Community Wildfire Safety Program
SOLANO COUNTY

March 31, 2020
Meeting Purpose and Discussion Topics

MEETING PURPOSE

Share what we’re doing across our system and at the county level to reduce wildfire threats and improve Public Safety Power Shutoffs (PSPS) in 2020.

DISCUSSION TOPICS:

- **CIRCUIT MAPS**
  Communicate how local energy is supplied

- **REDUCING FUTURE PSPS IMPACTS**
  Lay out the short-term and long-term plan

- **LOCAL PROGRESS UPDATE**
  Review critical wildfire mitigation work planned in 2020

- **30-YEAR WEATHER ANALYSIS**
  Share results of weather analysis including PSPS likelihood and frequency

- **FEEDBACK AND PLANNING**
  Share what we’ve heard and how we’re planning for 2020

- **IMMEDIATE IMPROVEMENTS**
  Convey immediate improvements to the PSPS program

- **PREPARE FOR 2020 WILDFIRE SEASON**

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Following the wildfires in 2017 and 2018, some of the changes included in this document are contemplated as additional precautionary measures intended to further reduce future wildfire risk.
Wildfire Risks Across PG&E’s Service Territory

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50% of PG&E’s service territory is in high fire-threat district areas

<table>
<thead>
<tr>
<th></th>
<th>PG&amp;E SYSTEM-WIDE</th>
<th>SOLANO COUNTY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overhead distribution line miles in high fire-threat district (HFTD) areas</td>
<td>25,000+</td>
<td>139</td>
</tr>
<tr>
<td>Overhead transmission miles in HFTD areas</td>
<td>5,500+</td>
<td>92</td>
</tr>
<tr>
<td>Electric customers served</td>
<td>5.5M</td>
<td>175K</td>
</tr>
<tr>
<td>Weather stations installed</td>
<td>654</td>
<td>3</td>
</tr>
<tr>
<td>High-definition cameras installed</td>
<td>155</td>
<td>2*</td>
</tr>
<tr>
<td>Estimated number of trees near power lines</td>
<td>20M</td>
<td></td>
</tr>
</tbody>
</table>

*2 Cameras on Mount Vaca bordering Napa and Solano Counties

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Key Objectives for 2020

1 REDUCE WILDFIRE IGNITION POTENTIAL
   • Asset inspection and repair
   • Enhanced vegetation management
   • System automation
   • System hardening
   • Public Safety Power Shutoffs

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

3 REDUCE IMPACT OF PSPS EVENTS
   • Reduce impacted customers
   • Reduce duration
   • Reduce frequency
   • Improve coordination with and support communities and customers

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### 2019 vs 2020 By the Numbers

#### PROGRAM

<table>
<thead>
<tr>
<th>Description</th>
<th>2019 Complete</th>
<th>2020 Target</th>
<th>2020 Progress</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SYSTEM HARDENING</strong></td>
<td>171 Line Miles</td>
<td>241 Line Miles</td>
<td>28 Line Miles</td>
</tr>
<tr>
<td>Stronger poles, covered lines and/or targeted undergrounding</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>ENHANCED VEGETATION MANAGEMENT</strong></td>
<td>2,498 Line Miles</td>
<td>1,800 Line Miles</td>
<td>565 Line Miles</td>
</tr>
<tr>
<td>Inspecting, pruning and removing vegetation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>HIGH-DEFINITION CAMERAS</strong></td>
<td>133 Cameras</td>
<td>200 Cameras</td>
<td>13 Cameras</td>
</tr>
<tr>
<td>Improving real-time monitoring of high-risk areas and conditions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>WEATHER STATIONS</strong></td>
<td>426 Stations</td>
<td>400 Stations</td>
<td>28 Stations</td>
</tr>
<tr>
<td>Enhancing weather forecasting and modeling</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>SECTIONALIZING DEVICES</strong></td>
<td>287 Devices</td>
<td>592 Devices</td>
<td>28 Devices</td>
</tr>
<tr>
<td>Separating the grid into small sections for operational flexibility</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TRANSMISSION LINE SWITCHES</strong></td>
<td>0 Devices</td>
<td>23 Devices</td>
<td>1 Device</td>
</tr>
<tr>
<td>Enabling targeted transmission outages to lessen downstream customer impacts</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>COMMUNITY RESOURCE CENTERS</strong></td>
<td>111 Sites Activated</td>
<td>201 Sites Targeted</td>
<td>1 Site Ready</td>
</tr>
<tr>
<td>Safe, energized locations for customers to receive basic resources and information</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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**2020 PSPS Improvements**

