Pacific Gas and Electric Company®

# Public Safety Power Shutoff Annex

## to the

## Company Emergency Response Plan


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# Document Control

PSPS Team maintains this Annex. This section records the revisions made to the PSPS Annex: the responsible persons for its preparation, maintenance, review, and updates; and signature authorities for approval.

## Change Record

The following table is used to record all changes made to the plan. It describes the revisions made, the locations of the revisions, the names of the persons responsible for the revisions, and dates of revisions:

| Section | Person Responsible for Revision | Change | Date |
|---|---|---|---|
| 1.3 Annex Relation to CERP | [redacted] | **Revision**: Added Customer Strategy Officer to Command Staff and removed Legal Officer<br>**Revision**: "Functional Business Unit" replaces "Lines of Business" here and throughout document.<br>**Revision**: Text relationship Annex to CERP, NIMS and ICS. | 07/19/2022<br>07/29/2022<br>08/05/2022 |
| 2.2 EOC Staffing for PSPS Event | [redacted] | **Revision**: Clarification on Standard Roles per ICS. | 07/29/2022 |
| 2.3 Officer-in-Charge | [redacted] | **Revision**: "General Staff" specific meaning to use capitals in this sections and throughout document.<br>**Removal**: "Deputy OIC" as possible delegate. | 07/29/2022 |
| 2.4 EOC Commander | [redacted] | **Revision**: EOC Incident Commander responsible for the overall command of the incident/event. | 07/29/2022 |
| 2.6 Customer Strategy Officer and Supporting Roles | [redacted] | **Addition**: Medical baseline customers as receiving notifications before de-energization. | 06/30/2022 |
| 2.6.2 Community Resource Center Lead | [redacted] | **Revision**: Title to Community Resource Center Lead | 07/05/2022 |

| Section | Person Responsible for Revision | Change | Date |
|---|---|---|---|
| 2.6.3<br>Agency and Communications Lead | [redacted] | **Revision**: Title to Agency and Communications Lead - adding Agency. | 07/22/2022 |
| 2.7<br>Liaison Officer and Supporting Roles | [redacted]<br>[redacted]<br>[redacted] | **Addition**: "federal" to listing of types of government.<br>**Addition**: "planning meetings" to listing of meetings.<br>**Removal**: CalOES state notification form process.<br>**Addition**: Supporting requests and serving as single point of contact from third-party representatives to embed in PG&E's EOC.<br>**Removal**: "Receiving and reviewing Cal OES State Notifications Forms from Planning Section and sending to Cal OES Warning Center."<br>**Removal**: "In both a Single or Unified Command Structure , representatives from assisting or cooperating agencies and organizations coordinate through the LNO . " | 07/14/2022<br><br><br>07/29/2022<br><br>08/01/2022 |
| 2.7.1<br>Assigned City/County Agency Representatives | [redacted]<br>[redacted] | **Revision**: Branch Lead to replace Branch Manager<br>**Addition**: Liaison Branch Lead ask for escalations/feedback. | 07/29/2022<br>07/19/2022 |
| 2.7.2<br>PG&E State Operations Center Agency Representatives | [redacted] | **Revision**: Changed title to "PG&E Sate Operations Center Agency Representatives" from formerly listed as "PG&E State Operations Center Liaison Agency Representatives". | 07/22/2022 |
| 2.10<br>Legal Advisor | [redacted] | **Revised**: Description of "Legal" Advisor role formerly listed as a Note and now has section number. | 07/19/2022 |
| 2.11.1<br>Human Resources Branch | [redacted] | **Revision**: Minor revisions throughout text.<br>**Revision**: Title to "Team Scheduler."<br>**Revision**: Title to "Geoscience Information System Technical Specialist."<br>**Addition**: Coordinating with Customer Strategy Officer and Liaison Officer.<br>**Addition**: Bullet about "Impacted personnel."<br>**Addition**: "PG&E coworkers...receive their primary messaging...through PSPS customer messaging." | 07/12/2022<br><br><br><br><br>07/13/2022 |
| 2.13<br>Logistics Section Chief and Supporting Roles | [redacted]<br>[redacted] | **Revision**: Minor verbiage revisions.<br>**Addition**: Working with Finance and Administration Section on purchase orders, approved vendors, and Sarbanes Oxley regulations. | 07/11/2022<br>07/29/2022 |

| Section | Person Responsible for Revision | Change | Date |
|---|---|---|---|
| 2.14<br>Operations Section Chief and Supporting Roles | [redacted] | **Removal**: For purposes of consistency removal of former Fig 2-4, Operations Section org chart. | 07/22/2022 |
| 2.14.3<br>Electric Transmission Operations Branch Director | [redacted] | **Revision**: Title to "Electric Transmission Branch Director" from formerly "Electric Transmission Operations Branch Director." | 07/20/2022 |
| 2.14.7<br>Temporary Generation Branch Director and Supporting Roles | [redacted] | **Addition**: Utilize Deputy Branch Director for support<br>**Addition**: Descriptions of actions taken by Primary and Secondary Voltage Leads. | 07/20/2022 |
| 2.14.7.1<br>Primary Voltage Lead | [redacted] | **Revision**: Minor revisions to text.<br>Additions: Added further responsibilities. | 07/20/2022 |
| 2.14.7.1<br>Secondary Voltage Lead | [redacted] | **Revision**: Moved content to section 2.14.7 | 07/20/2022 |
| 2.15<br>Planning Section Chief and Supporting Roles | [redacted]<br>[redacted]<br>[redacted] | **Addition**: "responsible for direction of Planning Section staff and development of their respective documentation."<br>**Addition**: EOC Commander has final approval over all materials produces by Planning Section.<br>**Revision**: Text on responsibilities of two Deputies per ICS. | 07/22/2022<br>07/22/2022<br>07/29/2022 |
| 2.15.2<br>Deputy Planning Section PSPS Chief | [redacted]<br>[redacted] | **Removal**: Note on working with Deputy Planning Section Chief<br>**Revision**: In Figure 2-4 Planning Section with PSPS Specific Roles revised text in guide for "All" for grey boxes to ""Activates for all incidents."<br>**Revision**: Data is exported to the EOC event folder. | 07/22/2022<br>07/11/2022 |
| 2.15.3.1<br>PSPS Communications Coordinator | [redacted] | **Revision**: Corrected role title to "PSPS Comms Coordinator" from formerly listed as "External Comms Coordinator".<br>**Revision**: Minor revisions including "sequences" replacing "plans". | 07/12/2022 |

| Section | Person Responsible for Revision | Change | Date |
|---|---|---|---|
| 2.15.3.2 PSPS Distribution Asset Health Specialist | [redacted] | **Addition**: Responsibility "Creating Asset and Vegetation Tags Situational Summary deck for OIC Decisions B+C and D+E." | 07/19/2022 |
| 2.15.3.3 PSPS Portal Unit Leader | [redacted] | **Revision**: Corrected role title to Portal Unit Lead from formerly "Portal Unit Lead".<br>**Addition**: Event data is refreshed twice daily. | 07/12/2022 |
| 2.15.3.4 PSPS Portal Unit Support | [redacted] | **Revision**: Corrected role title in text to "PSPS Portal Unit Support" from former listing of "Portal User Support.<br>**Addition**: "PSPS Portal Unit Lead" to last bullet. | 07/12/2022 |
| 2.15.3.5 PSPS Process Unit Leader | [redacted] | **Addition:** "Coordinating ETOR revisions with Operations Chief before and immediately after de-energization" to responsibilities. | 07/08/2022<br>07/11/2022 |
| 2.15.3.6 PSPS Recorder | [redacted]<br>[redacted] | **Addition**: Confirm/Cancel/Delay meetings.<br>**Removal**: "Assisting with management of PSPS overall event timeline and assisting the PSPS Process Lead."<br>**Addition**: "Collecting data from Meteorology" added to responsibilities. | 07/11/2022<br>07/08/2022 |
| 2.15.3.7 PSPS Risk Analyst | [redacted] | **Revision**: Supporting presentation to OIC meetings from formerly Presenting to EOC decision making meetings. | 07/11/2022 |
| 2.15.3.8 PSPS Technical Lead | [redacted] | **Revision**: Interface with HAWC Lead. | 07/12/2022 |
| 2.15.4.1 Documentation Unit | [redacted] | **Revision**: To "Incident Briefing (201) from formerly "Incident Action Plan (IAP)". | 07/22/2022 |
| 2.15.4.3.1 HAWC Lead | [redacted] | **Revision**: Field observation schedules to field observation to support All-Clear decisions. | 07/12/2022 |
| 2.15.4.3.3 Safety Infrastructure Protection Team | [redacted] | **Addition**: Responsibilities "may" include. | 08/03/2022 |
| 2.15.4.9 Situation Unit | [redacted] | **Revision**: Is an "All-Hazard Unit". | 07/22/2022 |
| 2.15.4.9.1 Situation Unit Leader | [redacted]<br>[redacted] | **Addition**: "Developing situational information to support external briefings and development of a common operating picture."<br>**Addition**: Example for scoping abnormalities. | 07/22/2022<br>08/02/2022 |

| Section | Person Responsible for Revision | Change | Date |
|---|---|---|---|
| 3.2.1 Geographic Scope | [redacted] | **Revision:** Figure 3-1 title text updated from December 2021 to April 2022. | 07/11/2022 |
| 3.2.3 Time Places | [redacted] | **Revision**: Clarification on TP's de-scoped in Figures 3-2 and 3-3. | 07/07/2022 |
| 3.3.1 Ignition Probability Weather Index (IPW) | [redacted] | **Revision**: To "Ignition Probability Weather Index (IPW) model" from former listing of "Outage Producing Winds (OPW) model." | 08/02/2022 |
| 3.3.3 PSPS Event Activity Timeline | [redacted] | **Revision**: Updated Activity Timeline Figures 3-10, 3-11, 3-12, 3-13 to fill gaps. Formerly on three pages to now four pages. | 07/25/2022 |
| 3.3.4 Decisions made by the OIC | [redacted] | **Revision**: Named HAWC and Operations as other EOC sections.<br>**Revision**: Added language on how factors OIC considers are not limited to the listing.<br>**Addition**: HAWC and Operations Section added to listing of groups that OIC receives situational awareness from.<br>**Revision**: Figure 3-15 - text to "Patrol, Make safe, and Restore power" from former listing of "Safely Restore Power."<br>**Addition**: OIC will consider "various factors including but not limited to ..."<br>**Revision**: To "areas" from former listing of "Time Places (TPs)." | 07/11/2022 |
| 3.5.3 Call-out Procedures | [redacted] | **Removal:** As redundant to Section 3.6.1 | 08/03/2022 |
| 3.5.5 Readiness Posture - Sections and Focus Areas | [redacted] | **Revision**: Liaison Officer responsibility to confirm internal presenters and schedule SEBs. | 07/19/2022 |
| 3.7.5 Resource Planning | [redacted] | **Revision**: Minor revisions to text including on simultaneous wind events.<br>**Removal**: "Extra resources above FORCE and/or SOPP are allocated based on requests and availability of crews".<br>**Revision**: Minor updates to Figure 3-20 REC/OEC Resource Planning Process to include "REC". | 07/14/2022 |

| Section | Person Responsible for Revision | Change | Date |
|---|---|---|---|
| 3.7.6 Field Observer Resourcing | [redacted] | **Addition**: When requested by Meteorology..." | 08/03/2022 |
| 3.8.1 PSPS Event Overview | [redacted] | **Addition:** "repair" to patrol, repair and restoration. | 07/22/2022 |
| 3.9 PSPS Event Scoping | [redacted] | **Addition**: In Figure 3-20 PSPS Process with OIC Decisions added "(optional)" after Confirm/Cancel/Delay Meetings. | 08/02/2022 |
| 3.9.2 De-energization | [redacted] | **Revision**: Minor edits including Cal OES Form to notify when first de-energization begins. | 07/22/2022 |
| 3.10.1 Re-Energization Process | [redacted]<br>[redacted] | **Addition**: Met forecast of weather "all clears" by "All Clear Zones" including circuits. Weather "all clears also possible by entire Time Place.<br>**Revision**: Fig 3-23 Steps after Weather "All Clear" - "patrol of all "event specific assets at risk"" to replace "patrol of every mile of lines." | 07/08/2022<br>07/08/2022 |
| 3.11.3 Re-energization Decision Factors | [redacted] | **Revision**: Declining pressure gradients must be below meteorology PSPS guidance. | 07/08/2022 |
| 3.10.4 Weather "All Clear" Decision Methodology | [redacted]<br>[redacted] | **Revision**: Details on "all clear" granularity.<br>**Revision**: Add TPs to list for which OIC can declare "all clears". | 07/18/2022<br>07/08/2022 |
| 3.10.5 Patrols and Restoration | [redacted] | **Revision**: Added that unsafe POLs will be isolated. | 07/18/2022 |
| 3.10.6 Step Restoration | [redacted] | **Addition**: When the patrol of an individual segment is completed "(and providing a source is available").<br>**Addition**: prioritization of segments with alphabetical order labels for criticality "(i.e., critical infrastructure when applicable, customer impacts, etc.)". | 07/18/2022 |
| 4.1.1 Community Resource Centers | [redacted] | **Revision**: CRC Plan is now in 2022 Pre-season report. | 07/05/2022 |
| 4.1.2 Support for Access and Functional Needs | [redacted] | **Revision:** Local Independent Living Centers (ILCs) participating in the DDAR program with link. | 06/30/2022 |

| Section | Person Responsible for Revision | Change | Date |
|---|---|---|---|
| 4.3.1<br>PSPS Portal - Event Specific Information for Public Safety Partners | [redacted] | **Revision**: "refreshed" twice daily replaces "updated".<br>**Addition**: Info on External User access. | 07/15/2022 |
| | [redacted] | **Addition**: Self-Identified Vulnerable customers. | 07/22/2022 |
| 4.4<br>Customer Notifications | [redacted] | **Revision**: Fig 4-4 to include “optional” after Confirm/Cancel/Delay Meetings and asterisk(*) text for Readiness Posture about NON- regulatory requirement. | 07/25/2022 |
| 4.4.1<br>Initial Notification Sequence | [redacted] | **Removal**: Reference to Priority Notice page. | 07/21/2022 |
| | [redacted] | **Removal**: "potentially" from impacted customers for de-energization, weather "all clear", and ETOR update. | 08/05/2022 |
| 4.5<br>De-energization Cancellation Customer Notifications | [redacted] | **Revision**: Fig 4-5 to include “optional” after Confirm/Cancel/Delay Meetings and asterisk(*) text for Readiness Posture about NON- regulatory requirement. | 07/25/2022 |
| 4.6<br>Doorbell Ring Process | [redacted] | **Addition**: to listing self-identified vulnerable and self-identified Electricity Dependent.<br>**Revision**: To "Contact Success Reporting to EOC" from formerly "Medical Baseline Contact..."<br>**Revision**: In Figures 4-6 "Doorbell Ring Process" and 4-7 "Success Reporting to EOC" text listing self-identified vulnerable and self-identified Electricity Dependent. | 07/18/2022 |
| 4.7<br>Master Meter Customer Notification | [redacted] | **Addition**: Tenants and business in locations that have Master Meter receive electric service from PG&E, but they "are not the account holder".<br>**Addition**: Exception if master meter customer is enrolled in Medical Baseline. | 06/30/2022 |
| 4.8<br>Notifications for Transmission Customers | [redacted] | **Revision**: Fig 4-8, updates to be automated in step 1, revision of step 5 to “Just before Power is Restored”, new addition step 6. | 07/15/2022 |
| 5<br>PSPS Data Sources | [redacted] | **Revision**: To "EOC SharePoint" to replace "Foundry" to store PSPS event data. | 07/17/2022 |
| 5.2.1<br>Field Observations | [redacted] | **Addition**: "When requested by Meteorology..." | 08/03/2022 |

| Section | Person Responsible for Revision | Change | Date |
|---|---|---|---|
| 5.3<br>Materials used to inform OIC | [redacted]<br>[redacted] | **Revision**: Source for Internal Sit Report PSPS Deputy replaces formerly listed Sit Unit.<br>**Addition**: Bullet on tags report: "Number of prioritized P1, P2 tags and EC tags to be closed out by Operations and Vegetation. Management and removed from scope." | 07/19/2022<br>07/19/2022 |
| 5.3.1.2<br>Transmission Scoping Assessment and Scoping Dashboard | [redacted] | **Revision**: Information available on Dashboard.<br>**Revision**: Updated screenshots for Figure 5-5 "Example of Tx PSPS Scoping Dashboard" and Figure 5-6 "Example Transmission Line Scoping - OIC Summary". | 07/25/2022 |
| 5.4<br>PSPS Viewer | [redacted] | **Addition**: PSPS Viewer is also used to incorporate potential impact to scope | 07/19/2022 |
| 5.5<br>PSPS Situational Intelligence Platform (PSIP) | [redacted]<br>[redacted] | **Revision**: “major features” of PSIP revised with additions | 07/17/2022<br>07/19/2022 |
| 5.6<br>Data Sources and Flow of Information | [redacted] | **Revision**: Fig 5-9 to include P1/P2 Tree Tags and EC Tags and clear double direction arrow between PSPS Viewer and PSIP. | 07/20/2022 |
| 6.3<br>Customer Notification Metric | [redacted] | **Addition**: Specified transmission to add to distribution customers. | 07/26/2022 |
| 8.2.1<br>Cal OES PSPS State Notification Form | [redacted] | **Addition**: Documents located on the Cal OES PSPS Hub.<br>**Revision**: Delegation of authority for Cal OES form submission.<br>**Addition**: "Deputy Planning Section Chief" to text.<br>**Revision**: Call Warning Center for only the first Cal OES form submission.<br>**Addition**: Fig 8-3, dashboard example.<br>**Revision**: Updated example of “Cal OES PSPS Dashboard - PSPS IOU Notification Forms.” | 07/17/2022 |
| 8.2.2<br>CPUC De-energization Report | [redacted] | **Addition**: Responsible individuals to Notifications, Complaints and Claims, Other Relevant Information and Appendix sections<br>**Revision**: Updates to "Responsible Individuals" in Table 8-1 "PG&E PSPS Report to the CPUC – Sections | 07/20/2022 |

| Section | Person Responsible for Revision | Change | Date |
|---|---|---|---|
| 8.2.3 Pre-Season Report | [redacted] | **Removal**: Sentence about lessons learned in action descriptions<br>**Addition**: New Table 8-2 "PG&E PSPS Report to CPUC - PSDR" with PSDR Sections and Responsible Lines of Business.<br>**Removal**: Sentence about details being confirmed at a future date. | 07/20/2022<br>07/19/2022 |
| 8.2.4 Post-Season Report | [redacted] | **Revision**: In Table 8-3 "PG&E PSPS Report to the CPUC - POSTR 1" under Responsible Individuals "CC PSPS Program Team" replaces "CC Regulatory Strategy." | 07/20/2022 |
| 8.2.5 Post-Season Data Report | [redacted] | **Revision**: Due date is March 1st replaces former listing of April 1.<br>**Addition**: CC PSPS Program team to Decision Specified Requirements and SED Specified Requirements sections.<br>**Removal**: CC Regulatory strategy from Decision Specified Requirements and SED Specified Requirements sections. | 07/20/2022 |
| Appendix F: PSPS Business Continuity | [redacted] | **Addition**: New Section added with link to Business Continuity Plans. | 07/14/2022 |

## Recision Log

| Document Number | Title |
|---|---|
| NA | NA |

## Reference Documents

| Document Number | Title |
|---|---|
| EMER-2001S | *Company Emergency Operations Plans Standard* |
| EMER-3001M | *Company Emergency Response Plan (CERP) (v7)* |
| EMER-3005M | *Logistics Annex* |
| EMER-3006M | *Human Resources Annex* |
| EMER-3105M | *Wildfire Annex* |
| PSPS-1000P-01 | *PSPS for Electric Transmission and Distribution Lines* |
| PSPS-4999-B001 | *Mobile Generator Use During Public Safety Power Shutoff (PSPS)* |
| TD-1464S | *Preventing and Mitigation Fires While Performing PG&E Work* |

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# Change Request Form

To request changes, corrections, or additions to this *Annex*, the *Company Emergency Response Plan (CERP),* (EMER-3001M), or other associated annexes, submit a request through the online change request here.

Proposed changes are significant when they affect the emergency organizational structure, critical operations, key facilities, or execution of the plan; the information will be published by a Bulletin to the *CERP* or *Annex*. Minor changes will be saved and addressed during the next document update.

Once the Bulletin is communicated, a copy will be placed under the respective annex located in the Guidance Document Library (GDL) and be included as content in the next *Public Safety Power Shutoff Annex* update.

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# 1 Introduction

## 1.1 Purpose

The purpose of the *PSPS Annex* is to provide a high-level overview of Pacific Gas and Electric, Company's (PG&E) actions and strategies regarding Public Safety Power Shutoff (PSPS).

PG&E's goal is to provide safe, reliable, affordable, and clean commodities (natural gas and electricity) to customers every day. PG&E is constantly working to safeguard and improve its natural gas and electric systems, to minimize the risk of service interruptions and develop processes to ensure the safe, prompt, and efficient restoration of services.

In support of that goal, PG&E has developed a *Company Emergency Response Plan (CERP),* (EMER-3001M), to provide staff with a safe, efficient and coordinated response strategies to emergency incidents within the PG&E service territory. This document serves as an annex to the *CERP*.

## 1.2 Scope

The scope of this Annex covers actions and strategies to prepare for, respond to and recover from risk of wildfire ignition related to PG&E assets leading to de-energization for public safety during dry severe weather conditions. This Annex depicts PG&E's coordination and communication, both internal and external, that provide an organized and comprehensive approach to managing PSPS. This Annex references other technical and operational plans that demonstrate how certain actions and strategies are implemented; it is not a replacement or substitute for those documents.

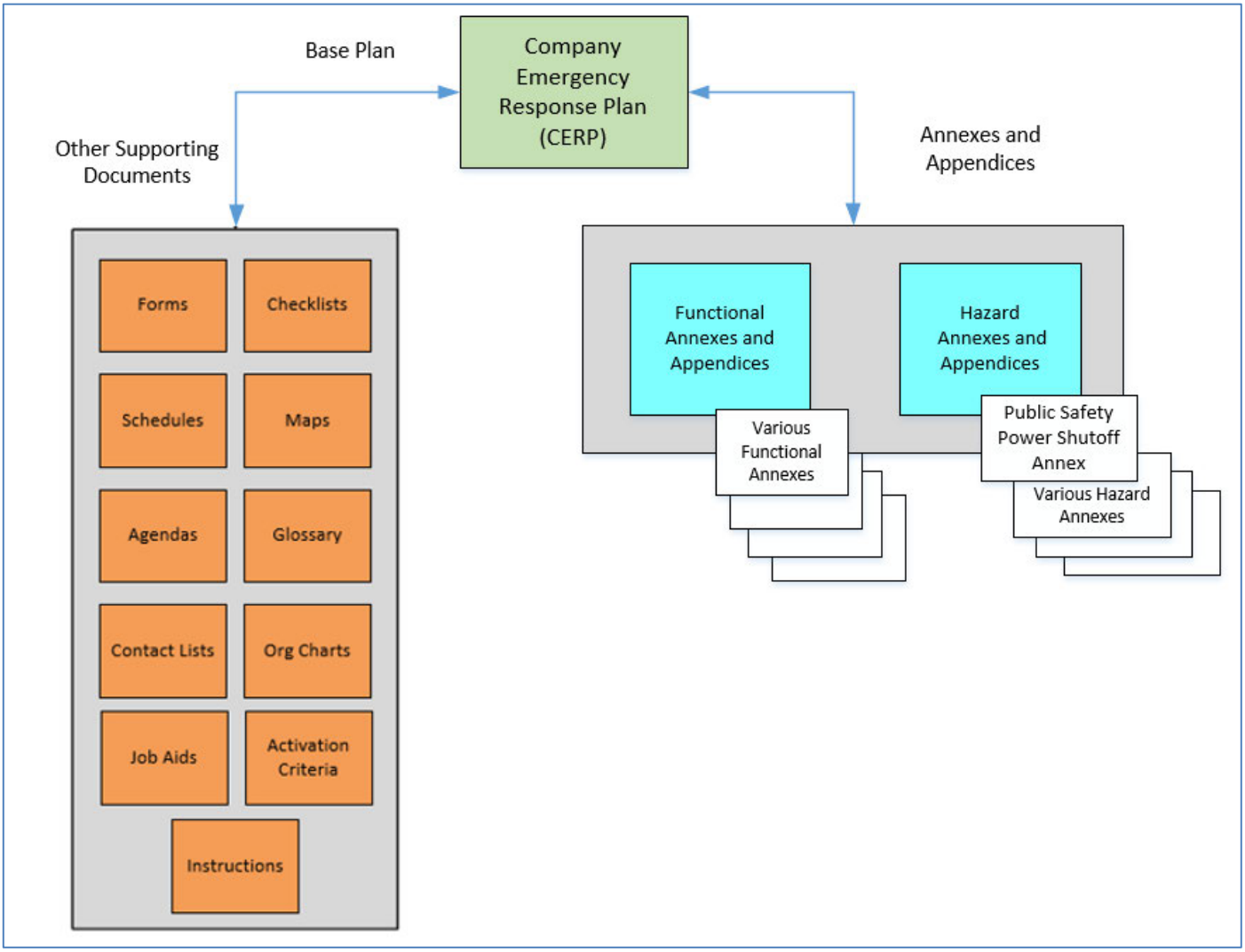
This Annex:

- Provides a broad overview of PG&E's emergency organization for PSPS.
- Creates an inter-departmental outline of PSPS actions and strategies.
- Identifies roles and responsibilities pertaining to PSPS.

## 1.3 PSPS Annex Relation to *CERP* and Supporting Documents

The PSPS Annex is a hazard-specific annex to the *Company Emergency Response Plan (CERP)*, (EMER_3001M). Figure 1-1 below illustrates the relation between this Annex, the *CERP*, other annexes, and supporting documents. The representation in Figure 1-1 is not an all-inclusive list.

**Figure 1-1: Company Emergency Response Plan Structure and Annexes**




The *CERP* presents an emergency response structure with defined emergency roles and responsibilities in support of the Gas, Electric and other PG&E functional business units and externally among agencies and organizations including:

- Government (local, state, tribal and federal)
- Media
- Other gas and electric utilities including mutual aid
- Essential community services
- Vendors
- Public agencies
- Emergency First responders
- Contractors

A key element of the *CERP* is the alignment of PG&E's functional business units to the frameworks provided by the National Incident Management System (NIMS), California Standardized Emergency Management system (SEMS) and the NIMS/SEMS component Incident Command System (ICS). Adoption of these frameworks align PG&E with our public partners to execute a coordinate response that supports safe restoration of service and whole community recovery.

Under the NIMS, SEMS and ICS organizational structures, there are Command and General Staff positions. General Staff consists of five primary peer sections: Operations, Intelligence and Investigations, Planning, Logistics and Finance and Administration.

The PG&E emergency response model is organized, and the Emergency Operations Center (EOC) is staffed, using principles from NIMS, SEMS and ICS, including but not limited to:

- Following a unified approach (i.e., a single chain of command, adaptable to meet situational needs).
- Managing by a unified set of objectives, when possible, for single and dual commodity incidents.
- Managing equipment, facilities, personnel, procedures, and communications effectively.
- Standardizing operational structures and terminology to enable disparate groups to work and communicate together in a predictable, coordinated manner.
- The Command Staff includes the Public Information Officer, Safety Officer, Customer Strategy Officer, and Liaison Officer. These individuals report directly to the Incident Commander during emergency or event activations.

## 1.4 Regulations and Authorities

This Annex, as part of the *CERP*, complies with the regulations and authorities listed below.

### 1.4.1 CPUC Decisions 19-05-042: Decision in Phase 1 of the De-Energization Rulemaking Proceeding (R.18-12-005)

On June 4, 2019, the Commission issued Decision (D.) 19-05-042, adopting additional guidelines for the utilities in developing, implementing and executing the PSPS programs beyond those previously established by Resolution ESRB-8.

D.19-05-042 provided for additional PSPS guidelines, including but not limited to:

- The development of a statewide public education and outreach campaign in coordination with the other utilities, Cal OES and CAL FIRE.

- The identification and notification of Public Safety Partners, Critical Facilities and Critical Infrastructure, Access and Functional Needs populations and all other affected customers leading up to and during a potential PSPS event, including upon completion of re-energization.
- Providing GIS maps with affected circuits and customers to Public Safety Partners during a PSPS event.
- Coordinating with local jurisdictions during an event including embedding a liaison officer at local EOCs or reserving seats in PG&E's EOC for local representatives.
- A post de-energization event report to be filed with the CPUC Safety and Enforcement Division (SED) for an evaluation of the reasonableness of the PSPS event.

The guidelines from the Phase 1 Decision built on existing requirements from previous decisions. Further information is available on CPUC website PSPS page including Joint letter sent to utilities October 26, 2018, Decision 12-04-024, ESRB-8 and two letters that Resolution L-598 approved: October 8, 2019 Letter to Utilities re: Providing Information to First Responders for Medical Baseline and October 23, 2019 CPUC letter to Utilities re: Providing Information to Counties and Tribal Governments.

### 1.4.2 CPUC Decision 20-05-051: Decision in Phase 2 of the De-Energization Proceeding (R.18-12-005)

On June 5, 2020, the CPUC issued D.20-05-051 adopting Phase 2 updated and additional utility PSPS guidelines. The Phase 2 Guidelines include new requirements including, but not limited to:

- Working Groups and Advisory Boards including how often to convene, who should be included and on what they should provide input.
- De-energization exercises.
- De-energization notifications.
- Community Resource Centers including hours of operation and services to be made available.
- Restoration of service including timing of notifications related to service restoration and how long it should take to fully restore power.
- Transportation resilience including details of pilot programs.

### 1.4.3 CPUC Decision 21-06-034: Decision in Phase 3 of the De-Energization Proceeding (R.18-12-005)

On June 29, 2021 the CPUC issued D.21-06-034 adopting Phase 3 revised and additional PSPS guidelines. The Phase 3 Guidelines include new requirements, including but not limited to:

- Guidelines to Improve Planning, Preparation and Access to Resources During PSPS events.
- Guidelines to Enhance Notification of and Mitigate Impacts on Access and Functional Needs and Vulnerable Populations.

### 1.4.4 CPUC Decision 21-06-014 in the Order Instituting Investigation (OII) into Late 2019 PSPS Events

- The Decision contains new requirements, including but not limited to:
- Forgo collection of revenues from customers that are associated with electricity not sold during future PSPS events until it can be demonstrated that utilities have made improvements in identifying, evaluating, weighing and reporting public harm when determining whether to initiate a PSPS event.
- Improve communications with customers dependent on electricity for medical reasons, especially life support, before, during and after a PSPS event.
- Share best practices and lessons learned for initiating, communicating, reporting and improving all aspects of PSPS events by regularly holding utility working group meetings.
- Provide Standard Emergency Management System (SEMS) training for all personnel and contractors involved in PSPS planning.
- File annual reports describing progress and status on improving compliance with PSPS guidelines.
- Support the CPUC's Safety and Enforcement Division's development of a standardized 10-day post-event reporting template.

## 1.5 Annex Maintenance

PG&E's Emergency Preparedness and Response (EP&R) department is responsible for developing, updating, and maintaining the *CERP* and its Annexes in collaboration with the subject matter experts from the responsible functional business units. Please refer to section 1.6 (Plan Maintenance) of the *(Company Emergency Response Plan (CERP),* EMER-3001M) for information regarding document approval, revision, and periodic maintenance. After approval, the *CERP* and its Annexes are published in PG&E's Guidance Document Library (GDL). You can access the site here: http://pgeweb.utility.pge.com/guidance.

The PSPS Annex will be reviewed and updated in accordance with Utility Standard EMER-2001S, *Company Emergency Operations Plans Standard* and submitted to EP&R SE on an annual basis.

This Annex is produced and will be maintained by the Public Safety Power Shutoff organization in conjunction with the EP&R SE Planning Division. The PSPS staff works closely with affected organizations and individuals to include alignment with the *CERP* and other Annexes, updated information, new processes and advances in execution strategy for PSPS.

The PSPS Annex may be modified because of:

- Lessons learned from exercises and actual PSPS events.
- Key changes to processes, structure, responsibilities, new technologies, assessment procedures, restoration strategies, etc.
- Feedback generated by PG&E subject matter experts, the planning team, internal and external stakeholders, and users of the annex.
- Changes to laws or regulations pertaining to PSPS.

Each revision of the annex will be approved by the Vice President of Electric System Operations and the Vice President of Emergency Preparedness and Response. Records of revisions to the PSPS Annex will be maintained in the change register at the beginning of this document.

Those departments having assigned responsibilities under this annex are obligated to inform the PSPS organization when organizational or operational changes affecting this plan occur or are imminent.

## 1.6 PSPS Annex Organizational Structure

To ensure the information is comprehensive and user-friendly, this Annex has been organized by the following format:

**Section 1 – Introduction –** provides background information necessary to understand: the need for Annex; the subject matter; the governing regulations and the challenges PG&E faces regarding the topic.

**Section 2 – PSPS – Emergency Organization and Responsibilities –** provides information on EOC staffing, information on roles, which roles are part of Readiness Posture, which additional roles are part of EOC activation, calls out EOC roles that are specific to PSPS and describes PSPS specific responsibilities for affected EOC roles.

**Section 3 – Concept of Operations**

- **Purpose –** provides goals of PSPS program.
- **Scope –** provides information on general scope for PSPS.
- **Decision Making –** provides information on PSPS related decisions**.**

- **Preparedness –** provides information on how PG&E prepares to execute PSPS including general preparation, training, exercises and the Readiness Posture stood up in advance of EOC activation when possible.
- **Response –** provides information on steps to activate EOC and preparations for possible de-energization to reduce risk of catastrophic wildfire.
- **Restoration –** provides information on steps to restore power to customers.

**Section 4 – PSPS Information, Notification, and Coordination Strategies –** provides information on how customers are informed about PSPS in general and in advance, during and after an event and how PG&E coordinates with agencies and partners.

**Section 5 – Data Sources –** provides information on how and what data meteorology uses to determine projected weather footprints and describes tools used to produce customer lists for notifications and maps.

**Section 6 – Performance Indicators –** provides listing of selection of PSPS related metrics with purpose and brief description.

**Section 7 – Training and Exercises –** outlines training and exercises for PSPS.

**Section 8 – Documenting Event –** provides information on requirements and timelines for event documentation.

**Section 9 – Appendices –** provides a listing of abbreviations, a glossary of terms, information on supporting documents and PSPS related links, information on notification scripts and examples of customer communication materials.

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# 2 Emergency Organization and Responsibilities

## 2.1 Emergency Roles and Responsibilities

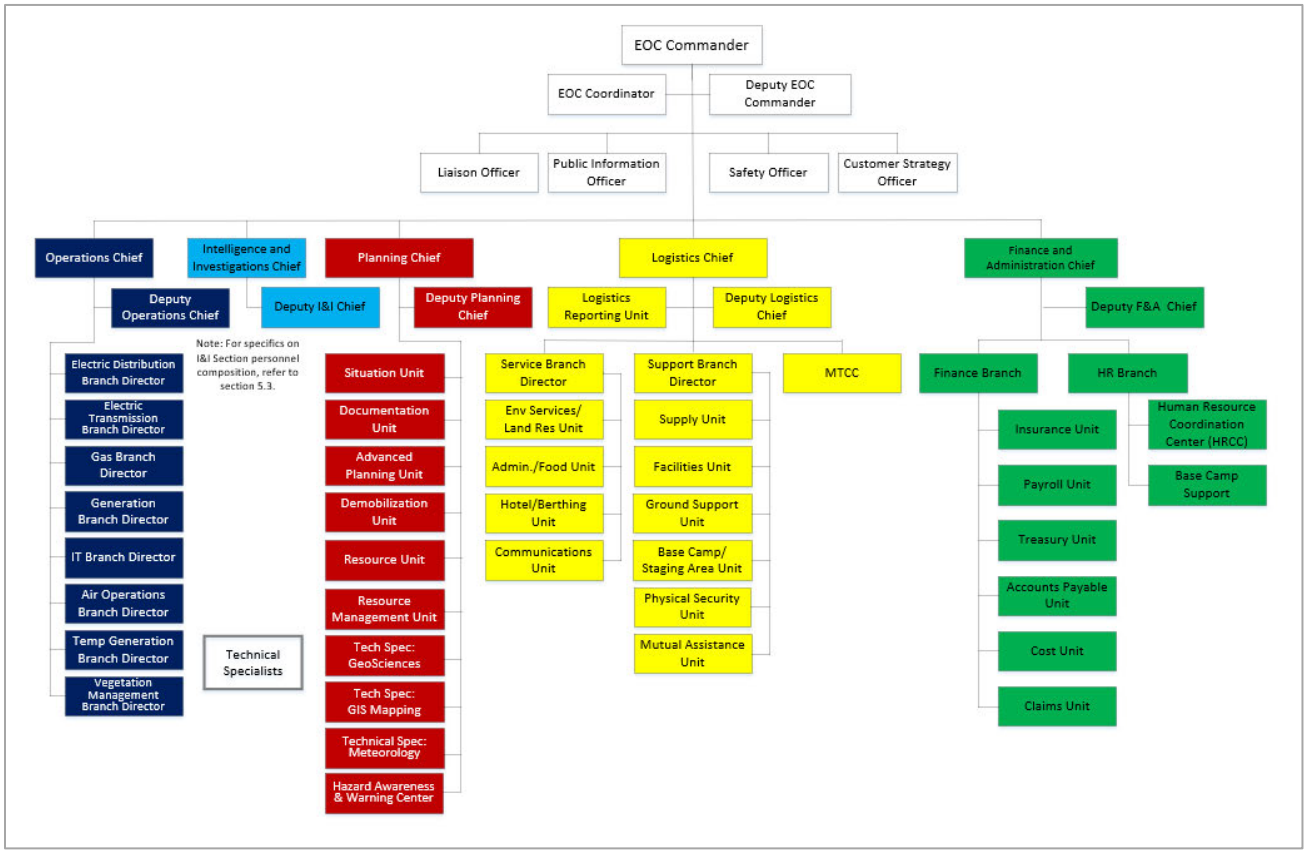
PG&E's Emergency Preparedness and Response Strategy and Execution (EP&R SE) organization facilitates the pre-event conference call to determine if the Emergency Operations Center (EOC) should be activated for a potential PSPS event (see EOC Activation Process in section 3.6.) After the decision is made to activate the EOC, EP&R SE notifies appropriate staff of EOC Activation, opens the EOC and provides management of center services to assist sections and command staff in developing emergency response strategies and procedures for the event.

The activation sequence is outlined in the *Company Emergency Response Plan (CERP)*. For general information on EOC roles see Incident Command System (ICS) checklists and position guides within folders for various groups/sections under Roles and Responsibilities on the EOC intranet site.

For information about Covid-19 and the use of a Virtual EOC platform, see *CERP* section 2.9.1.

