

ESTIMATED SHUTOFF TIME: 10/7/20 between 6 pm and 10 pm. Shutoff times may be delayed if winds arrive later than forecast.

We expect weather to improve by 6 am on 10/8/20. After weather has improved, we will inspect equipment before restoring power.

ESTIMATED RESTORATION TIME: 10/8/20 by 4 pm. Changes in weather can affect shutoff & restoration times. pge.com/pspsupdates

Reply w/ “1” to verify receipt.

If you rely on power to operate life-sustaining medical devices or have access and functional needs, additional support may be available. For more information, visit pge.com/specialresources.

If this is not the correct phone number for 1234 EL ANYWHERE COURT, press 2.

Press # to repeat this message.

Thank you. Goodbye.
Some of the measures included in this presentation are contemplated as additional precautionary measures intended to further reduce the risk of wildfires.

WARNING EMAIL

PG&E PSPS Outage Alert
10/7/20: PG&E will turn off power for safety at 1234 EL ANYWHERE COURT on 10/7/20. Estimated shutoff: 6:00pm – 10:00pm or later if weather improves. Estimated restoration: 10/8/20 by 4:00 pm depending on weather & equipment damage. Info: pge.com/pspsupdates Reply w/ “1” to verify receipt.

WARNING TEXT
PG&E’s dedicated weather webpage offers a 7-day PSPS potential forecast that indicates the potential weather conditions that could necessitate a PSPS.

The 7-day PSPS potential forecast is updated daily by PG&E’s meteorology team.

PG&E’s weather webpage also offers an interactive weather map updated in real time using information from weather stations and cameras throughout PG&E’s service territory.

To sign up for daily email notifications regarding PSPS, visit cloud.em.pge.com/PSPS-7day-Signup.

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**Website Improvements**

We immediately upgraded our website to serve higher levels of traffic during a PSPS event following the October 2019 PSPS event and website failure.

- Moving pge.com to the Cloud
- Building a new stand-alone, cloud-based website specifically for emergencies
  - Automatically redirecting traffic
  - Developing an “all-in-one” map
  - Improved the website to accommodate lower bandwidth
  - Simpler language and layouts
  - Faster upload of information
  - Fully multilingual-translated content with ADA accessibility

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Community Resource Centers (CRCs)

CRCs provide a safe location where community members can access basic resources, as well as up-to-date information. The following resources may be available:

- Heating and cooling
- Device charging
- Bottled water
- Non-perishable snacks
- Wi-Fi service
- Coffee/tea
- Blankets
- ADA-compliant restrooms and hand washing stations
- Security personnel
- Chairs and tables

During a PSPS event, CRC locations will be shared on pge.com/pspupdates and via social media.

**COVID-19 CONSIDERATIONS**

PG&E is adapting our approach to CRCs to reflect appropriate COVID-19 public health considerations.

We will offer Micro CRCs (smaller, open air tents) and Mobile CRCs (vans) to supplement Indoor CRCs if shelter-at-home and physical distancing recommendations prevent the use of Indoor CRCs.

We are also taking measures to:

- **Require facial coverings** in accordance with state and county guidelines
- **Administer temperature checks** before entering indoor facilities
- **Limit attendance** to maintain physical distancing
- **Regularly sanitize surfaces**

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PG&E is working with the California Foundation for Independent Living Centers (CFILC) to fund resources to help prepare for disasters and extended power outages.

**Application Process:** The CFILC will determine who qualifies for resources. Medical needs and income will be taken into account.

Applications are available online or at Independent Living Centers (ILCs) and will be accepted at regional ILC locations.

In an effort to support customers who depend on power for medical and independent living needs, we will:
- Provide **PSPS event specific resources at** [pge.com/afn](http://pge.com/afn)
- Publish **press releases** and air **radio advertisements**
- Leverage our network of CBOs

Coordination of resources takes time. Individuals are encouraged to engage with their local ILC and plan before a PSPS event is imminent.

**Resources include:**

<table>
<thead>
<tr>
<th><strong>Portable backup power</strong></th>
<th><strong>Emergency preparedness assistance</strong></th>
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<tbody>
<tr>
<td><strong>Accessible transportation</strong></td>
<td><strong>Hotel vouchers and food stipends</strong></td>
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</table>
| **Medical Baseline application assistance** | **coordination of resources takes time. Individuals are encouraged to engage with their local ILC and plan before a PSPS event is imminent.**

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Where To Go For Additional Information

PG&E’S WILDFIRE SAFETY WEBSITE

WEATHER AND PSPS FORECASTING
Live weather information, a 7-day PSPS potential lookahead and images from PG&E’s high-definition cameras deployed in high fire-threat areas.

BACKUP POWER
Information on backup power options, safety tips, financing options, a marketplace to search major backup power retailers and more.

SAFETY ACTION CENTER
Information about wildfire risks and what customers can do before, during and after an emergency to keep their home, family or business safe.

MEDICAL BASELINE PROGRAM
Learn more about PG&E’s Medical Baseline Program for those who rely on power for medical devices.

UPDATE CONTACT INFORMATION

STAY UP TO DATE DURING A PSPS

For more information about our Community Wildfire Safety Program, please:
Call 1-866-743-6589 Email wildfiresafety@pge.com

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