<table>
<thead>
<tr>
<th>SMALLER IN SIZE</th>
<th>SHORTER IN DURATION</th>
<th>SMARTER FOR CUSTOMERS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GOAL</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reduce the number of customers impacted by PSPS every year</td>
<td>Restore power for customers twice as fast after severe weather has passed</td>
<td>Provide more accurate and timely communications and additional customer resources</td>
</tr>
<tr>
<td>• Installing <strong>23 transmission switches</strong> capable of re-directing power</td>
<td>• Adding <strong>more field crews</strong> to speed inspection of lines</td>
<td>• Enhancing <strong>meteorology technology</strong> to pinpoint severe weather</td>
</tr>
<tr>
<td>• Adding <strong>592 sectionalizing devices</strong> that limit the size of outages</td>
<td>• Expanding <strong>helicopter fleet</strong> from 35 to 65 for aerial line inspections</td>
<td>• Improving <strong>customer alerts</strong> with earlier restoration timing</td>
</tr>
<tr>
<td>• Hardening poles/wires and conducting <strong>targeted undergrounding</strong></td>
<td>• Commissioning two new <strong>fixed-wing planes</strong> for aerial line inspections</td>
<td>• Upgrading <strong>Customer Resource Centers</strong> with additional items and services</td>
</tr>
<tr>
<td>• Developing <strong>temporary microgrids</strong></td>
<td>• Utilizing <strong>infrared equipment</strong> to enable more inspections at night</td>
<td>• Establishing a <strong>new collaborative working approach</strong> with cities, counties, tribes and critical service providers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Bolstering <strong>website and call center capacity</strong></td>
</tr>
</tbody>
</table>

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Review of County-Specific Electric Grid
CIRCUIT MAP
Following the wildfires in 2017 and 2018, some of the changes included in this document are contemplated as additional precautionary measures intended to further reduce future wildfire risk.

Solano County Overview

CPUC High Fire-Threat District Map
Solano County

- **1,554** total overhead distribution miles
  - 139 in Tier 2 | 0 in Tier 3
- **589** total overhead transmission miles
  - 92 in Tier 2 | 0 in Tier 3
- **17** total substations
- **174,800** total customers served
  - 8,000 Medical Baseline Customers
- **750** total critical facilities

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Grid Flyover
REDUCING FUTURE PSPS IMPACTS
Work In Your Community
LOCAL PROGRESS UPDATE IN SOLANO COUNTY
Prioritizing Wildfire Mitigation Activities

PG&E prioritizes wildfire mitigation work by evaluating which circuits in our service territory are at the highest risk for wildfire. This is a dynamic and ongoing process.

We look at three key factors when determining a circuit’s risk for wildfire:

1. Likelihood of an ignition

2. How quickly a fire could spread in that location and potential impact

3. How easy it is to get in and out of the area in the event of a fire

Working to include **PSPS likelihood** as an additional criteria

Circuits at the greatest risk for wildfire are prioritized for:

- Inspections and repairs
- Enhanced vegetation management
- System hardening

**NOTE:** In some cases, PG&E made changes to the prioritization order of circuits based on other factors (e.g., environmental issues, safety, planned projects, geographic access and weather).
Following the wildfires in 2017 and 2018, some of the changes included in this document are contemplated as additional precautionary measures intended to further reduce future wildfire risk.

### WILDFIRE SAFETY PROGRAM EFFORTS

<table>
<thead>
<tr>
<th>Effort</th>
<th>2019 Complete</th>
<th>2020 Target</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Weather Stations</strong></td>
<td>3 STATIONS</td>
<td>IN PROGRESS*</td>
</tr>
<tr>
<td>Enhancing weather forecasting and modeling</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>High-Definition Cameras</strong></td>
<td>2 CAMERAS</td>
<td>IN PROGRESS*</td>
</tr>
<tr>
<td>Improving real-time monitoring of high-risk areas and conditions</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>System Hardening</strong></td>
<td>0 LINE MILES</td>
<td>0 LINE MILES</td>
</tr>
<tr>
<td>Stronger poles, covered lines and/or targeted undergrounding</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Sectionalizing Devices</strong></td>
<td>6 DEVICES</td>
<td>20 DEVICES</td>
</tr>
<tr>
<td>Separating the grid into small sections for operational flexibility</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Enhanced Vegetation Management</strong></td>
<td>21 LINE MILES</td>
<td>30 LINE MILES</td>
</tr>
<tr>
<td>Inspecting, pruning and removing vegetation</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Locations identified on a monthly basis

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Following the wildfires in 2017 and 2018, some of the changes included in this document are contemplated as additional precautionary measures intended to further reduce future wildfire risk.
We’re installing real-time tools to better understand how severe weather can impact our system and proactively respond to potential threats.

Targeting one station roughly every 20 circuit-miles in high fire-threat areas by 2022.

Weather stations installed to date

MAP LEGEND:
- PG&E Weather Station installed
- PG&E Weather Station planned
- Remote Automated Weather Stations (RAWS) within PG&E territory

Data available at mesowest.utah.edu
We’re supporting the installation of new High-Definition cameras in high fire-threat areas, which allow PG&E and first responders to monitor wildfires in real time.