The organizational chart in Figure 2-1 shows the standard structure for EOC operations. Additional roles specific to PSPS not shown in this chart are described in section 2.14, Planning Section.

**Figure 2-1: Emergency Operations Center Organizational Chart (*CERP* Section 5)**



## 2.2 EOC Staffing for PSPS Event

This section lists standard EOC roles with specific responsibilities during PSPS and also roles specific to PSPS.

**Standard Roles**

For a PSPS event, the EOC staff consists of the standard ICS Command and General Staff positions as outlined in the *CERP* and includes the use of the Intelligence and Investigation Section which is established within the General Staff organization. Along with the standard ICS roles, PG&E's PSPS processes include the use of several PSPS specific EOC functional roles listed below.

**PSPS Specific Roles**

In addition to the standard EOC roles, there are PSPS specific EOC roles such as:

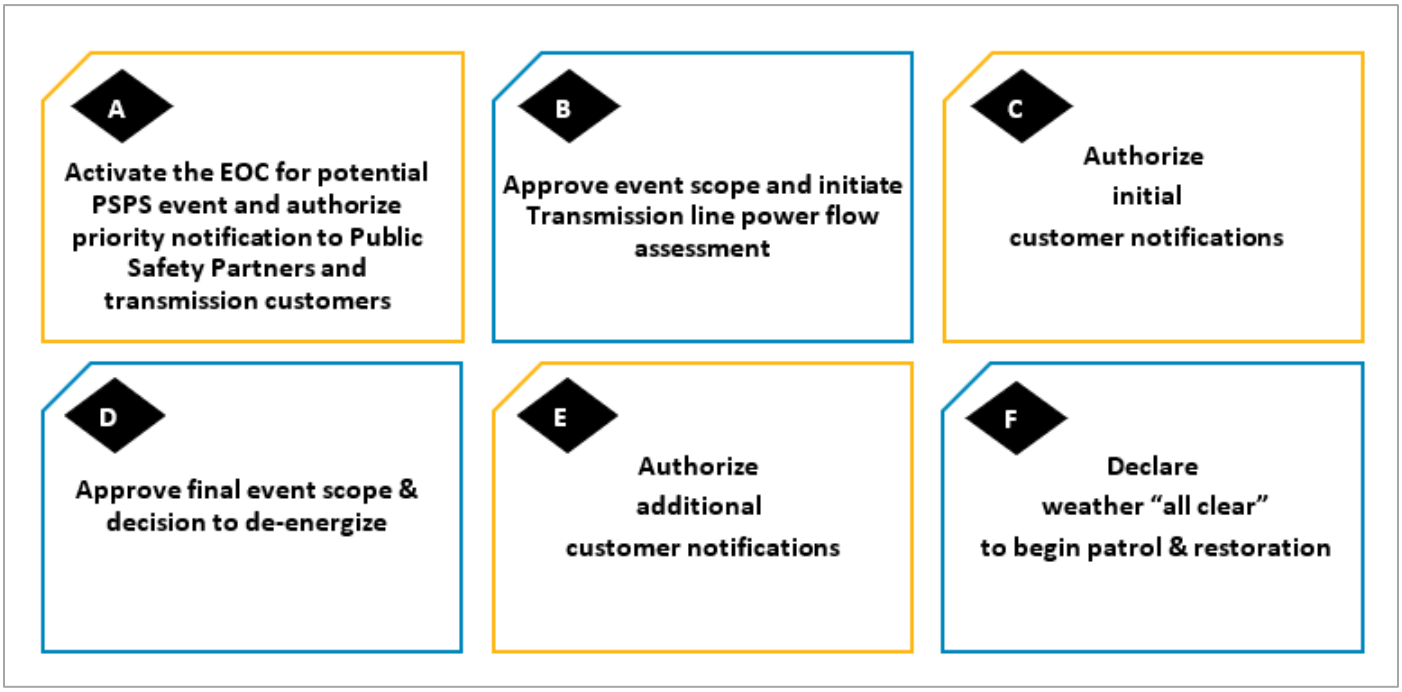
- Officer-in-Charge (OIC)
- Deputy Planning Section PSPS Chief
- PSPS Technical Unit Leader
- PSPS Technical Specialist
- PSPS Distribution Asset Health Specialist (DAHS)
- PSPS Transmission Asset Health Specialist (TAHS)
- PSPS Portal Unit Leader
- PSPS Portal Unit Support
- PSPS Process Unit Leader
- PSPS Recorder
- PSPS Communications Coordinator
- PSPS Risk Analyst
- Digital Strategy Lead
- Digital Strategy Publisher
- Digital Strategy Assistant
- Primary Voltage Generation Division Lead
- Secondary Voltage Generation Division Lead

## 2.3 Officer-in-Charge

The Officer-in-Charge (OIC) is a role specific to PSPS events and was created to engage higher-level management accountability of the decision given the magnitude and impact of PSPS, while also enabling rapid decision-making during a real-time PSPS event. The OIC receives situational awareness from the Command Staff and General Staff of PG&E's EOC, including from the Meteorology, Planning, and Customer Sections.

There are six important PSPS decisions, called OIC decisions, of which the OIC is responsible for making during an event (A-F). Decisions B + C are made jointly and Decisions D + E are made jointly. The OIC Decisions are summarized in Figure 2-2

**Figure 2-2: OIC Decisions A - F**




While the OIC is given the Authority to Act and owns the key decisions outlined above, the EOC Commander (EC) is responsible for executing on those decisions and owns the response executed by the Emergency Operations Center (EOC). The OIC approves all PSPS Decision Records and associated documentation following a PSPS event.

Additionally, the OIC may elect to delegate the authority of an OIC decision to the EOC Commander through a written confirmation outlining the parameters and timing of that delegation. However, the OIC retains full accountability for the OIC decisions made under the delegation of authority.

## 2.4 EOC Commander

The EOC Incident Commander is responsible for the overall command of the incident/event. This includes ensuring the safety of all employees involved, initiating, and approving the Incident Action Plan (IAP), and acting as a liaison with agency executives, governing boards and other organizations.

In addition, during PSPS the on-call EOC Commander (EC) is responsible for:

- Working with EP&R (as indicated in section 2.1) to identify representatives from select sections and officers (determined by need and incident complexity) to meet for Readiness Posture, when warranted and time permitting, to track developing conditions and perform certain tasks (Note: Readiness Posture is not a requirement to precede OIC Decision A to activate EOC for PSPS.).

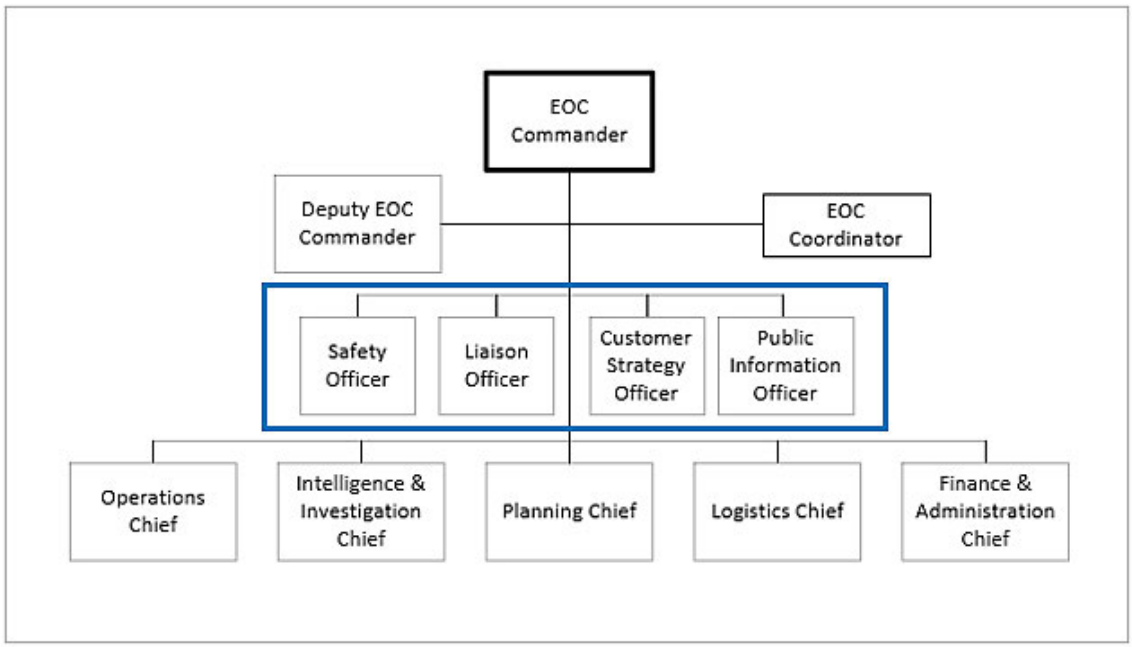
- Coordinating readiness of activities related to Readiness Posture.
- Advising OIC on decisions.
- Reviewing OIC decision records and documentation.
- Executing on decisions made by OIC.

For more information on role of EOC Commander see *CERP* section 5.1.1.

## 2.5 EOC Command Staff

The organizational chart in Figure 2-3 displays the EOC Command Staff top-level structure. The Officer group is framed.

**Figure 2-3: EOC Command System (*CERP* Section 5)**




**Note:** Command Staff officers and related roles are listed in alphabetical order in this section. Role descriptions focus on PSPS specific responsibilities. In particular cases related roles are also described for their role specific to PSPS.

## 2.6 Customer Strategy Officer

The Customer Strategy Officer (CSO) is responsible for customer communications and outreach during a PSPS event. The CSO coordinates notifications and interactions with customers before, during and after a PSPS. Additional Customer Care emergency response roles will support the CSO as needed based on event size and scope.

In addition, the CSO's responsibilities during a PSPS event include:

- Verifying number of impacted customers including customer segmentation (i.e., critical public safety-related facilities such as police and fire stations, telecommunications providers, water agencies, utilities, healthcare facilities, schools and Access and Functional Needs (AFN) community which includes Medical Baseline customers).
- Sending customer notifications before, at de-energization, during and after an event to all customers - initially prioritizing notifications to critical public safety-related facilities and transmission customers, followed by notifications to Medical Baseline customers and to general customers in the PSPS scope.
- Identifying and opening Community Resource Centers (CRCs) to support impacted customers. Coordinating with CRC leads to gather real-time local intelligence for CSO/Logistics to respond accordingly; managing customer escalations; aggregating daily reports from each CRC for timely reporting.
- Coordinating with local Independent Living Centers (ILC) and Community Based Organizations (CBO's) to support AFN customers in attendance as appropriate.
- Facilitating doorbell rings to notify Medical Baseline[1] customers and Self-Identified Vulnerable customers that were not successfully contacted through initial automated notifications (i.e., e-mails, phone calls, and text messages).
- Coordinating with Community Choice Aggregators (CCA) relations teams to engage with potentially impacted CCAs during event.
- Managing customer escalations including commercial critical customers and those within the AFN population (i.e., MBL, Life Support, Self-Identified Vulnerable).
- Coordinating with the Customer Contact Emergency Coordination Center (CCECC) to provide event intelligence for staffing and communication needs.
- Working with OECs to gather real-time local intelligence to fully inform IC and identifying escalations, challenges, and events that could impact the scope of the PSPS event.
- Communicating with critical public safety-related customers, addressing customer escalations, and providing intelligence to the OIC for consideration when determining de-energization scope and prioritizing restoration.
- Coordinating with the Temporary Generation Branch team on prioritization of customer requests for temporary back-up power during an event.
- Coordinating with Billing Operations and Credit, Demand Response teams and additional internal partners regarding customer impacts.
- Coordinating with Electric Operations on Estimated Time of Restoration (ETOR) notifications and restoration priorities.

[1] Medical Baseline Customers are enrolled in PG&E's medical baseline program who rely on electric service for mobility or life sustaining medical reasons.

- Understanding Customer Service Office impacts and working with this team to mitigate customer impacts.

For more information on role of Customer Strategy Officer see *CERP* section 5.1.6.

### 2.6.1 Notification Hawk

During a PSPS event the Notification Hawk is responsible for:

- Executing on notification strategy approved by CSO to ensure timely and appropriate communications.
- Overseeing PG&E customer communications performance, especially that of critical commercial customers and residential Medical Baseline (MBL) customers.

### 2.6.2 Community Resource Center Lead

During a PSPS event the Customer Strategy Community Resource (CRC) Lead is responsible for:

- Overseeing the Customer Strategy activities during EOC readiness posture.
- Coordinating the activation, daily execution, and closure of Community Resource Centers in partnership with Logistics and Liaison teams.

### 2.6.3 Agency and Communications Lead

During a PSPS event the Agency and Communications Lead is responsible for:

- Representing the Customer Strategy team on agency calls with a focus on CRCs and Medical Base Line (MBL) updates, as well as any scope changes impacting customers and communities.
- Coordinating internal communications and updates within Customer Care.

### 2.6.4 Critical Infrastructure Lead

During a PSPS event the Critical Infrastructure (CIL) Lead is responsible for:

- Maintaining situational awareness for critical telecommunications infrastructure and transmission customers.
- Ensuring critical telecommunications infrastructure partners are receiving actionable data to assist in the mobilization of their internal resources to minimize community impacts.

### 2.6.5 Backup Generation Lead

During a PSPS event the Backup Generation (BUG) Lead is responsible for:

- Managing and maintaining overall documentation and tracking for all temporary generation requests.
- Providing temporary generation installation recommendations to the CSO, in partnership with Liaison team, for final approval.

### 2.6.6 Access and Functional Needs Lead

During a PSPS event the Access and Functional Needs (AFN) Lead is responsible for:

- Managing Community Based Organization partnerships and customer support strategies.
- Overseeing the response to MBL customer escalations received in the field, at CRCs and through the contact centers.
- Managing Customer Care senior leadership inquiries and requests.

## 2.7 Liaison Officer and Supporting Roles

The Liaison Officer (LNO) is responsible for leading the team that serves as the primary contact for representatives of local, tribal, state, and federal governments. The LNO participates in weather briefings, planning meetings, command and general staff meetings, and OIC decision meetings. They inform the LNO team when key decisions are made or are expected. The LNO makes real-time decisions on behalf of the LNO Team.

In most PSPS events, the LNO will be supported by representatives from some or all of the following PG&E departments:

- Community Relations
- State Government Relations
- Federal Affairs
- Tribal Relations
- State Agency Relations
- Local Government Affairs (LGA)
- Regulatory Relations
- Public Safety Specialists
- State Operations Center (SOC) Liaison

The LNO oversees PSPS event notifications and interactions with external partners such as tribes, cities, counties, state, and federal agencies. Additional responsibilities include:

- Coordinating with Tribes, cities, counties, and other agencies to help ensure PG&E has the latest contact information for each agency.

- Working with tribal, city, county, and state contacts during PSPS events to coordinate and align operations and response.
- Sending notifications (before, during, and after a PSPS event) to Cal OES, the CPUC, Tribes, cities, counties, first responders, and other external stakeholders.
- Responding to and tracking inquiries from external stakeholders.
- Facilitating and managing a once-daily State Executive Briefing and a once-daily Cooperator call for county, city, utility, and emergency management partners for external situational awareness.
- Supporting requests and serving as single point of contact from third-party representatives to embed in PG&E's EOC.

For more information on role of Liaison Officer see *CERP* section 5.1.7.

## 2.7.1 Assigned City/County Agency Representatives

During an emergency incident, the primary role of the Public Safety Specialists (PSS) is to serve as the PG&E assigned City/County Agency Representative who coordinates and integrates PG&E's response with their assigned City/County Office of Emergency Services. For larger events, Local Public Affairs may also act as a PG&E assigned City/County Agency Representative. Cultural Resource Specialists will be Tribal Agency Representatives and will be assigned to regions as needed.

The Agency Representatives directly report to the Liaison Branch Lead or Group Supervisor depending on the scale of the event. The Liaison Branch Lead typically holds twice-daily conference calls to coordinate with the Agency Representatives, provide the current event information and ask for escalations/feedback received by Agency representatives. The Agency Representatives then meet with their respective jurisdiction to relay the information and answer questions.

The initial priority of the PSS team members, absent their required response to an existing emergency (e.g., fire, gas release), will be to respond to any regional (local/county) EOC location(s) if activated. The PSS team members serve as a liaison to their assigned City/County Office of Emergency Services (OES). Other PSS members may be requested to support the needs of surrounding regions that may be potentially affected by a PSPS.

## 2.7.2 PG&E State Operations Center Agency Representatives

The role of the PG&E State Operations Center (SOC) Agency Representative (AREP) is to function as an ICS Agency Representative position to California's State Emergency Operations Center in Mather, California. During SOC activation, the SOC Liaison provides real-time coordination of PG&E information to the SOC Situation Unit (part of the Planning Section).

## 2.8 Public Information Officer

Each level of PG&E's emergency response may have a Public Information Officer (PIO) and/or public information function. However, when staffing the EOC, the PIO's role is to provide strategic communications counsel to the EOC Commander.

The PIO's responsibilities during a PSPS event include:

- Developing main narrative for talking points.
- Developing and implementing communications strategy to ensure "one voice" communications.
- Coordinating with Customer team, Liaison, and any other LOB stakeholders on communication materials.
- Coordinating emergency communication activities with other agencies, media, customers and others through verbal replies, on-camera interviews, written statements, press releases and social media.
- Providing early warning of a potential PSPS event when possible, using a combination of direct communication, traditional and social media.
- Informing employees through internal communications about the PSPS event.
- Responding to real-time media requests for information, interviews and status reports.
- Conducting press conferences and managing press questions and queries.

For more information on role of Public Information Officer see *CERP* section 5.1.5.

### 2.8.1 Digital Strategy Lead

The Digital Strategy Lead functions as the overall PSPS digital program (PSPS maps, address lookup, data tables, website user interface, etc.) subject matter expert, with knowledge of both the tools and how they function as well as the static content. The Lead is versed in the sequencing of tasks, who to turn to for help or to get technical questions answered.

Responsibilities include:

- Having situational awareness for the event and how the web should be updated in response to changing operations conditions.
- Coordinating with the various teams that support the web during events, including the Digital Strategy assistant, the GIS team, the Customer Care Emergency Contact Center (CCECC) team and the various branches represented in the huddle board (Planning, Liaison, Customer and PIO). For example: the huddle board execution is a set of steps that are followed in sequence and according to various protocols that must be followed in order to execute in a timely manner). The Lead is expected to understand upstream and downstream dependencies, the timing required for each step in the digital process, and the correct sequencing of events for accurate, timely web and customer notifications.

- Reviewing customer feedback and making on the fly optimizations to the customer experience when possible.

### 2.8.2 Digital Strategy Assistant

The Digital Strategy Assistant takes direction from the Digital Strategy Lead and works with the digital strategy publisher to ensure that all content posted is correct.

Responsibilities include:

- Having a strong understanding of what content should be on the site at various stages of a PSPS event.
- Proofreading the content put up by the publisher before it goes live to the public (including all 16 of the languages).
- Managing new translation requests that come in on the fly during events.
- Ensuring all new translations become part of the translations-library and that both translations and the subsequent draft web pages are reviewed and approved by in-country reviewers before going live to the public.
- Monitoring various chats for possible issues that need addressing, alerting the Digital Strategy lead when needed.

Coordinating with the PIO branch on items such as publishing press releases.

## 2.9 Safety Officer

The Safety Officer's responsibilities during a PSPS event include:

- Preparing safety messaging on potential hazards for line/office personnel, substation personnel, Field Observers, and contractors as well as disseminating safety messages to "EO EOC out" mailbox.
- Confirming Safety staff availability for EOC field support and availability of protective equipment and supplies as appropriate.
- Finalizing Field Safety Specialist (FSS) deployment plans based on Operational needs, operations crew deployment plans (e.g., one FSS for every XX line-personnel deployed).
- Accompanying Field Observers, crews, and patrols to support safe working and driving conditions as well as safe restoration activities as appropriate. Incorporating field observations into safety messaging.

For more information on role of Safety Officer see *CERP* section 5.1.4.

## 2.10 Legal Advisor

While not a standing EOC position, an attorney will be on call to serve as a "Legal Advisor" to an incident or event Command Staff to provide legal advice on an ad hoc basis, including as required:

- Counsel on PSPS legal matters
- Media release and public information review
- Regulatory reporting compliance monitoring and guidance
- Document retention plan review
- Incident investigation assistance

For PG&E legal advice in the absence of an appointed EOC Legal Advisor, please call the Law EOC hotline at [redacted] or send an email to [redacted]@pge.com".

In the following section the group of Section Chiefs is listed in alphabetical order.

## 2.11 Finance and Administration Section Chief and Supporting Roles

The Finance and Administration Chief represents both the Human Resources Branch and Finance Branch.

For more information on role of Finance and Administration Chief see *CERP* section 5.6.

### 2.11.1 Human Resources Branch

The Human Resources Branch is within the EOC Finance & Administration Section. One of the Human Resources Emergency Response Team's (HR ER TM) three EOC activation response capabilities is specific to PSPS. HR's PSPS response is unique from the other response capabilities with its limited HR emergency roles activation and core capabilities requirements.

During PSPS responses, the HR ER TM consists of its HR EOC main floor emergency roles including the Finance & Administration Section (F&A Section) Chief, Deputy Chief and HR Branch Director roles. The HR Coordination Center (HRCC) Data emergency role is initially activated in a standby role response posture and may be further activated to remote/virtual response posture to conduct impacted personnel and impacted facility assigned personnel analysis only when required. The HRCC Team Scheduler emergency role may be activated in remote/virtual response posture to support HR ER TM follow-on staffing and team transition requirements. The HR Base Camp support is not usually required for PSPS events. Other HR ER TM emergency roles response capability may be activated to support an incident complex escalation requiring HR full operational capability response when required (as seen with simultaneous wildfire response requiring HRCC emergency roles activation). F&A Section representation is not included in the PSPS

Readiness Posture phase. When the EOC is activated, the F&A Section capability is available.

The HR Branch Director oversees HR's PSPS event response core capabilities including the following:

- Supervising the HRCC Data emergency role which is initially activated in a standby role response posture. The HRCC Team Scheduler may be activated to support HR ER TM staffing and team transition requirements. When activated, both emergency roles are in the span of control of the HR Branch Director (the HRCC Unit Leader is not activated).
- Managing HR emergency response essential functions, submitting EOC reports, and developing and distributing the HR Common Operating Picture/HR Leadership message.
- Conducting impacted facility assigned personnel analysis when requested by the EOC Facilities Unit Leader. This capability requires the HRCC Data emergency role activation and impacted facility information provided by the EOC Facilities Unit Leader. Refer to the HR Annex, Appendix F All-Hazard Impacted Personnel and Emergency Message Support process.
- Supporting the EOC Facilities Unit Leader with leadership guidance to ensure leaders are informed and support supervised impacted personnel effectively. Impacted facility managers support leaders with activating their emergency communications plans.
- Conducting impacted personnel residential/home analysis when requested by the EOC Commander or other leaders. This capability requires the HRCC Data emergency role activation and impacted area zip code analysis provided by the EOC Geoscience Information System (GIS) Technical Specialist. Refer to the HR Annex, Appendix F All-Hazard Impacted Personnel and Emergency Message Support process.
- Coordinating with the Planning Section Chief, HAWC, Facilities Unit Leader, Physical Security Unit Leader, Safety Officer, Customer Strategy Officer, Liaison Officer, and/or Operations Section Chief to support coworker safety and security related requirements.
- Facilitating responses to coworker and leadership questions/issues that arise as part of the PSPS activation. The HR Help Line may be requested to support when required.

HR PSPS Event Guiding Principles. The PSPS event is a PG&E human safety-initiated incident and has unique differences from cybersecurity and natural hazard HR emergency response capabilities. The HR PSPS response guiding principles are as follows:

- A PSPS response is not an impacted personnel disaster support event – support aid such as time off, lodging, and financial assistance is not expected to be available/appropriate during this type of incident.
- PSEA emergency assistance grants are not expected to be available/appropriate for PSPS events.

- HR policies, collective bargaining agreement (CBA) rules, and processes remain in effect.
- Business Unit leadership are responsible for managing, tracking, directing, and supporting their coworkers as they would during normal business operations.
- Daily Human Resources services remain active and available via normal communication and processes. Business Unit leadership requests support from their assigned HR Business Partner.

PG&E coworkers residing within the PSPS impacted areas receive their primary communications from the Customer Care organization through PSPS customer messaging. HR leverages or redirects PG&E personnel inquiries to these communications as appropriate.

- Coworkers working in facilities within the PSPS impacted areas receive their primary communications from the Corporate Real Estate (CRESS) organization – which provides information about facilities availability during the PSPS event. HR leverages or redirects PG&E personnel inquiries to these communications as appropriate.
- Impacted personnel home and facility/work assignment analysis may be conducted only upon EOC Commander request and requires the HRCC Data emergency role to be activated.

For further information on Human Resources see *CERP* section 5.6 and EMER-3006M, *Human Resources Annex*, section 4.2.3.

### 2.11.2 Finance Branch

The Finance Branch is part of the Finance and Administration Section. The Finance Branch's key functions for PSPS events include ensuring proper charging to event, creating event forecast, and maintaining key support functions such as cost unit, payroll, and accounts payable.

For more information on Finance Branch see *CERP* section 5.6.2.

## 2.12 Intelligence and Investigation Section Chief and Supporting Roles

The Intelligence and Investigation (I&I) Section Chief, in conjunction with the PSPS I&I Section Process Manager ensures compliance with the regulatory requirements that PG&E reports on any wind-related damage or hazards sustained by PG&E facilities during a PSPS event including Resolution ESRB-8, Ordering Paragraph 1 of California Public Utilities Commission (CPUC) Decision (D.) 19-05-042 (Phase 1), and Ordering Paragraph 1 of Decision (D.) 20-05-051 (Phase 2) in addition to investigation of any other incidents arising out of the PSPS event (e.g., Fire/ignition). The I&I Unit's responsibilities during a PSPS event include:

- Maintaining the PSPS Damage Hazard Form via Inspect App and/or paper form to record damages and hazards observed in the post de-energization patrol.
- Receiving and aggregating the reports of damages and hazards (including photos) into a master table.
- Quality-controlling the damages and hazards documentation to verify they are PSPS qualified and reportable.
- Managing a PSPS Damage/Hazard dashboard to provide situational awareness to the damages/hazards identified during patrol, ensuring the dashboard is actionable by stakeholders.
- Drafting the language for the damage documentation section of the CPUC De-Energization Post-Event Report.
- Provide validated and structured damage and hazard data to satisfy data requests from external and internal stakeholders.

For more information on role of Intelligence and Investigations for PSPS see *CERP* section 5.3.1.

## 2.13 Logistics Section Chief

The Logistics Section Chief is responsible for securing resources, supplies, material, food, lodging, vehicles and equipment rentals, fuel, security, and medical services, as well as maintaining equipment for incident personnel.

For a PSPS event, the Logistics Section's responsibilities include:

- Working with the Electric Operations and Customer Strategy teams to determine the need for emergency sites (base camps, staging areas, micro sites, material laydown areas and/or Community Resource Centers (CRCs)). See section 4.1.1 Community Resource Centers.
- Working with Land Acquisition and Environmental to identify locations needed for emergency sites and confirming their availability.
- Working with the Finance and Administration Section to ensure appropriate purchase orders are created and approved vendors used in accordance PG&E Finance guidance documents and Sarbanes Oxley regulations.
- Staffing and supporting emergency sites. This includes securing resources needed such as: supplies, food, temporary lodging, vehicle and equipment rentals, flagging support, security services, IT support, fueling, and other needed resources.

For more information on role of Logistics see *CERP* section 5.5 and the *Logistics Annex,* (EMER-3005M).

## 2.14 Operations Section Chief and Supporting Roles

The Operations Section Chief implements the de-energization and restoration strategy for PSPS events and achieves the incident objectives set by EOC Commander and

communicated in the Incident Action Plans (IAPs). The Operations Section Chief ensures coordination with other EOC sections and emergency centers (such as Region Emergency Centers (RECs) and Operations Emergency Centers (OECs).

The Operations Section, led by the Operations Section Chief / Coordinator, consists of the following eight (8) branches:

- Air
- Gas
- Electric Distribution
- Electric Transmission
- Vegetation
- Generation
- Information Technology
- Temporary Generation

Base descriptions of the eight branches of Operations Section are located in *CERP* section 5.2. Descriptions in this chapter specify additional responsibilities for a PSPS event.

**Note:** The Operations Branch Directors are listed in alphabetical order.

## 2.14.1 Air Operation Branch Director

Aviation Services interfaces with the Operations Section Chief and directly manages aviation asset requests from the EOC and assesses the current situation to potentially provide aerial support that could include patrolling lines.

Additional responsibilities include:

- Determining PSPS patrol aircraft deployment plan (for example, number of patrol aircrafts needed, number and location of aircrafts available, pilot resources available, timing of patrols).
- Coordinating with Cal Fire during PSPS on communications and access to airspace where they have Temporary Flight Restrictions (TFR).

For more information on role of Air Operation Branch Leader see *CERP* section 5.2.1.

## 2.14.2 Electric Distribution Branch Director

The Electric Distribution Branch Director coordinates with the Electric Distribution Emergency Center (EDEC), RECs, and OECs for the de-energization, and recovery and restoration of PG&E's electric distribution system. The branch also provides information on customer outages and field operational challenges to the EOC.

Electric Distribution Operations responsibilities during a PSPS event include:

- Providing "grid awareness" when a PSPS event is forecasted, which can include any work in progress (planned and unplanned), Critical Operating Equipment impacts to plan, Supervisory Control and Data Acquisition (SCADA) health, abnormal switching, load-at-risk, and protection studies.
- Developing and executing the resource plans for pre-PSPS assessment staging/repair work, field observations, de-energizing, patrols, and restoration.
- Dispatching Medical Baseline door-knock resources to ensure successful notification when required.
- Reporting patrol progress, damage assessments, and repair progress.

For more information on role of Electric Distribution Operations Branch Director see *CERP* section 5.2.3.

## 2.14.3 Electric Transmission Branch Director

The Electric Transmission Branch Director coordinates with the Electric Transmission Emergency Center (ETEC) and Substation Transmission Operations Emergency Center (STOEC) to manage the restoration of the electric transmission system.

Electric Transmission Operations responsibilities during a PSPS event include:

- Defining and proposing risk and consequence targets for event.
- Performing and supporting an array of PSPS activities such as initial transmission line scoping, Direct and Total Transmission Impact Studies, system protection studies, rotating outages management, developing de-energization and restoration strategies, wildfire assistance, communicating and coordinating with the California Independent System Operator (CAISO), and ensuring that the grid is operated in a safe, reliable, compliant and event free manner.
- Developing and executing the resource plans for pre-PSPS assessment staging/repair work, field observations, de-energizing, and patrols and restoration.
- Working with EDEC to ensure collaboration with ETEC and STOEC (e.g., outages, restoration times, etc.).
- Determining current status of transmission line and Substation damage assessments, patrolling efforts and workforce status.

For more information on role of Electric Transmission Operations Branch see *CERP* section 5.2.4.

## 2.14.4 Gas Operations Branch Director

The EOC's Gas Operations Branch supports and coordinates the response, repair, and restoration of PG&E's gas distribution and transmission systems. Execution of gas service restoration and repair will be coordinated from the Gas Emergency Center (GEC) and local OEC or OECs.

Gas Operations responsibilities during a PSPS event include:

- Providing Planning Section and Operations team with an assessment of facilities that may be impacted during a PSPS event.
- Ensuring Gas resources as needed for a forecasted PSPS event.
- Determining potential need to shut-in terminals and/or implement business continuity plans (BCP) based on de-energized facilities.

For more information on role of Gas Operations Branch Director see *CERP* section 5.2.2.

## 2.14.5 Generation Branch Director

The EOC's Generation Branch supports and coordinates the response, repair, and restoration of PG&E's power generation systems and associated facilities. The responsibilities of the Generation Branch Director for a PSPS event include:

- Providing situational intelligence to generation leadership to determine potential impacts and coordinate responses. This includes Power Generation leadership teams and the On Call Duty Team Station Director at Diablo Canyon Power Plant (DCPP).
- Providing EOC leads with a list of PG&E generation systems and facilities (including hydro, fossil, renewables, battery storage and nuclear) that may be impacted during the PSPS event.
- Providing EOC leads with action/business continuity plans for each of the potentially impacted systems and facilities.
- Staging and mobilizing response resources as necessary.
- Working with Electric Transmission, Electric Distribution and Grid Ops to coordinate power plant islanding, when applicable.

For more information on role of Generation Branch Director see *CERP* section 5.2.6.

## 2.14.6 Information Technology Branch Director

The EOC's Information Technology (IT) Branch Director coordinates the response of PG&E's IT resources and systems in support of all stages of PSPS. Responsibilities include:

- Providing the EOC with coordinated communication as to the readiness and any limitations of IT systems and support.
- Ensuring availability of IT capabilities to support the PSPS event (from applications including PGE.com and the PG&E Alert websites, to infrastructure, and facilities). This may include cancelling or postponing planned maintenance, deployments, and/or field activities.
- Determining / managing potential needs for IT logistical support in the field (radios, base camps, CRCs, etc.).

- Managing the impact of a PSPS outage on IT resources (e.g., radio support, SCADA / network communication devices, etc.).
- Responding to needs of the EOC and coordinating any needed changes to IT support, Information Technology Coordination Center (ITCC), Enterprise Network Operations Center (ENOC), field support, etc.

For more information on role of Information Technology Branch Director see *CERP* section 5.2.8.

## 2.14.7 Temporary Generation Branch Director and Supporting Roles

The Temporary Generation Branch Director is the main point of contact for temporary generation and develops the temporary generation strategy for potential PSPS events. Responsibilities of the Director include:

- Developing temporary generation strategy that maps to anticipated scope of event.
- Coordinating temporary generation strategy with Temp Gen Field Operations.
- Determining number of branch resources needed by function for event.
- Utilizing the Deputy Branch Director to support any of the assigned branch roles and responsibilities.
- Utilizing auto scoping report issued by the Planning Section to develop temporary generation strategy as event scope evolves in coordination with Temp Gen Field Leads across both Primary and Secondary in-scope locations:

  Primary:
  - Informing temporary generation deployment decisions for a given event by identifying which pre-planned sites (i.e., temporary microgrids and facilities to be supported with temp gen) are in-scope for that event and ready to operate.
    - Confirming existing temporary generators and microgrid field setup (i.e., where generators are staged, what microgrids are operationally ready, etc.)
    - Analyzing PSPS Playbooks to determine temp gen scope.
  - Coordinating microgrid deployments with Temp Gen Field Operations and EDEC.
  - Managing primary ad hoc requests from EOC groups; delegate and prioritize relevant requests.
  - Coordinating microgrid demobilization following weather “all clear.”
  - Coordinating primary voltage backup gen demobilization following weather “all clear.”

  Secondary:
  - Communicating to Temp Gen Field Operations which indoor Community Resource Centers require fueling support throughout the event.

- Coordinating with Customer Backup Generation (BUG) Lead to route ad hoc backup power support requests through evaluation and approval process.
- If a request is approved, ensure execution of temp gen support to fulfill that request.
- Coordinating with Temp Gen Field Operations and vendor to dispatch generators for approved ad-hoc backup power support requests.
- After restoration, coordinating generator retrieval strategy with Customer BUG Lead.

### 2.14.7.1 Primary Voltage Lead

Process improvements regarding auto-scoping by the Planning Section will allow the Primary Voltage Lead position will be staffed on an "as-needed" bases as determined by the Temporary Generation Branch Director based on event size and initial identified scope. If critical non-pre-staged primary locations are identified as in-scope for an event the Director may call for a Primary Strike Team to support the event for specific limited functions. A Primary Strike Team includes eight experienced temporary generation engineers.

The Primary Strike Team's responsibilities may include:

- Assessing grid solution alternatives for backup power support requests routed through Customer.
  - If grid solution exists, coordinating execution of grid solution.
  - If no grid solution exists, assessing feasibility of serving request with temporary generator fleet.
- For primary voltage requests, if backup power support is feasible and approved by Operations Section Chief, coordinating execution with EDCC and Temp Gen Field Operations.

For more information on role of Temporary Generation Branch see *CERP* section 5.2.9.

## 2.14.8 Vegetation Management Branch Director

The Vegetation Management Branch Director's responsibilities during PSPS include:

- Developing strategies and tactics to manage vegetation response in the field.
- Ensuring Vegetation Branch Support team members and Vegetation Management Operations Emergency Center (OEC) leads understand the EOC Operational Period objectives and have adequate resources.
- Establishing a cadence of receiving and reporting progress on field operations from Vegetation OEC leads.
- Planning vegetation patrols in areas impacted by an emergency to identify abatement and clearing/fuel reduction opportunities.

- Planning vegetation clearing/fuel reduction to reduce the fuel in and around the power poles and utility right-of-way using a variety of vegetation clearing/fuel reduction methods.
- Prioritizing the resource and equipment needs.
- Taking information from Planning Section to develop mitigation plan including identifying high-risk trees and trees with identified high priority tags.
- Reporting back to Planning Section on mitigation plan and execution of plan.

For more information on role of Vegetation Management Branch Director see *CERP* section 5.2.5.

## 2.15 Planning Section Chief and Supporting Roles

The Planning Section (a.k.a. “Plans”) is responsible for collecting, evaluating, and displaying event intelligence and information, and is the source of all event impact data. Updates are communicated broadly through the EOC.

Additional responsibilities include:

- Preparing and maintaining event documentation including the Situation Report, Cal OES Notification Form, and event Playbooks.
- Documenting circuits potentially in de-energization scope, customers potentially in de-energization scope, and customers proactively de-energized by PSPS event.
- Developing PSPS event impact maps in various formats to be used by Public Safety Partners and critical public safety-related customers.
- Developing long-range resource, contingency, and demobilization plans.

As per the *CERP* section 5.4, the Planning Section is led by the Planning Section Chief who is assisted by the Deputy Planning Section Chief. For PSPS a second deputy is active, the PSPS Deputy Planning Section Chief.

The Planning Section Chief is responsible for direction of Planning Section staff and development of their respective documentation. They also focus on leading/participating in meetings, representing the Planning Section perspective in OIC Decision meetings, and reviewing all Planning-developed external materials. For PSPS, the Planning Section Chief has two deputies: a Deputy Planning Section Chief and a PSPS Deputy Planning Section Chief. These deputies work with staff to confirm activities are being performed according to procedures. They work together closely, dividing leadership responsibilities in alignment with ICS.

The Deputy Planning Chief leads the standard ICS Units (Documentation Unit, Situation Unit, Resource Unit, Resource Management Unit and Demobilization Unit). The PSPS Deputy Planning Chief leads the group of specific PSPS units established within the Planning Section (PSPS Technical Unit Leader, PSPS Distribution Asset Health Specialist (DAHS), PSPS Transmission Asset Health Specialist (TAHS), PSPS Portal Unit Leader, PSPS Process Unit Leader, and the PSPS Risk Analyst).

The EOC Commander has final approval over all materials produced by the Planning Section, and they can delegate approval to the Planning Section Chief, who in turn can delegate approval to their Deputies, when and if necessary.

