Community Wildfire Safety Program
Alameda, Contra Costa and Marin Counties

June 10, 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.
Introductions

Vanessa Bryan  Manager, Local Customer Experience
Laura Wetmore  Senior Manager, East Bay and Mission Division
Vic Baker  Senior Manager, Diablo Division
Jim Wickham  Public Safety Specialist
John Walsh  Public Safety Specialist
Les Putnam  Public Safety Specialist
Matt Pender  Director, Community Wildfire Safety Program

All data is preliminary and based on early 2020 work planning. Data as of May 2020. Some of the measures included in this presentation are contemplated as additional precautionary measures intended to further reduce the risk of wildfires.
Your Local Electric System

What Is Public Safety Power Shutoff?

Lessons Learned and 2020 Improvements

Local Progress to Help Prevent Wildfires

Preparing for Public Safety Power Shutoffs

Open Discussion

All data is preliminary and based on early 2020 work planning. Data as of May 2020. Some of the measures included in this presentation are contemplated as additional precautionary measures intended to further reduce the risk of wildfires.
Your Electric System In Alameda, Contra Costa and Marin
Local CPUC High Fire-Threat District (HFTD) Map

The California Public Utilities Commission (CPUC) has a map that designates areas that are most at risk for wildfire.

- Tier 3 areas are at extreme risk
- Tier 2 areas are at elevated risk

This map helps PG&E to plan and prioritize wildfire prevention efforts.

~50 percent of PG&E’s service area is in high fire threat districts

<table>
<thead>
<tr>
<th></th>
<th>TOTAL OVERHEAD DISTRIBUTION LINE MILES</th>
<th>DISTRIBUTION LINE MILES IN HFTD</th>
<th>TOTAL OVERHEAD TRANSMISSION LINE MILES</th>
<th>TRANSMISSION LINE MILES IN HFTD</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALAMEDA COUNTY</td>
<td>2,188</td>
<td>347</td>
<td>744</td>
<td>169</td>
</tr>
<tr>
<td>CONTRA COSTA COUNTY</td>
<td>2,236</td>
<td>442</td>
<td>907</td>
<td>430</td>
</tr>
<tr>
<td>MARIN COUNTY</td>
<td>1,024</td>
<td>528</td>
<td>155</td>
<td>64</td>
</tr>
</tbody>
</table>

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

All data is preliminary and based on early 2020 work planning. Data as of May 2020.
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?
What Is A Public Safety Power Shutoff?

If severe weather threatens a portion of the electric system, it may be necessary for PG&E to turn off electricity in the interest of public safety.

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.
What Weather Could Lead To A PSPS?

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

All data is preliminary and based on early 2020 work planning. Data as of May 2020. Some of the measures included in this presentation are contemplated as additional precautionary measures intended to further reduce the risk of wildfires.
How Often Will A PSPS Event Occur?

Below is an estimate of potential PSPS events in your communities based on a review of 30 years of weather data.

Alameda County

1 event per year on average

Contra Costa County

1 event per year on average

Marin County

1 event per year on average

The number of events in any particular year will be exclusively driven by the weather pattern experienced and the above historical weather analysis may not be representative of the experience in a particular year.

All data is preliminary and based on early 2020 work planning. Data as of May 2020.
Some of the measures included in this presentation are contemplated as additional precautionary measures intended to further reduce the risk of wildfires.
How Are We Improving For This Year?

<table>
<thead>
<tr>
<th>SMALLER IN SIZE</th>
<th>Reduce the number of customers impacted by PSPS events by one-third compared to 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>SHORTER IN DURATION</td>
<td>Restore customers twice as fast after severe weather has passed</td>
</tr>
<tr>
<td>SMARTER FOR CUSTOMERS</td>
<td>Provide more accurate/timely communications and additional resources</td>
</tr>
<tr>
<td></td>
<td>Deliver more assistance for customers before, during and after a PSPS event</td>
</tr>
</tbody>
</table>

All data is preliminary and based on early 2020 work planning. Data as of May 2020. Some of the measures included in this presentation are contemplated as additional precautionary measures intended to further reduce the risk of wildfires.
How Are We Improving For This Year?

GOAL:
Reduce the number of customers impacted by PSPS events by one-third compared to 2019

WHAT WE’RE DOING:
- Installing sectionalizing devices on the transmission and distribution systems capable of re-directing power and limiting the size of outages
- Developing microgrids that use generators to keep the lights on
- Conducting targeted undergrounding as part of system hardening

Some of the measures included in this presentation are contemplated as additional precautionary measures intended to further reduce the risk of wildfires.
How Are We Improving For This Year?