This will increase our coverage to more than 90 percent of our service territory by 2022.

**2**

Cameras installed to date

**MAP LEGEND:**
- PG&E High-Definition Camera installed
- PG&E High-Definition Camera planned
- Non-PG&E Camera that looks into PG&E territory

*2 Cameras on Mount Vaca bordering Napa and Solano Counties

Images available at alertwildfire.org
Our system hardening work involves:

- **Installing stronger and more resilient poles** that will be set deeper in the ground to better withstand high winds.
- **Re-framing poles** to increase the separation of the conductors.
- **Replacing bare conductors** with larger, covered conductors.
- **Installing more poles than previously needed** to support the weight of the covered conductor and to meet new utility standards.
- **No longer using trees** to support PG&E infrastructure.
- **Adding down guys and anchors** to some poles to prevent leaning or falling.
- **Targeted undergrounding** of select overhead lines.
We are increasing the quantity of automated sectionalizing devices on distribution lines to help minimize the number of customers impacted by PSPS outages.

To date, we have installed 8 devices in your community. 100% of those devices have remote control capabilities (i.e., are SCADA-enabled).
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Local Sectionalizing

- Distribution sectionalizing device planned for 2020

Potential PSPS Impact Area for Planning Purposes:

- Area potentially removed from scope due to planned sectionalizing
- New area now in scope
- No change from 2019
- PG&E Substation

Electric Transmission Line

- 60 kV; 70 kV; 115kV only
- Electric Distribution Line

Note: Map reflects projects in planning and/or underway and may not include all miles planned for 2020
Temporary Microgrids and Local Resiliency

One of the ways PG&E is working to reduce PSPS impacts is through establishing new temporary “microgrids” in portions of our service area most likely to experience future PSPS events. In 2019, PG&E piloted a series of microgrids that were able to safely provide 4,800 customers across four communities with electricity during PSPS Events.

In 2020 we plan to continue these efforts by:

- Targeting the development of additional temporary microgrids, with more than 50 sites currently being considered.
- Exploring the ability to support communities and customers to develop their own multi-customer or community-level microgrids through our new Community Microgrid Enablement Program.

We will have more information about site selection and timing of microgrid projects in the coming months.

Example Placerville Temporary Microgrid

The diagram above shows the approximate area a temporary microgrid was able to serve in Placerville during a 2019 PSPS event using temporary backup generation.
Enhanced Vegetation Management

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.

- This includes establishing increased safety clearances between power lines and surrounding vegetation in high fire-threat areas.

- This also includes evaluating trees that pose a potential risk to the lines if they are tall enough to strike.

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30-Year Weather Analysis
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 territory to help determine the average likelihood and frequency of a PSPS event.

The following weather model data points were analyzed:

- **WIND SPEED**
- **WIND GUST**
- **TEMPERATURE**
- **RELATIVE HUMIDITY**
- **PRECIPITATION**
- **DEAD FUEL MOISTURE (4 TYPES)**
- **LIVE FUEL MOISTURE**
- **FOSBERG FIRE WEATHER INDEX**
- **OUTPUTS FROM THE NATIONAL FIRE DANGER RATING SYSTEM (4 MAIN OUTPUTS)**

During an event, the meteorology model is updated and run 4x daily.

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KEY TAKEAWAYS

Datasets/Model

- PG&E 30-year climatology
- Outage activity from 2008 (over 300,000 unplanned events)

Analysis/Results

- Wind speeds were extracted for each outage record per location per hour from climatology
- Numerous wind-outage model fits were tested
- Operational high-resolution model predicts the frequency of unplanned outages based on location-specific wind-outage model
Following the wildfires in 2017 and 2018, some of the changes included in this document are contemplated as additional precautionary measures intended to further reduce future wildfire risk.

**KEY TAKEAWAYS**

**Datasets/Model**
- PG&E 30-year climatology
- Fire Occurrence dataset from USFS (1992 – 2018)

**Analysis/Results**
- Benchmarked FPI against agency and utility best practices
- Evaluated dozens of parameters to determine best predictors of large fires
- Constructed over 4,000 FPI model variants for predictive analysis
- PG&E FPI outputs the probability of large fire occurrence

**PG&E Utility FPI**

- **Weather**
  - Wind Speed, Temperature and Humidity

- **Fuels**
  - Dead Fuel Moisture and Live Fuel Moisture

- **Land Type**
  - Forest, shrub/brush or grass-land dominated

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The **Utility Fire Potential Index** and **Outage Producing Winds Model** are used in unison to analyze what conditions existed during the most catastrophic fires in California history to forecast when catastrophic fires are most likely to occur in the future.