## 2.15.1 Deputy Planning Section Chief

The Deputy Planning Chief primarily focuses on general EOC activities such as the development of the Incident Action Plan (IAP), and resource and demobilization plans.

Responsibilities include:

- Coordinating the completion of Internal and External Situation Reports.
- Coordinating the completion of the State Executive Briefing report.
- Assisting with the completion of the Cal OES PSPS notification form.

## 2.15.2 PSPS Deputy Planning Section Chief

The PSPS Deputy Planning Section Chief primarily focuses on PSPS-specific activities such as playbook development, scoping process, etc.

Responsibilities include:

- Coordinating the PSPS activities for the Planning Section, including Playbook development and external communications.
- Coordinating with PSPS Portal Unit Leader and the External Communications team on posting of information to be shared with external entities.
- Overseeing, verifying, and approving the export of outage, customer impact and notification data to the EOC event folder and the PSPS Portal.
- Overseeing and verifying various internal and external PSPS deliverables, including Cal OES PSPS notification form, internal and external Situation reports, and State Executive Briefing report.

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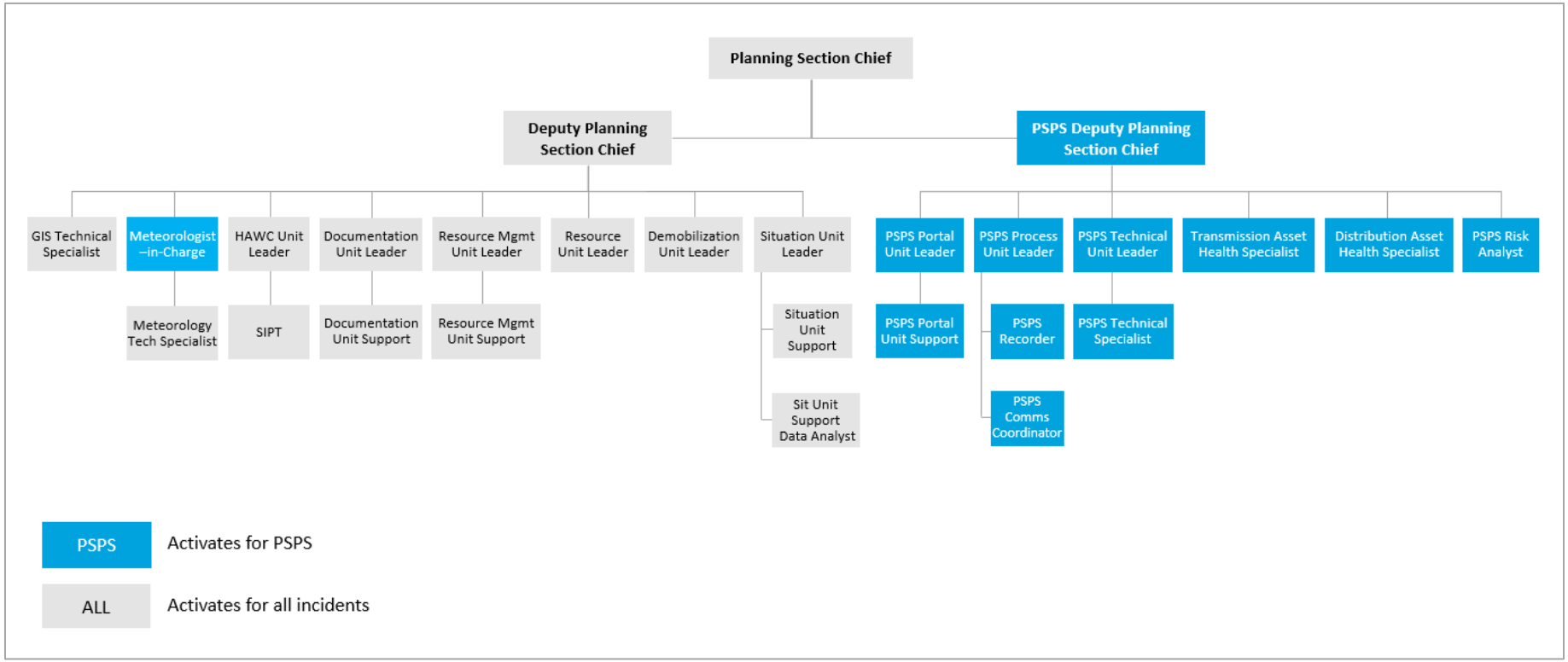
Figure 2-4 gives an overview of the Planning Section with alignment of units, groups, and roles under the Deputy Planning Section Chief and the Deputy Planning Section PSPS Chief.

**Figure 2-4: Planning Section with PSPS Specific Roles**



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In addition to standard responsibilities outlined in the *CERP*, the following groups in the Planning Section have specific functions for a PSPS Event: Meteorology, Hazard Awareness Warning Center (HAWC), PSPS Technical roles, Situation Unit, and Resource Unit.

**Note:** Listing of roles is by alignment to either PSPS Deputy Planning Section Chief or Deputy Planning Section Chief and each list is in alphabetical order.

## 2.15.3 Roles aligning to PSPS Deputy Planning Section Chief

### 2.15.3.1 PSPS Communications Coordinator

The PSPS Communications Coordinator supports the communication alignment throughout all stages of a PSPS event.

Responsibilities include:

- Coordinating External Communications (Comms) Huddle Board.
    - Maintaining an active bridge line for the Communications (Comms) Huddle.
    - Ensuring accuracy of Communications Huddle Dashboard.
    - Ensuring all members of the Comms Huddle understand how the Comms Huddle functions and the expectations they will be held to.
    - Ensuring all members of the Comms Huddle are aware of the goal(s) and understand the path to accomplish the goal(s) for each comms sequence.
    - Taking notes of what occurred during each comms sequence – hurdles, root cause(s) of issues, decisions made, areas of for improvement, etc.
    - Conducting a +/Δ for each comms sequence and document the details in the notes section.
- Guiding the Comms Huddle members through the staging process and execution of the communications sequences.
- Providing guidance on communication requirements which guide each communication sequence.
- Problem-solving issues as they arise to ensure communications are sent in timely manner while abiding to the spirit of the regulations.
    - Identifying issues quickly and bring together members of the Communications Huddle who can mitigate the issue in a timely manner.

### 2.15.3.2 PSPS Distribution Asset Health Specialist

Responsibilities include:

- Identifying potential changes to scope due to P1/ P2 tree tags and Electric Compliance (EC) tags.
- Identifying and prioritizing vegetation tags and EC tags to work with Operations and Vegetation Management to complete in advance of de-energization. Open tags not addressed before de-energization may impact scope of PSPS event.

- Communicating with Operations and Vegetation Management on tag status as it relates to scope of PSPS event.
- Communicating with PSPS Technical lead and specialist on scope changes.
- Interfacing with Meteorology to determine time-places associated with incremental tags.
- Creating Asset and Vegetation Tags Situational Summary deck for OIC Decisions B+C and D+E.

### 2.15.3.3 PSPS Portal Unit Leader

The PSPS Portal Unit Lead manages the publication of PSPS event information from the PSPS Viewer and PSPS Situational Intelligence Platform (PSIP) into the PSPS Portal for authorized external and internal users.

Responsibilities include:

- Coordinating with the PSPS Situation Unit Leader and External Communications Process Coordinator to stage and publish event information to the PSPS Portal.
- Completing PSPS Event data refreshes twice daily, regardless of scope change, at 0900 and 1500.
- Assisting internal and external users with complex technical and data issues.
- Performing general PSPS Portal data quality control (checking interactive map layers and file locations).
- When feasible, supporting PSPS User Support to process user access requests.

### 2.15.3.4 PSPS Portal Unit Support

The PSPS Portal Unit Support is the primary point of contact for PSPS Portal internal and external user management.

Responsibilities include:

- Processing internal and external user access requests, including routine continuous monitoring of the user request dashboard, user authentication, and account creation.
- Responding to requests for user support related to Portal account issues, and data availability/timing.
- Triaging complex technical issues for referral to PSPS Portal Unit Lead, IT or GIS specialists, if applicable.

### 2.15.3.5 PSPS Process Unit Leader

The PSPS Process Leader manages the PSPS overall event timeline and required execution points.

Responsibilities include:

- Building and sharing of the PSPS event timelines.

- Coordinating OIC Decision meetings and de-energization confirm/cancel meetings.
- Coordinating ETOR revisions with Operations Chief before and immediately after de-energization.
- Serving as a process and regulatory compliance expert and advisor.
- Aiding with executive and external communications.
- Creating folder structure based off official event nomenclature.

### 2.15.3.6 PSPS Recorder

The PSPS Recorder supports the PSPS Process Lead.

Responsibilities include:

- Documenting OIC Decision and Confirm/Cancel/Delay meetings.
- Ensuring documentation is uploaded to EOC event Sharepoint site in appropriate folders.
- Maintaining notes of other meetings involving the OIC, as needed.
- Collecting data from Meteorology pertaining to the forecast weather start time for each TP for the Event, and collecting from the EOC Operations Chief the corresponding actual de-energization time for each TP.
- Completing a form in PSPS Situational Information Platform (PSIP) immediately after each Decision F meeting to input the exact time of approval for each “All Clear Zone”.
- Preparing EDRS routing of all decision documents.

### 2.15.3.7 PSPS Risk Analyst

Responsibilities include:

- Managing and applying consequence data based on meteorology forecasts and PSPS scoping data to evaluate the risk and benefits in calling a PSPS event to our customers.
- Leveraging PG&E developed Risk-Benefit tool to quantify risks and interpret results.
- Supporting the presentation of results at OIC decision-making meetings to inform decision to de-energize.

### 2.15.3.8 PSPS Technical Unit Leader

The PSPS Technical Lead oversees and verifies the use of the PSPS Viewer and PSPS Situational Intelligence Platform (PSIP).

Responsibilities include:

- Supporting Planning Section Chief and PSPS Planning Section Deputy Chief for updates as necessary.
- Directing and supporting PSPS Technical Specialists.
- Inputting ETOR per time-place and per event into PSPS Viewer.
- Coordinating with the HAWC Lead on updates.
- Verifying updates to PSPS Viewer.
- Overseeing and verifying updates to the PSPS Playbooks (De-energization and Restoration) and alignment to the PSPS Viewer and PSIP.
- Interfacing with ETEC and EDEC to understand abnormal configuration related to impacts.
- Overseeing and verifying the updating of the PSPS Viewer and PSIP to align with OIC decisions on scope of the event.
- Coordinating and verifying the alignment of the PSPS Viewer and PSIP.
- Interfacing with Transmission Asset Health Specialist (TAHS) and Distribution Asset Health Specialist (DAHS) and incorporating changes to scope in PSPS Viewer and PSIP.
- Supporting completion of any required forms, reports, and other documentation to be archived within the EOC as appropriate.

### 2.15.3.9 PSPS Technical Specialist

The PSPS Technical Specialist verifies the use of the PSPS Viewer and alignment to the PSPS decision reports.

Responsibilities include:

- Supporting PSPS Technical Unit Leader.
- Updating PSPS Viewer and PSIP to align with OIC decisions on scope of the event.
- Using PSPS Viewer and PSIP to create/update PSPS playbooks.
- Using PSIP to generate customer outage notifications and reports.
- Supporting completion of any required forms, reports, and other documentation to be archived within the EOC as appropriate.

### 2.15.3.10 PSPS Transmission Asset Health Specialist

The Transmission Asset Health Specialist (TAHS) validates transmission line segments to be included in scope and coordinates with ETEC (or GCC) on sections to be studied. The Transmission Asset Health Specialist further validates lines and transmission customers impacts of study and coordinates with PSPS Technical Unit Leader and Critical Infrastructure Lead (CIL)(CSO) as needed. Responsibilities include:

- Using the “Transmission Scoping Dashboard” interacts with several parties to determine which T-lines should be in scope for de-energization for OIC Decision B: Set Transmission Power Flow scope. The dashboard ties together many different sources of information such as meteorology data, vegetation data, A tags, and structure-specific data.
- Identifying subset of lines in scope for de-energization that will require grounding mitigation due to induction.
- Sending the list of In Scope T-lines to ETEC for Direct Impact analysis. ETEC then produces the Direct Impact summary for the tab in Playbook C.
- Identifying the transmission customers in scope for 72-48 hours in advance of the forecasted start time of the PSPS event.
- Developing OIC Decision B deck after ETEC sends out Playbook C summarizing transmission recommendations using the “OIC Decision B template”.
- Populating the standard FERC template with the list of transmission lines to be de-energized prior to each OIC B/C and the OIC D/E meetings, and sending it to the Digital Strategy Lead, who immediately posts them on the FERC website. This process is repeated for each OIC Decision B/C or OIC Decision D/E scope revision approval.
- Creating OIC Decision D materials after ETEC sends out Playbook D (incorporating transmission indirects from studies), using “OIC Decision D Waterfall Excel” and “OIC Decision D” templates.
- Supporting the “all clear” process for transmission lines by using the Tx All Clear Report to calculate “all clears” by t-line, update Playbook F as changes occur, and relay information to CIL.
- Supporting the Customer Critical Infrastructure Lead (CIL) by providing timely communication of completed playbooks C, D, F and OIC Decisions C and D, reviewing the customer list for accuracy, and answering any questions from the CIL.
- QA/QC-ing the final list of lines in scope and confirm times of de-energization/re-energization per line for the CPUC-De-energization Report (“10-Day Report”).

## 2.15.4 Roles aligning to Deputy Planning Section Chief

### 2.15.4.1 Documentation Unit

During a PSPS event, the Documentation Unit's responsibilities include:

- Creating the draft Incident Briefing (201) during Readiness Posture.

For more information on role of Documentation Unit see *CERP* section 5.4.2.

### 2.15.4.2 GIS Technical Specialist

The GIS Technical Specialist's responsibilities include:

- Serving as Primary Liaison for the GIS Team in the EOC and Initial Point of Contact for PSS Team seeking GIS Support.
- Providing technical information to PSS Team from GIS Analysts: special request maps and map data layers, as appropriate, to support operations, planning, and other functions.
- Directing EOC map requests to members of the GIS team, as needed (Note PSPS Viewer should be first point of contact).
- Activating during PSPS event for both AM hours (6a – 6p) and PM hours (6p-6a).

### 2.15.4.3 Hazard Awareness & Warning Center

Before activation of the EOC, the HAWC is responsible for identifying any ongoing incidents within the scope of the potential PSPS event.

During a PSPS event the HAWC is represented in the EOC by the HAWC Lead and the HAWC Technical Specialist. The HAWC uses the weather forecast and information within the Foundry based Situational Report to define the initial locations of Field Observations for the Safety & Infrastructure Protection Teams (SIPT).

For more information on role of HAWC Lead (formerly WSOC) see *CERP* section 3.1.1.

#### 2.15.4.3.1 HAWC Lead

Hazard Awareness & Warning Center (HAWC) Lead is an advisor on the pre-assessment call where the OIC makes the decision to activate the EOC for a possible PSPS event.

The HAWC Lead reports on fire conditions and behavior as well as the Field Observations. The Lead's responsibilities include:

- Coordinating information between the EOC Command and General Staff, HAWC, PSS Team (serving as PG&E Assigned County/Agency Representatives), and SIPT.
- Setting up and updating field observation to support All-Clear decisions.

- Presenting observer intelligence during OIC briefing and decision-making meetings.
- Communicating with EOC staff as needed regarding fire situation, ignitions, and updates.

#### 2.15.4.3.2 HAWC Technical Specialist

The HAWC Technical Specialist supports the HAWC Lead. The Technical Specialist's responsibilities include:

- Working with HAWC, Meteorology and SIPT Leadership to determine Field Observation locations.
- Entering the Field Observation locations into the Wildfire Incident Viewer (WIV), active incident dashboard, and SIPT Viewer.
- Ensuring that the Field Observation locations are accurate based on any scope changes.
- Summarizing active fires and field observation data to aid in PSPS decision-making.
- Interfacing with the HAWC to provide status updated and clarify information needs.

#### 2.15.4.3.3 Safety Infrastructure Protection Team

When Safety Infrastructure Protection Teams (SIPT) are utilized during a PSPS event, their responsibilities may include:

- Conducting field weather observations.
- Documenting field fuel conditions.
- Providing standby fire protection and medical response.
- Supporting generators and other energized assets as requested by the EOC Operations Section.
- Supporting fire prevention treatment efforts.

For more information on role of HAWC Lead (formerly WSOC) see *CERP* section 6.2.7.

### 2.15.4.4 Meteorology

PG&E has a dedicated Meteorology team that, in collaboration with key external partners, gathers, analyzes, and models weather and fire potential data. Preceding and during a PSPS event responsibilities include:

- Notifying the Vice President of EP&R when there is an increased potential of outages combined with heightened fire potential, which will initiate PSPS pre-assessment "Readiness Posture" (see section 3.4.5).
- Defining the meteorological footprint of weather impacts that may warrant PSPS, including estimated event start and end times, for event scoping.
- Providing situational awareness and updates regarding current weather conditions and forecast models to the OIC, EOC Commander and EOC Command Staff.

- Publishing Utility Fire Potential Index (FPI) forecasts.
- Communicating Ignition Probability Weather (IPW) forecasts.
- Evaluating public and proprietary weather models.
- Evaluating fire spread consequence outputs from Technosylva.
- Evaluating Red Flag Warnings or Fire Weather Watches declared by the National Oceanic and Atmospheric Administration (NOAA) National Weather Service.
- Evaluating “High Risk” forecast triggers from the Northern and Southern California Geographic Area Coordination Centers Predictive Services.
- Advising HAWC on positioning of Field Observers as needed.
- Advising the OIC on when it is appropriate to declare weather “all-clear” conditions subsequent to de-energization.

### 2.15.4.5 Meteorologist-in-Charge

The Meteorologist-In-Charge (MIC) is the lead meteorologist in the EOC and consults with the OIC directly and frequently during PSPS events. The MIC is responsible for providing Meteorology reports and models that help define PSPS event scope and support OIC decisions. Additionally, the MIC assigns tasks to the Technical Weather Specialists and other supporting members of the meteorology team during an event.

### 2.15.4.6 Meteorology Technical Specialist

The Technical Weather Specialist (TWS) supports the Planning Section and other sections, such as Operations, during a PSPS event. The TWS consults with the MIC on the scope, timing, and duration of the event. The TWS handles most ad-hoc weather-related requests in the EOC.

### 2.15.4.7 Resource Unit Leader

During a PSPS event the Resource Unit Lead’s responsibilities include:

- Tracking and analysis of resources assigned to the operation Version 7.0 *Company Emergency Response Plan (CERP)* (EMER-3001M), EOC Staffing, page 5-21
- Development and maintenance of the Incident Organization Assignment List (ICS 203) and Organization Chart(s) (ICS 207).
- Establishing Check in/Out functions at the incident locations (RECs, OECs, Base Camps) and working to achieve total accountability and tracking of incident resources.
- Preparing and submitting the ICS-204 Resource Tracking form if required (total resource counts in the event).

### 2.15.4.8 Resource Management Unit Leader

During a PSPS event the Resource Management Unit Leader's responsibilities include:

- Setting strategy for staffing the event based on data and analytics provided by the Resource Unit Lead.
- Working with REC Leaders and Operation leaders providing staffing recommendations as part of the overall strategy for the event.
- Preparing the field operations resource calculation using the FORCE tool which provides estimated restoration patrol resources needed for Resource Management Unit Leader to provide staffing recommendation to meet CPUC restoration regulatory requirements.
- Tracking crew movements between regions.

For more information on role of Resource Unit see *CERP* section 5.4.5.

### 2.15.4.9 Situation Unit

The Situation Unit is an All-Hazard Unit and consists of three positions – Situation Unit Leader, Situation Unit Support, and Situation Unit Support Data Analyst. Each role is trained to be able to perform all common Situation Unit tasks. Tasks related to PSPS listed under each role may be shared or delegated to one of the other roles. The Unit operates in close communication with the PSPS Deputy Planning Section Chief and PSPS Technical Unit.

#### 2.15.4.9.1 Situation Unit Leader

The Situation Unit Leader is responsible for leading, coordinating, and delegating the tasks to be fulfilled by the Sit Unit. During PSPS Situation Unit Leader responsibilities include:

- Updating the Plan Administration Tab in PSPS Situational Intelligence Platform.
- Using PSIP to configure and quality check the Internal and External Situation Report.
- Downloading the "All Affected Customer Report".
- Developing situational information to support external briefings and development of a common operating picture.
- Communicating with PSPS Deputy Planning Section Chief and PSPS Technical Unit for status of key event stages and scoping abnormalities (example: when a new Plan is completed and ready to be published in the internal Sit Report and abnormalities are identified, such as an incorrect County being listed due to data issues that needs to be updated in Sit Report and for managing data quality dashboard.).

#### 2.15.4.9.2 Situation Unit Support

Responsibilities include:

- Providing Emergency Web files to PSPS Portal Unit to be used for the public-facing website.
- Producing the State Executive Briefing deck to be distributed ahead of 1530 call with state agencies.
- Completing the Cal OES PSPS State Notification Form (Cal OES Form) with the latest and most accurate information at the specified submission points.

#### 2.15.4.9.3 Situation Unit Support Data Analyst

Responsibilities include:

- Entering global Estimated Times of Outage Restored (ETORs) in Outage Management Tool (OMT).
- Tracking, documenting, and triaging issues via the Issues Tracker.
- Resolving technical problems in Foundry and Tableau dashboards.
- Resolving data anomalies encountered in the Situation Report.
- Addressing gaps in reporting and ad-hoc data requests, using tools such as “Planned All Affected Customers” and “Actual All Affected Customer tables” in PSIP.

For more information on the Situation Unit see *CERP* section 5.4.1.

# 3 Concept of Operations

## 3.1 Purpose of Public Safety Power Shutoff

The purpose of PSPS is to mitigate the risk of utility infrastructure contributing to catastrophic wildfire risk by proactively de-energizing PG&E facilities in the event of severe weather. The PSPS program is based on four guiding principles:

1. **Prevent catastrophic wildfires**: Prevent catastrophic wildfires associated with electric equipment located in high fire-risk areas while **minimizing potential public safety impact.**
2. **Execute de-energization events with no safety incidents.**
3. **Restore power quickly and safely**: Ensure power to all customers affected by the PSPS event is restored quickly and safely after the weather "all clear".
4. **Communicate potential impact with internal and external stakeholders**: Provide timely and accurate notifications to customers, California Public Utilities Commission (CPUC), California Department of Forestry & Fire Protection (CAL FIRE, Governor's Office of Emergency Services (Cal OES), Public Safety Partners and employees.

PG&E may proactively de-energize its facilities for other purposes that do not fall within the scope of a PSPS event, such as when requested by public first responders, CAISO or state agencies (for example, CAL FIRE), during an emergency, or to protect PG&E assets from the spread of an existing fire. Such proactive de-energizations are not PSPS events.

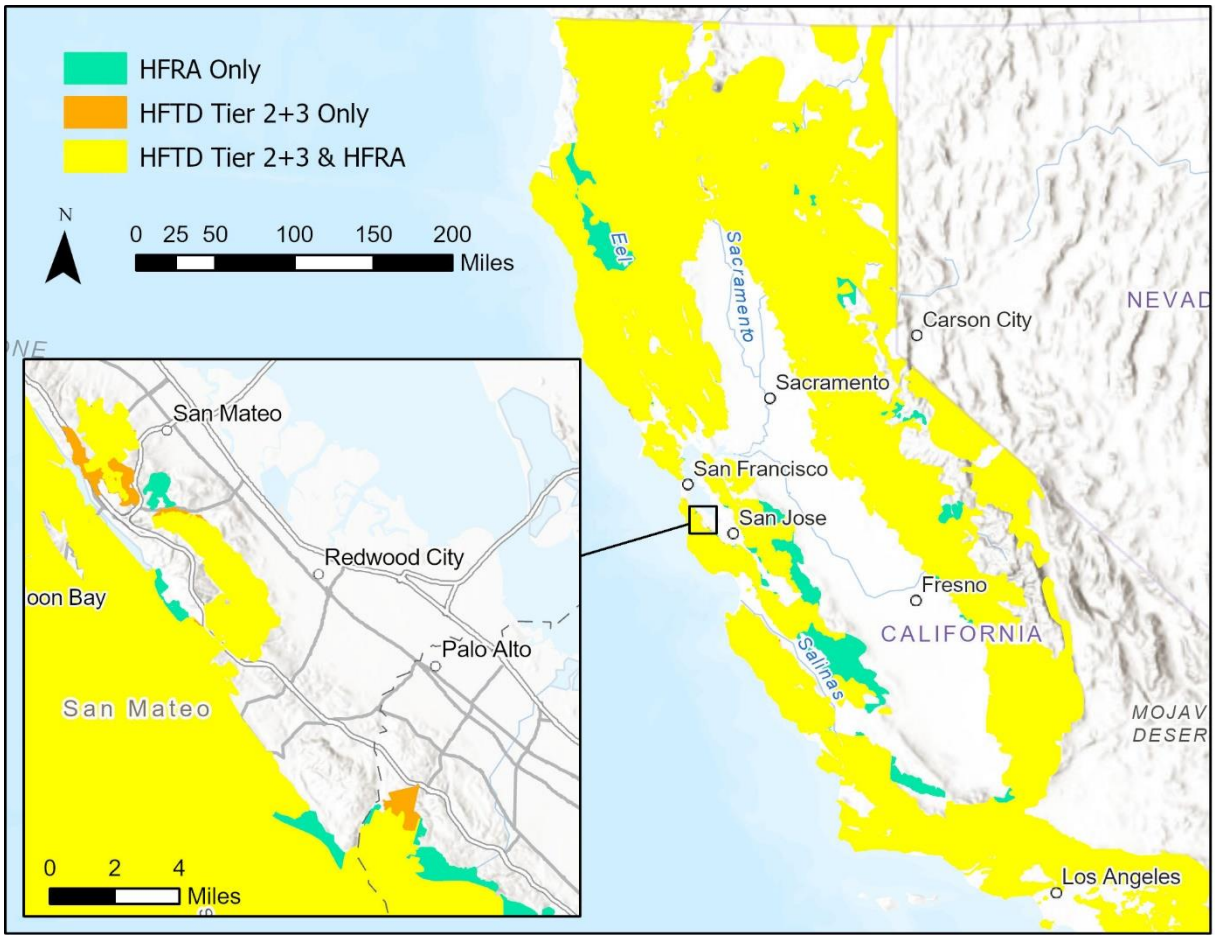
## 3.2 General Scope for PSPS

### 3.2.1 Geographic Scope

To inform the geographic scope of PSPS events, PG&E performs a fire threat assessment of its service territory focused on identifying areas where an ignition during an offshore wind event could lead to a catastrophic wildfire. These areas are collectively referred to as PG&E's High Fire Risk Area (HFRA). All electric distribution and transmission infrastructure within the HFRA is potentially subject to PSPS. In contrast, electric distribution and transmission infrastructure outside the HFRA is potentially subject to PSPS only where its de-energization may be necessary to implement PSPS for infrastructure inside the HFRA. In scoping for a PSPS event, the HFRA serves as an initial geospatial filter, upon which event-specific geospatial data concerning weather and fuel conditions is overlaid and analyzed to arrive at a final PSPS scope.

PG&E began development of the HFRA in 2020, using the Tier 2 and Tier 3 portions of the CPUC's High Fire Threat District (HFTD) as a starting point, adding areas where there is potential for an ignition, during an offshore wind event, to lead to a catastrophic wildfire, and removing areas where such potential is absent. Figure 3-1 shows the spatial relationship between the HFTD and the HFRA, as of April 2022.

**Figure 3-1: CPUC's High Fire Threat District and PG&E's High Fire Risk Area as of April 2022**




## 3.2.2 Operational Scope

PG&E's PSPS program includes all electric lines that pass through HFRAs — both Distribution and Transmission. The most likely electric lines to be considered for shutting off for safety will be those that pass through HFRAs. Often lines that traverse HFRAs also feed customers in non-HFRAs. These customers could be impacted by risk associated with lines that could be many miles away.

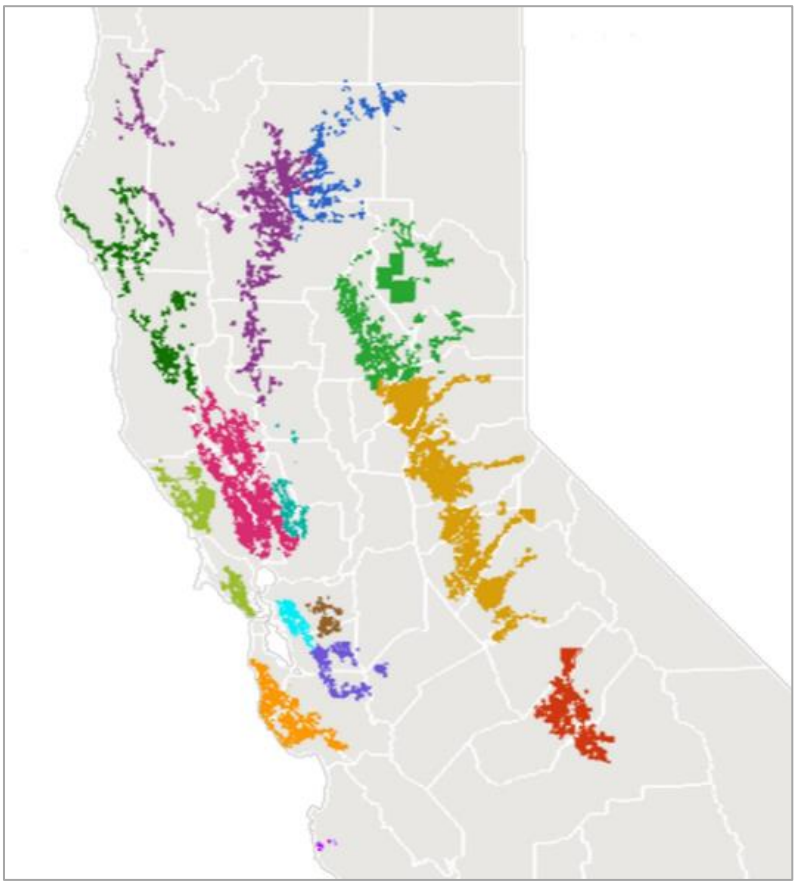
In an effort to minimize the impacts of PSPS, PG&E may operate selected sectionalizing devices closest to the identified risk area/s on a per event basis.

### 3.2.3 Time Places

Extreme weather may reach different areas at different times. A Time-Place (TP) is a portion of the PG&E grid where the impacted electric lines and geographical locations are aligned and is forecast to experience consistent timing for potential PSPS. Time-Places are identified for each PSPS event and receive consistent treatment for notifications and de-energization. Once actual weather conditions occur, weather "all clear" and service restoration times may vary due to actual weather conditions within a TP.

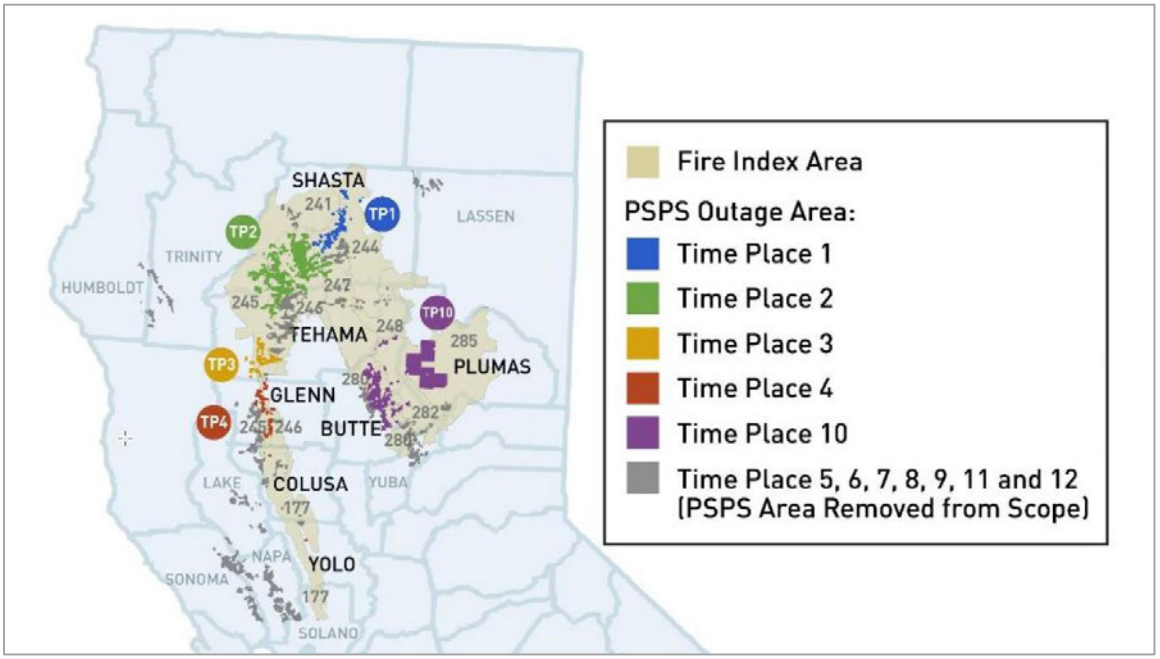
When there are multiple Time Places, each TP receives a number and is assigned a unique color for easy identification on a map as in Figure 3-2.

**Figure 3-2: Example Map with colored Time Places**



Each PSPS event is unique. Prediction models of severity of weather may change enough over time so that originally forecasted TPs can be removed from event scope. In Figure 3-3 initial TPs 5, 6,7,8, 9, 11, and 12 that were included in Figure 3-2 have been de-scoped.

**Figure 3-3: Example Map with In-scope and De-scoped Time Places**




## 3.3 Decision Making for PSPS

### 3.3.1 Public Safety Power Shutoff Criteria

PG&E monitors conditions across its service territory and evaluates whether to proactively de-energize electric lines in the interest of safety. PG&E must reasonably believe there is an imminent and significant risk that strong winds will topple its power lines onto tinder dry fuels or will cause major vegetation-related impacts on its facilities during periods of extreme fire hazard.

In order to ensure this risk exists, PG&E first applies a filter known as minimum fire potential conditions to all hours and locations of the forecast. These minimum fire potential conditions must all be met for a location to be considered for PSPS. This applies for both Distribution and Transmission. These minimum fire potential conditions consist of required values of:

- Sustained Wind Speeds
- Dead Fuel Moisture (10/100/1000-hour variants)
- Relative Humidity
- Live Fuel Moisture (herbaceous and shrub variants)
- PG&E Fire Potential Index

Meeting these minimum fire potential conditions does not mean automatic inclusion in PSPS scope. For distribution, once a location meets minimum fire potential conditions it must then hit a second set of guidance in order to be included in scope.

These criteria are:

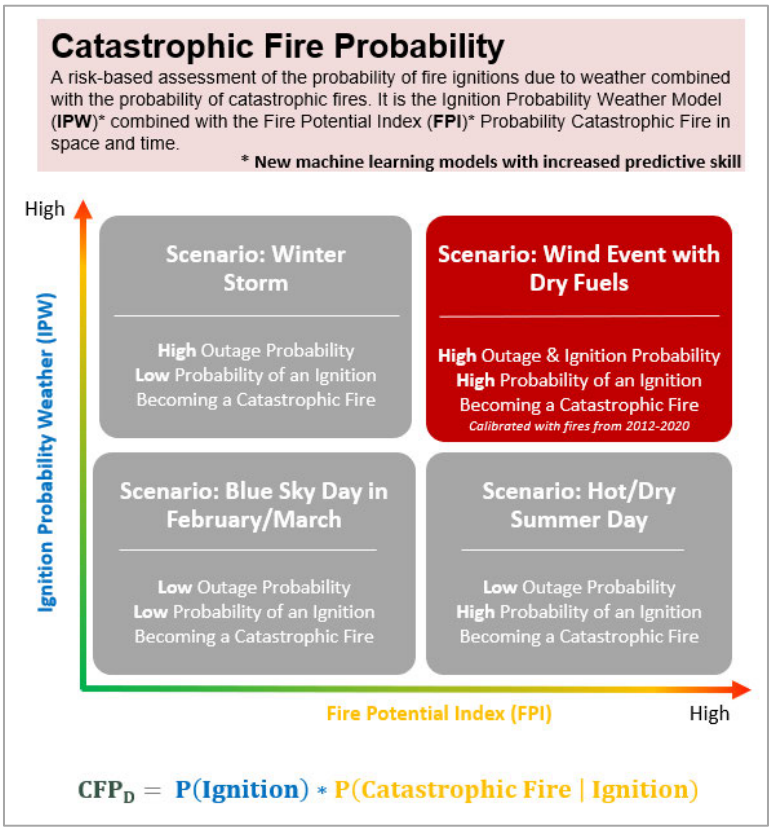
- Catastrophic Fire Probability ($CFP_D$)
- Catastrophic Fire Behavior (CFB)
- Vegetation and Asset Hazard Consideration

Also, the total number of POMMS (PG&E Operational Mesoscale Modeling System) cells that must meet minimum fire potential conditions and one of the above criteria should total to at least 25 grid cells (2 x 2 km).

CFP is calculated as the product of the PG&E Ignition Probability Weather (IPW) and the PG&E Fire Potential Index (FPI). The IPW model predicts the likelihood of an outage and resulting ignition, while the FPI model predicts the likelihood that an ignition would become a catastrophic fire.

Figure 3-4 shows a matrix for IPW and FPI.