SHORTER IN DURATION

GOAL:
Restore customers twice as fast after severe weather has passed

WHAT WE’RE DOING:
- Adding more field crews to speed inspection of lines
- Expanding helicopter fleet from 35 to 65 for aerial line inspections
- Commissioning two new airplanes for aerial line inspections
- Utilizing infrared equipment to inspect at night
How Are We Improving For This Year?

SMARTER FOR CUSTOMERS

GOALS:
Provide more accurate/timely communications and additional resources

- AND -

Deliver more assistance before, during and after a PSPS event

WHAT WE’RE DOING:

- Enhancing meteorology technology to pinpoint location and timing of severe weather
- Bolstering website capacity
- Improving customer alerts and notifications
- Upgrading Community Resource Centers
- Improving coordination with local agencies and critical service providers
- Working with the California Foundation for Independent Living Centers (CFILC) and other Community Based Organizations to support vulnerable customers
- Making it easier for eligible customers to join and stay in the Medical Baseline program
- Expanding in-language communications

Some of the measures included in this presentation are contemplated as additional precautionary measures intended to further reduce the risk of wildfires.
Local Progress To Help Prevent Wildfires
We’re adding **advanced weather stations** to better understand how severe weather can impact our system and proactively respond to potential threats.

**Advanced Weather Station Network**

Data is publicly available at [mesowest.utah.edu](http://mesowest.utah.edu) and [pge.com/weather](http://pge.com/weather).

---

**ALAMEDA COUNTY**
- 18 PG&E Stations

**CONTRA COSTA COUNTY**
- 14 PG&E Stations

**MARIN COUNTY**
- 21 PG&E Stations

---

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

*Some of the measures included in this presentation are contemplated as additional precautionary measures intended to further reduce the risk of wildfires.*
Sectionalizing The Electric Grid To Limit PSPS Impacts

We’re installing new sectionalizing devices that separate the grid into smaller parts to limit the number of customers impacted during a PSPS event.

We are installing 600 new sectionalizing devices this year:

- **45** devices planned for Alameda County
- **35** devices planned for Contra Costa County
- **45** devices planned for Marin County

We are also working to add remote and/or automated capabilities to many of the devices in order to further reduce the number of customers who are impacted by a public safety power shutoff.

All data is preliminary and based on early 2020 work planning. Data as of May 2020. Some of the measures included in this presentation are contemplated as additional precautionary measures intended to further reduce the risk of wildfires.
We are exceeding state vegetation and fire safety standards by addressing vegetation that poses a higher potential for wildfire risk to maximize the safety of our customers and communities.

<table>
<thead>
<tr>
<th>COUNTY</th>
<th>2020 TARGET</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALAMEDA</td>
<td>28 LINE MILES</td>
</tr>
<tr>
<td>CONTRA COSTA</td>
<td>67 LINE MILES</td>
</tr>
<tr>
<td>MARIN</td>
<td>9 LINE MILES</td>
</tr>
</tbody>
</table>

2020 Area Work*

*Work plan is subject to change due to weather, access or other scheduled constraints.
Preparing For Public Safety
Power Shutoffs
Advance PSPS Alerts For Customers

We provide advance notice prior to turning off power and updates until power is restored. This year, notifications will include more details about when the power will be shutoff 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 shutoff and restored.

**Direct Customer Notifications**

We will attempt to reach customers through calls, texts and emails.

**Additional Updates**

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

All data is preliminary and based on early 2020 work planning. Data as of May 2020. Some of the measures included in this presentation are contemplated as additional precautionary measures intended to further reduce the risk of wildfires.
Community Resource Centers (CRCs)

CRCs provide customers and residents with a safe, energized, ADA accessible location with basic resources, as well as up-to-date information. The following resources may be available:

- Heating and cooling
- Power strips to charge devices
- Bottled water
- Non-perishable snacks/fruit
- Wi-Fi service
- Coffee/tea
- Blankets
- ADA-compliant toilets and hand washing stations
- Security personnel
- Chairs and tables

During a PSPS event, the locations will be made available on pge.com/pspupdates and via social media, local news and radio.

If social distancing measures remain in place due to COVID-19, we will be incorporating alternative solutions like mobile, popup or reconfigured CRCs.
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.

PSPS event specific AFN resources will be posted at pge.com/afn. Press releases, radio advertisements and leveraging our network of CBOs will also be used to communicate with customers who depend on power for medical and independent living needs when possible during events.