**Scenario: Winter Storm**
- High Outage Probability
- Low Probability of an Ignition
- Becoming a Large Fire

**Scenario: Blue Sky Day in February/March**
- Low Outage Probability
- Low Probability of an Ignition
- Becoming a Large Fire

**Scenario: Wind Event with Dry Fuels**
- High Outage Probability
- High Probability of an Ignition
- Becoming a Large Fire

**Scenario: Hot/Dry Summer Day**
- Low Outage Probability
- High Probability of an Ignition
- Becoming a Large Fire

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The following is a conservative estimate of potential PSPS events in your community based on 30 years of data when FPI and OPW met the PSPS criteria threshold.

**Potential Historical PSPS Events Over 30-year Period**

<table>
<thead>
<tr>
<th></th>
<th>JAN</th>
<th>FEB</th>
<th>MAR</th>
<th>APR</th>
<th>MAY</th>
<th>JUN</th>
<th>JUL</th>
<th>AUG</th>
<th>SEP</th>
<th>OCT</th>
<th>NOV</th>
<th>DEC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Events</td>
<td>4</td>
<td>10</td>
<td>2</td>
<td>7</td>
<td>7</td>
<td>18</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>11</td>
<td>18</td>
<td>39</td>
</tr>
<tr>
<td>Red Flag Warning Days (2015-2019)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

**NOTE:** Additional factors are considered before turning power off for safety such as red flag warning days or conditions on-the-ground during winter months.

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2020 Public Safety
Power Shutoff
FEEDBACK, PLANNING AND IMPROVEMENTS
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What We Heard: PSPS Planning for 2020

We completed 36 sessions with counties and tribes impacted by the October and November 2019 PSPS events to listen to concerns, gather feedback and improve our coordination going forward.

Common Themes

- **Community Resource Centers**
  Advanced planning and/or additional resources

- **Accurate and Timely Event Information**
  More timely and accurate event information for all stakeholders

- **More Granular, Parcel-Level Maps**
  Noted need for circuit info

- **Critical Facilities/Medical Baseline Customers**
  Requested to review and align on lists

- **Backup Power**
  Requested backup power support for critical facilities

- **PSPS Criteria**
  Noted confusion regarding PSPS criteria and specific weather conditions

- **Operational Briefings**
  Requested less frequent, streamlined and concise briefings

- **Coordination with Telecom Providers**
  Requested additional preparedness efforts for Telecom

- **Assigned Liaison Representative**
  (previously referred to as “SPOC”)
  Found the information flow through Assigned Liaison Representatives to be helpful

- **Sectionalizing, Microgrids and Power Resiliency**
  Raised interest in other power resilience solutions

Solano County Feedback:

- **Requested reduction of PSPS impacts** to City of Vallejo
- **Improvements to maps on PSPS portal**
- **Increase coordination with telecommunication providers**
- **Requested additional cameras and weather stations** on Mount Vaca
Based upon feedback received, **we are standing up multiple workstreams to improve communications and make PSPS events smaller, shorter and smarter.** Some of the key actions underway include:

**INFORMATION SHARING:**
- Sharing circuit level planning maps of the electric infrastructure
- Improving PSPS notification process and mapping to provide more timely and accurate event information for all stakeholders
- Providing additional maps and weather data to help clarify how PG&E determines when a PSPS event is necessary
- Providing a live, interactive map during future PSPS events
- Enhancing critical customer lists and updating PSPS data sharing policies related to critical and Medical Baseline customers

**POWER RESILIENCY:**
- Working to establish more temporary microgrids across our service area to help minimize the potential scope of future events
- Installing ~600 automated reclosing sectionalizing devices to remotely sectionalize portions of our electric grid to reduce PSPS event scope and shorten overall outage durations

**CUSTOMER AND AGENCY RESOURCES:**
- Identifying more permanent CRC locations and working with the California Foundation for Independent Living Centers (CFILC) to assist the AFN population (i.e. transportation resources)
- Streamlining briefings for public safety partners and stakeholders
- Continuing to provide Assigned Liaison Representatives (previously referred to as “SPOCs”) to impacted counties and tribes
- Working to streamline the portal to be more intuitive and timely

**TELECOM COORDINATION:**
- Increasing coordination with telecom providers to improve alignment during PSPS events
Event Communications

Once PG&E’s Emergency Operations Center (EOC) is activated, we will provide information through the following:

**Regional Twice-Daily Briefings at the Local Level**
- Hosted by Assigned Liaison Representatives (previously referred to as “SPOCs”) for counties and tribes.
- Event-specific information changes will be reviewed.
- Opportunity to resolve local issues.
- Q&A session will be available.

**Once-Daily Cooperator Call**
- Calls will be 15-30 minutes and provide the latest high-level updates.
- All counties and tribes within the service area are welcome to join the call, as well as telecom service providers, water agencies, special districts and other public safety partners.

**Event-Specific Information**
- Up-to-date information will be provided twice-daily at regular intervals.
- Information provided will include counties and tribes in scope, estimated time of de-energization, estimated time of restoration, number of Medical Baseline customers and number and types of critical facilities in scope.