**Figure 3-4: IPW/FPI Matrix**



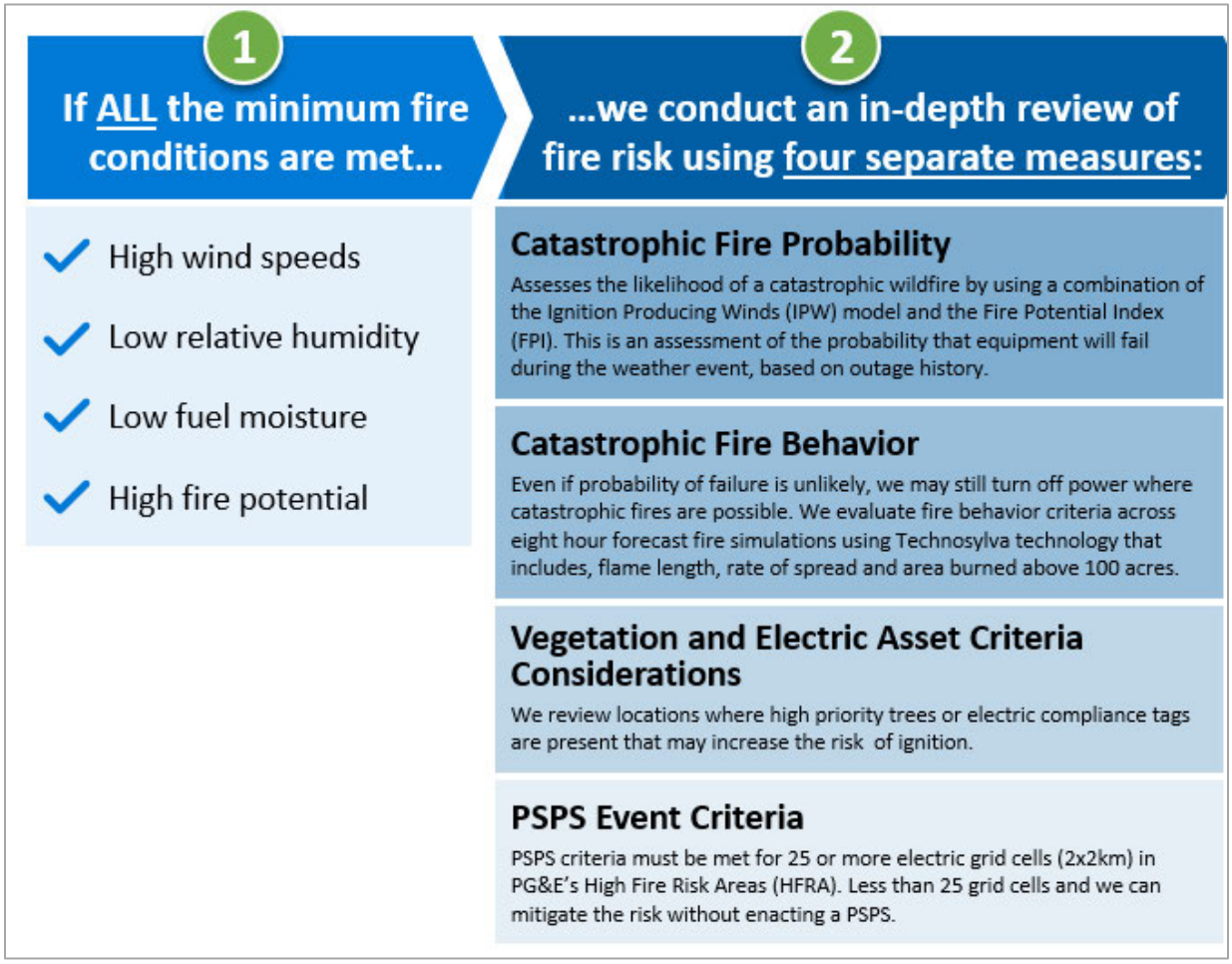

CFB is calculated using the outputs from the Technosylva Wildfire Analyst Enterprise (WFA) system. Technosylva ingests PG&E weather data, and then runs over 100 million fire spread simulations at 3-hour time intervals for the territory out multiple days, creating a dataset of potential consequence of new ignitions. In order to meet CFB guidance, an ignition must meet a set Flame Length, Rate of Spread, and 8 hour burned acreage.

The use of CFB helps PG&E identify areas where the potential consequence from an ignition is very high, but where the IPW score may be low due to high circuit resiliency.

Vegetation and Asset Hazard Consideration is the last criteria, which is met by the presence of certain distribution asset tags or tree designations. Grid cells that meet minimum Fire Potential Conditions that also contain certain trees ("P1" or "P2" trees) or certain distribution asset tags, which cannot be mitigated, are also recommended for inclusion in PSPS scope.

Figure 3-5 shows the Distribution PSPS framework.

**Figure 3-5: Distribution PSPS Framework**




The criteria for Transmission Scoping for PSPS also begins with the minimum Fire Potential Conditions. Meeting these minimum fire potential conditions does not mean automatic inclusion in PSPS scope. For transmission, once a structure meets minimum fire potential conditions it must then hit a second set of guidance criteria in order for the transmission line or segment to be included in scope. These criteria are:

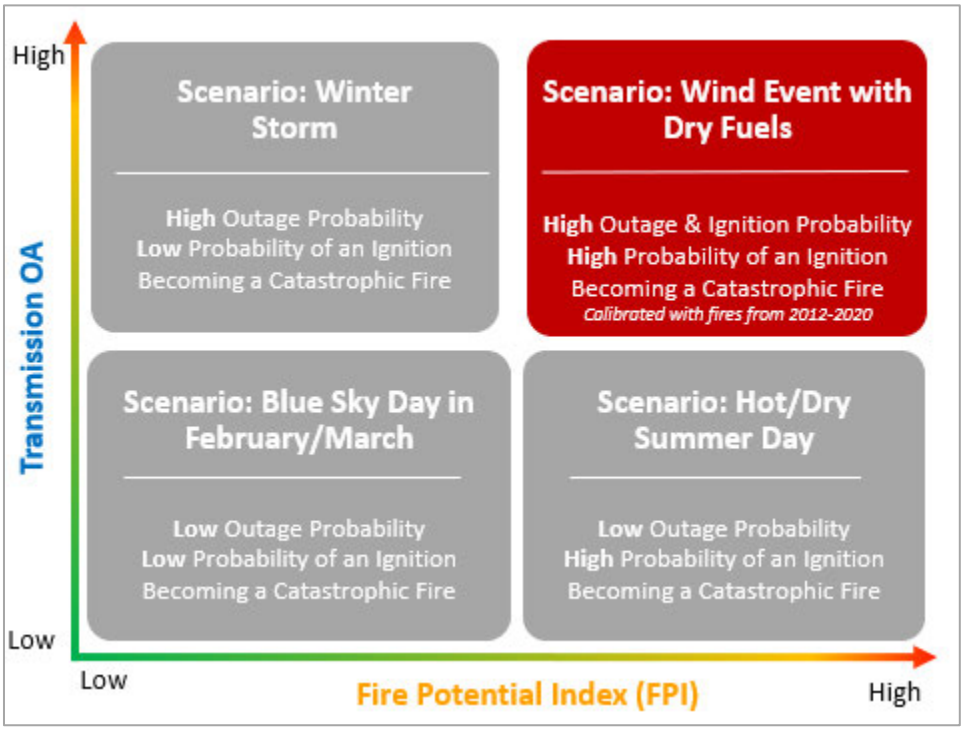
- Catastrophic Fire Probability -Asset ($CFP_D$-Asset)
  - Catastrophic Fire Probability - Induction ($CFP_T$-Induction)
- Catastrophic Fire Probability -Veg ($CFP_T$-veg)
- Catastrophic Fire Behavior ($CFB_T$)
- Vegetation and Asset Hazard Consideration

- Low Impact

$CFP_T$-Asset is calculated very similar to the distribution model; however, the Ignition Probability Weather Index (IPW) model is replaced with the Transmission Operability Assessment (OA) model, which provides fragility curves based on wind speeds for each transmission structure. For Transmission PSPS Decision Making these models are combined in both space and time.

Figure 3-6 shows a matrix for OA and FPI.

**Figure 3-6: Matrix for Operability Assessment and Fire Potential Index**

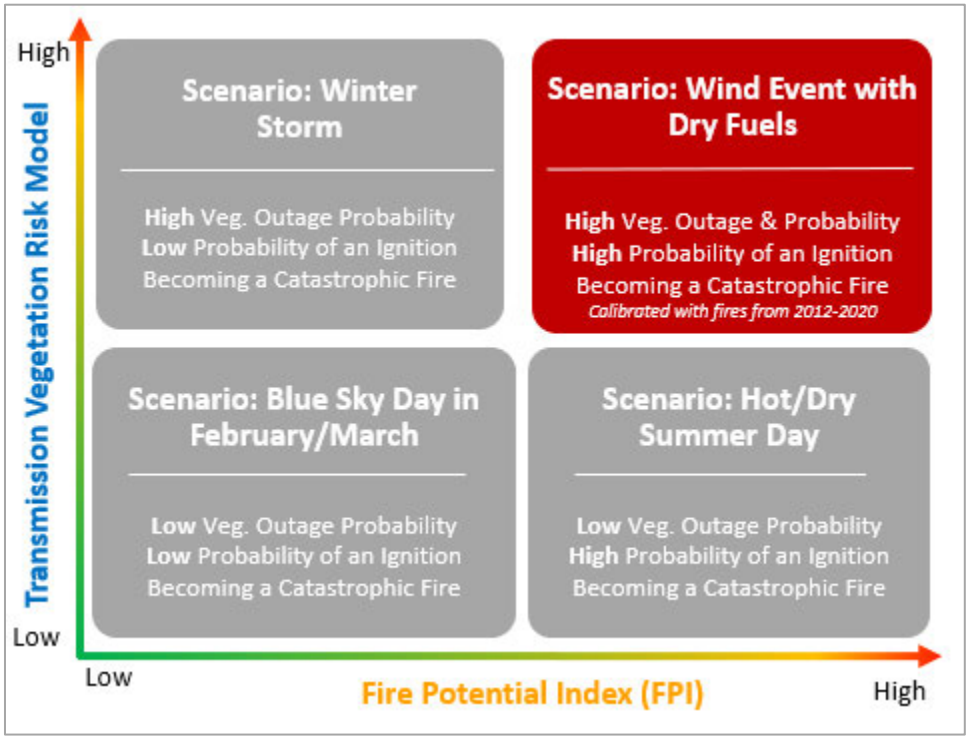



$CFP_T$-Induction is a subset of the lines that are in scope for $CFP_T$-Asset which also have indicators that show a higher risk for induction related ignitions even while the line or segment is deenergized. Additional mitigations are considered for these lines.

$CFP_T$-Veg is a combination of the tree strike model in space and time for each tree with PG&E's Fire Potential Index model. The Tree Strike Model provides a relative exposure ranking for trees which could strike a transmission line if the tree fails. Each tree has a unique tree ID and tree risk score.

Figure 3-7 shows a matrix for the transmission Vegetation Risk model and Fire Potential Index (FPI).

**Figure 3-7: Matrix Transmission Vegetation Risk Model and Fire Potential Index**



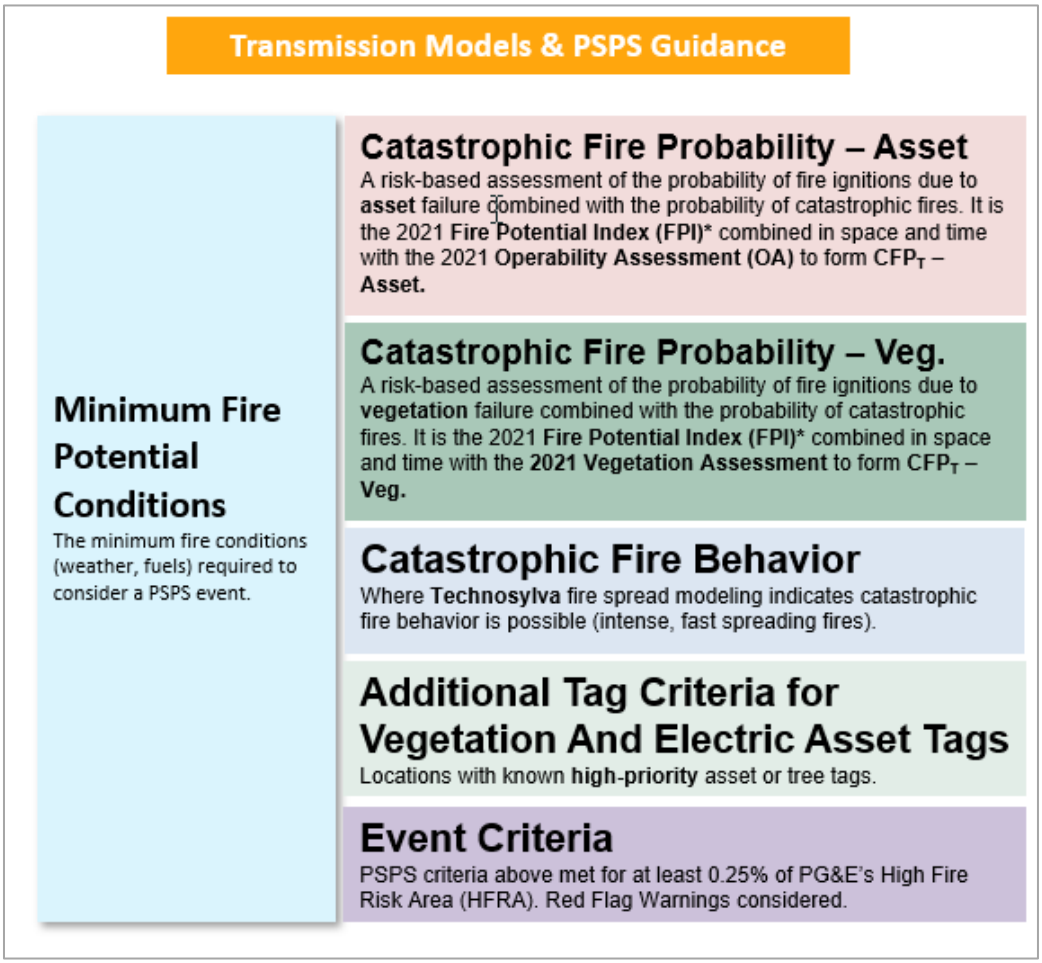

$CFB_T$ is calculated the same as it is in the distribution model. Many of PG&E's high voltage transmission lines exhibit very high reliability, which is reflected in the Operability Assessment model. Transmission lines are only de-energized for Catastrophic Fire Behavior where Operability Assessment fragility is also above a minimum guidance level.

Vegetation and Asset Hazard Consideration is the last scoping criteria, which is met by the presence of certain transmission asset tags or tree tag designations. Transmission structures that meet minimum Fire Potential Conditions that also contain trees with high priority tags ("HNI" or "HNU") or certain transmission asset tags, which cannot be mitigated in the time before the weather start, are also recommended for inclusion in PSPS scope.

Low Impact lines are also considered in transmission. The Transmission Asset Health Specialist (TAHS) reviews the system to identify if there are lines that didn't meet any of the above scoping criteria but can be deenergized without impacting customers or causing other adverse effects to the grid.

Figure 3-8 shows the Transmission PSPS framework.

**Figure 3-8: Transmission PSPS Framework**




Although PG&E's models are the main drivers of PSPS decision making, no single factor drives PSPS, as each situation is dynamic and unique. PG&E carefully reviews a combination of many criteria when determining if power should be turned off for safety.

PG&E evaluates multiple forecasts from external weather agencies about the potential for fires that include Red Flag Warnings from the National Weather Service, High Risk forecasts of Significant Fire Potential from the Geographic Area Coordination Center (GACC) and fire weather outlooks from the Storm Prediction Center (SPC), which is part of the National Weather Service (NWS), within the National Oceanic and Atmospheric Administration (NOAA). This review ensures federal agencies also recognize a high potential for significant large fires.

During high-risk periods PG&E meteorologists also take part in daily interagency conference calls that usually include multiple NWS local offices, the NWS western region headquarters, and representatives from the GACC. This call is hosted by the Northern California or Southern CA GACC offices. Agreements with Cal Fire and United States Forest Service (USFS) leadership allow PG&E to participate on these calls while not influencing any forecasts issued by these independent agencies. During these calls the agencies present their views on the upcoming period of risk, discuss timing, wind speed

and fuel moisture levels and align on when certain federal forecast products may be issued. PG&E greatly appreciates participation on these conference calls as it allows further PG&E coordination with external and independent forecast agencies on upcoming risk periods.

External forecasting models and services, such as the European Center for Medium-Range Weather Forecasts (ECMWF) and Global Forecast System (GFS), are also closely monitored.

PG&E meteorologists look for consensus and agreement among internal model forecasts and external forecasts. Agreement amongst the model forecasts supports higher confidence and accuracy in the forecasted conditions, while lack of agreement would indicate more variability in potential weather outcomes. For this reason, the review of external weather intelligence is a valuable and standard part of PSPS decision making.

In addition to this information, PG&E carefully reviews and considers the location of existing fires and where new fires are detected using the Satellite Fire Detection & Alerting System (FDAS), which uses data from five NOAA/NASA satellites to detect fires.

Sources of information besides internal forecast information that are considered for PSPS are listed below:

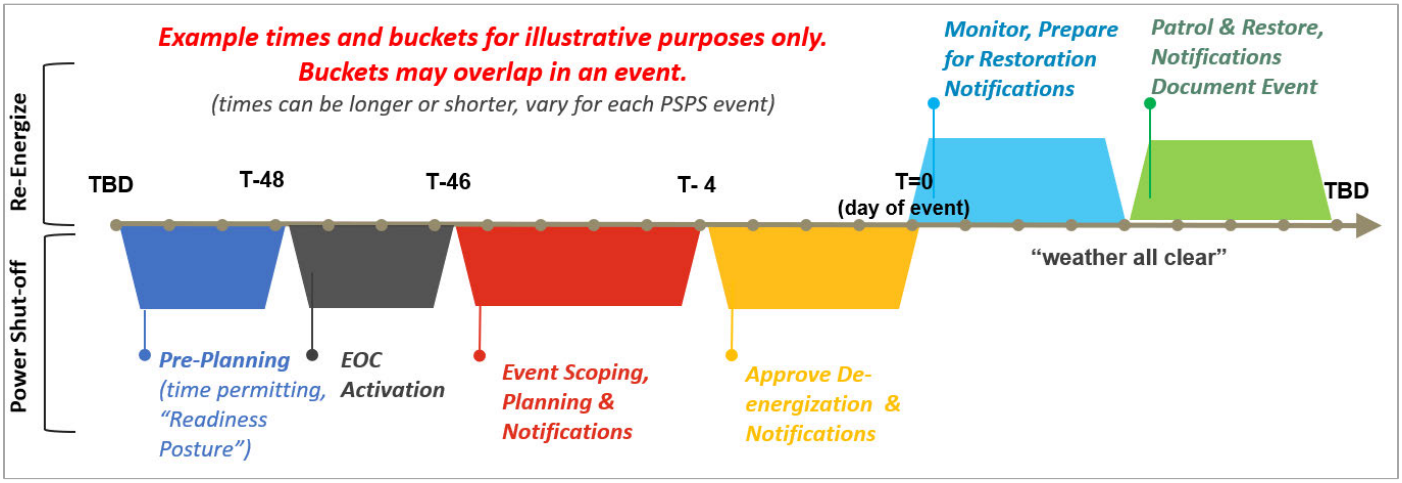
- Fire Weather Watches and Red Flag Warnings (Federal).
- High Risk of Significant Fire Potential (Geographic Area Coordination Center (GACC), Federal).
- Storm Prediction Center fire weather outlooks (National Oceanic and Atmospheric Administration (NOAA), Federal).
- Information received from agencies on Interagency Conference Calls during high-risk periods.
- External forecasting services, including the European Center for Medium-Range Weather Forecasts (ECMWF), Global Forecast System (GFS).
- Field Observer information.
- Data from weather stations.
- Locations of existing fires.
- New fires detected – Satellite Fire Detection & Alerting System (FDAS).

PG&E is currently evaluating new technologies including fire-spread modelling to incorporate into PSPS decision-making. In the future, PSPS guidance may include and incorporate new scientific methods and models.

## 3.3.2 Example Sequence of a PSPS Event

Forecasts are subject to change quickly and preparation timelines adjust to forecasts for each PSPS event. Figure 3-9 shows a general example sequence for a PSPS event.

**Figure 3-9: Example Timeline of PSPS Event**



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## 3.3.3 PSPS Event Activity Timeline

Figure 3-10, Figure 3-11, Figure 3-12 and Figure 3-12 show an overview timeline for PSPS event activity from ~T-96 hours to T + 10 business days.

**Figure 3-10: PSPS Event Activity Timeline (1 of 4)**

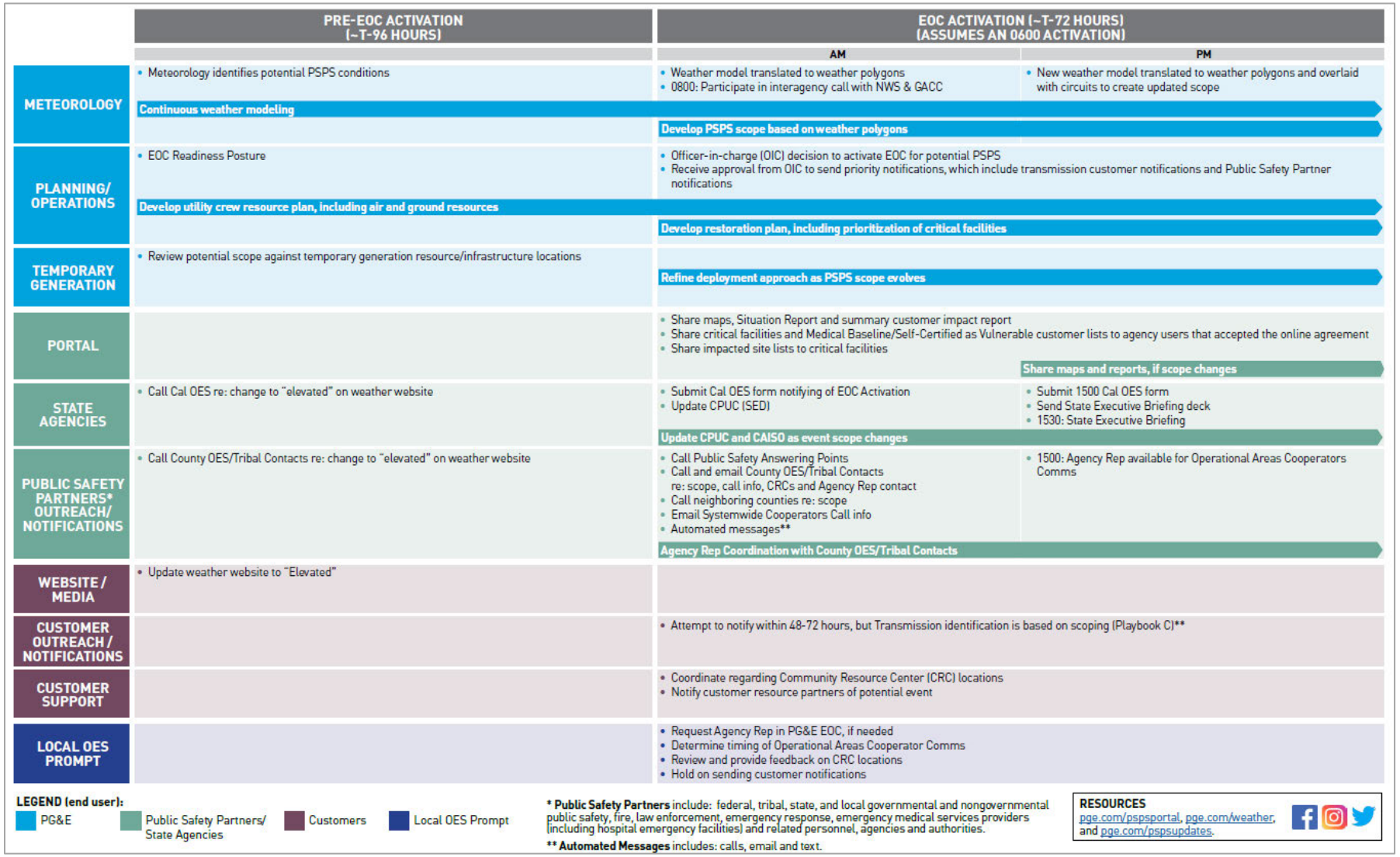


**Figure 3-11: PSPS Event Activity Timeline (2 of 4)**

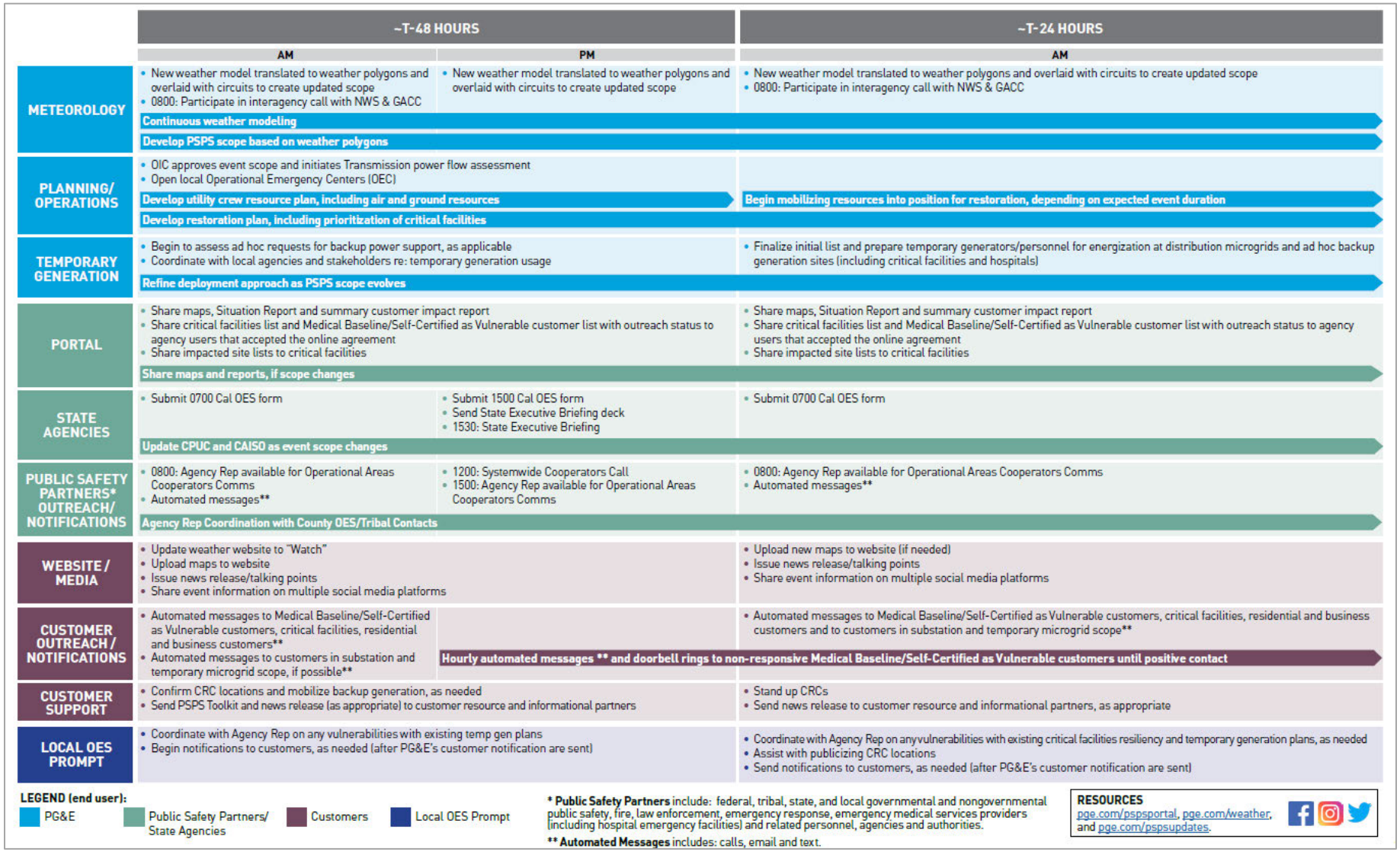


**Figure 3-12: PSPS Event Activity Timeline (3 of 4)**

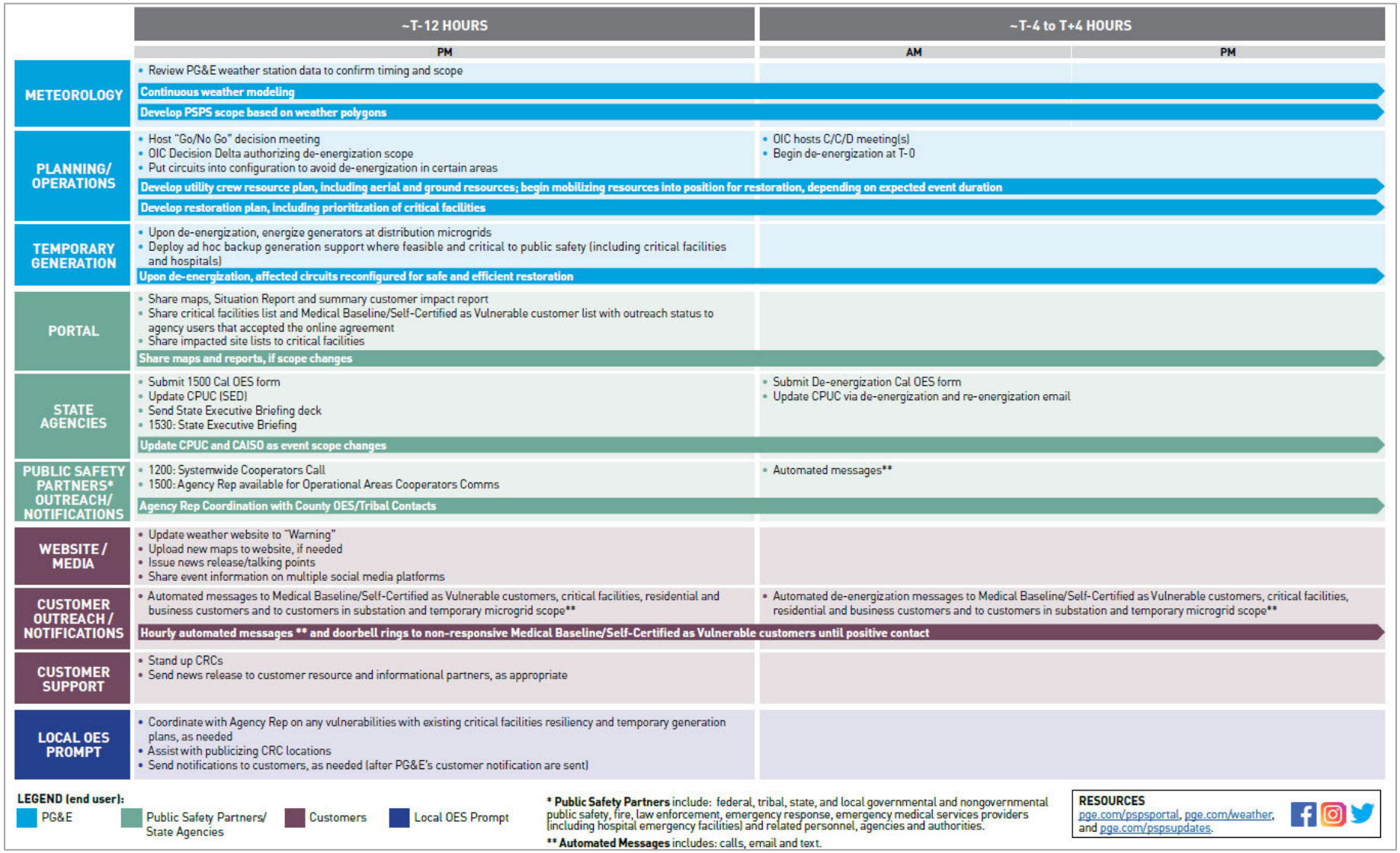
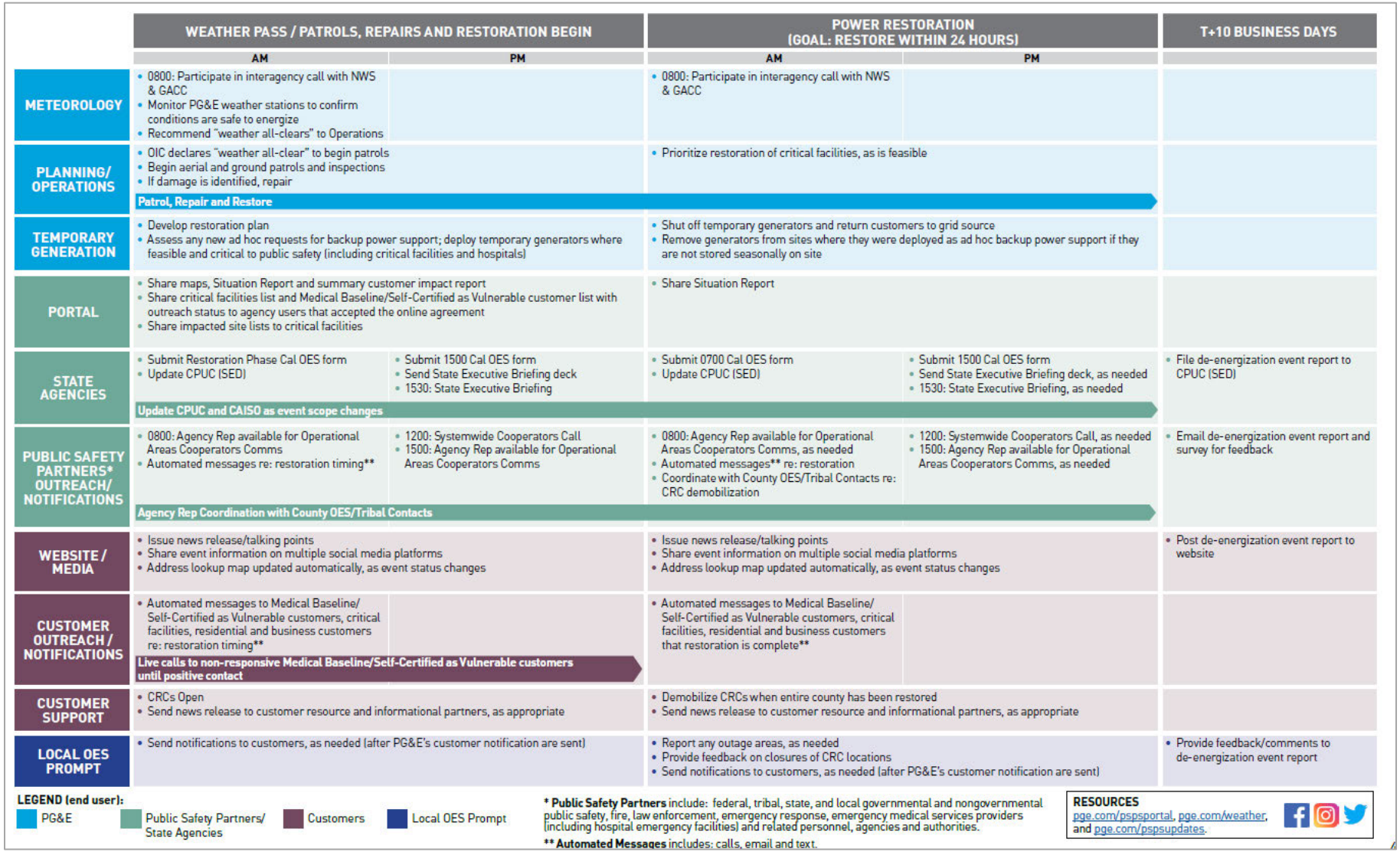


**Figure 3-13: PSPS Event Activity Timeline (4 of 4)**

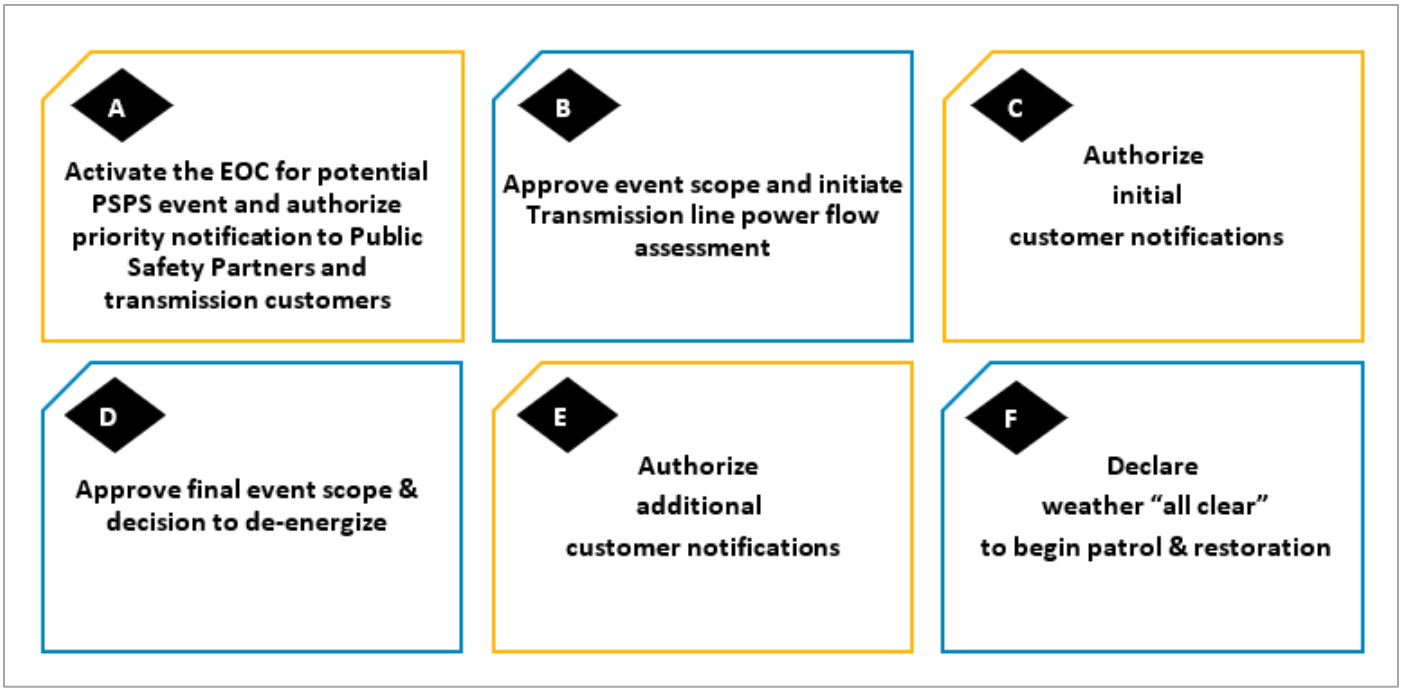


### 3.3.4 Decisions made by Officer-in-Charge

A designated Officer-in-Charge (OIC) makes several key decisions throughout a PSPS event, including the ultimate decision to shut off power and to issue a weather "all-clear" to begin the process of patrols and restoration after high-risk weather conditions subside. In making these decisions, the OIC receives situational awareness from the Command Staff and General Staff of PG&E's EOC, including from the Meteorology, Planning Section, Customer Strategy, and other EOC sections such as the HAWC and Operations Section.