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 Interdependent Living Centers (ILCs) and will be accepted at regional ILC locations. More information is available through these ILC locations:

**Community Resources for Independent Living (CRIL)**
510-881-5743  
439 A Street, Hayward, CA 94541

**Independent Living Resources of Solano and Contra Costa Counties (IRL)**
925-363-7293  
1850 Gateway Blvd #12, Concord, CA 94520

**Marin Center for Independent Living (MCIL)**
415-459-6245  
710 Fourth Street, San Rafael, CA 94901

All data is preliminary and based on early 2020 work planning. Data as of May 2020. Some of the measures included in this presentation are contemplated as additional precautionary measures intended to further reduce the risk of wildfires.
All data is preliminary and based on early 2020 work planning. Data as of May 2020.

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

Where To Go For Additional Information

DO WE HAVE YOUR CURRENT CONTACT INFORMATION?

pge.com/mywildfirealerts

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.
pge.com/weather

BACKUP POWER

Information on backup power options, safety tips, financing options, a marketplace to search major backup power retailers and more.
pge.com/backuppower

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.
safetyactioncenter.pge.com

MEDICAL BASELINE

Learn more about PG&E’s Medical Baseline program for those who rely on power for medical devices.
pge.com/medicalbaseline

KEEP UP TO DATE DURING A PSPS EVENT

pge.com/PSPSUpdates

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

All data is preliminary and based on early 2020 work planning. Data as of May 2020. Some of the measures included in this presentation are contemplated as additional precautionary measures intended to further reduce the risk of wildfires.
# 2019 PSPS Overview

<table>
<thead>
<tr>
<th>EVENT DETAILS</th>
<th>OCT 9 - 12</th>
<th>OCT 26 - NOV 1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ALAMEDA</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CUSTOMERS IMPACTED</td>
<td>~28,500</td>
<td>~55,300</td>
</tr>
<tr>
<td>PEAK WIND GUSTS</td>
<td>48</td>
<td>75</td>
</tr>
<tr>
<td>DAMAGE/HAZARDS</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>MAX. OUTAGE LENGTH (HRS)</td>
<td>40</td>
<td>61</td>
</tr>
<tr>
<td><strong>CONTRA COSTA</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CUSTOMERS IMPACTED</td>
<td>~38,900</td>
<td>~46,400</td>
</tr>
<tr>
<td>PEAK WIND GUSTS</td>
<td>40</td>
<td>59</td>
</tr>
<tr>
<td>DAMAGE/HAZARDS</td>
<td>0</td>
<td>15</td>
</tr>
<tr>
<td>MAX. OUTAGE LENGTH (HRS)</td>
<td>64</td>
<td>92</td>
</tr>
<tr>
<td><strong>MARIN</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CUSTOMERS IMPACTED</td>
<td>~9,800</td>
<td>~120,700</td>
</tr>
<tr>
<td>PEAK WIND GUSTS</td>
<td>70</td>
<td>61</td>
</tr>
<tr>
<td>DAMAGE/HAZARDS</td>
<td>16</td>
<td>12</td>
</tr>
<tr>
<td>MAX. OUTAGE LENGTH (HRS)</td>
<td>94</td>
<td>121</td>
</tr>
</tbody>
</table>

**Note:** All data is subject to change based on ongoing data reconciliation.

All data is preliminary and based on early 2020 work planning. Data as of May 2020. Some of the measures included in this presentation are contemplated as additional precautionary measures intended to further reduce the risk of wildfires.
How Is PG&E Improving Restoration Times?

We expect to be able to restore power to most customers **within 12 daylight hours after extreme weather has passed**, a **50 percent improvement** from 2019.

**Note:** Because extreme weather can last several hours or days, for planning purposes, we suggest customers prepare for outages that could last multiple days.

---

**WEATHER ALL CLEAR**

**After severe weather has passed**, crews begin inspections

**PATROL & INSPECT**

Crews visually inspect for damage by **vehicle, foot and air**

**ISOLATE & REPAIR DAMAGE**

Crews **isolate and fix damage**

**RESTORE POWER**

The **PG&E Control Center** restores power to customers

**NOTIFY CUSTOMERS**

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

---

*All data is preliminary and based on early 2020 work planning. Data as of May 2020. Some of the measures included in this presentation are contemplated as additional precautionary measures intended to further reduce the risk of wildfires.*
We’re supporting the installation of new HD cameras in high fire-threat areas, which allow PG&E and first responders to monitor potential wildfire threats in real time.

Monitoring For Wildfires

Images publicly available at alertwildfire.org

pge.com/weather

ALAMEDA COUNTY

CONTRA COSTA COUNTY

MARIN COUNTY

2
PG&E Cameras

5
PG&E Cameras

12
PG&E Cameras

PG&E HD Camera
Non-PG&E Camera that looks into PG&E’s service area

All data is preliminary and based on early 2020 work planning. Data as of May 2020.
Some of the measures included in this presentation are contemplated as additional precautionary measures intended to further reduce the risk of wildfires.