When and where possible, we will strive to provide timely information to emergency service agencies in advance of notifying customers.
Emergency Operations Center (EOC) Coordination

PG&E will offer the following resources to support local EOCs during a PSPS event:

**Local EOC Liaison**
An Assigned Liaison Representative can be embedded in a county or tribe’s local EOC, upon request.

**Assigned Liaison Representative**
Counties and tribes will be assigned a single point of contact to provide them updates twice-daily and help resolve local issues.

**GIS Analyst**
A PG&E GIS Analyst can be embedded in a county or tribe’s local EOC upon request; remote support is also available, if preferred.

**Third-Party Representative in the PG&E EOC**
Per CPUC guidelines, cities, counties, tribes, water agencies and telecom providers may request to send a representative to observe the PG&E EOC in San Francisco during a PSPS event.

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A secure data transfer site (also known as “the portal”) is available for cities, counties, tribes and emergency responders that require confidential customer data to support community needs during an event. Based upon feedback received during the listening sessions, we are working to streamline the portal and make it more intuitive and provide real-time updates.

The portal includes the following:

- Event-Specific Information
- Maps (GIS, PDF, KMZ)
- CRC Location Information
- Summary of Affected Customers
- Summary of Affected Medical Baseline Customers

**NOTE:** Though we are going to open the portal to all public safety partners (including telecom, water agencies and hospitals), not all partners will receive confidential customer data.

[CONCEPTUAL LAYOUT]

1,262 portal users as of 1/10/2020
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Earlier this year, PG&E conducted outreach to tribes and counties to streamline and enhance the overall Community Resource Center (CRC) process, including working together to identify permanent locations.

Our goal is to secure multiple hardened CRC locations within each county and tribe.

- We will set up and open a CRC as soon as possible after the start of a PSPS event.
- The location will be set up within the PSPS event footprint and with the input of county OES/tribal agencies.
- During a PSPS event, the locations will be made available to customers on pge.com/pspsupdates and via social media, local news and radio.

The following resources will be available:

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

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**Proposed CRC Locations in Your Community**

1. Solano Community College, Fairfield
2. Joseph Nelson Community Center, Suisun City
3. Solano Community College, Vacaville

*Locations will be activated as needed, depending on event scope and potential customer impacts.*
Identifying Critical Customers and Facilities

Before, during and after a PSPS event, PG&E provides **advanced communication** (when possible) and **priorities restoration** to certain non-residential **customers identified as “Critical.”** These customers include:

<table>
<thead>
<tr>
<th>Public Safety Impacting Customer</th>
<th>Schools</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Level 1 – Public Safety Partner; Provides Emergency Services</strong></td>
<td><strong>Level 1 – Universities/Higher Education Facilities</strong></td>
</tr>
<tr>
<td>• Emergency Services: Fire and police stations; 911 Dispatch; EOCs</td>
<td></td>
</tr>
<tr>
<td>• Government Agencies: Government agencies critical to national defense/cybersecurity; Prisons and jails</td>
<td></td>
</tr>
<tr>
<td>• Communications Services: Critical telecom infrastructure</td>
<td><strong>Level 2 – K-12 Schools</strong></td>
</tr>
<tr>
<td>• Water Agencies: Critical potable water/wastewater treatment</td>
<td></td>
</tr>
<tr>
<td>• Energy Sector: Publicly-owned utilities; Electric co-ops</td>
<td></td>
</tr>
<tr>
<td>• Health Services: Emergency hospitals; Surgical centers</td>
<td></td>
</tr>
<tr>
<td><strong>Level 2 – Supports Emergency Response Needs</strong></td>
<td></td>
</tr>
<tr>
<td>• Emergency Services: Non-critical fire and police stations; Evacuation centers/shelters</td>
<td><strong>85</strong> Jurisdictions provided feedback</td>
</tr>
<tr>
<td>• Government Agencies: Local/state/national staging sites</td>
<td><strong>500+</strong> Critical customers were added to database</td>
</tr>
<tr>
<td>• Health Services: General hospitals; Hospice center; Kidney dialysis centers; Public Health Departments; etc.</td>
<td><strong>800+</strong> Critical customers were confirmed in database</td>
</tr>
<tr>
<td>• Communications Services: Non-critical telecom infrastructure; Radio/TV broadcasting critical facilities</td>
<td></td>
</tr>
<tr>
<td>• Chemical Sector: Fuel refineries; Hazardous materials facilities; etc.</td>
<td></td>
</tr>
<tr>
<td>• Water Agencies: Non-critical potable water/wastewater treatment</td>
<td></td>
</tr>
<tr>
<td>• Transportation: Major local and national public transportation</td>
<td></td>
</tr>
</tbody>
</table>

As we approach the 2020 wildfire season, we **continue to enhance and validate our critical customer lists** through internal process improvements and additional coordination with local governments. Outreach is expected to begin in April 2020.
Data Sharing and Critical Facilities

We have received a number of inquiries from government and tribal agencies related to PG&E’s ability to share critical facility and Medical Baseline customer data both before and during PSPS events.