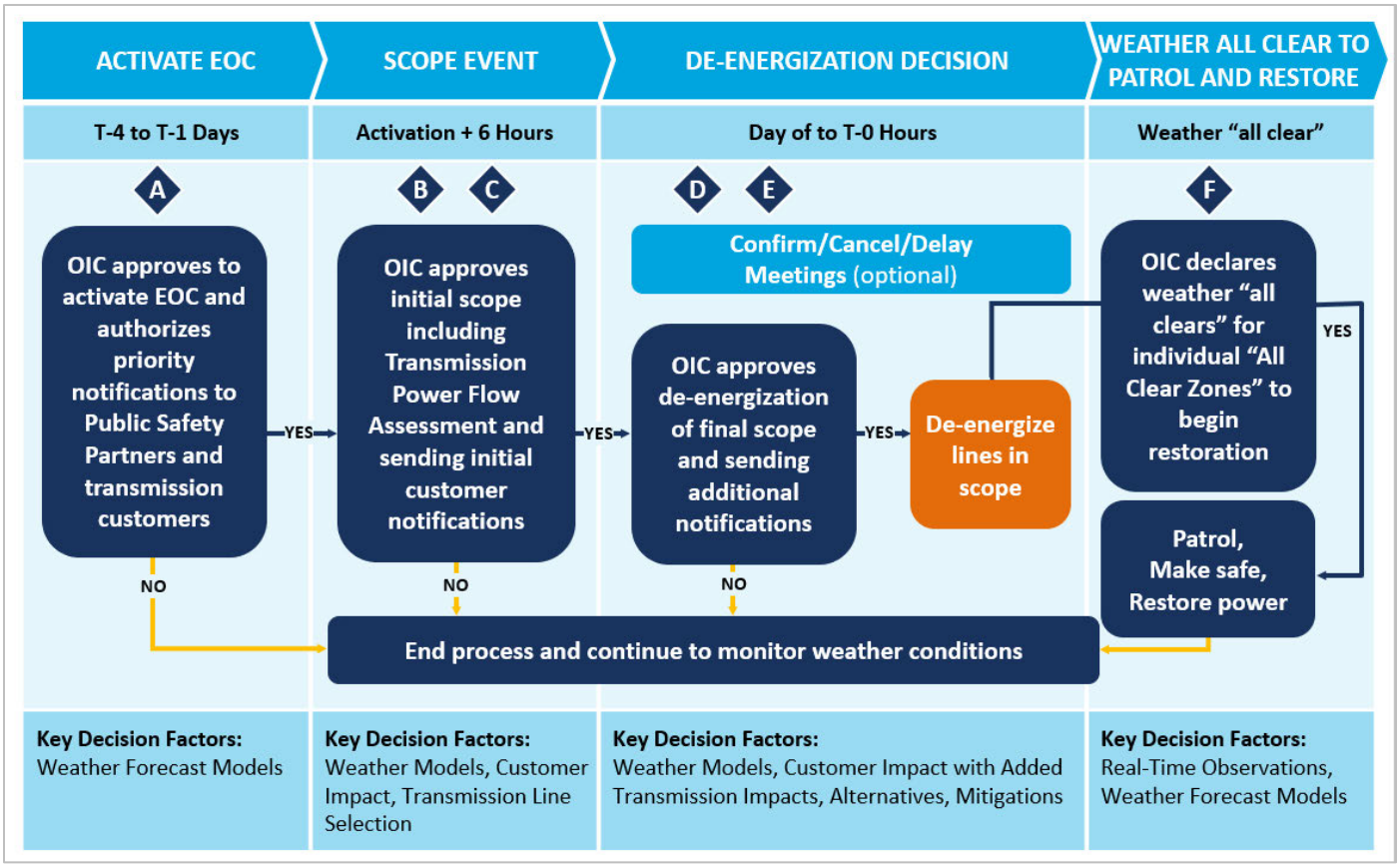
There are six important PSPS decisions, called OIC decisions which the OIC is responsible for making during an event (A-F). Decisions B + C are made jointly, and Decisions D + E are made jointly. The OIC Decisions are summarized in Figure 3-14.

**Figure 3-14: OIC Decisions A – F**



The sequencing of the PSPS decision process, with an example of approximate timing, is visualized in Figure 3-15. The figure below also indicates what happens if a decision is made not to proceed and the process is ended with the continued monitoring of weather conditions.

**Figure 3-15: Public Safety Power Shutoff Decision Process**




PG&E's meteorology team and HAWC will continue to closely monitor changing forecasts and conditions leading up to the event and update the OIC of any changes in the forecasts or conditions. Concurrently, PG&E will begin notifying all potentially impacted entities including state, local, and tribal agencies, public safety partners, and customers. Based upon the latest information provided by the meteorology team and Command and General Staff, the OIC will decide whether to proceed with de-energization of the transmission and distribution lines passing through the areas of forecasted risk.

To make this decision, the OIC will consider various factors, including but not limited to, the availability of alternatives to de-energization and the ability to mitigate the adverse impacts on customers and communities in areas planned for shutoff through steps such as warning customers through notifications, mobilizing community assistance locations, implementing sectionalization and microgrids where possible, or providing back up power support under exception circumstances.

Based on the intelligence provided, the OIC must determine there is an imminent and significant risk of strong winds impacting PG&E assets, and a significant risk of large, destructive wildfires should ignition occur. The OIC must determine alternatives to de-energization are not adequate to reduce this risk and that the public safety risk of catastrophic wildfire outweighs the adverse impacts of de-energization within the given scope. If it is determined that de-energization is necessary to protect public safety, the OIC will approve the decision to de-energize the final scope of the event and send warning notifications to the customers in scope.

After the decision to de-energize is made, PG&E continues to actively monitor weather forecasts up until the planned de-energization time. The EOC Commander, Operations, and the Meteorology teams monitor approaching weather, and may hold a series of "Confirm/ /Cancel/Delay" meetings to:

1. **Confirm** – confirm that weather has materialized and de-energization can proceed per plan,
2. **Cancel** – confirm that the weather threat did not materialize, in all or certain areas, and the de-energization should be cancelled, or
3. **Delay** - confirm that the weather threat is still imminent but has materialized slower than expected and the final decision to de-energize areas in question needs to be delayed.

This final set of meetings immediately prior to anticipated de-energization allows PG&E to change course and reduce or expand the scope, as necessary, if there is an emergent change in the weather.

## 3.4 PSPS Preparedness

### 3.4.1 Organization

All employees involved with a PSPS event will be oriented to the PSPS Annex, applicable department emergency plans, and their respective emergency centers' contact list. Refer to EOC Intranet site for additional information on EOC staffing plans, training, job aids, and further EOC related information.

A staffing plan identifies on-call individuals. The on-call responsibilities include the following:

- Ensure availability during defined schedule.
- Maintain a heightened level of awareness of all potential, forecasted, and in-process PSPS events.

### 3.4.2 Readiness Expectations

EP&R SE determines and posts EOC on-call teams, rotations, and yearly scheduling. Rotations and scheduling can be adapted as necessary. EOC on-call distribution lists are maintained to ensure team notifications are timely and accurate.

For more information see *CERP* section 8.3.

### 3.4.3 Pre-Event Preparation

See section 3.5.3 on “Event Specific Readiness Posture”.

**Note:** Readiness Posture is not a requirement for EOC activation and may not occur in all PSPS events.

### 3.4.4 Hazard Forecasting and Prediction

The potential for an R5-Plus weather forecast based on numerical weather prediction models and forecasted FPI and IPW models will trigger Meteorology to call the Vice President of EP&R to discuss the forecast. These discussions may occur several days before the event depending on the forecast.

If the forecasted weather event is beyond the range of PG&E’s high-resolution forecast model, PG&E utilizes a suite of public and proprietary global weather models to evaluate potential for strong, dry winds to occur with dry fuel conditions present. The frequency of weather updates increases leading up to a potential PSPS event as PG&E has more access to internal and federal high-resolution forecast data.

### 3.4.5 Event Specific Readiness Posture

When Meteorology identifies forecast models that have the potential for developing R5-Plus level conditions and there is advance time before de-energization is forecasted to be required, the on-call EOC Commander can call on representatives from select sections and officers to meet, track developing conditions, perform readiness tasks where possible, and when warranted make a recommendation to the OIC to activate the EOC for a potential PSPS event.

Readiness Posture is equivalent to EOC Activation Level 2, Enhanced Steady-State/Partial Activation, described within National Incident Management System (NIMS) as “certain EOC team members/organizations are activated to monitor a credible threat, risk, or hazard and/or to support the response to a new and potentially evolving incident.”

Time permitting, the on-call EOC Commander can decide to declare Readiness Posture.

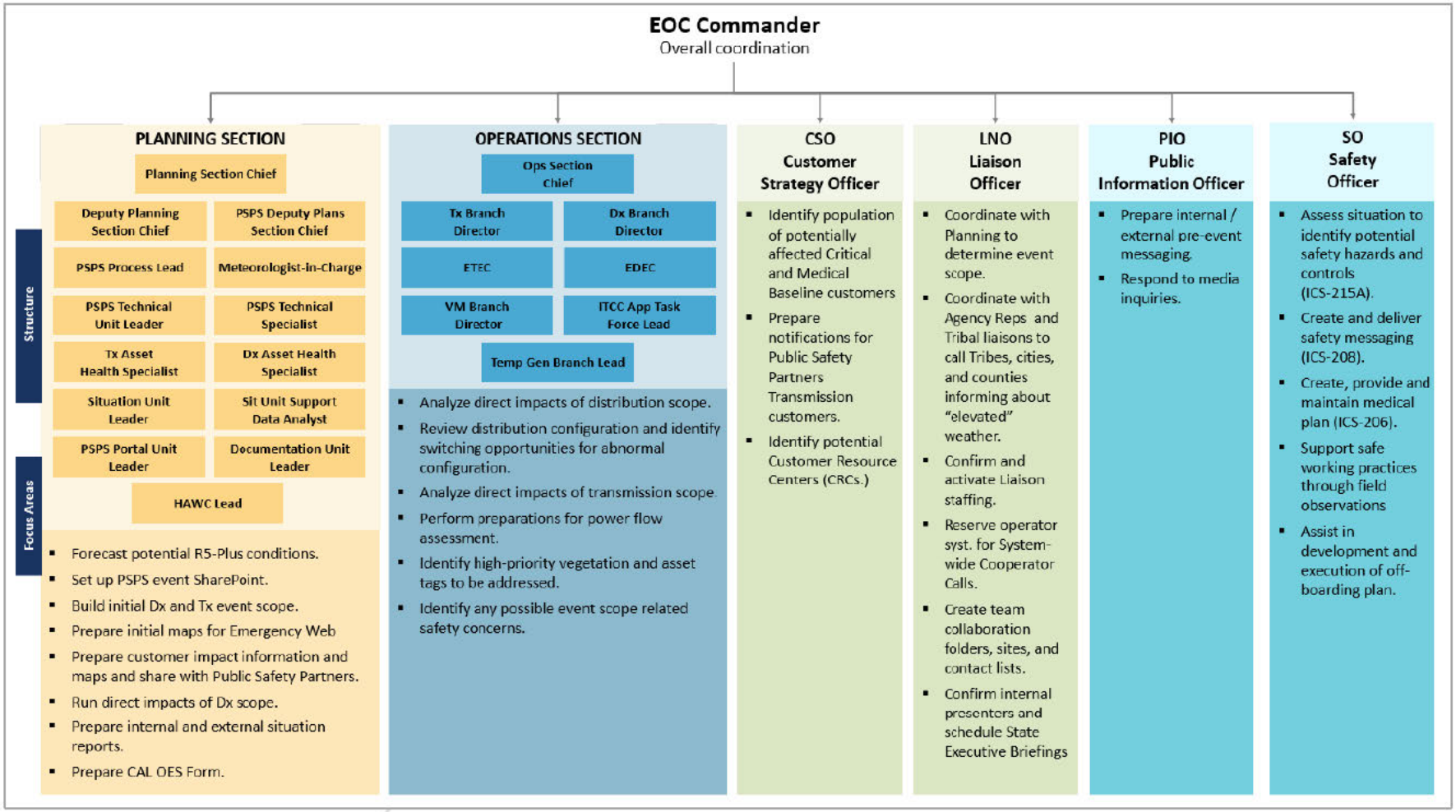
Upon request from the on-call EOC Commander or his/her delegate, EP&R S&E will make internal notifications that the EOC is moving into a Readiness Posture and those in pre-assigned positions are to report.

See Figure 3-16, on page 3-21, for overview of Readiness Posture sections and focus areas.

## Readiness Posture Overview

Figure 3-16 shows combined overview of Readiness Posture structure and focus areas based on text in section 3.5.3

**Figure 3-16: Readiness Posture – Structure and Focus Areas**



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## 3.4.6 Readiness Posture – Sections and Focus Areas

The on-call EOC Commander is responsible for overall coordination, insight, and readiness of activities related to Readiness Posture.

Sections and focus areas for Readiness Posture include Planning, Operations, Customer Strategy Officer (CSO), Liaison Officer (LNO), Public Information Officer (PIO) and Safety Officer (SO). See Figure 3-16, on page 3-18, for overview of Readiness Posture sections and focus areas.

### Planning

**Roles:**

- Planning Section Chief
- Deputy Planning Section Chief
- PSPS Deputy Planning Section Chief
- PSPS Process Lead
- Meteorologist-in-Charge (MIC)
- PSPS Technical Unit Leader
- PSPS Technical Specialist
- Transmission Asset Health Specialist (TAHS)
- Distribution Asset Health Specialist (DAHS)
- Situation Unit Leader
- Situation Unit Support
- Situation Unit Support Data Analyst
- PSPS Portal Unit Leader
- Documentation Unit Leader
- HAWC Lead

**Focus Areas may include:**

- Forecast potential R5-Plus conditions.
- Setting-up PSPS event SharePoint.
- Building initial distribution and transmission event scope.
- Preparing initial maps for Emergency Web.
- Preparing customer impact information and maps and share with Public Safety Partners.
- Preparing internal and external situation reports.
- Preparing State Executive Briefing materials.

## Operations

**Roles**

- Operations Section Chief
- Distribution Branch Director
- Transmission Branch Director
- Vegetation Management Branch Director
- Temporary Generation Branch Lead
- Information Technology Coordination Center (ITCC) PSPS Application Task Force Lead
- Vegetation Management Branch Director

**Focus Areas may include:**

- Analyzing direct impacts of distribution scope.
- Reviewing distribution configuration and identify switching opportunities for abnormal configuration.
- Analyzing direct impacts of transmission scope.
- Performing preparations for power flow assessment.
- Identifying high-priority vegetation and asset tags to be addressed.
- Identifying any possible event scope related safety concerns.

## Customer Strategy Officer

**Focus Areas may include:**

- Identifying population of potentially affected Critical and Medical Baseline customers (source Planning Section from PSPS Viewer).
- Preparing notifications for Public Safety Partners and Transmission customers.
- Identifying potential Community Resource Center (CRC) sites.

## Liaison Officer

**Focus Areas may include:**

- Coordinating with Plans to determine event scope.
- Coordinating with Agency Representatives and tribal liaisons to call Tribes, cities, and counties informing about “elevated” weather.
- Confirming and activate Liaison team staffing.
- Confirm internal presenters and schedule State Executive Briefings.
- Reserving operator system for Systemwide Cooperators Calls.
- Creating team collaboration folders, sites and contact lists to support team collaboration and agency notifications.

### Public Information Officer

**Focus Areas may include:**

- Preparing internal / external pre-event messaging.
- Responding to media inquiries.

### Safety Officer

**Focus Areas may include:**

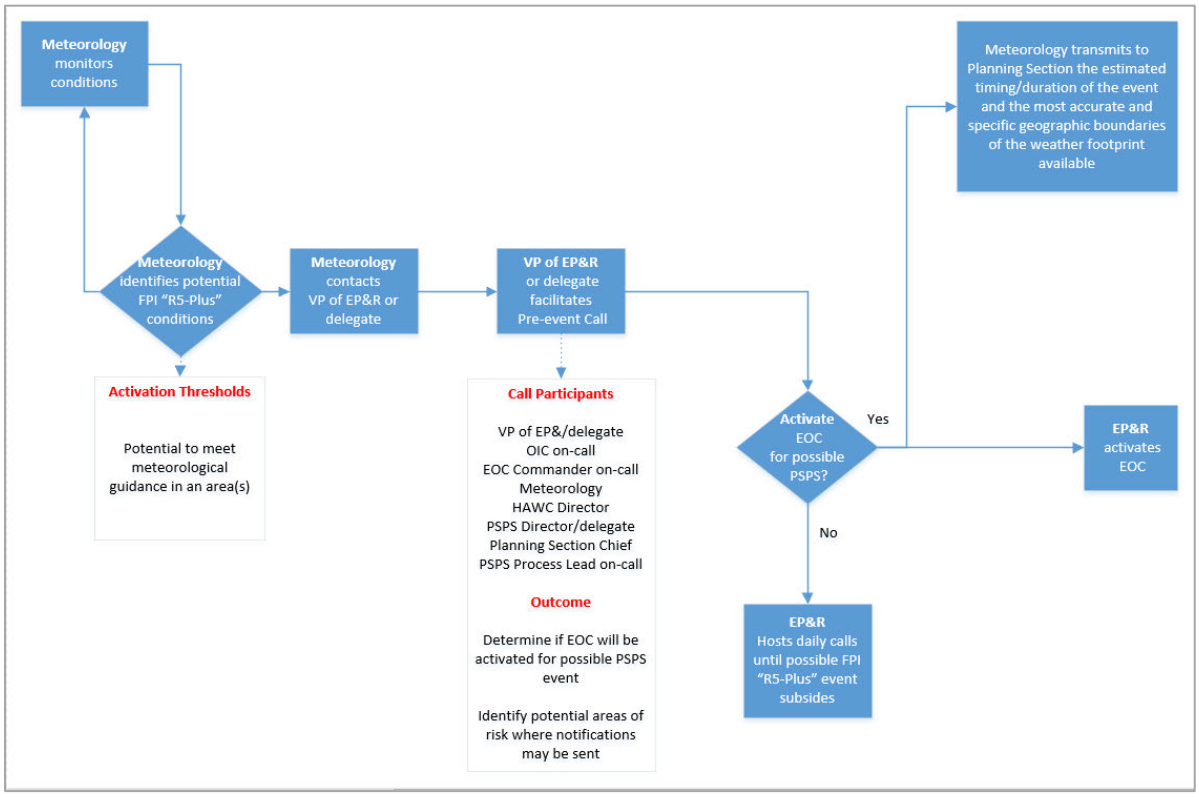
- Assessing situation to identify potential safety hazards and controls (ICS-215A).
- Creating and deliver safety messaging (ICS-208).
- Creating, providing, and maintaining medical plan (ICS-206).
- Supporting safe working practices through field observations.
- Assisting in development and execution of off-boarding plan.

## 3.5 Response - EOC Activation Process for Potential PSPS Event

PG&E's EOC has been established to coordinate overall response and support in an emergency. On an initial call established and facilitated by the Vice President of EP&R (or delegate) the OIC, with input from on-call EOC Commander and a representative from Meteorology, EOC Planning Section Chief, PSPS Process Lead, and representative from the HAWC, will decide if forecasted conditions indicate a credible threat to warrant activating the EOC and all EOC team personnel (OIC decision A see section 3.8.1).

Once the decision is made, standard procedures outlined in the *CERP* are followed to activate the EOC. Figure 3-17 shows the PSPS EOC activation process. Due to the dynamic circumstances of a PSPS event, OIC Decision A may or may not happen as weather conditions may unfold quicker than planned or back-to-back PSPS events may result in the EOC staying activated between events.

**Figure 3-17: PSPS EOC Activation Process**




Details about the ICS approach and EOC activation process and execution are outlined in PG&E's *CERP* section 8.

## 3.6 Notifications – Internal and External

### 3.6.1 Internal Notifications

When requested by on-call EOC Commander, VP of EP&R or Planning Section Chief instructs the EOC Communication Technical Specialist in coordination with the EOC Coordinator to send out EOC activation notifications to EOC personnel that the EOC is activating for a PSPS.

### 3.6.2 External Notifications – CPUC, Cal OES, and Public Safety Partners

In compliance with Standard Six of G.O. 166, within one hour of identification of a major outage or other newsworthy event, EP&R SE must notify the CPUC and the Warning Center at California Office of Emergency Services (Cal OES) of the location, possible cause and expected duration of the outage.

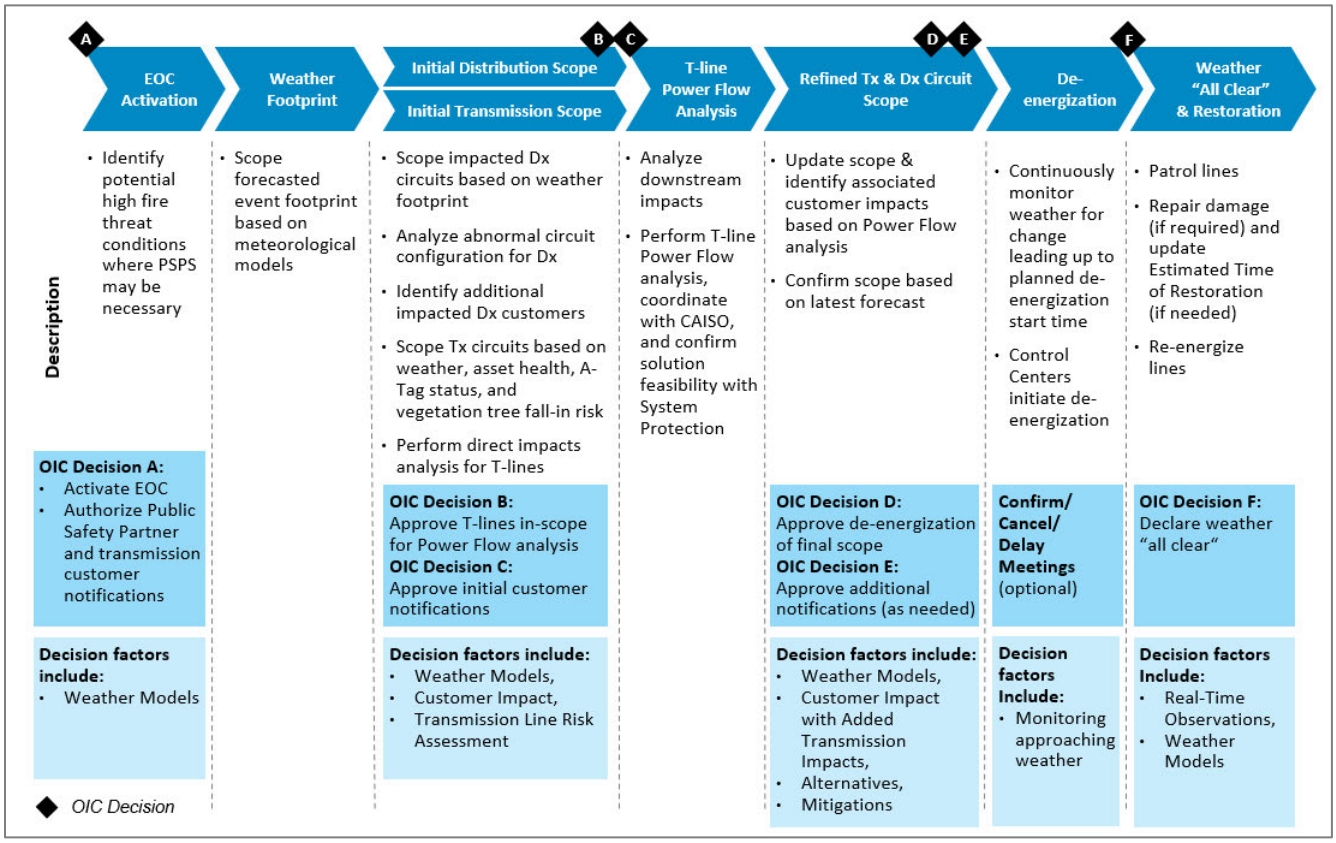
Per CPUC D.19-05-042, Liaison and Customer notify Public Safety Partners when the EOC is activated in anticipation of a de-energization event or whenever the determination is made that de-energization is likely, whichever occurs first. PG&E includes information as outlined in D.19-05-042.

# 3.7 PSPS Event

## 3.7.1 PSPS Event Overview

The overview in Figure 3-18 provides a high-level diagram of major PSPS phases, discussion points, deliverables, and decisions. It is a guide and not a prescription for PSPS events.

**Figure 3-18: PSPS Event Overview with OIC Decisions**




**OIC Decisions:**

- **A** Activate the EOC for potential PSPS event and authorize priority notification to Public Safety Partners and transmission customers.
- **B** Approve event scope and initiate Transmission line power flow assessment.
- **C** Authorize customer notifications.
- **D** Approve final event scope and decision to de-energize.
- **E** Authorize additional customer notifications.
- **F** Declare weather "all clear" to begin patrol, repair, and restoration.

### 3.7.2 PSPS De-energization Playbook using PSPS Viewer, PSPS Situational Intelligence Platform, and Transmission List

The PSPS Viewer and (when applicable) a Transmission PSPS direct impact analysis output or total impacts study output are used to create and update an event specific PSPS de-energization Playbook with versions A-D. The initial PSPS Playbook A is generated from the initial event using PSPS Viewer and PSPS Situational Intelligence Platform (PSIP), then sent to the DCC (Distribution Control Center) for review. The finalized PSPS Playbook D incorporates distribution circuits and abnormal configurations, direct and indirect transmission lines, Substations, and customers, that are being considered for de-energization. This information can then be used to notify the scope of the event with outside entities and customers.

**De-energization Playbooks**

- **Playbook A** – Initial distribution playbook.
- **Playbook B** – Adds distribution abnormal circuits from direct impacts and confirmed temporary generation.
- **Playbook C** – Adds direct transmission impacts and updated confirmed temporary Generation.
- **Playbook D** – Adds total transmission impacts (direct & indirect) and updated confirmed temporary generation.

### 3.7.3 Electric Transmission Emergency Center for PSPS

Initiation of a PSPS event triggers activation of the Electric Transmission Emergency Center (ETEC) at the primary location, which is currently at the Vacaville GCC or Grid Support Center (GSC). ETEC will serve as a hub for all transmission assets as well as communication and coordination between internal entities such as the EOC, Electric Distribution Emergency Center (EDEC), Substation Transmission Operations Emergency Center (STOEC), and external agencies such as California Independent System Operator (CAISO), municipally owned utilities, etc. ETEC consists of the GCC Supervisor(s), Operations Engineers (OEs), System Protection, Transmission System Operations (TSO) Programs (as required), Emergency Management System (EMS) (as required), and Remedial Action Schemes (RAS) Operations (as required).

The GCC Supervisor sends a “PSPS Awareness” notification to CAISO by phone and e-mail. This notification will consist of potentially impacted transmission lines and an estimated timeline of the PSPS event. After further analysis, EOC Planning Section will provide a list of transmission lines to ETEC and Operations Section Chief. Once the line list is received, ETEC team will begin the process to determine direct transmission impact analysis with support from Operations Engineering, System Protection, and the CAISO.

ETEC responsibilities include:

- Identifying directly impacted transmission assets and facilities within the potentially-impacted geographic scope meeting transmission line selection criteria, which involves the creation of a PSPS Direct Impacts analysis (also called “Tx Playbook C”) output spreadsheet indicating impacted lines and outage cards via Transmission Operations Tracking & Logging System, then sharing with CAISO.
- ETEC Lead sends the PSPS Direct Impact Summary to Electric Transmission Branch Director and EOC Planning Section Chief.

Upon the Planning Section receiving the PSPS Direct Impact Summary, presenting the list of T-lines for OIC approval to commence the power flow studies (OIC Decision B see section 3.3.4)

Upon approval of OIC decision B, ETEC team initiates PSPS Total Impact Analysis (initiates an in-depth scenario analysis in parallel with CAISO’s own impact study, which includes power flow studies and contingency analysis). These studies will help ETEC team and CAISO identify any necessary mitigation requirements to maintain the stability of the system when implementing PSPS.

The study results are then exchanged and validated with CAISO. When mitigation requirements are identified and agreed upon, ETEC team will provide all the operational requirements to System Protection, which will confirm overall protection coordination and adequacy of the grid through a complete Protection Dependability Study and Final Bus Fault Duty Analysis. CAISO, System Protection, and OEs will analyze the overall results and then agree upon the complete set of operational requirements for the implementation of PSPS (such as rotating outages, pro-rata load-sharing to minimize the impacts to other utilities, changes in relay settings, etc.).

ETEC team will then produce a PSPS Total Impact Summary and share with ETEC Lead, CAISO, EDEC, and STOEC. The ETEC Lead will provide this to Electric Transmission Branch Director and EOC. The summary contains:

- Transmission lines impacted with voltage level information.
- Impacted substations and static estimated customer count.
- Transmission customers impacted (load, generators, municipally owned utilities, etc.).
- Estimated power generation impact in megawatt (MW).
- Estimated load impact (MW).
- Rotating outage plan projection (if needed) based on load forecast.

System Protection identifies transmission-level customers/entities that will remain energized but experience a fault duty change of greater than 15%, prompting the third party to perform a coordination study and potentially reset relays for the duration of the event. Notification of third-party transmission interconnection customers to be done as per established process through the Critical Infrastructure Lead (CIL).

ETEC team creates new outage cards or updates the existing cards with CAISO based on Total Impact Analysis results. Next, ETEC team identifies critical in-service lines for patrol prior to weather event, and then create a prioritized sequence for de-energization of transmission grid elements including load, generation, system protection settings, and other assets. ETEC Lead then shares the plan with STOEC, EDEC, CAISO, and EOC. Finally, based on all the information discussed above, ETEC team prepares PG&E's electric grid for the PSPS event. This involves coordination with CAISO, EDEC and STOEC.

### 3.7.4 Forecast Fire Potential Index of R5-Plus - Assessment Actions

The Fire Potential Index (FPI) forecast describes the potential for fires to ignite and spread rated on a scale from "R1" (lowest) to "R5" (highest) specific to each FPI Rating Area. "R5-Plus" indicates there is elevated fire potential plus the potential for wind-related outage activity from the IPW model, which may warrant a PSPS event. (See section 5.1.1 for more information on Fire Potential Index.)

When an R5-Plus weather event is forecasted, a pre-assessment review is conducted[1] that includes:

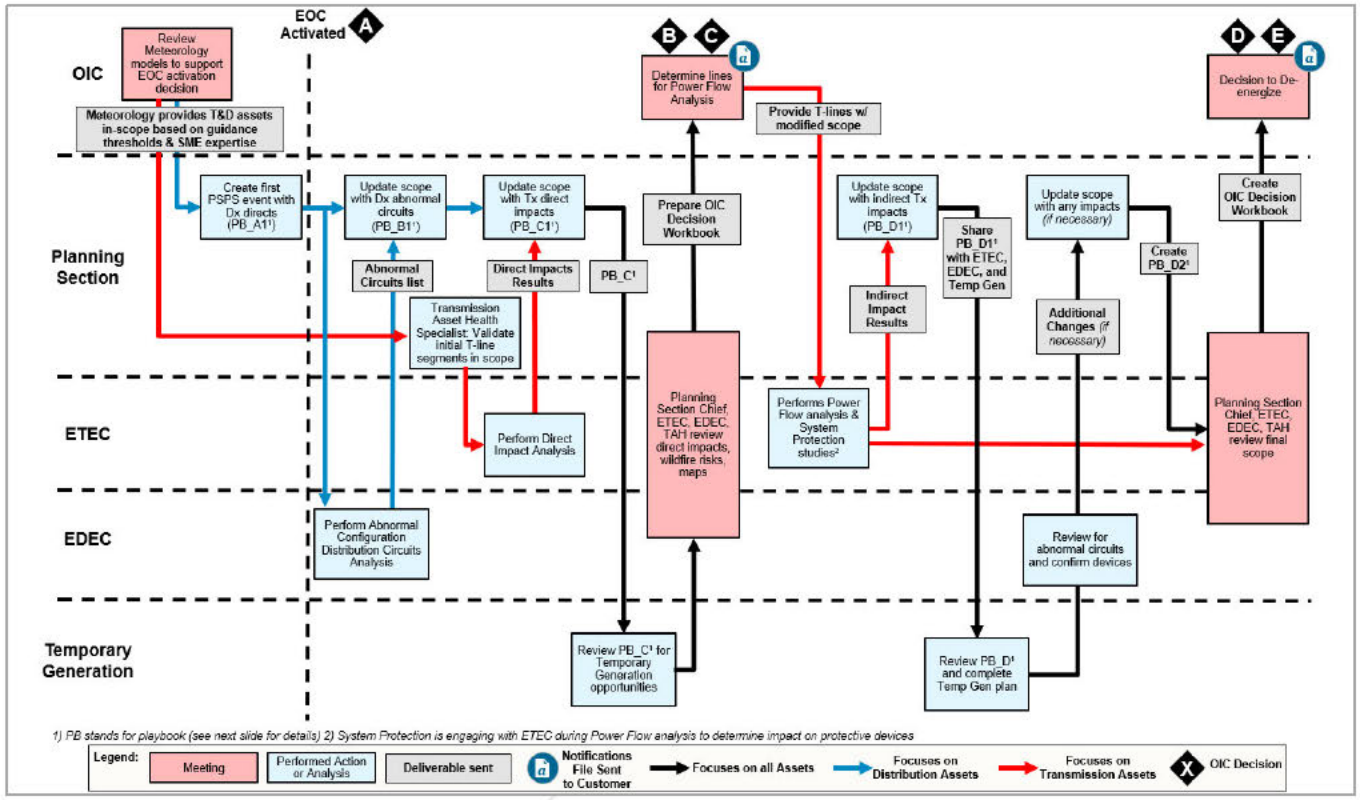
- Stopping specific types of work in areas where R5-Plus is forecasted according to according to TD-1464S, Preventing and Mitigating Fires While Performing PG&E Work.
- Reviewing high-priority maintenance tags (A and B tags) along high-risk areas (using fire spread modeling, wind outage history) within the Meteorology determined times and places and/or along specific circuits and accelerating work if possible or needed.
- Reviewing planned work (e.g., Vegetation Management) along high risk areas (determined using fire spread modeling, wind outage history) within the Meteorology determined times and places and/or along specific circuits.
- Determining if Enhanced Vegetation Management work has occurred.
- Evaluating Red Flag warnings, temperature forecast, and other weather conditions to determine if high-risk work (e.g., temperature impact to loading) can be safely completed prior to PSPS event).
- Confirming work is complete prior to PSPS event.

Aerial patrols may be considered for a pre-event grid assessment and will depend on efficacy prior to a forecasted R5-Plus event. The HAWC, in coordination with Aviation Services and Electric Operations, will make the determination if aerial patrols are warranted.

Figure 3-19 shows a process flow for the Transmission and Distribution PSPS scoping process including OIC Decisions A-E and Playbooks A-D. The process flow is limited to PSPS scoping and for that reason does not show OIC Decision ◆D or Restoration Playbook F.

[1] The pre-assessment review may not be completed depending on time and employee safety concerns.

**Figure 3-19: Transmission and Distribution PSPS Scoping Process**




**Note:** Not rendered in figure, possible "break-ins" or having to loop back to the beginning due changes in forecasted weather.

**OIC Decisions:**

- A Activate EOC for potential PSPS event and authorize priority notification to Public Safety Partners and transmission customers.
- B Approve event scope & initiate Transmission power flow assessment.
- C Authorize customer notifications.
- D Approve final event scope & decision to de-energize.
- E Authorize additional customer notifications.

OIC Decision F (weather "all clear") not part of scoping process.

**De-energization Playbooks**

Playbook A – Initial distribution playbook

Playbook B – Adds distribution abnormal circuits from direct impacts and confirmed temp generation

Playbook C – Adds direct transmission impacts and confirmed temp generation

Playbook D – Adds total transmission impacts (direct/indirect) and confirmed temp generation

Restoration Playbook F not part of scoping process.

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### 3.7.5 Resource Planning

The guiding principles for PSPS resource planning are listed below. Resource plans should:

1) Identify specific PSPS resource needs including resource requirements for patrolling circuits prior to restoration, field observation, and restoration.
2) Strive for restoration of power to all customers affected by the PSPS event as quickly and safely as possible, after the weather "all clear", while maintaining safety for customers and PG&E employees.
3) Have triggers for mutual assistance requests based on the size of the PSPS event.
4) Refine resource allocations as the event evolves and de-energization approaches.

When weather events are occurring at the same time as a PSPS event, the weather forecast will be part of the overall resource planning via the Distribution System Operation (DSO) Storm Outage Prediction Project (SOPP) model that Meteorology produces for system outage forecasts. The SOPP model will inform staffing for response to the weather event.

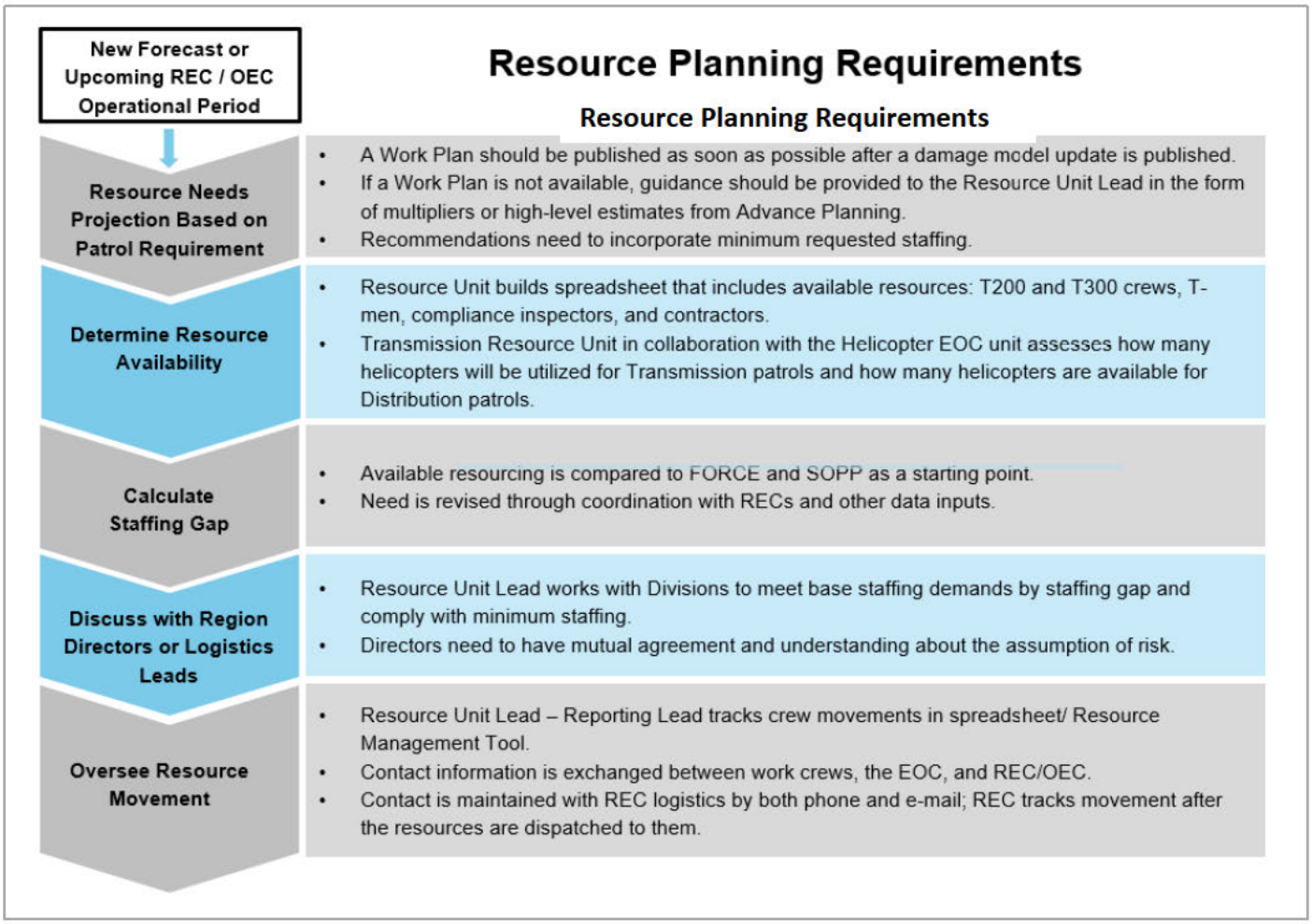
For PSPS events, the EOC allocates all Qualified Electric Worker (QEW) / crew resources based on FORCE tool outputs and REC crew requests, which also includes taking into account the availability of helicopters for Distribution line patrols. The FORCE tool provides a reference point based on inputs, but actual staffing may exceed or be below FORCE staffing models based on overall staffing availability and input from our local REC resource teams. Commonly, when there are not enough resources to meet the need (including resources through mutual aid), the Resource Unit will attempt to balance resources based on the FORCE and/or SOPP outputs using a ratio/percentage base. EOC reviews output with RECs before starting dispatch.