- We are currently reviewing and working to update our PSPS data sharing policies, including working with the CPUC, by this wildfire season.

- In the interim, if your agency is willing to execute an updated non-disclosure agreement (NDA), we can share sensitive customer data via the agency portal in accordance with our 2019 policy.

- To submit an NDA, or if you have questions related to the agreement, please email wildfiresafety@pge.com.
Collaborating with the California Foundation for Independent Living Centers

PG&E and the CFILC will conduct a pilot program to provide AFN community members with support and resources to help them prepare for disasters and extended power outages.

- Through the initial agreement for this pilot program, PG&E is providing funding to the CFILC beginning in October 2019 through October 2020.

- The CFILC will determine who qualifies for resources through an application process. Medical needs and income will be taken into account.

- Applications will be accepted at CFILC locations.

Your local CFILC location is:
450 Chadbourne Road, Suite C, Fairfield, CA 94534

PG&E and the California Foundation for Independent Living Centers (CFILC) are working together to determine ways to best serve the Access for Functional Needs (AFN) community before, during and after a Public Safety Power Shutoff event or other emergency.

California Foundation for Independent Living Centers (CFILC)
Registered 501 (c)(3) non-profit

For more information visit: cfilc.org

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Sharing the Message

You can help your community take steps to prepare.

Encourage customers to **update their contact information** with their utility provider.

Let customers know they may be eligible for the **Medical Baseline Allowance**.

Remind residents to **attend a local Community Wildfire Safety Program open house** (schedule to be found at [pge.com/wildfiresafety](http://pge.com/wildfiresafety)).

Share our **preparedness messages** through your newsletter, website or social media.

Let us know what **other opportunities** you see.

Additional materials are available upon request.

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Next Steps

We want to coordinate with you to:

- CONFIRM contact information
- CONFIRM portal access
- FINALIZE CRC locations
- REVIEW critical facility information
- DISCUSS PSPS communications timeline
Open Discussion
Thank You

Please direct customers with questions to:

• Call us at 1-866-743-6589
• Email us at wildfiresafety@pge.com
• Visit pge.com/wildfiresafety
Appendix
## Appendix Table of Contents

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<th>TOPIC</th>
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# 2019 PSPS Overview

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

<table>
<thead>
<tr>
<th>EVENT DETAILS</th>
<th>JUNE 8 - 9</th>
<th>SEPT 23 - 26</th>
<th>OCT 5 - 6</th>
<th>OCT 9 - 12</th>
<th>OCT 23 - 25</th>
<th>OCT 26 - NOV 1</th>
<th>NOV 20 - 21</th>
</tr>
</thead>
<tbody>
<tr>
<td>CUSTOMERS IMPACTED</td>
<td>~22,000</td>
<td>~50,000</td>
<td>~12,000</td>
<td>~735,000</td>
<td>~179,000</td>
<td>~968,000</td>
<td>~49,000</td>
</tr>
<tr>
<td>COUNTIES IN SCOPE</td>
<td>5</td>
<td>7</td>
<td>3</td>
<td>35</td>
<td>17</td>
<td>38</td>
<td>11</td>
</tr>
<tr>
<td>CRCs OPEN</td>
<td>4</td>
<td>8</td>
<td>3</td>
<td>33</td>
<td>28</td>
<td>77</td>
<td>34</td>
</tr>
<tr>
<td>PEAK WIND GUSTS</td>
<td>63 mph</td>
<td>58 mph</td>
<td>51 mph</td>
<td>77 mph</td>
<td>80 mph</td>
<td>102 mph</td>
<td>75 mph</td>
</tr>
<tr>
<td>DAMAGE/HAZARDS</td>
<td>5</td>
<td>4</td>
<td>2</td>
<td>116</td>
<td>26</td>
<td>554</td>
<td>15</td>
</tr>
<tr>
<td>AVG. OUTAGE DURATION AFTER ALL CLEAR</td>
<td>5 HRS</td>
<td>7 HRS</td>
<td>4 HRS</td>
<td>25 HRS</td>
<td>5 HRS</td>
<td>22 HRS</td>
<td>10 HRS</td>
</tr>
<tr>
<td>AVG. OUTAGE DURATION TOTAL</td>
<td>16 HRS</td>
<td>16 HRS</td>
<td>14 HRS</td>
<td>37 HRS</td>
<td>25 HRS</td>
<td>55 HRS</td>
<td>25 HRS</td>
</tr>
</tbody>
</table>

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

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Following the wildfires in 2017 and 2018, some of the changes included in this document are contemplated as additional precautionary measures intended to further reduce future wildfire risk.
Following the wildfires in 2017 and 2018, some of the changes included in this document are contemplated as additional precautionary measures intended to further reduce future wildfire risk.
As part of our wildfire risk monitoring, we will review a transmission lines in the potentially affected area.

- While no single factor will drive a PSPS, some factors for a transmission-level event include:
  - Severity and duration of weather
  - Site-specific environmental conditions that increase wear
  - Age and condition of the asset
  - Status of recent repairs
  - Real-time field observations

- If it is determined that a transmission line might be de-energized for safety, PG&E works closely with the California Independent System Operator to assess the system impacts.
Agency Notifications

We will be following up with you to confirm we have your latest contact information.

2,195 total contacts
(as of 2/4/2020)

6 total contacts
for Solano County

Contact List:

<table>
<thead>
<tr>
<th>LAST NAME</th>
<th>FIRST NAME</th>
<th>DEPARTMENT</th>
<th>TITLE</th>
<th>PRIMARY PHONE</th>
<th>EMAIL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ryan</td>
<td>Donald</td>
<td>OES</td>
<td>Emergency</td>
<td>(707)784-1600</td>
<td><a href="mailto:dlryan@solanocounty.com">dlryan@solanocounty.com</a></td>
</tr>
<tr>
<td>Corsello</td>
<td>Birgitta</td>
<td>County Administration</td>
<td>County Administrator</td>
<td>(707)784-6100</td>
<td><a href="mailto:bcorseollo@solanocounty.com">bcorseollo@solanocounty.com</a></td>
</tr>
<tr>
<td>Jones</td>
<td>Shana</td>
<td>CAL FIRE</td>
<td>Local Cal Fire</td>
<td>(707)967-1400</td>
<td><a href="mailto:Shana.jones@fire.ca.gov">Shana.jones@fire.ca.gov</a></td>
</tr>
<tr>
<td>Vasquez</td>
<td>John</td>
<td>County Board of Supervisors</td>
<td>Chair of the Board</td>
<td>(707)784-6129</td>
<td><a href="mailto:ehannigan@solanocounty.com">ehannigan@solanocounty.com</a></td>
</tr>
<tr>
<td>Chadwick</td>
<td>Josh</td>
<td>Fire Area Coordinator</td>
<td>Fire Chief</td>
<td>(707)590-3193</td>
<td><a href="mailto:jchadwick@ci.benicia.ca.us">jchadwick@ci.benicia.ca.us</a></td>
</tr>
<tr>
<td>Ferrara</td>
<td>Thomas</td>
<td>Sheriff's Department</td>
<td>Sheriff</td>
<td>(707)784-7030</td>
<td><a href="mailto:Tferrara@solanocounty.com">Tferrara@solanocounty.com</a></td>
</tr>
</tbody>
</table>
Microgrids – Community Microgrid Enablement Program (CMEP)

PG&E is exploring the ability to support communities and customers to develop their own multi-customer or community-level microgrids as a way to reduce PSPS impacts.

This may include sponsoring enhanced technical support for project development, project tools and in some cases, one-time matching funds.

To qualify for this program, microgrid projects must meet the following criteria:

- Serve areas that experienced a PSPS event in 2019
- Located in an area that could be safely energized during a PSPS event
- Serve one or more critical facility
- Supported by local governments and stakeholders

This program is currently under development and pending approval by the CPUC.
Undergrounding

The process for identifying priority circuits for undergrounding includes the following steps:

**IDENTIFY** overhead circuits with highest wildfire risk.

**REVIEW** of circuits by PG&E or contract staff specialized in electric systems, fire prevention and suppression, construction and environmental impact.

**CONSIDER** if elimination of high-risk assets is possible (including if customers or communities can be served through alternate means).

**DETERMINE** the most effective, timely and feasible approach. If undergrounding is not feasible, a hardened and/or relocated overhead system can be pursued.

**CONFIRM** chosen risk mitigation approach and design (asset elimination, undergrounding or hardened overhead) will reduce wildfire risk.

We will engage with local officials throughout this process to discuss decision factors and considerations. **Note that undergrounding is a complex process that can take years to complete. We will continue to take immediate wildfire safety measures while work is planned.**
PG&E completed safety inspections of all electric infrastructure in areas of higher wildfire risk in 2019, as part of our enhanced wildfire safety efforts.

- In 2020, our System Inspections Program will continue to evaluate our electric infrastructure on an ongoing basis to find and fix potential risks to the safety and reliability of our system.

- Continuing in 2020, we are accelerating our inspection cycles beyond minimum compliance regulations to align with wildfire risk. This means HFTD Tier 2/Tier 3 areas will be evaluated more frequently.