Elements that influence resource plans include:

- FORCE model outputs.
- SOPP model and forecast system outages.
- Outage Management Tool (OMT) information on actual outage counts.
- Event timing (i.e., day of week, time of day).
- Circuits and customers impacted (i.e., circuit miles, amount and type of customers, circuit accessibility and/or visibility to aerial patrols).
- Resource availability and planned work.
- Availability of helicopters to conduct patrol, which may be impacted by any fire activity in the vicinity.
- Grid awareness (i.e., abnormal switching, SCADA and protection capabilities).

The RECs are accountable for assessing the local situation in collaboration with their local Operations Emergency Center (OEC) resource planning teams. The REC / OEC process is illustrated in Figure 3-20.

**Figure 3-20: REC / OEC Resource Planning Process**




Each PSPS event is unique. Resource staging may vary but, in general, will be prepared in the following locations:

- Control Centers (various): Distribution and Transmission Control Centers: stage resources for system protection analysis and coordination of resources required for automatic switching and separately for manual switching.
- Service Centers, base camps, staging areas, micro sites, material laydown areas and/or Community Resource Centers (CRCs), will vary based on the forecasted event. Field Observers, Vegetation Management crews, Restoration crews, Local Customer Representatives, and (potentially) Maintenance and Construction crews will await deployment from a local Service Center.
- Aviation Services consolidate operations to Vacaville and Winters. Vacaville will serve as the centralization of PG&E's aviation organization. Winters will be the main training center.

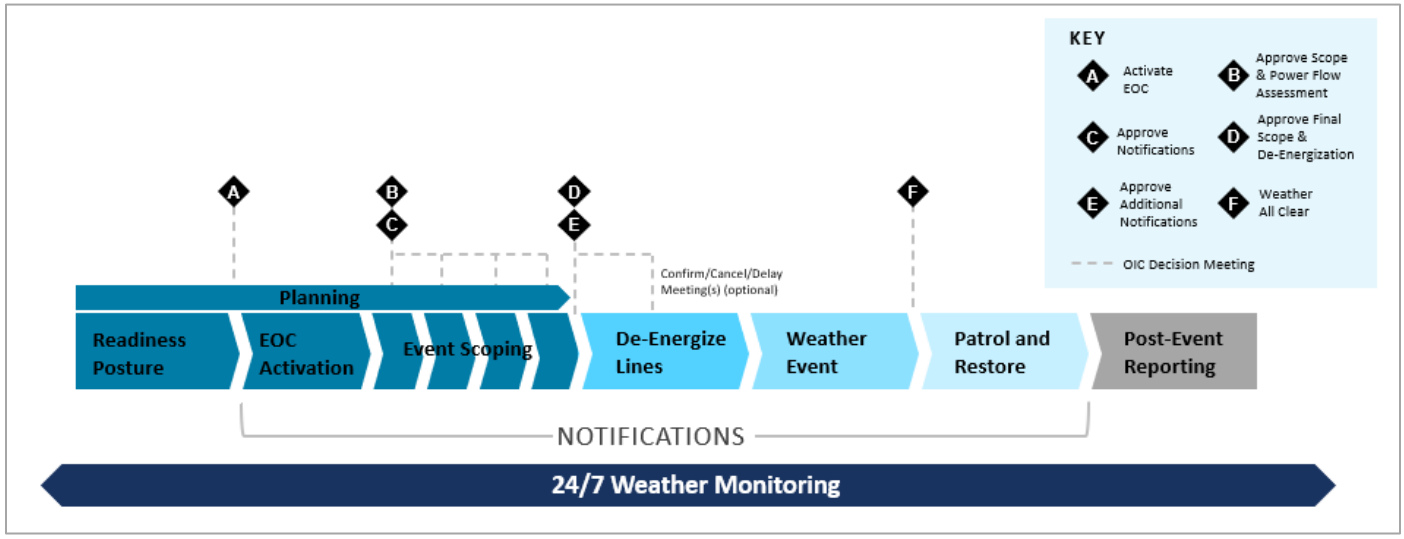
### 3.7.6 Field Observer Resourcing

When requested, field observations are completed by members of Safety and Infrastructure Protection Team (SIPT). The HAWC provides guidance and coordination of the SIPT teams.

## 3.8 PSPS Event Scoping

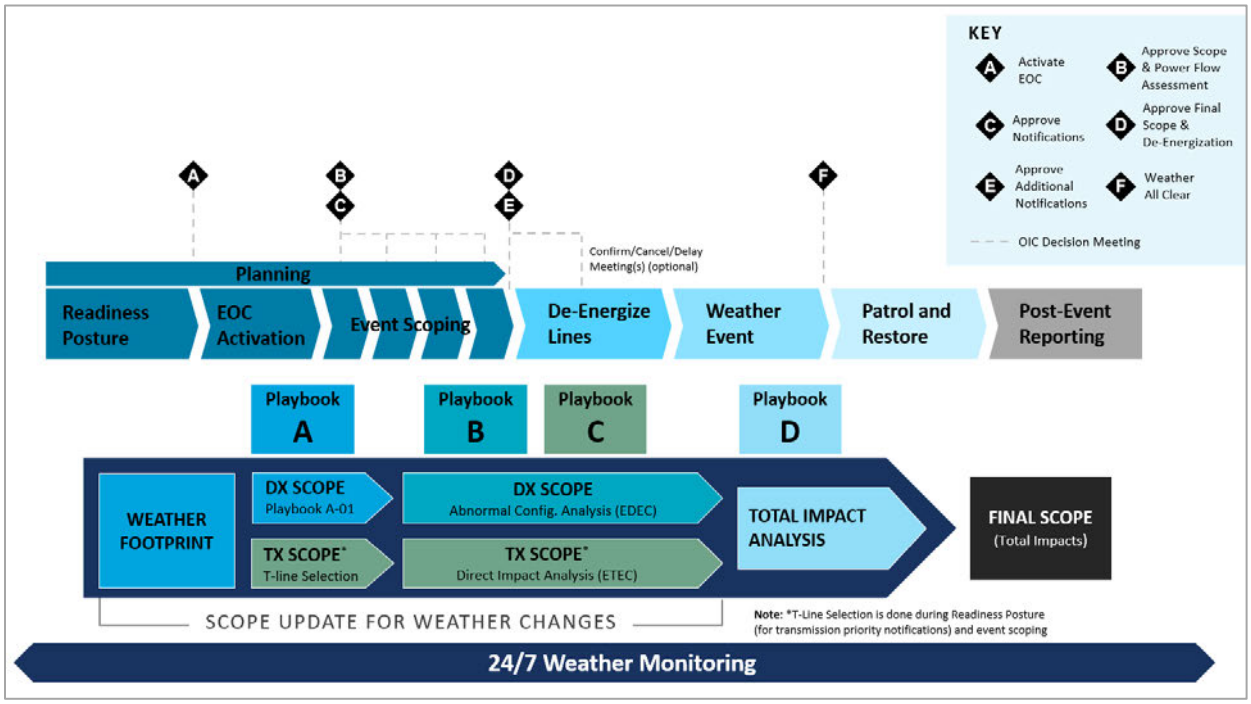
Scoping of a potential PSPS event can begin during Readiness Posture. If there is no Readiness Posture scoping begins after EOC activation. OIC Decisions B through E are made during the scoping phase. Figure 3-21 shows overview of PSPS sequence and event scoping.

**Figure 3-21: PSPS Process with OIC Decisions**




Scoping of a PSPS event includes information from meteorology, distribution, and transmission. Through an iterative process a series of Playbooks are created starting with Playbook A and leading towards Playbook D. Figure 3-22 shows components of the scoping process and Playbooks.

**Figure 3-22: Scoping Components and Playbooks**




# 3.9 Approval and De-Energization

## 3.9.1 OIC Approval to Shut off Power

The OIC will make the final decision to shut off power (OIC Decision D see section 3.3.4). This decision will be based on an assessment of the quantitative and qualitative factors listed in section 3.3.1.

Upon confirming the decision to shut off power for safety, the OIC will hand off to the EOC Commander to execute the necessary steps to de-energize. The OIC can delegate the authority to the EOC Commander to adjust the scope of the event as necessary if there are emergent weather changes.

## 3.9.2 De-energization

The de-energization process consists primarily of the following actions:

- EOC team and OIC finalize scope to proactively de-energize customers based on evaluation of quantitative and qualitative information.
- OIC makes decision to proactively de-energize (OIC Decision D, see section 3.3.4). If applicable in conjunction with OIC Decision D, OIC authorizes notifying any additional customers, OIC Decision E.
- Depending on the timing of OIC Decision D in relation to the time of de-energization, with permission from the OIC, the EOC Commander may elect to reaffirm OIC

Decision (D) closer to the start of the weather event in a subsequent de-energization Confirm/Cancel/Delay meetings to account for quickly changing weather conditions and allow for increased situational awareness closer to the time of de-energization.

- Preparations for notifications before de-energization include:
  - Planning Section confirms facilities and customers for shutoff with Electric Operations via approved PSPS Playbook.
  - Planning Section uses the PSPS Viewer and Foundry tools to create updated customer lists, reports, event maps, and files reflecting de-energization plans created from the PSPS Viewer.
  - Planning Section prepares the Cal OES form to notify when first de-energization begins.
  - Digital Strategy team uploads content to the PG&E website, including updated files for the affected area maps, updated files for the address lookup tool, and information that the decision to de-energize has been made.
  - PSPS Portal Lead uploads content to the ArcGIS Online PSPS Portal including updated GIS layers for customer impacts and affected circuits, updated medical baseline and critical facility lists for agency users, and updated affected site lists for critical facility providers.
  - Liaison stages notifications to CPUC, cities, counties, Tribes, and other stakeholder groups informing them of imminent power shutoff (pointing users to the latest files on the web and Portal).
  - Prior to notifying transmission customers PG&E will engage Public Safety Partners as required by the CPUC. In order to ensure compliance with FERC Standards of Conduct, PG&E will communicate concurrently with the initial transmission PSPS scope for the given event (and subsequent modified transmission scopes) to Public Safety Partners who may also be electric wholesale market participants.
  - Planning Section / Digital strategy will post communications, including specifying the transmission PSPS scope, to PG&E's FERC Standards of Conduct website pge.com. PG&E has sought FERC guidance regarding these procedures and may modify these procedures based upon additional input from FERC.
  - Customer Team sends notifications to Public Safety Partners, Critical Customers, Critical Facilities and all other customers informing them of imminent power shut off. Once power has been turned off, customers also receive "power off" notifications.
  - PIO posts on social media and issues press release communications.
  - PG&E will make best effort attempts to provide affected customers, or their agents, with notice, but shall not be liable for interruption if notice cannot be provided in a timely manner, as required in Electric Rule No. 14.

- If conditions exist that make it impossible to inform customers and other stakeholders of an imminent power shutoff, Customer Care and Liaison will send notifications to customer and stakeholders as soon as possible notifying them of the shutoff.
- Electric Transmission and Distribution Control Centers verify impacted circuits and devices.
- Electric Transmission and Distribution Control Centers coordinate opening and closing devices according to PSPS Playbook.
- Electric Transmission and Distribution Control Centers confirm that devices have been opened and that power is shut off.
- Once confirmed, the Transmission and Distribution Control Centers communicate to their respective EDEC/ETEC, who communicate to the respective Distribution and Transmission Branch Directors.
- Distribution Control Centers create outages in Distribution Management System (DMS) that appear in Outage Management Tool (OMT) for distribution to track PSPS devices proactively de-energized (including handing off to next shift).
- DCCs complete via SCADA or give switching instructions to OEC/TFL to complete circuit segmenting after de-energization is completed.
- EOC Commander ensures that Command Calls have appropriate timing to discuss re-energization and protocols (may be necessary in addition to standard schedule).
- DCC segments PSPS impacted distribution circuits following de-energization based on pre-identified locations per the approved Playbook and PSPS Circuit Segment Guides.

## 3.10 PSPS Recovery - Monitor, Patrol, and Restore

### 3.10.1 Re-energization Process

The re-energization process consists primarily of the following actions:

- Electric Transmission Grid and Distribution Control Centers (GCC, DCC), and Operations Emergency Centers (OECs) develop restoration plans and determine scope of restoration, including prioritization of circuits/lines and available resources (ground and aerial).
- The EOC provides an estimate of crews (ground and aerial) needed for patrols based on desired ETOR and amount of line miles in HFRA, terrain and accessibility of circuit.

- Meteorology provides a forecast of weather “all clears” by “All Clear Zones” including circuits prior to the OIC Decision (F) meeting to the Planning Section, which creates a “forecast” restoration playbook and sends this to the EOC Operations Chief, who then cascades this forecast to field operations. This facilitates pre-staging of patrol resources.
- EOC Commander provides the OIC the recommendation to re-energize power (i.e., weather “all clear”) for designated “All Clear Zones” or globally for all areas previously de-energized for PSPS. If a recommendation is made only for a designated area/s, later recommendations will address remaining de-energized areas. In some instances, depending on the scale and scope of the Event, EOC Commander may recommend a weather “all clear” for an entire TP, in which case, all of the “All Clear Zones” in the TP will be recommended for re-energization.
- The OIC gives approval to re-energize power (i.e., weather “all clear”, OIC Decision (F)) for designated All Clear Zones or globally for all PSPS de-energized areas. If a decision is made only for a designated area, later decisions will address remaining de-energized areas.

Following each OIC Decision (F) meeting, the PSPS Recorder immediately inputs the approved All Clear Time and the corresponding approved “All Clear Zones” into a form in Foundry. If an entire TP is approved for “all clears” then the Recorder will input the approved All Clear Time and the specific TP in the form. The Recorder also sends a message to the PSPS Technical Unit Leader that this action is complete.

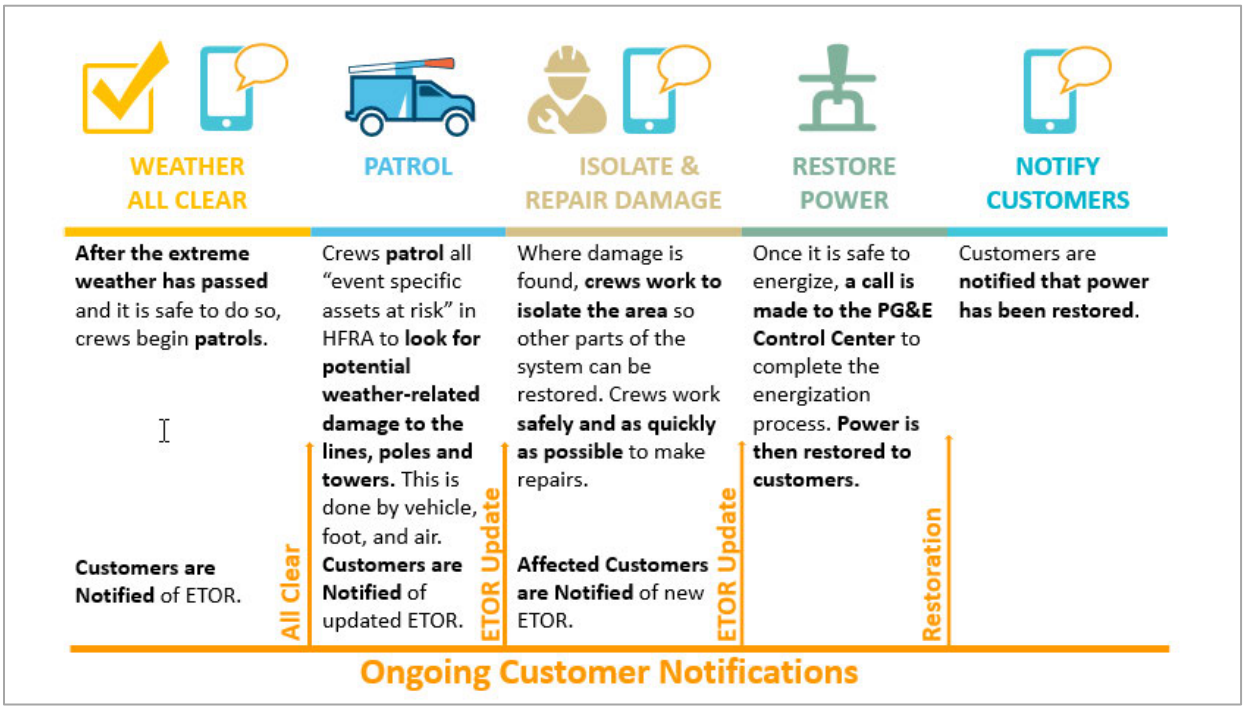
Upon receipt of this information from the Recorder, the Planning Section updates Restoration Playbook F to reflect the approved weather “all clears” and sends the updated Restoration Playbook to the EOC Operations Chief, who further cascades the information to field operations. This process is repeated for every subsequent Decision (F) meeting.

GCC, DCC and Field resources follow procedures found in PSPS-1000P-01 to execute the restoration process.

For guidance on the PSPS re-energization process, see PSPS-1000P-01, PSPS for Transmission and Distribution Lines.

The weather “all clear” sets a series of restoration steps in motion as shown in Figure 3-23.

**Figure 3-23: Steps after Weather "All Clear"**




PG&E intends to provide press releases and updates to pge.com for each of the phases above.

**Note:** In addition to the overview above, whenever there is new information about the process or through daily updates, PG&E notifies customers about any changes in ETOR and when power has been restored.

## 3.10.2 Monitor during De-energization

During de-energization the EOC will monitor the weather and impacts to the system (i.e., wind outages in non-high-fire threat areas that may still be impacted) as well as the presence of any emerging or existing fires.

The EOC will coordinate with the Safety Officer to confirm that all field personnel are following safety guidelines for high fire-threat risks, and that employees are not dispatched into potentially dangerous conditions.

Following complete de-energization of all lines in scope, the GCC continues to monitor grid integrity, and the ETEC initiates restoration sequence planning. This involves creation of a prioritized sequence for restoration of transmission assets and validation of the plan with the GCC and CAISO. This plan is discussed/developed with both the EOC and EDEC, finalized, and then provided to the EOC and EDEC to allow for coordinating the restoration efforts once the weather event has passed.

For distribution, once identified assets in the event scope have been de-energized, DCC(s) having jurisdiction over impacted distribution facilities "set up" the de-energized portions of

those circuits by “segmenting” to provide for “step restoration” (details in 3.9.4.1) once the weather event has passed. This segmenting consists of opening pre-identified devices that delineate circuit segment boundaries that are provided both to DCC and field patrol personnel to ensure alignment of patrol efforts once the event has passed. The Customer Owned Line (COL-distribution) and Foreign Transmission Line (transmission- FTL) assets identified during the event scoping phases can typically be isolated during the segmenting phase if resources are available. If not, they would need to be isolated during the restoration phase.

## 3.10.3 Re-Energization Decision Factors

To begin patrol and restoration, current weather conditions must be below meteorology PSPS guidance, including declining pressure gradients, weather stations must report that winds are decreasing in strength, and field observations must confirm decreasing fire-weather conditions. Additionally, weather forecasts should also indicate that winds are forecast to continue decreasing in strength such that conditions will not exceed meteorology PSPS guidance in the immediate future.

## 3.10.4 Weather “All Clear” Decision Methodology

Weather “all clears” are called based on pre-defined areas that align with timing of weather conditions. This is known as the All Clear Zone methodology. Due to the large geographic span of some Fire Index Areas (FIA), the Meteorology Department has further divided FIAs into pre-defined boundaries to allow for varying geographic weather conditions. These All Clear Zones align with known meteorological phenomena, such as mountain tops and wind gaps which may experience longer periods of extreme weather. This methodology provides for further granularity in calling weather “all clears”, thereby allowing for areas less prone to extended periods of wind gusts or adverse conditions to potentially be cleared earlier and restored as these more localized conditions permit.

Based on this weather “all clear” decision methodology, the OIC provides the weather “all clears” to begin the re-energization process. The OIC can declare weather “all clears” for specific “All Clear Zones”, entire TPs and also for complete FIAs.

## 3.10.5 Patrols and Restoration

Following the OIC’s decision to declare weather “all clear”, Electric Operations begins procedures for patrol and restoration.

Once the weather “all clear” is given, PG&E patrols PG&E owned lines to the point of service with Customer-owned lines equipment COL – (Distribution) and Foreign Transmission Lines (FTL - Transmission)[2].

Once the "All Clear" is given for COL or FTL assets in event scope, they would either have been isolated during the weather event or during the restoration phase of the event. At that

[2] Customer-owned lines/Foreign Transmission Lines here refers to customers that own either distribution (COL) and/or transmission (FTL) facilities

point, PG&E continues to patrol to the point of service with the COL/FTL, In addition, the customer is notified of the "All Clear" and that they are required to confirm that their equipment is both safe and ready to be energized once PG&E is able to do so and to notify PG&E once customer has completed that confirmation. PG&E will not restore those COL/FTL assets until that customer confirmation has been received. See PSPS-1000P-01, PSPS for Transmission and Distribution Lines for additional details on the overall COL and FTL related process.

The Transmission Branch Director communicates transmission patrol results to the GCC Supervisor. GCC isolates all equipment with found trouble and reports the same to ETEC.

For Distribution facilities, circuit-based structured teams are typically formed and utilized to patrol the impacted “Event Specific Assets at Risk in HFRA” distribution grid assets for damage, and any damage is reported accordingly. The appropriate DCC and OEC will be notified of damage, and any repair work that will require the impacted asset to be cleared. If repairs are required, the Task Force Lead (TFL) notifies the DCC for further instructions. Assets requiring repair are analyzed and subsequent restoration plan adjustments are made, when necessary, then communicated from the DCC to the TFL for alignment and execution.

If a privately-owned line (POL) is de-energized due to a PSPS event, PG&E will provide a courtesy patrol prior to re-energizing. If after the patrol, the line is deemed unsafe and repairs are needed by the POL owner, PG&E will isolate the POL and not-re-energize it until the corrections have been completed.

Field resources patrol lines according to TD-1464S, Preventing and Mitigating Fires While Performing PG&E Work and PSPS-1000P-01, PSPS for Transmission and Distribution Lines. Crews do not have to patrol the entire line at once; rather, they can perform step restoration as they complete patrols.

### 3.10.6 Step Restoration

Crews patrol circuits in segments. When the patrol of an individual segment is completed (and providing a source is available), that segment can be re-energized. This strategy allows for more efficient restoration of customers compared to having to patrol the entire line prior to re-energization.

- PSPS circuits have been analyzed to ‘pre-sectionalize’ them into smaller patrol zones called “segments”.
- Segments have been prioritized with alphabetical order labels in order of criticality (i.e., critical infrastructure when applicable, customer impacts, etc.) aligned with source availability.
- There is not a ‘one-size-fits-all’ approach and strategy for every circuit. Patrol and restoration are based upon infrastructure/customer criticality and impacts, with additional considerations typically being length, configuration, patrol types required (i.e., air, vehicle, foot) and given resource availability.

- A ‘guidance’ based approach for maximizing restoration has been implemented:
  - Simultaneous segment patrols and restoration.
  - Air and ground patrols.
- Communication strategies between TFLs and control centers.
- TFLs are the single point of contact between the DCC and field operation restoration activities. For guidance on restoration, see PSPS-1000P-01, PSPS for Transmission and Distribution Lines.

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# 4 PSPS Information, Notifications, and Coordination Strategies

## 4.1 General Information about PSPS Program

PG&E continues outreach and education to share our PSPS criteria and meteorological guidance. This includes but is not limited to briefing the California Public Utilities Commissions (CPUC), California Department of Forestry and Fire Protection (CAL FIRE), California Governor's Office of Emergency Services (Cal OES), and local and tribal governments throughout PG&E's electric service territory. PG&E has also shared its general meteorological guidance information broadly with the public through a series of open houses, webinars, meetings and presentations beginning in 2018. The general meteorological guidance and criteria are also posted on PG&E's external-facing website and included in PG&E's PSPS Policies and Procedures available on pge.com PSPS page listed under "Outages" tab.

To provide greater transparency for interested stakeholders, PG&E has provided detailed weather and PSPS forecasting information on PG&E's public-facing website at pge.com under "Outages" / select "Public Safety Power Shutoff" "PSPS updates and alerts". This includes general information about PSPS, PSPS outages, and PSPS updates and alerts. as well as "Weather monitoring awareness" with Seven-day PSPS forecasts

Customers are also informed about the PSPS program and how to prepare for a PSPS through various types of customer communications such as letters, doorhangers and information on pge.com. See Appendix E for examples.

### 4.1.1 Community Resource Centers

To minimize PSPS outage impacts and serve our communities and vulnerable customers during a PSPS event, PG&E is required to open Community Resource Centers (CRCs) in impacted communities. CRCs provide customers and residents a safe location to meet their basic power needs, such as charging medical equipment and electronic devices, access to resources (water, snacks, restrooms, etc.), and up to date event information. PG&E works closely with impacted counties and Tribes to mobilize indoor and outdoor CRCs as soon as possible from the time of de-energization until the time electric service is fully restored. CRC standard operating hours are from 8:00 AM - 10:00 PM.

For additional details on: PG&E's coordination with counties, Tribes, and other key stakeholders in the selection of CRC sites and the formation of its CRC plan, details on site selection requirements and steps, resources available at CRCs, considerations for AFN and medical baseline customers, on-site and off-site support staff, and many other details related to the CRC program see the CRC Plan located in Appendix A of PG&E's 2022 Preseason Report.

### 4.1.2 Support for Access and Functional Needs Populations

PG&E recognizes that de-energization has a disproportionate impact on our most vulnerable populations, including Medical Baseline customers, as well as individuals with

Access and Functional Needs (AFN) individuals as defined by the California Public Utilities Commission.[3] It is critical to ensure these individuals are aware of a potential PSPS and are prepared with information and resources.

Before, during and after PSPS, PG&E collaborates with a number of Community Based Organizations (CBOs) as both information and resource partners to help broaden our message, provide resources and assist with emergency preparedness. Refer to PG&E's AFN plan for specific details. PG&E collaborates with the California Foundation for Independent Living Centers (CFILC) to implement the Disability Disaster Access and Resource (DDAR) program. The DDAR program provides assistances to those individuals who require continuous power for medical sustainability or independent living needs with emergency planning and assistance charging medical devices during PSPS. This may include but is not limited to those in the aging population and those who may have disabilities. Local Independent Living Centers (ILCs) participating in the DDAR program can be found at Disability Disaster Access & Resources.

PG&E is also partnered with the California Network of 211, a free-confidential calling and texting service to provide customers with support and resources during periods of critical needs. 211 provides PSPS education, outreach and emergency planning in advance of PSPS outages and connect individuals with AFN or other needs to critical resources. This includes transportation, food delivery, hotel accommodations, portable backup batteries, food replacement and other social services during and after PSPS.

To view additional resources, partnerships and detailed information, see pge.com "Resources for accessibility, financial, language, and aging needs."

### 4.1.3 Microgrids for Community Power Continuity

**Objectives**

PG&E has two microgrid initiatives designed to support customers during PSPS, each of which is configured to address a different type of PSPS impact:

1. **Temporary Substation Microgrids** are focused on energizing customers when the substation serving them is impacted by an upstream transmission line de-energization but the distribution lines coming out of the substation still have safe-to-energize load (i.e., transmission-level only impacts).
2. **Temporary Distribution Microgrids** are focused on energizing "main street corridors" with shared services and critical facilities when the distribution lines serving these areas are de-energized as a result of a PSPS event (i.e., distribution-level impacts or transmission-level impacts).

The microgrids are "temporary" in nature because they utilize mobile temporary generation.

[3] CPUC PSPS Phase 1 D.19-05-042 (pp. A6-A7), AFN Populations consists of "individuals who have developmental or intellectual disabilities, physical disabilities, chronic conditions, injuries, limited English proficiency or who are non-English speaking, older adults, children, people living in institutionalized settings or those who are low income, homeless, or transportation disadvantaged, including, but not limited to, those who are dependent on public transit or those who are pregnant."

The scale and scope of each temporary microgrid will vary. The common design elements among them are:

- A safe-to-energize polygon that can be isolated from the wider grid using sectionalizing devices. The scale and scope of the polygon, and whether sectionalizing devices are operated manually or remotely will vary by site.
- For Distribution Microgrid deployments, a pre-installed interconnection hub (PIH) made up of a pad-mounted transformer and recloser. The PIH is constructed to enable rapid mobile generation connection. The PIH design will be standardized across sites to speed up construction and simplify operating procedures.

**Process**

Step-by-step instructions including rental equipment needs, switching logs, and customer notification processes will be handled by the EOC and Distribution Control Centers for each temporary microgrid that is declared operationally ready.

### 4.1.4 Backup Power Support

As a general policy, PG&E does not offer backup generation to individual facilities. However, PG&E's policy allows for granting exceptions for critical facilities when a prolonged outage could have a significant adverse impact to public health or safety (including illustrative examples):

- High risk to public safety (e.g., hospital with active trauma units; critical water or wastewater asset; city or county EOC).
- High risk of environmental hazard (e.g., chemical plant which risks toxic spill into local river).
- High risk to essential emergency response and support facilities (e.g., 911 call center; water pump availability compromises firefighting; critical telecommunications equipment or other support businesses that directly affect emergency services provision).

PG&E's EOC manages incoming requests for backup power support during PSPS events. Requests will be routed through an approval process within the ICS, and, if approved, will be fulfilled by PG&E in partnership with generator contractors.

Temporary generation requests and prioritization are reviewed on a rolling basis during PSPS events in accordance with PSPS-4999-B001, Mobile generator use during Public Safety Power Shutoff (PSPS). (to become Standard PSPS-4000S, targeted publishing September, 2022)

## 4.2 Identifying Impacted Customers

To effectively identify impacted customers and deliver notifications, Customer Section needs:

- Customer Impact and Customer Notification files
- Medical Baseline, Self-Identified Vulnerable, AFN characteristics, and Critical Facility customer data
- Transmission Customers
- Event maps

Figure 4-1 shows the groups to be identified among impacted customers.

**Figure 4-1: Identifying Impacted Customers**


## 4.3 Event Specific Information

Recognizing that de-energization for public safety does burden communities with risks and hardships, PG&E is committed to providing notice to customers and communities when severe weather, combined with heightened fire risk are forecasted. As part of this commitment, PG&E provides event information using a multi-channel notification approach through direct (i.e. phone calls, text and e-mails) and indirect (i.e., social media, local news, radio and the pge.com outreach.

The EOC Planning Section is the central source for all event-specific data and maps. Public Information, Customer Care, Liaison and IT teams coordinate with the EOC Commander and Planning Section on required sequencing of notifications, consistent with CPUC guidelines.

**Before notifications are sent out:**

1. Planning Section, PIO, LNO, and CSO ensure all channels are ready to receive in-bound traffic (e.g., pge.com, the PG&E emergency web site, PG&E's PSPS Portal and call center).

2. Planning Section ensures data files are transferred to Digital Strategy (Emergency Web), PSPS Portal and Customer and Liaison Sections (notifications).
3. Planning Section / Digital Strategy uploads FERC notification to FERC Standards of Conduct after OIC Decision C and again at OIC Decision E.

### 4.3.1 PSPS Portal – Event Specific Information for Public Safety Partners

During a PSPS event, maps and other event information are posted on the PSPS Portal concurrent with the initial notification to Public Safety Partners (PSAP). PG&E updates the maps and data files on the PSPS Portal as weather forecasts change and detailed customer impact assessments are performed. PG&E also validates that the information shared on the Portal is refreshed twice daily at fixed times in the morning at 0900 and afternoon at 1500, regardless of a change in scope or customer impacts.

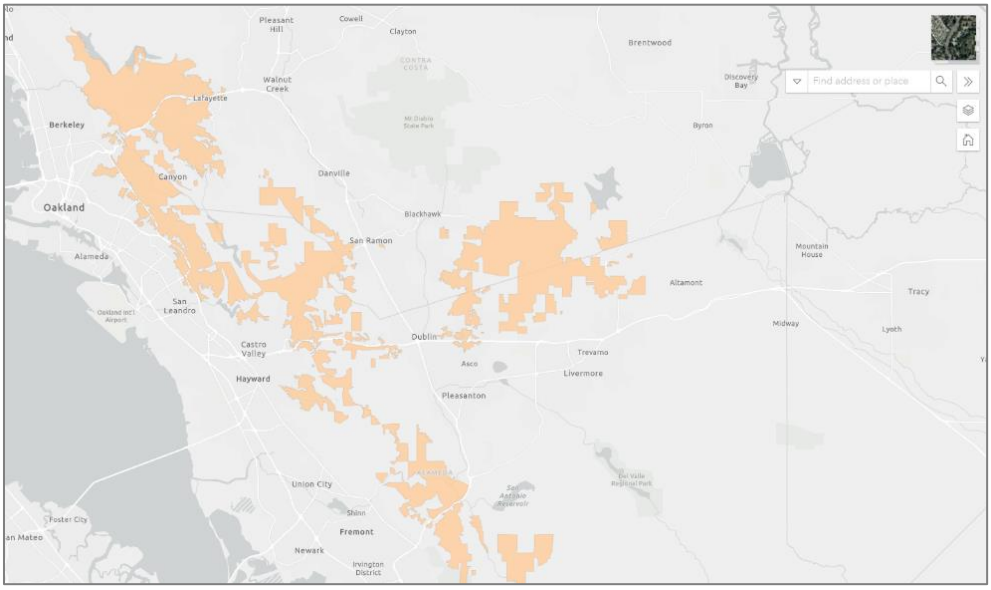
The PSPS Portal has an interactive map that will allow the user to select various data sets for visualization. The map includes a search function to display customer and critical facility impacts within a geographic area, such as a particular city or county.

PSPS Portal Users receive e-mail notifications when new files are available on the PSPS Portal, as well as at the twice daily morning and afternoon update. PSPS Portal users are also encouraged to check back every few hours as information will be updated in real-time. Agency representatives aim to keep cities, counties and Tribes informed during the event when changes to the Portal have been made.

Agency users must accept an online confidentiality agreement related to customer privacy and data handling requirements to receive enhanced data access. This enhanced access includes names and addresses of potentially impacted Medical Baseline and Self-Identified Vulnerable customers, critical facilities and all impacted customers within a jurisdiction in advance of and during a PSPS event.

**Event map:** Allows the user to view a map of the areas projected to be affected by the shutoff event. These maps are parcel based without buffered areas. An example is shown in Figure 4-2.

**Figure 4-2: Example Parcel Based Map**




**Event files:** Include County PDF maps, GIS layers, and an event-specific Customer Impact Summary Report. For agencies these files include lists of Medical Baseline customers, Critical Facilities, and All Impacted Customers within the forecasted scope of the event. Critical facility providers are provided a list of all sites within the forecasted scope of the event. This also includes files for ad hoc data requests from users.

**Access:** For internal PG&E users to get access to the PSPS Portal see Appendix D, PSPS Portal – Instructions to Request Access. External users should request access via an online form available at: pspsportal.pge.com.

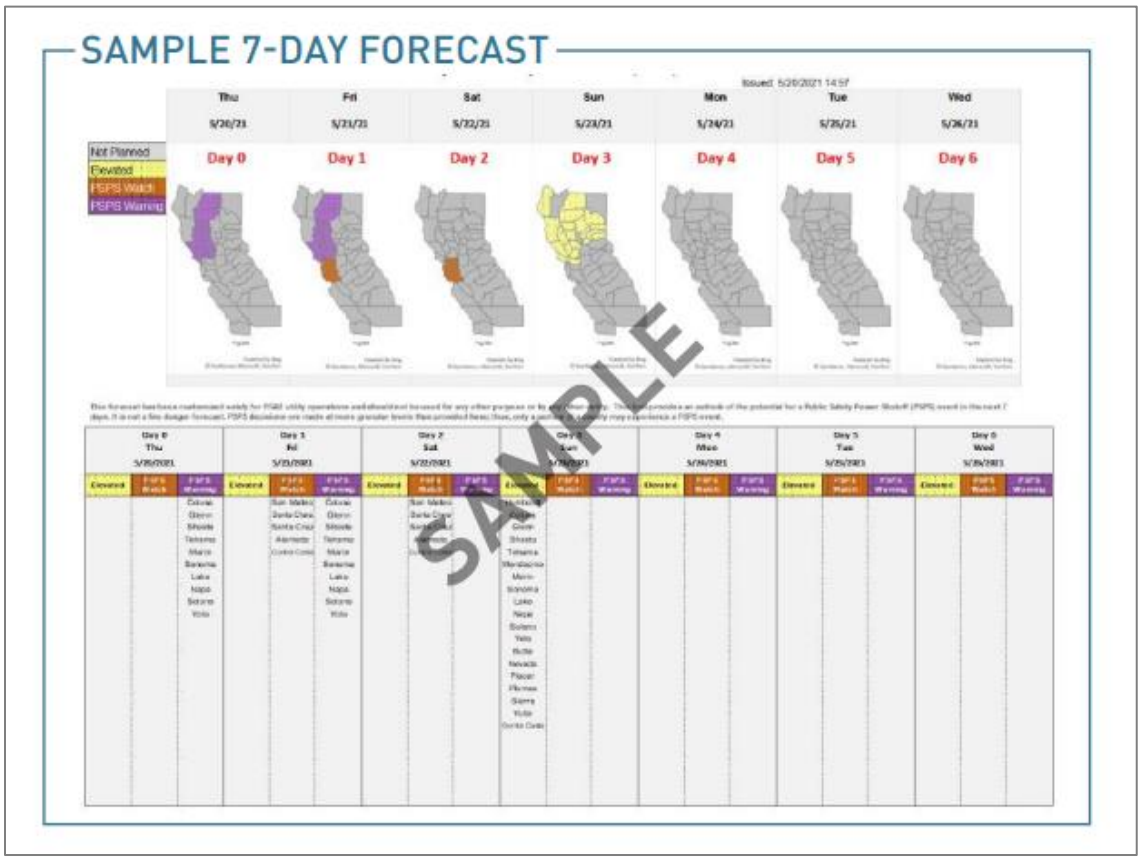
### 4.3.2 Event Specific Information on PGE.com

Event specific information is made available to the public on the PSPS page of the PG&E Emergency Web including PSPS updates, maps, and a way for customers to do an address lookup to see if an address will potentially be affected. Updates to the site are made when possibility of PSPS event is announced, when new information is available along the way to decision to de-energize, weather “all clear” to begin restoration, information on patrols, estimated times of restoration (ETORs) and restoration progress/restored.