- Specifically for 2020, we are inspecting all assets in Tier 3 areas and one-third of assets in Tier 2 areas. All non-HFTD areas will be inspected at minimum every six years.
Preparing for Outages

The threat of extreme weather and wildfires continues to grow. We are asking our customers to prepare their emergency plan using the checklist below:

PLANNING BASICS:

- Keep a hard copy of emergency phone numbers.
- Build or restock an emergency supply kit
  Stock supplies to last a week — include flashlights, fresh batteries, first aid supplies, food, water and cash.
- Practice manually opening their garage door.
- Designate an emergency meeting location.
- Learn more at PG&E’s Safety Action Center
  Visit safetyactioncenter.pge.com for helpful safety and preparedness tips in English, Spanish or Chinese.

FOR CUSTOMERS WHO USE ELECTRICITY AND BATTERY-DEPENDENT DEVICES

- Plan for any medical needs including medications that need refrigeration or medical devices that require power.
- Ensure any backup generators are ready to safely operate
  Backup power safety tips can be found at pge.com/backuppower.
- Consider staying with a friend or relative during an outage.
- Visit prepareforpowerdown.com to download the Pacific ADA Center’s Emergency Power Planning Fact Sheet.

Update contact information. PG&E account holders can call us at 1-866-743-6589 or visit pge.com/mywildfirealerts.

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PG&E has a dedicated weather forecasting webpage.

- **Weather data and daily forecasting information**, including a 7-Day PSPS potential lookahead.
- **Lookahead shows when and where PG&E is forecasting** the type of conditions that may lead to a PSPS event.
- **See live weather information** from the hundreds of weather stations PG&E has installed.
- **View images** from the more than 150 high-definition cameras PG&E has deployed in HFTD areas.
The Safety Action Center contains helpful information about wildfire risks and what customers can do before, during and after an emergency to keep their home, family or business safe.

VISIT:
safetyactioncenter.pge.com
Backup Power and Air Quality

We are providing resources to help customers determine if backup power is right for them as part of their preparedness plan.

A dedicated website and fact sheet on backup power options that include:

- **Tips for assessing energy needs** and choosing the right backup power option.
- **Alternatives to generators**, including portable power storage and battery technology.
- **Guidance for how to safely use** portable and permanent stand-by generators.
- **Financing options** including a list of resources.
- **A marketplace to search all major backup power retailers** and find energy efficient products.

Operating a backup generator may be subject to **air quality regulations**; for information visit [arb.ca.gov/app/dislookup/dislookup.php](http://arb.ca.gov/app/dislookup/dislookup.php).

pge.com/backuppower
What is Medical Baseline?

- The Medical Baseline Program provides financial assistance to residential customers that have special energy needs due to certain qualifying medical conditions.
- Eligible customers may receive a “standard” Medical Baseline quantity of approximately 500 kilowatt-hours (kWh) of electricity and/or 25 therms of gas per month, in addition to regular baseline quantities.

Who Qualifies for Medical Baseline?

A licensed medical practitioner must certify that a full-time resident in your home is:

- Dependent on life-support equipment used in the home.
- A paraplegic, hemiplegic, quadriplegic or multiple sclerosis patient with special heating and/or air-conditioning needs.
- A scleroderma patient with special heating needs.
- Being treated for a life-threatening illness, compromised immune system or other medical condition with special heating and/or air-conditioning requirements necessary to sustain the patient’s life or prevent deterioration of the patient’s medical condition.

Applying for Medical Baseline

1. Complete the “Medical Baseline Allowance” application form. Forms can be found by visiting pge.com/medicalbaseline. Note: a licensed medical practitioner must sign the application and certify the medical condition.

2. Mail the completed and signed application form to:

   PG&E
   Attention: Medical Baseline
   P.O. Box 8329
   Stockton, CA 95208

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Update Contact Info

Make sure PG&E has your current contact information by visiting pge.com/mywildfirealerts today!

If we need to turn off power for safety, we will attempt to contact PG&E account holders in advance by:

- Phone
- Text
- Email

Updates will also be provided through:

- Social media (Facebook, Twitter, Instagram)
- Local news
- Radio
- PGE.com
- Nixle
- Nextdoor

We will be following up with you to confirm the latest agency automated notification contacts and portal access users.

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**Additional Preparedness Resources**

- **prepareforpowerdown.com**
  Statewide education and awareness resource, led jointly by PG&E, San Diego Gas & Electric and Southern California Edison at the direction of the California Public Utilities Commission (CPUC)

- **ready.gov**
  Disaster preparedness information from the U.S. Department of Homeland Security

- **readyforwildfire.org**
  CAL FIRE’s wildfire preparedness website

- **cpuc.ca.gov/wildfiresinfo**
  Information on the CPUC’s wildfire safety efforts

- **caloes.ca.gov**
  California Governor’s Office of Emergency Services website

- **firesafecouncil.org**
  California Fire Safe Council website

- **noaa.gov**
  National Oceanic and Atmospheric Administration website

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