## 4.3.3 7 Day Public Safety Power Shutoff Potential Forecast

A daily "7 Day Public Safety Power Shutoff (PSPS) Potential Forecast" is published on the weather webpage on pge.com. This provides the public a view of risks PG&E Meteorologists are seeing over the next seven days. A forecast discussion is also provided that discussed the general weather pattern over the next seven days, the general state of fuel moistures and vegetation, and longer-range projections from federal agencies and climate outlooks. Figure 4-3 provides an example of the forecast.

**Figure 4-3: Example of 7 Day Public Safety Power Shutoff Potential Forecast**




**PG&E PSPS Potential Key:**

***PSPS*** – If weather forecasts indicate an increased risk of wind-related damage to overhead electric lines combined with dry vegetation susceptible to fire ignition and spread, it may be necessary for PG&E to turn off the electricity serving that area. This is called a Public Safety Power Shutoff (PSPS).

***Not Planned*** – Conditions that generally warrant a PSPS event are not expected at this time.

***Elevated*** – An upcoming event (typically a period of adverse weather combined with dry fuels) is being monitored for an increased potential of a PSPS event.

***PSPS Watch*** – The company Emergency Operations Center (EOC) is activated for a reasonable chance of executing PSPS to reduce public safety risk in a given geographic zone due to a combination of adverse weather and dry fuel conditions. A PSPS watch is typically only issued within 72 hours before the anticipated start of an event.

***PSPS Warning*** – The company Emergency Operations Center (EOC) is activated and customers in areas being considered for PSPS have been or are being notified. This level indicates execution of PSPS is probable given the latest forecast of weather and fuels and/or observed conditions. PSPS is typically executed in smaller and more targeted areas than the PG&E Geographic Zones. This level does not guarantee a PSPS execution as conditions and forecasts may change.

Based on a detailed analysis of PG&E's high resolution 30-year climatology and historical weather patterns, conditions that may warrant PSPS are most likely to occur in September/October/November when fuels are typically at their driest levels and dry offshore winds occur before widespread rain. PSPS events are also possible at other times of year based on the lack of precipitation and droughts. For example, a persistently dry autumn or winter season may result in potential PSPS conditions extending later into the year.

### 4.3.4 Social Media Engagement

PG&E uses social media, including Facebook, Instagram, Twitter and NextDoor, to direct users to its website where they can access important emergency preparedness information, as well as PSPS event updates and resources (e.g., Customer Resource Center (CRC) locations).

## 4.4 Customer and Agency Notifications

PG&E is committed to adhering to state directives for disseminating information during a PSPS event.

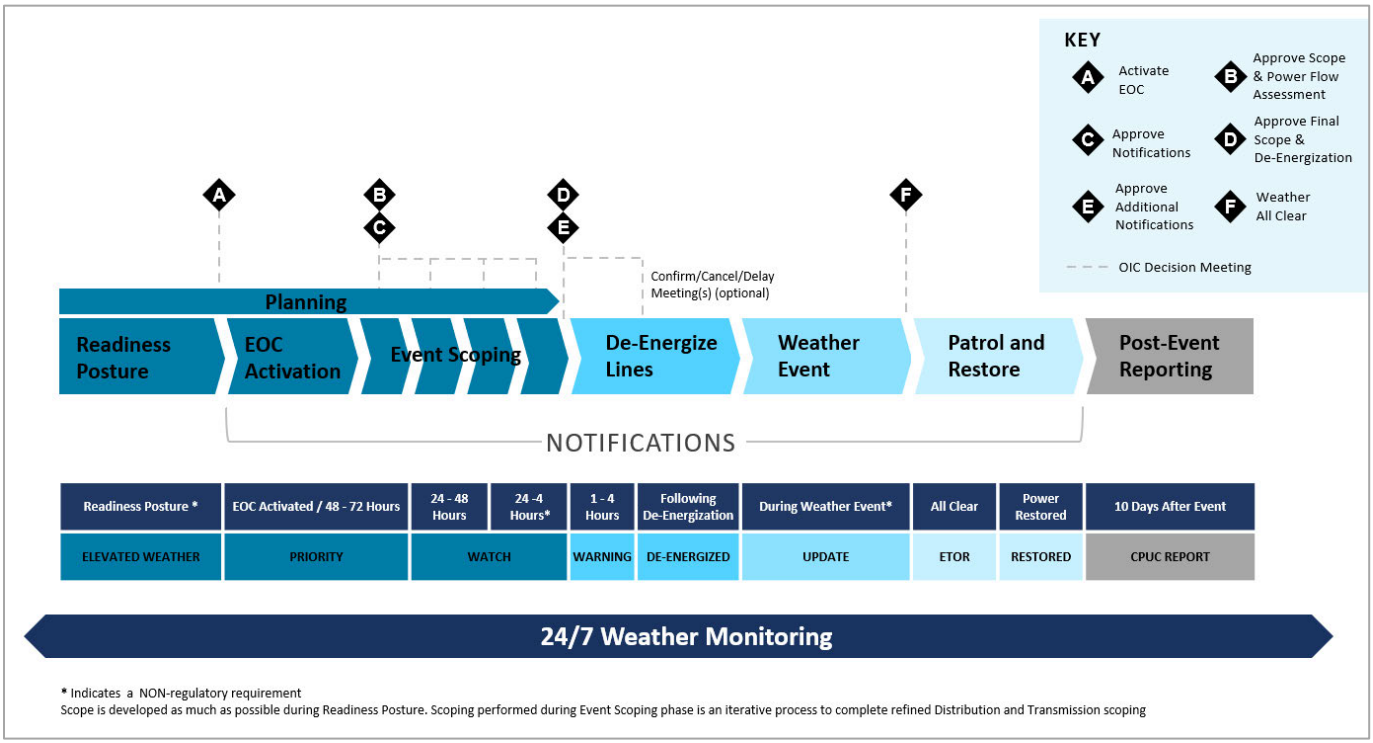
The OIC will make the decision to notify agencies and customers of PG&E's scope for de-energization (OIC decisions C [initial] and E [approve additional customer notifications (if scope has changed)], see section 3.8.1.

PG&E notifies Cal OES via the Cal OES PSPS State Notification Form and the CPUC via email prior to making a decision to de-energize unless the threat to public safety would increase by taking time to first notify these agencies. PG&E will also notify cities, counties, Tribes, CCAs, and other public safety partners prior to sending customer notifications. For the transcripts of notifications see Appendix C.

Communications and external outreach to the public via website updates, press releases and social media updates, along with direct notification to potentially impacted customers will be made after agencies are notified of the decision to de-energize based on the strategy outlined in the section above.

PG&E will provide as much notice as possible when a decision has been made to shut off power. Figure 4-4 shows the timeline for PSPS notifications.

**Figure 4-4: PSPS Notification Timeline**




## 4.4.1 Initial Notification Sequence

Priority Notice is sent out in a pre-specified sequence approximately 48-72 hours prior to de-energization:

1. Cal OES, CPUC, County OES, Public Safety Partners, Tribes, and California Independent System Operators (CAISO).
2. City, County, Community Choice Aggregates (CCAs), Publicly Owned Utilities (POUs).
3. Level 1 Critical Customers (CC1s) including telecom, emergency hospital services, water agencies
4. Transmission-level customers.

The OIC makes decision C is to send the first wave of customer notifications.

Customer notifications are sent out in a prescribed sequence starting at “Watch” within 24-48 hours:

1. Public safety partners.
2. Other critical facilities, Medical Baseline, Residential and Commercial Customers.
3. News release (depending on cycle).
4. Medical Baseline Doorbell Rings.

The next CPUC prescribed notification after 24-48 hours is 1-4 hrs before de-energization.

The following describes PG&E's notification process for PSPS events, whenever possible, and depending upon conditions. When issuing Priority Notice for a potential PSPS event, PG&E will complete the following tasks:

- Publish all web content for PSPS Portal and Emergency Web.
- Submit Public Safety Power Shutoff State Notification Form to Cal OES.
- Contact CPUC Safety and Enforcement Division (SED) Director.
- Conduct live calls to County Office of Emergency Services (OES), County and Local Public Safety Answering Points (PSAPs) and Tribal governments potentially impacted by the PSPS event.
- Conduct coordination with CAISO through ETEC.
- Execute automated calls, emails and texts to counties, cities, Tribes and Community Choice Aggregators (CCAs), wholesaler, transmission and municipal utilities customers potentially impacted by the PSPS event, which includes a link to PG&E's PSPS Portal and PG&E's Priority Partner page where event-specific information and maps can be found.
- Execute automated calls, e-mails and texts to critical facilities, Transmission-level customers, and other Public Safety Partners that are PG&E's customers and a critical facility (referred to as a "Critical Service Provider"). Notifications to the critical service providers will include a link to PG&E's Priority Public Safety Partners page where event-specific information and maps can be found.
- If Transmission lines are in scope, generating the FERC posting.

Starting approximately two days (or within 24-48 hours) prior to de-energization, once the above notifications have been completed, PG&E will send the first notification to potentially impacted critical facilities and all other customers (including Medical Baseline), wholesaler, transmission and municipal utilities customers. Customers with active temporary generation efforts in their area will receive information specific to their area.

PG&E will take additional steps to notify customers who are enrolled in the PG&E Medical Baseline program. Event notifications to these customers are made through automated calls, texts, and emails in advance of de-energization and PG&E will ask these customers to confirm they have received the message.

For Medical Baseline customers and Self-Identified Vulnerable customers with whom PG&E is unable to make successful contact, PG&E representatives will also conduct doorbell rings to ensure they have received pre-energization notification to activate their emergency plan. PG&E will prioritize doorbell rings with those customers who rely on electricity for critical life-sustaining equipment.

PG&E works to notify stakeholders on this timeline and to provide multiple notifications whenever possible before de-energization:

- **Priority Notice** (48-72 hours) prior to anticipated de-energization: notification to Public Safety Partners/Transmission Customers/Critical Public-Safety, CCAs and POUs related facilities.
- **Watch** (~ 2 Days) prior to anticipated de-energization: notification to all potentially impacted customers and stakeholders/populations.
- **Watch** (~ 1 Days) prior to anticipated de-energization: notification of all potentially impacted customers and stakeholders/populations.
- **Warning** (1-4 hours before de-energization) notification of all potentially- impacted customers and stakeholders/populations.
- **De-energization** notification of all impacted customers and stakeholders/populations.
- **Update** notification (if PSPS event / de-energization is extended/delayed/cancelled): notification of all impacted customers and stakeholders/populations.

After the OIC and EOC Commander indicate a weather “all clear”, OIC Decision F, PG&E communicates the post-weather event update to impacted customers via phone call, e-mail, and text (based on customer/account contact information populated in their PG&E profile). PG&E will notify cities, counties, Tribes, CCAs, and other public safety partners prior to sending customer notifications.

As ETOR is updated by Operations, ETOR Update notifications will be sent to customers and public safety partners impacted by the PSPS event.

Upon restoration, impacted customers and public safety partners will receive a Power Restored notification.

For the transcripts of notifications, see Appendix C.

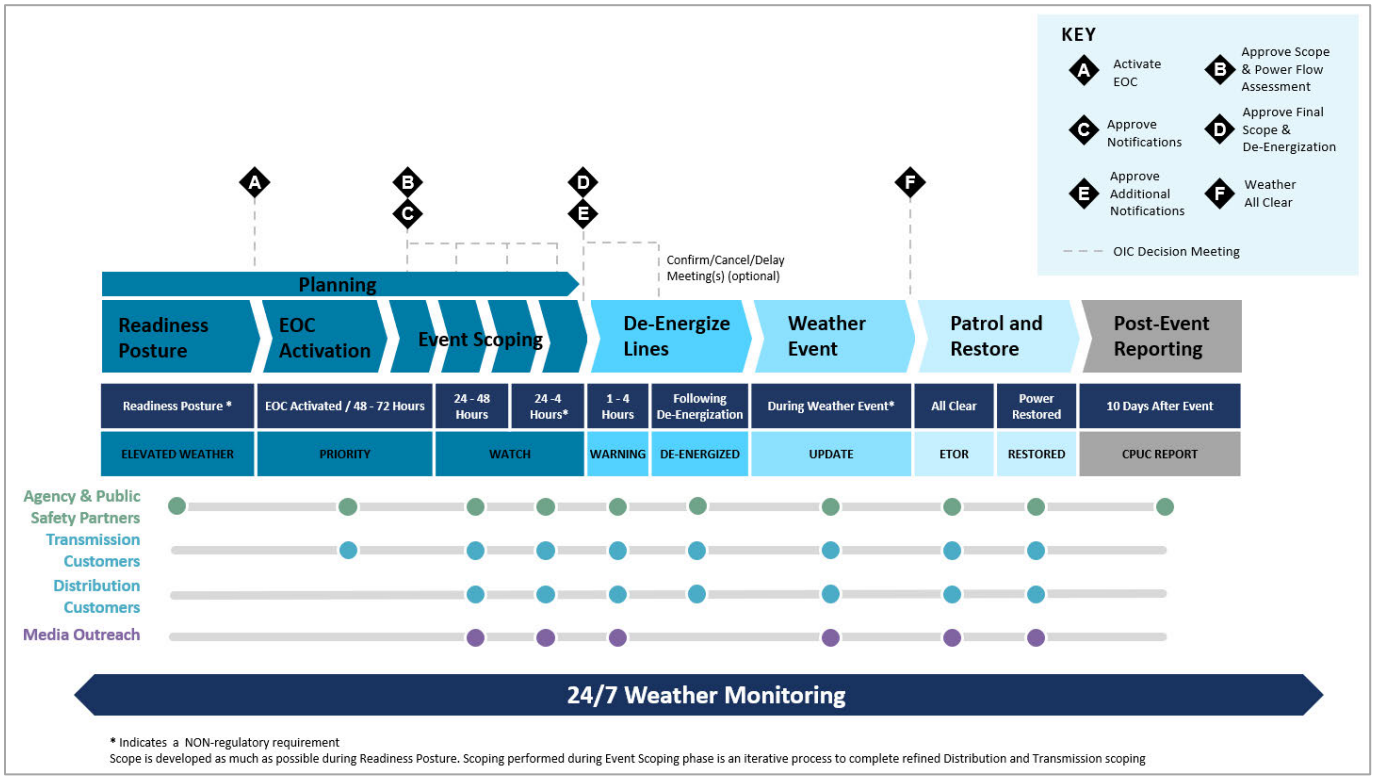
Affected customers will receive the following notifications during the restoration process.

- **Weather All Clear** (patrols begin): notification of all other impacted customers and stakeholders/populations and Public Safety Partners.
- **Estimated Time of Restoration (ETOR) Update** (available when OMT is updated with ETORs): notification of all other impacted customers and stakeholders/ populations and Public Safety Partners with ETOR information. The ETOR provided at this time supersedes the global ETOR provided in advance of de-energization.
- **Power Restored** (re-energization is complete): notification to all impacted customers/populations with date and time their power was restored and notification to agencies with the information that their jurisdiction has been restored.

**NOTE:** Actual timing of notifications will be driven by the timing of weather, forecasting, and expected impacts.

Figure 4-5 shows a timeline for PSPS Notifications.

**Figure 4-5: PSPS Notifications Timeline**




## 4.5 De-energization Customer Cancellation Notification

PG&E will also send a cancellation notice if the decision is made not to de-energize, when and where possible within 2 hours of the decision. For an example of a cancellation notice transcript see Appendix C.

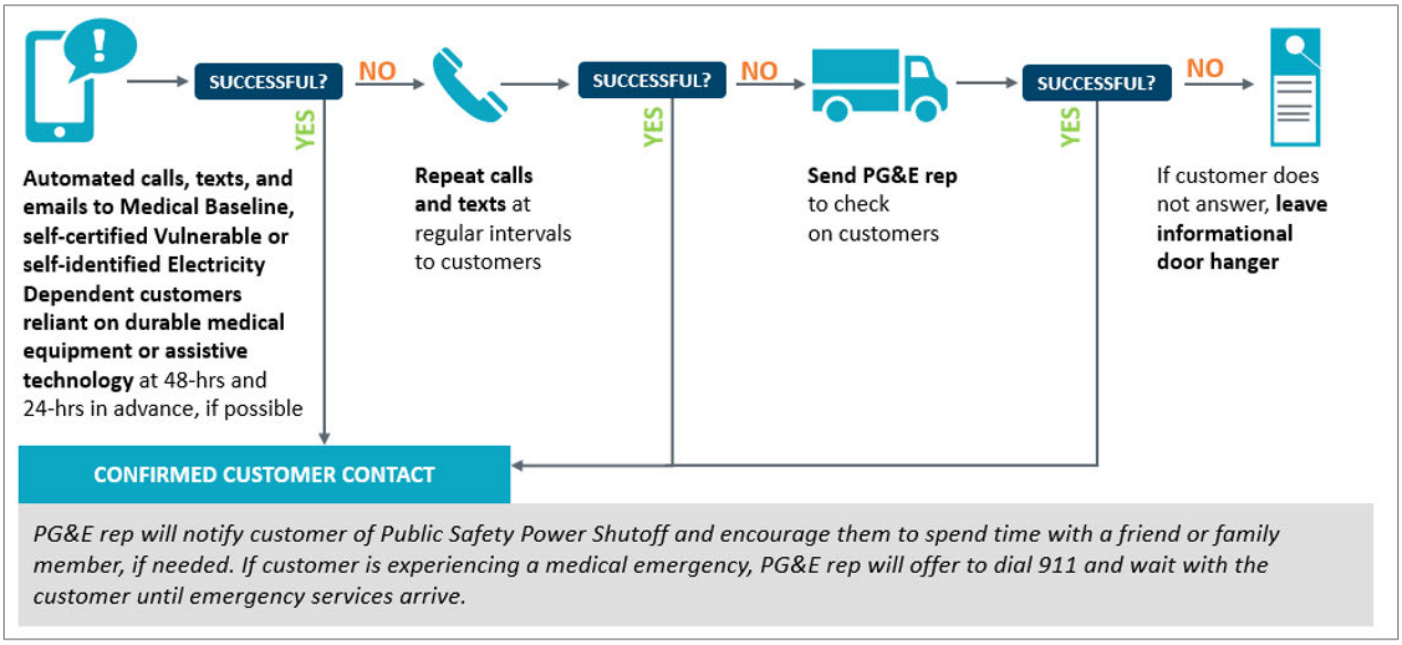
## 4.6 Doorbell Ring Process

Successfully notifying and confirming acknowledgment of notifications to Medical Baseline, self-certified Vulnerable, self-identified Electricity Dependent customers reliant on durable medical equipment or assistive technology, is critical and of the highest priority to ensure they are aware of the potential de-energization and can execute their emergency plan accordingly.

If automated phone calls, e-mails, and text messages are not acknowledged by these customers, and repeated calls are also not successful, PG&E will send representatives to the previously referenced customer's address to ring the doorbell to ensure the resident

has been notified of the potential PSPS. Figure 4-6 gives an overview of the Doorbell Ring process.

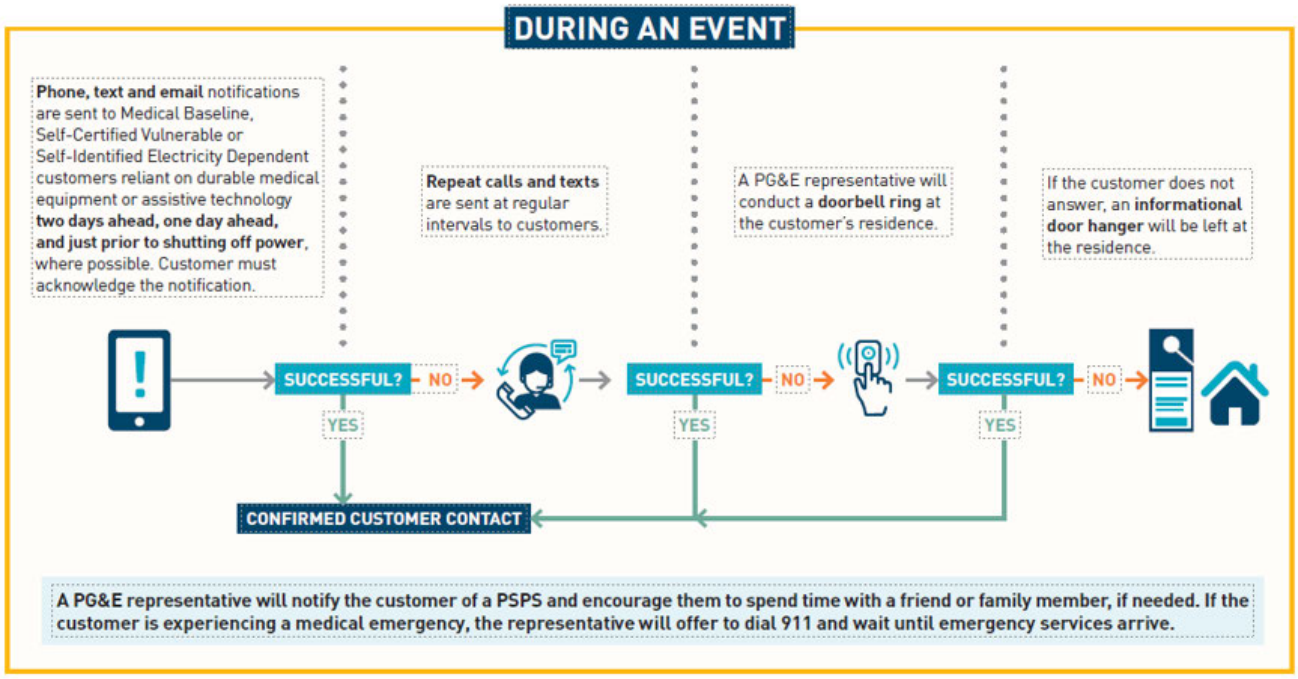
**Figure 4-6: Doorbell Ring Process**




## Contact Success Reporting to EOC

Figure 4-7 shows the process towards Medical Baseline, self-certified Vulnerable or self-identified Electricity Dependent customers reliant on durable medical equipment or assistive technology Success Reporting to the EOC.

**Figure 4-7: Contact Success Reporting to the EOC**



## 4.7 Master Meter Customer Notification

Master Meter customers are those that have a single account that covers multiple residences or business. Examples include apartment buildings and property management companies.

Since tenants and businesses in locations that have a Master Meter receive electric service from PG&E, but they are not the account holder, PG&E has no contact information to reach out before or during events. The exception to this is if a master meter tenant is enrolled in Medical Baseline.

PG&E continues to conduct outreach to the Master Meter account holder and provides resources and information for each account holder to provide to their tenants.

### 4.7.1 Pre-event Outreach

PG&E continues to drive awareness of the PSPS program to customers that are tenants of master-metered accounts. This includes sending a tenant education kit to master-metered owners via direct mail and email (if an email address is available). This kit contains a letter to remind master-metered owners to maintain contact information for their tenants and distribute PSPS notification details to their tenants in the event of a PSPS event, as well as provide PSPS overview flyers that can be posted in communal areas.

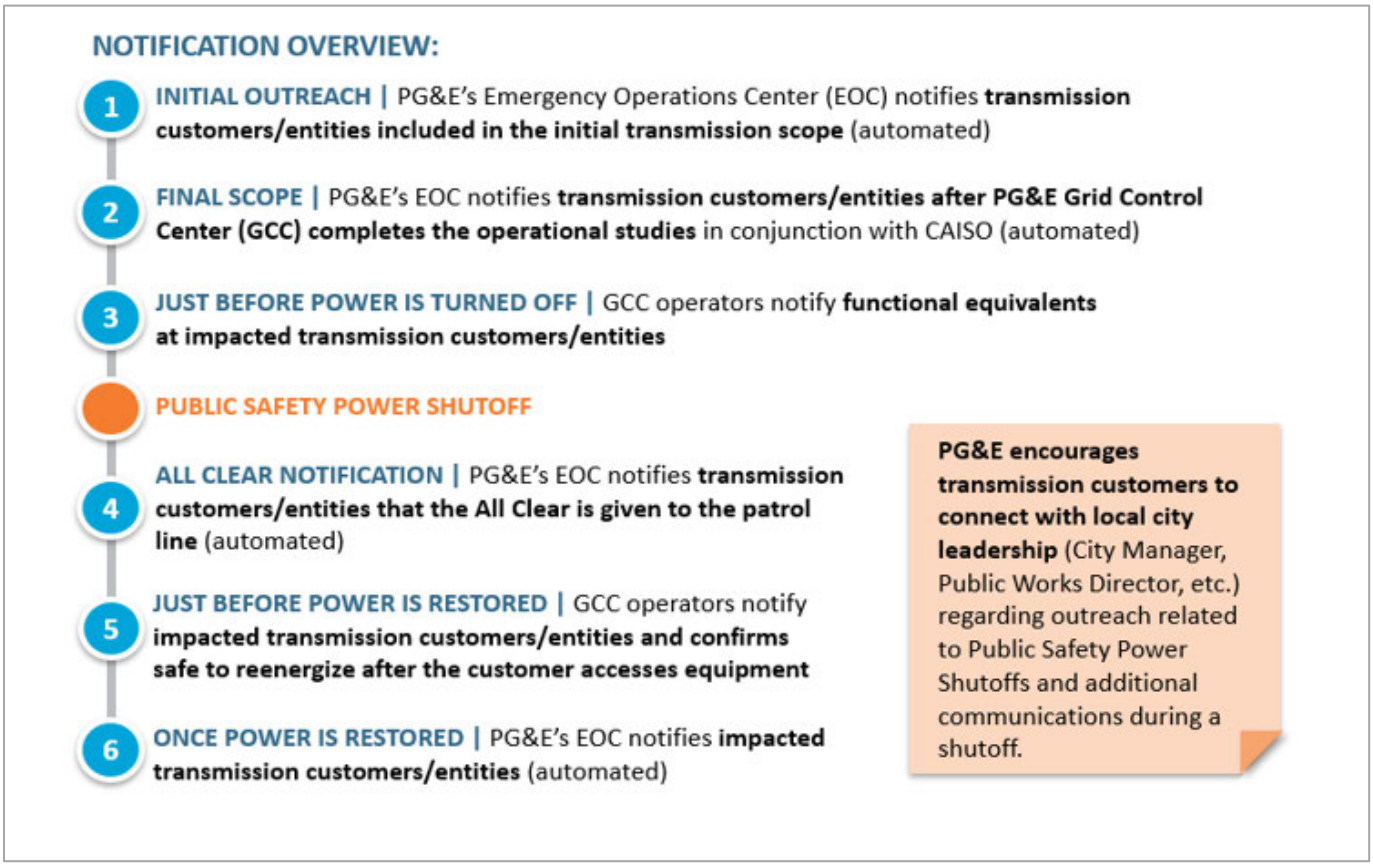
### 4.7.2 Address Level Alerts

PG&E continues to drive awareness of Address Level Alerts to master metered owners. This tool can be utilized by tenants to receive PSPS notifications for a specific address. Notifications can be received via Interactive Voice Recording (IVR) or SMS and in-language (English + 15 languages).

## 4.8 PSPS Notifications for Transmission Customers

Figure 4-8 shows a sequence for notifications of Transmission Customers.

**Figure 4-8: Notifications for Transmission Customers**




## 4.9 Agency Event Notifications and Coordination

### 4.9.1 What Agencies can expect before, during, and after a PSPS Event

#### 4.9.1.1 Information Resources in Advance of a PSPS Event

The following information resources are available in advance of a PSPS event:

- Access to the PSPS Portal, which includes:
  - Planning maps.
  - Summary Customer Impact tabular files.
  - Lists of Medical Baseline program participants (customers and master metered tenants) in areas estimated to be within the scope of the upcoming event and within the jurisdiction of the agency.
  - Critical facilities in areas estimated to be within the scope of the upcoming event and within the jurisdiction of the agency.

- The PSPS Policy and Procedures document that includes information such as PSPS criteria, event notifications and customer resources.
- Access to an assigned Agency Representative who can help provide additional materials or information regarding emergency planning and PSPS.
- A phone call to affected Office of Emergency Services (OES) from their dedicated PG&E representative when an upcoming event is being monitored.

#### 4.9.1.2 Information Resources during a PSPS Event

The following information resources are available when the PG&E EOC has been activated for a PSPS event:

- An assigned Agency Representative who will assist with resolving local issues in real-time.
- A phone call to all Public Safety Answering Points (PSAP) in potentially affected areas.
- A phone call and e-mail to potentially affected county/tribal OES's with information regarding estimated event timing, availability of preliminary event maps and customer lists, and an offer to embed a PG&E representative in their local EOC. Additionally, a phone call is made to neighboring counties to County OES impacted by a potential PSPS event.
- Automated calls, texts and e-mails at least once a day with event timing (i.e., de-energization, weather "all clear," updates, restoration and/or cancellation) for their jurisdiction.
- Tribal and Operational Area Cooperator calls hosted by Tribal and Agency Representatives to review event-specific information changes and resolve local issues (Tribal and Agency Representative and county to determine need and frequency).
- Daily Systemwide Cooperator's Call hosted by PG&E's EOC providing the latest high-level PG&E systemwide event updates.
- E-mail notifications to all PSPS Portal users when any updates are made.
- Resources uploaded to the PSPS Portal, including:
  - Situation Reports (posted twice daily).
  - Maps (interactive, PDFs and GIS layers) at a parcel-level and updated as decisions affecting shut off scope are made.
  - Summary reports with customer impact totals by jurisdiction.
  - Lists of potentially affected Medical Baseline program participants (customers and master meter tenants) and critical customer lists with names and addresses (for Public Safety Partner agencies that accepted the online agreement).
- Local governments are welcome to embed a representative in PG&E's EOC for any PSPS event. Once PG&E's EOC is activated, a request should be made to the

Agency Representative, who can provide additional logistical details and notify PG&E's EP&R department.

### 4.9.1.3 Information Resources after a PSPS Event

The following information resources are available after a PSPS event:

- PG&E submits an event report to the California Public Utilities Commission (CPUC).
- A copy of the event report is provided to impacted cities, counties and Tribes.
- The report is posted on PG&E's website.

### 4.9.1.4 Emergency Operations Center Coordination

PG&E offers the following resources to support local Emergency Operations Centers (EOCs) during a PSPS event:

- **Agency Representative** will be assigned to each county and tribe to act as a single point of contact during an event. The Agency Representative can also staff a county or tribe's local EOC upon request.
- **Third-Party Representative** such as Tribes, cities, counties, water agencies and telecommunication providers may request to send/virtually embed a representative to the PG&E EOC during a PSPS event.
- **Account Managers and Local Customer Strategy Officers** engage with critical customers locally.

**NOTE**: To further reduce the risk of Covid-19 transmission, PG&E provides remote support when able.

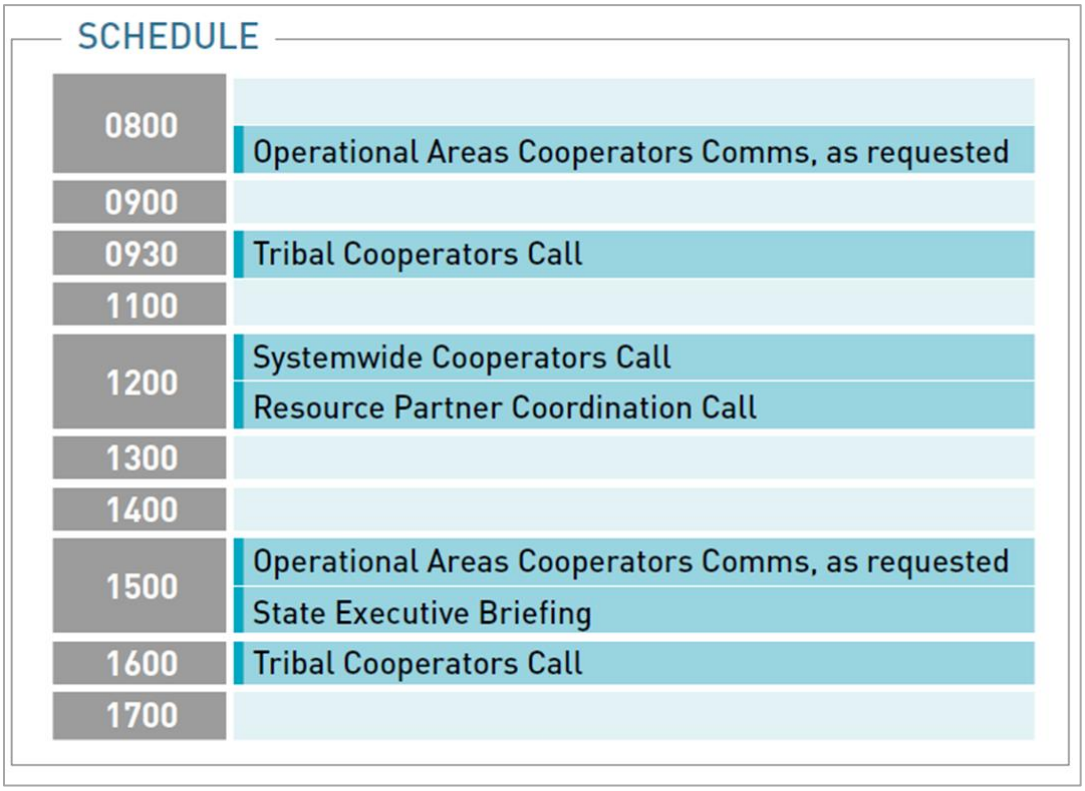
### 4.9.1.5 Notifications Process for Adjacent Agencies

The PSS will call County OES of neighboring counties adjacent to potentially affected jurisdictions to notify them of a potential PSPS event. They will also be invited to a once daily Systemwide Cooperators Call. The call-in information will be provided via email once PG&E's EOC is activated. All local and tribal governments will have access to event information through the PSPS Portal, regardless of whether they are expected to be impacted or not. Email notifications will also be sent via the PSPS Portal to all users when any event information has been posted.

### 4.9.1.6 PSPS Daily Calls

Figure 4-9 shows a schedule for PSPS daily calls.

**Figure 4-9: PSPS Daily Calls**



### 4.9.1.7 Systemwide Cooperators Call

At noon each day, PG&E's EOC will host a Systemwide Cooperators Call (Figure 4-10) to provide an update on the PSPS event. The call will be open to tribal, city, county governments, water agencies, telecom providers, emergency hospitals, community-based organizations and community choice aggregators within PG&E's service area, not just those within the PSPS scope.

**Figure 4-10: Agenda for Systemwide Cooperators Call**

| AGENDA | | | |
|---|---|---|---|
| **Meeting** | PG&E PSPS Systemwide Cooperators Call | | |
| **Call Time** | 1200-1230 | **Leader** | Liaison Officer |
| **Meeting Location** | *Vendor to provide info* | **Facilitator** | Liaison Officer |
| **Call-In Info** | *Vendor to provide info* | **Recorder** | Liaison Coordinator |

| Item | Topic | Description | Lead | Time |
|---|---|---|---|---|
| 1 | **Introductions** | • Welcome<br>• Meeting purpose<br>• Safety | Liaison Officer | 3 Mins |
| 2 | **Weather** | • Weather updates | Meteorologist | 5 Mins |
| 3 | **Operations** | • Key operational activities<br>• Counties currently in scope<br>• Timing of de-energization and restoration | Liaison Officer | 5 Mins |
| 4 | **Agency Outreach** | • State agency outreach<br>• Agency notifications last completed/next anticipated<br>• Agency Representative outreach to counties/tribes | Liaison Officer | 5 Mins |
| 5 | **Customer Outreach** | • Customers impacted<br>• Call Center wait time status<br>• Customer notification last completed/next anticipated<br>• Medical Baseline Program customer outreach status<br>• Community Resource Centers status<br>• Community Based Organizations update | Assistant CSO | 5 Mins |
| 6 | **Public Information** | • Website stability status<br>• News release last completed/next anticipated<br>• PSPS Public Briefing timing | PIO | 5 Mins |
| 7 | **Closing** | • Reminder to coordinate with PG&E contact for any questions<br>• Date and time of next call | Liaison Officer | 2 Mins |

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# 5 PSPS Data Sources

The decision factors for considering PSPS are both quantitative and qualitative:

Quantitative measures include but are not limited to current conditions of wind speed, humidity, temperature, asset health, and live and dead vegetation moisture content.

Qualitative measures include real-time outage tracking, observations in the field, and third-party hazardous condition reporting (which will help validate forecasted weather conditions). PG&E Field Observers conduct field observations to verify that nothing is happening weather-wise earlier than expected, and to act as eyes on the ground to confirm that there is no need to execute earlier than expected based on weather forecasts.

All data created during a PSPS event are to be stored on the EOC SharePoint under “Past Incidents” / “Incidents” into the respective year and PSPS event folder. The Planning Section creates an event specific file structure at the beginning of the event and circulates the link to all teams so that the information can be centralized and stored according to Enterprise Records Information policies.

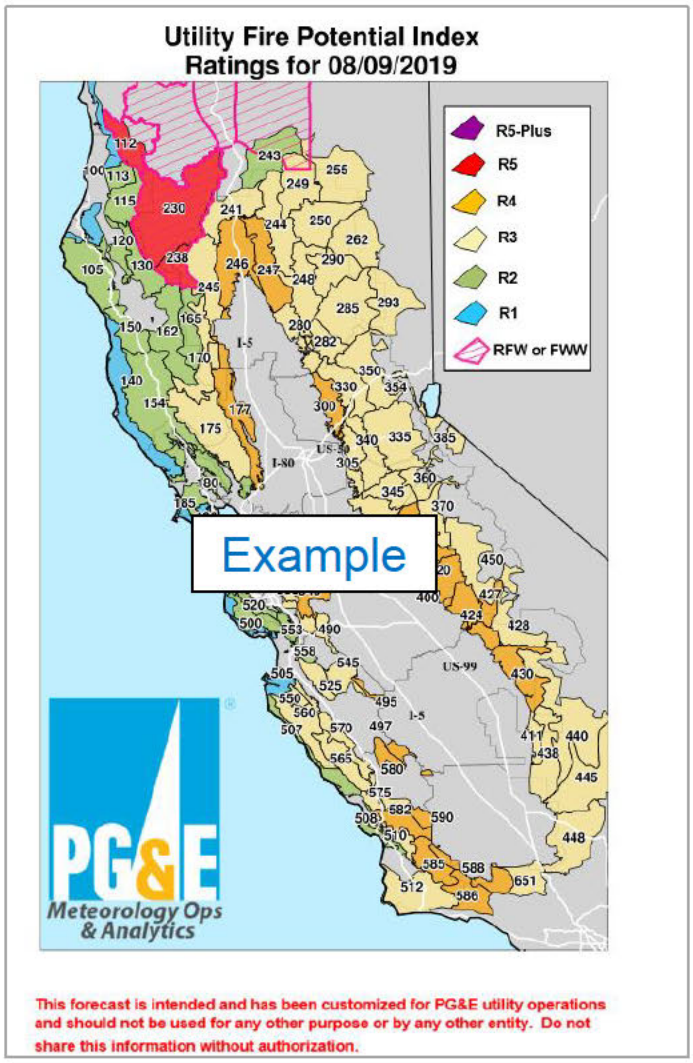
## 5.1 Weather Forecasting / Large Fire Probability Model – Quantitative Factors

### 5.1.1 Fire Danger Rating Scale and Utility Fire Potential Index

Modeled fire weather and fuel conditions are combined in a Utility Fire Potential Index (FPI) to forecast daily fire danger ratings by FIA. The fire danger rating scale (shown below) and related thresholds are based on historical incidence of large fires across PG&E’s territory, and the potential for increasingly severe and uncontrollable fires as the scale moves up From R1 to R5 as shown in Figure 5-1. An example map with utility fire potential index ratings is shown in Figure 5-2.

**Figure 5-1: PG&E Utility Fire Potential Index Scale**

**Figure 5-2: Example Map with Utility Fire Potential Index Ratings**



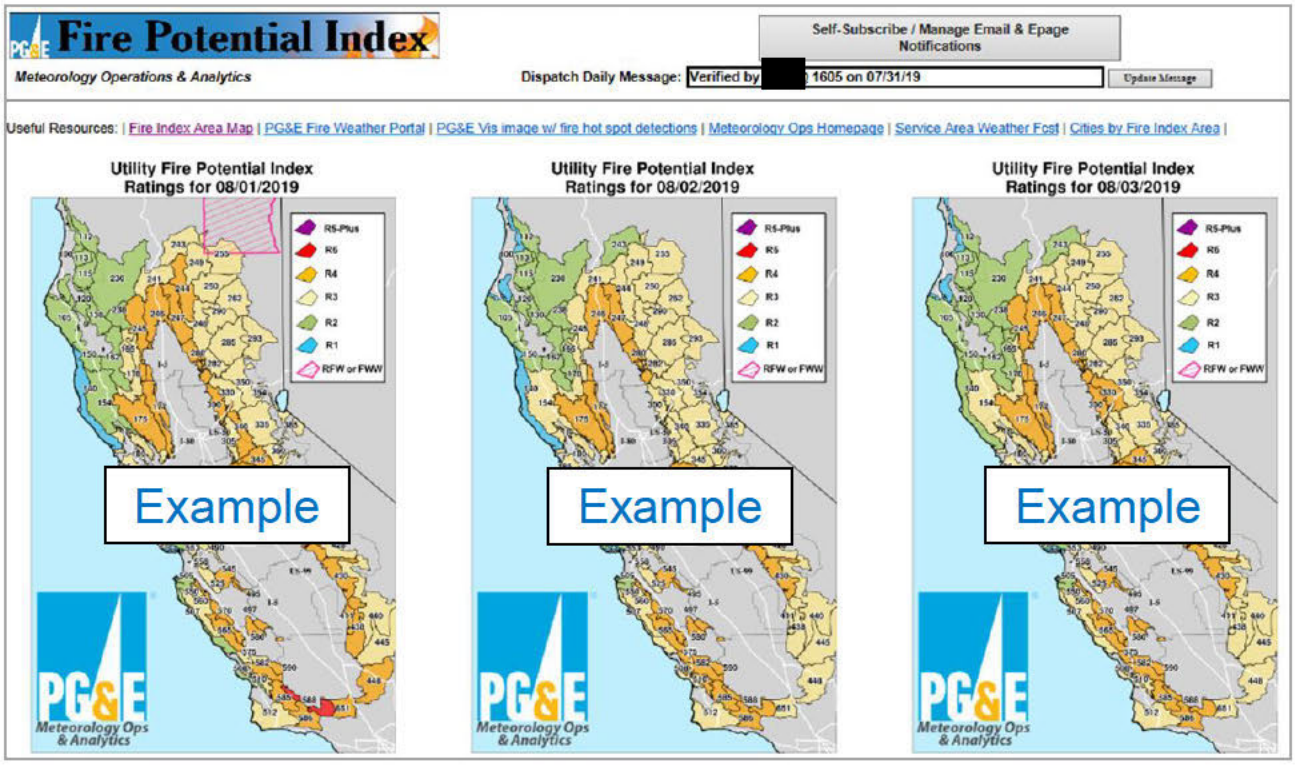

The FPI forecast describes the potential for fires to ignite and spread rated on a scale from "R1" (lowest) to "R5" (highest) specific to each FPI Rating Area. "R5-Plus" indicates there is elevated fire potential plus the potential for wind-related outage activity from the IPW model, which may warrant a PSPS event. The FPI model was calibrated using a high-resolution dataset of historical weather, fuel conditions, geographic-features, and fires.

### Utility Fire Potential Index (Utility FPI)

The Utility FPI is PG&E's main operational fire danger rating system. It provides hourly output 4 days out.

Figure 5-3 shows an example of Fire Potential Index with ratings shown for three days.

**Figure 5-3: Example Fire Potential Index**




PG&E's Meteorology and Fire Science team developed and calibrated the Utility FPI using a robust 30-year meteorological dataset, combined with a fire occurrence dataset in the PG&E territory. The Utility FPI combines several factors including a fire weather index (wind, temperature, turbulence, and vapor pressure deficit) with fuel moisture data (10-hour, 100-hour and 1000-hour dead fuel moisture, woody and herbaceous live fuel moistures), topography (terrain ruggedness, slope, and wind-terrain alignment) and landcover type (grass, shrub, timber or urban).

The Utility FPI is a balanced random forest classification model. The Utility FPI outputs ratings from R1 (lowest) to R5 (highest) in defined geographic areas that drive operational mitigating actions to reduce the risk of starting a fire. These include altering reclosing operations as well as work activities in the field.

## 5.1.2 Ignition Probability Weather Model

PG&E's Meteorology and Fire Science team also developed the IPW forecast model for 2021. IPW is a location-specific model and related to the historic frequency of outages in an area based on the wind speed and other factors.

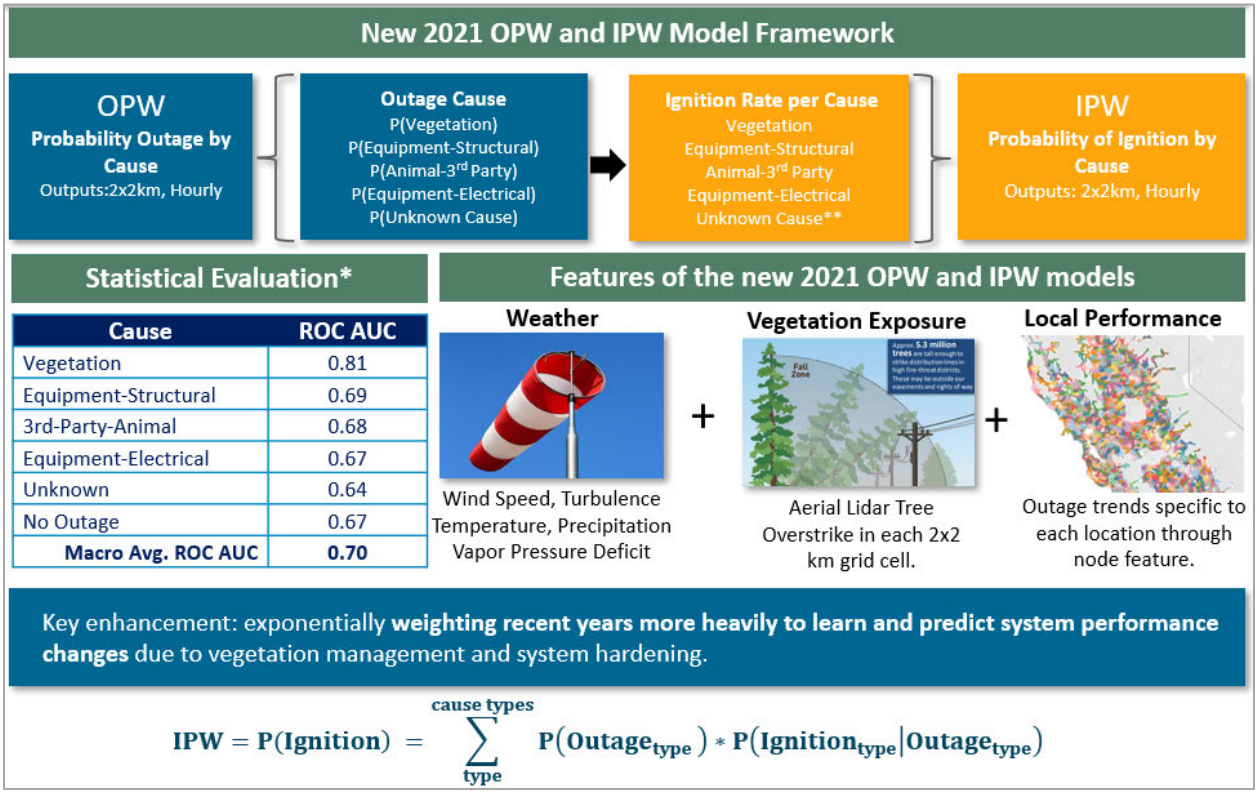
The 2021 OPW and Ignition Probability Weather (IPW) model version represents the next generation of distribution outage and ignition models building on the 2020 OPW 2.0 model. The core model is a new OPW model, that now can forecast outage probability by specific causes. The OPW output is transformed to an ignition probability (IPW) using known outage to ignition ratios for each outage cause.

The 2021 OPW model is trained on windspeeds from the 31 year down-scaled climatology at 2 x 2km resolution and approximately 500,000 sustained and momentary outages occurring on the distribution grid from 2008 to end of 2020. Excluded from these outages were underground outages and non-weather driven major event days, such as fires and earthquakes from the training dataset. PSPS event damages and hazards were also included in the training set.

The operational application of IPW is forecast four times per day producing hourly outage and ignition probabilities. The model has a forecast horizon of 129 hours ahead at the same 2 x 2 km resolution as the PG&E Operational Mesoscale Modelling System (POMMS), a configuration of Weather Research and Forecasting (WRF) model.

Figure 5-4 shows the framework for OPW/IPW.

**Figure 5-4: OPW/IPW Framework**




The CFP, the combination of IPW and Utility FPI, is forecast across PG&E's territory four times daily at 2KM spatial resolution using PG&E's Operational Mesoscale Model System (POMMS). The output of both models is evaluated daily by members of PG&E's Meteorology and Fire Science team to determine if there is concurrence of a heightened outage risk from a wind event and the potential for large fires to occur. The IPW and Utility FPI models are also used with other factors and external forecasts as well as subject matter expertise to reach risk-informed decisions about PSPS.

For more information about PSPS decision criteria see section 3.3.1.

## 5.2 Real-time Field Conditions

### 5.2.1 Field Observations

When requested by Meteorology, real-time field observations are made to provide information about weather conditions on circuits forecasted to be in a PSPS event. The observers are to be in position prior to the forecasted PSPS de-energization timing and prior to the timing of the weather “all-clear”. They provide information on the presence of R5-Plus conditions. With input from Meteorology, the HAWC makes decisions related to resourcing and location of Field Observers. Plans for use of Field Observers are reviewed by the EOC Commander.

Field observations are completed by members of the Safety and Infrastructure Protection Team (SIPT). The HAWC provides guidance and coordination of the SIPT teams.

Field Observers are sent to specific locations within or as close as possible to the expected weather footprint.

The number of Field Observers will vary depending on the scope of the event, surrounding terrain, facility attributes, and radio / cellular coverage.

On-the-ground, real-time field observations are conducted to provide qualitative as well as quantitative information (for example, flying debris, trees/branches down, conductor movement, ground level wind speed, relative humidity (RH), and temperature) about the presence of R5-Plus conditions and the possible need to trigger a PSPS event sooner than expected. Field observations are conducted by SIPT crews that have completed appropriate training.

When possible, Field Observers provide inputs to the HAWC from a designated area and observations will generally occur prior to the predicted weather event. It is expected that observers may report differing observations based on their specific location.

Field Observers will also be mobilized near the end of the wind event to aid in making a weather “all clear” decision. This acts as a second source in addition to real-time weather station observations to ensure that winds have subsided.

### 5.2.2 Field Observer Locations

Field Observers initially go to locations specified by the HAWC. When selecting sites for Field Observer locations, the HAWC will consider:

- Cellular phone and radio communications coverage.
- Road access.
- Altitude.
- Open exposure.
- Visibility to circuits.
- Safety factors as reported by the Field Observers.

- Field observation locations have been pre-identified for every Fire Index Area (FIA) within PG&E's service territory

### 5.2.3 Conditions to Observe and/or Validate

Field Observers note hazards related to wind conditions, which may lead to outages. They update conditions using the SIPT Viewer. If no mobile connection is available, Field Observers radio in observations to the HAWC, who manually input the data into the dashboard.

Field Observers must record observations including date/time and location specifics about the following conditions:

- Trees / branch movement
- Flying debris
- Conductor movement
- Local real-time wind speed data

The HAWC Lead and Technical Specialist review incoming observations and determine if conditions warrant additional field observation and submission of real-time condition videos. In certain circumstances, the information may warrant immediate consideration for PSPS initiation sooner than expected. This information is communicated to the Planning Section Chief, Meteorology and the EOC Commander.

### 5.2.4 Reporting Guidelines

Observations are classified as follows and depicted in Table 5-1.

- **No Movement:** No leading indicators of outages and little to no high winds in the area.
- **Slight Movement:** Some observations indicating R5-Plus conditions in the area.
- **Substantial Movement:** Many observations indicating R5-Plus conditions in the area.

**Table 5-1: Reporting Guidelines for Field Observers**

| Factors | Not Applicable | No Movement | Slight Movement | Substantial Movement |
|---|---|---|---|---|
| **Tree Observation** | No trees in the area of assigned field observation | Leaves and small twigs in motion, small branches and bushes sway, slender branches and twigs move gently | Pole sized trees in the open sway noticeably, large branches in the open toss, tops of trees in dense stands sway (Wind extends small flag) | Large trees in motion, tree damage increases with occasional breaking of exposed branches and tops (Effort needed to walk against the wind) |
| **Wire Movement** | No visible assets in the area of assigned field observation | No visible impact of wind on assets | Overhead conductors occasionally in motion, not sustained. Gusts have visible impact on assets (Umbrella use becomes difficult, empty garbage cans move in wind) | Assets visibly impacted due to weather, overhead conductors in sustained motion & whistling heard (Cars veer, damage to large tents, observable wind impacts) |
| **Debris Movement** | No debris in the area of assigned field observation | Loose paper and leaves begin to move (wind flutters small flag) | Debris movement observed during gusts, gentle movement during sustained winds | Visible debris (trash, dead leaves, bins, etc.) violently blowing around in constant motion |

## 5.3 Materials used to inform Officer-in-Charge

Materials used to inform the OIC include:

1. **Meteorology Reports –** Various models and reports showing useful weather information that will help the EOC Commander or the OIC in their decision-making process include:
   - Pressure gradients.
   - Forecasted humidity.
   - High resolution POMMS Weather Model, FPI and IPW.
   - Red Flag Warnings.
   - North/South Ops Predictive Services forecasts.
   - Asset risk/consequence information directly as well as in ArcGIS.
   - Other external reports as necessary.

2. **Maps –** Maps showing assets in scope and outage area impacts (source – GIS Technical Specialist, PSPS Viewer, Google Earth):
   - Asset locations.
   - Impacted customers' locations.
   - Weather footprints.
3. **Internal Situation Report – event-based summary displaying impacts of de-energization from planning to restoration** (source – PSPS Deputy, Foundry Tool):
   - User-enabled plan selection with options to select and focus on specific time-places.
   - Customer counts by time-places, PG&E divisions, counties, cities, zip codes, circuits, for possible de-energization.
   - High level customer notification metrics for critical facility, medical baseline, life support, and general customers with optional notification drilldown information.
   - Automated restoration progress view.
4. **HAWC Report** – Report from the Hazard and Awareness Center outlining any current:
   - Ongoing fires in the areas in consideration.
   - Additional hazards.
   - Real time field observations.
5. **Transmission PSPS Scoping Analysis** - Presentation materials detailing transmission lines or sections of transmission lines within the geographic region of the PSPS event which are recommended to be in scope due to exceeding guidance of at least one of the Transmission Line scoping criteria or other known conditions (source – PSPS Transmission Asset Health Specialist) including the following:
   - Summary of recommendation showing the number of lines by voltage proposed to be in scope.
   - Number of Transmission Customers and Municipalities affected.
   - Summary of Generation impacted.
   - Waterfall Chart detailing the number of lines that are in scope due to each transmission scoping criterion.
   - Detailed list of recommended Transmission lines for PSPS scope with the associated rationale for inclusion in PSPS Scope.

6. **PSPS Tags Report** – Presentation materials detailing information related to open PSPS-qualified tags impacting scope (source – PSPS Distribution Asset Health Specialist, Foundry tool):
    - Number of P1, P2 tags and Electric Compliance (EC) Priority A, B, and E tags in scope.
    - Number of prioritized P1, P2 tags and EC tags to be closed out by Operations and Vegetation Management and removed from scope.
    - Incremental circuits in scope.
    - Incremental customers in scope.

For information on documentation of OIC decision process see section 8.1.1.

#### 5.3.1.1 Transmission Scoping Process

On an event-by-event basis, PG&E considers the health of each transmission structure, vegetation risk near each structure, the local area wind speed and Utility FPI forecasts. Given the specific forecast and factors listed above, PG&E determines which structures exceed a risk guidance value outputting a preliminary scope of transmission lines to be deenergized.

The primary drivers for determining which structures and lines should be considered for PSPS is the Transmission Large Catastrophic Probability model ($CFP_T$), which is the combination of the FPI and Operability Assessment (OA) model. The model produces output for every transmission structure on an hour-by-basis. A Vegetation Risk Index (VRI) is also considered. The VRI takes advantage of LiDAR information about trees surrounding transmission lines and is used to prioritize those lines that have higher risk of vegetation impacts.

Ultimately, there is no single factor or threshold that will automatically trigger de-energization of any particular transmission line. Based on the relative wildfire risk calculated for each transmission line in the footprint, PG&E will exercise expert judgment to identify which transmission lines, if any, should be considered for de-energization. The transmission lines identified during this evaluation process drive the initial transmission PSPS scope.

PG&E then conducts a total impact analysis in coordination with the California Independent System Operator (CAISO) to ensure that the initial transmission PSPS scope is feasible and will not compromise reliable bulk power system operations.

This step is critical to support compliance with Federal Energy Regulatory Commission (FERC) and North American Electric Reliability Corporation (NERC) Reliability Standards, and to ensure that de-energizations will not negatively impact bulk power system integrity. This assessment process identifies the total count of customers who are likely to be impacted by a transmission PSPS event, including any publicly owned utilities/electric cooperatives, adjacent jurisdictions, and small/multi-jurisdictional utilities, as well as other facilities interconnected at the transmission level.

This step may also result in the identification of additional downstream PG&E distribution customers that would be impacted by transmission de-energization. Due to networked configuration of the transmission system, customers and entities impacted by a transmission PSPS event may not be directly located within the weather event footprint itself or in a high-fire threat area.

If a potential transmission PSPS scope is feasible from a grid operations standpoint while maintaining compliance with regulatory standards, then the benefits of de-energization of the potential transmission lines will be weighed against the public safety risks of de-energization. If it is determined that the benefits of de-energization outweigh the risks of de-energization of those transmission lines, PG&E will de-energize the identified transmission lines in coordination with the CAISO, after the decision has been approved by PG&E's Officer-in-Charge (OIC).

#### 5.3.1.2 Transmission Scoping Assessment and Scoping Dashboard

The Transmission PSPS Scoping Dashboard (example in Figure 5-5) is used to identify directly impacted transmission lines for inclusion in a PSPS event. This dashboard gathers and displays information related to Catastrophic Fire Behavior, Catastrophic Fire Probability of both Asset (CFPT - Asset) and Risk of Induction (CFPT - Induction), FPI, vegetation risk, the presence of open A-tags on any structure in a section of line or entire line that exceeds minimum FPI guidance and the presence of open vegetation HNI/HNU tags. This information is utilized to generate a list of directly impacted lines to be sent to ETEC for study. The results of this study are summarized in a presentation slide for the OIC at Decision B .

**Figure 5-5: Example Tx PSPS Scoping Dashboard**

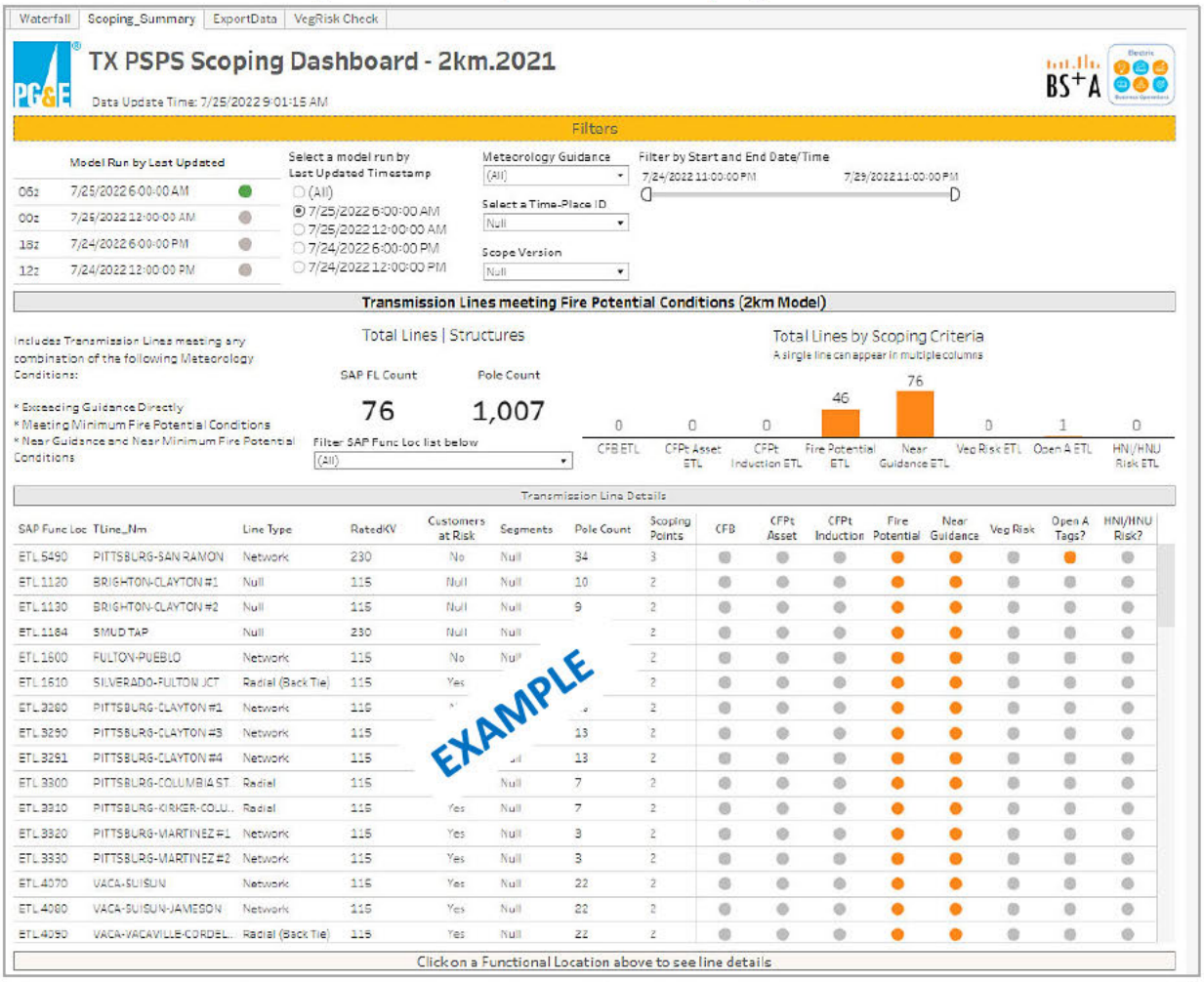


Figure 5-6 shows and example of the Transmission Line Scoping – OIC Summary.

**Figure 5-6: Example Transmission Line Scoping – OIC Summary**

**Transmission Lines Operated at Distribution Voltage**

For transmission idle lines or segments that are designed, constructed and maintained to transmission line standards, but are currently operated at distribution voltage serving distribution customer load (e.g., ETL.4317 METCALF-HICKS 1 & 2 115KV operating as a portion of the Hicks 2101 21 kV), the Transmission Asset Health Specialist (TAHS) will perform the Operability Assessment and provide a recommendation, based on applicable transmission PSPS thresholds, to the OIC for inclusion or exclusion in the overall scope of the PSPS event.

## 5.4 PSPS Viewer

The OIC, HAWC, Meteorology, the Operations Section, Planning Section, CSO, the PIO, and LNO use GIS systems information to inform the potential impacts of a PSPS event. The PSPS Viewer displays the circuits, premises, and facilities potentially - impacted by a PSPS event. The PSPS Viewer and PSPS Situational Intelligence Platform (PSIP, section 5.5) incorporate this information to support customer and stakeholder outreach and notifications.

The PSPS viewer is a tool used to translate meteorological scope to distribution circuit sections and to identify appropriate isolation devices to safely de-energize the distribution overhead electrical infrastructure in the area identified by meteorological team. This data is then integrated into PSIP to display and share the list of customers who will be affected when PSPS is executed for a specific area.

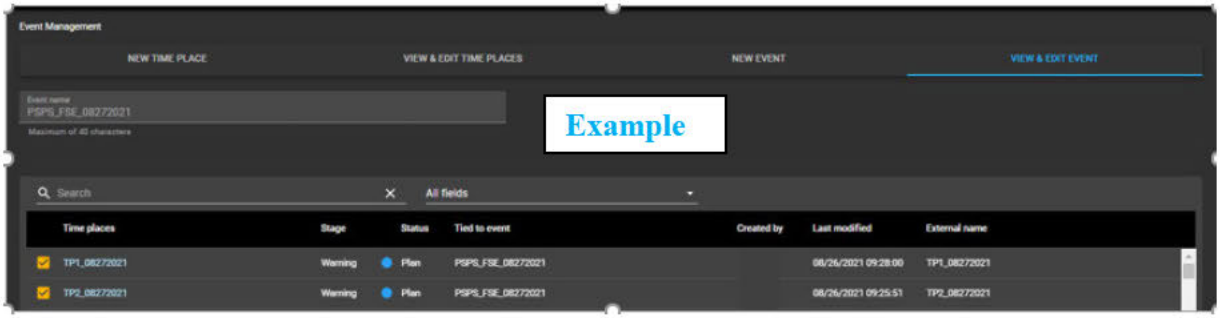
The PSPS Viewer identifies distribution customers and is based on the tracing and connectivity model in the Electric Distribution Geographic Information System (EDGIS). The PSPS Viewer can model abnormal configuration and temporary outages that are planned as a result of PSPS. The abnormal configuration includes the application of mid-feeder microgrids and substation temporary generation. PSPS Viewer is also used to incorporate potential impact to scope due to open P1/P2 tree tags, and Electric Compliance (EC) tags not addressed before de-energization.

The PSPS Viewer:

- Used for creating the scope of de-energization. This information is shared with PSIP to generate the De-energization Playbook and Restoration Playbook.
- Provides information about impacted distribution overhead circuit miles used towards restoration planning and estimating resource needs.
- Utilized to reflect the distribution feeders and associated customer impacts due to any Transmission PSPS action.

The PSPS Technical Lead and PSPS Technical Specialist are the primary users of the PSPS Viewer. Figure 5-7 shows an example of a PSPS Viewer screen.

**Figure 5-7: Example View of PSPS Viewer**



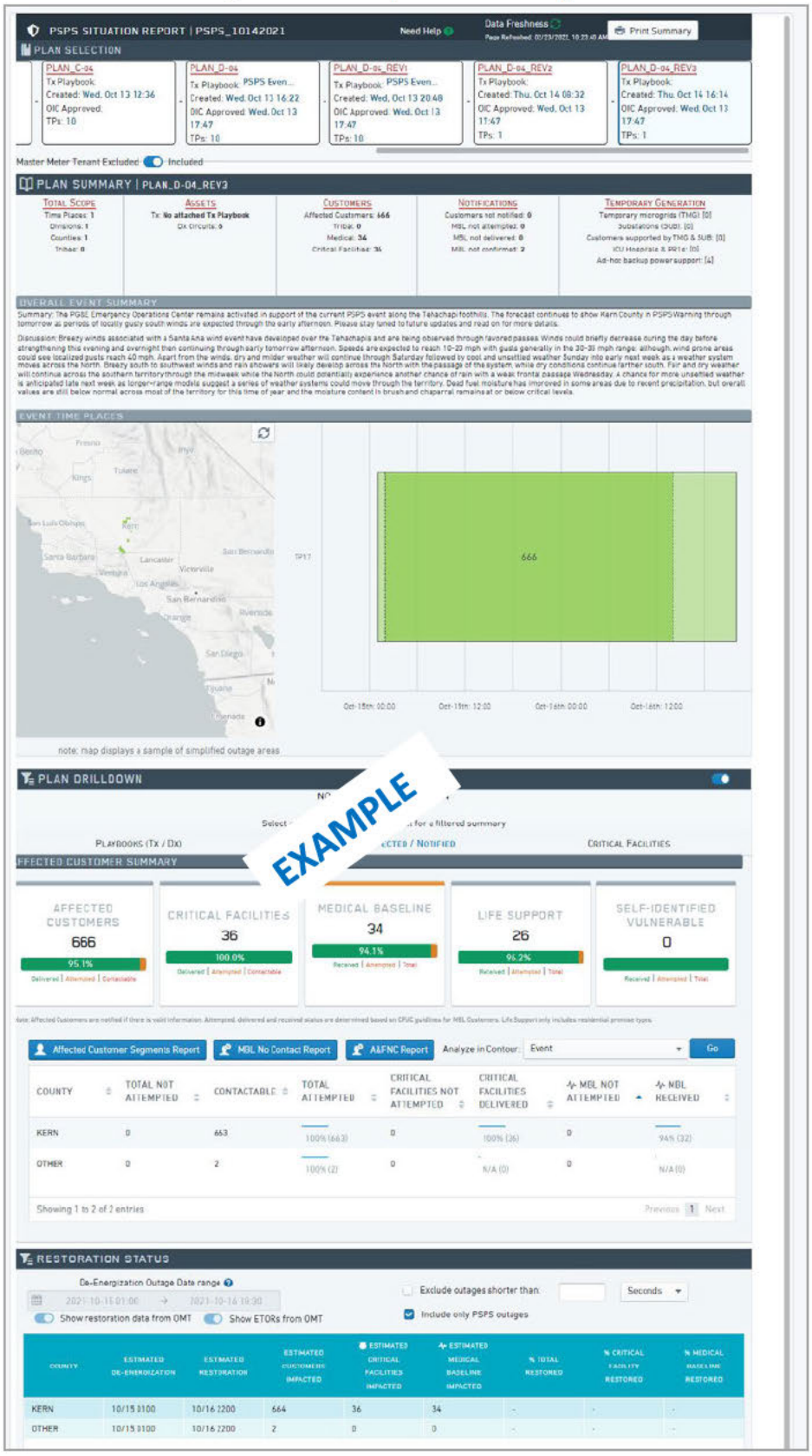

## 5.5 PSPS Situational Intelligence Platform

The PSPS Situational Intelligence Platform (PSIP) is built on PG&E's implementation of the Palantir Foundry system, which is currently connected to 50+ source systems that contain billions of records relevant to asset health analytics such as GIS, SAP, and CC&B.

The data platform does not replace the underlying source data systems of record, but rather provides a central platform to enable data integration/virtualization and access, support for data management and advanced analytics. PSIP is the central platform to inform PSPS decision-making, reporting, and communications. Major features include the following:

- Situation Report (example in Figure 5-8) - an event-based summary displaying impacts of de-energization from planning to restoration with the external situation report shared with external parties such as CAL FIRE and local emergency management agencies.
- Distribution Asset Health Specialist Dashboard – dashboard to view P1, P2 and Electric Compliance (EC) tags that should be included into scope.
- Customer Notifications – payloads generated and used for distribution to distribution, transmission, COL, and agency customers for notification.
- De-energization and Restoration Playbooks - generation of playbooks to be used for de-energization and restoration.
- Regulatory PSPS Reporting – repository of customers involved in PSPS events.

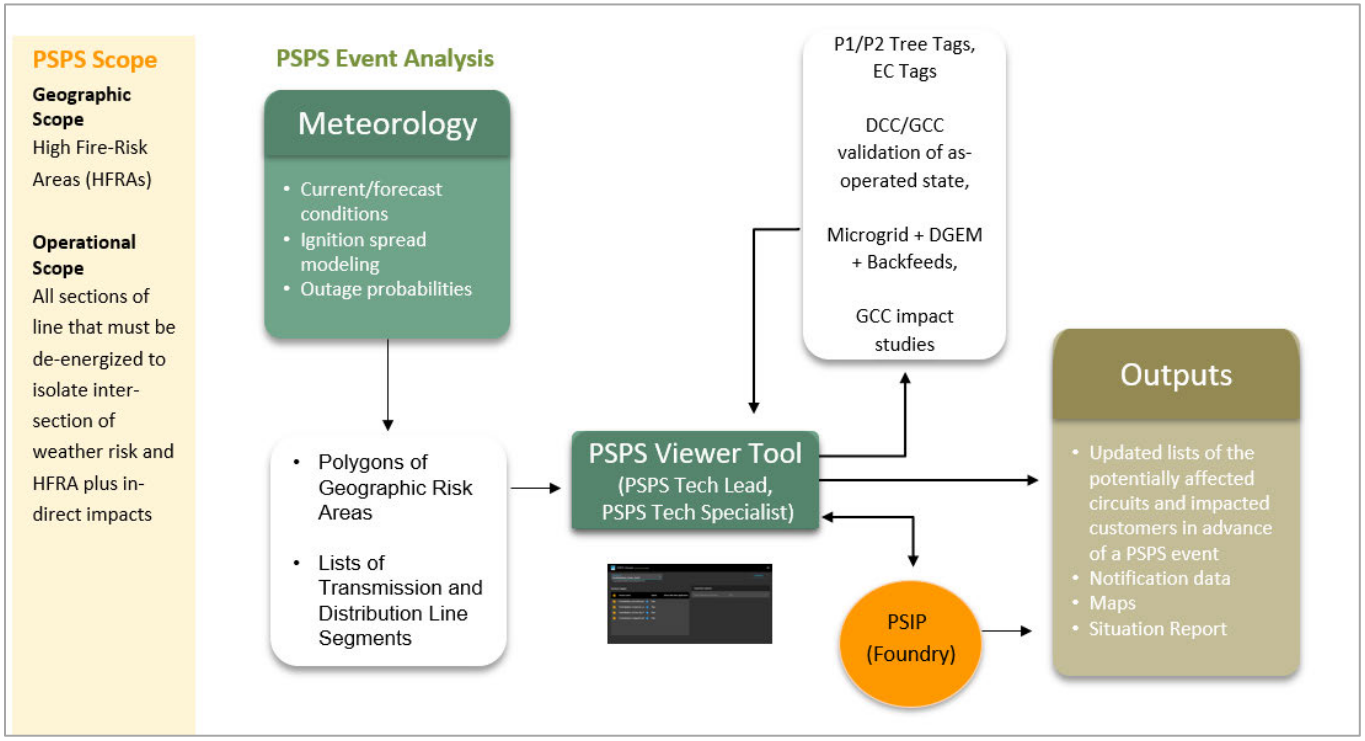
**Figure 5-8: Example Situation Report**



## 5.6 Data Sources and Flow of Information

The sequence in Figure 5-9 occurs as necessary in the EOC to enable the OIC and EOC Commander to make informed decisions during a PSPS event.

**Figure 5-9: Data Sources and Flow of Information for Distribution Lines**



# 6 Performance Indicators

Performance Indicators for PSPS are under development as a means of monitoring select metrics and being able to show how the program progresses and improves. PG&E metrics for PSPS in 2022 will include, at a minimum:

## 6.1 Customers Restored within 24 Hours

**Purpose:** Measure PG&E's progress towards improving restoration times and customer experience in a way that incentivizes improvements, while reducing variation from factors beyond PG&E's control. This provides leadership a clear view of both our progress and our opportunities for improvement.

**Description:** The percentage of customers who are restored within 24 hours after weather "all clear" is declared.

- This calculation excludes customers whose restoration was delayed because of fire damage to assets, access restrictions by emergency services, or by other factors that PG&E cannot control or meaningfully mitigate.
- A customer is "all clear" if weather conditions permit safe patrol and restoration of both the customer's distribution line and upstream transmission lines.

## 6.2 ETOR Accuracy

**Purpose**: Measure PG&E's progress towards improving the accuracy of Estimated Time of Restoration (ETOR) notifications.

**Description**: Percentage of customers whose restoration time meets criteria* divided by the number of customers who received an ETOR estimate**.

**Restoration criteria for customers restored must be within the following bounds: less than 2 hours before notification, or 15 minutes after the ETOR; no more than 2 updates following All Clear notification; and ETOR update sent before previous ETOR expiration.*

***ETOR estimates considered can be communicated during Warning, Power-Off, All Clear or ETOR update notifications*

## 6.3 Customers Notified Prior to Shutoff

**Purpose:** To improve accuracy of the notifications PG&E sends to PSPS affected customers in advance of their outage.

**Description:** The percentage of PG&E transmission and distribution electric customers (account holders) affected by PSPS who receive notifications in advance of PSPS outages. This excludes customers with no contact information and cancellation notifications.

## 6.4 Substation Temporary Generation Readiness Metric

**Purpose:** Keep safe-to-energize customers impacted by upstream transmission level PSPS outages energized.

**Description:** In 2022, based on the 10 year lookback data and the established scope criteria analysis, no substations meet the criteria that would warrant temporary generation reservation and pre-staging. If a substation(s) were to come into scope an early "no regrets" decision would be required to deploy "on demand" temporary generators and resources.

## 6.5 Automated Distribution Sectionalization Metric

**Purpose:** Reduce the number of customers impacted during future PSPS events affecting the distribution system.

**Description**: The number of new, automated distribution sectionalizing devices installed and SCADA commissioned by the start of peak PSPS season on 9/1/2022. The target for 2022 is 100 new devices.

## 6.6 Temporary Distribution Microgrids Metric

**Purpose:** Increase quantity of temporary distribution microgrids with pre-installed interconnection hubs available to energize "main street" corridors with critical and shared community services during PSPS events relative to 2022.

**Description:** The total quantity of distribution microgrid PIHs ready to operate during PSPS events in 2022 minus the total quantity of distribution microgrid PIHs ready to operate during PSPS events in 2021. This is an end-of-the-year metric.

## 6.7 Transmission Line Switches Metric

**Purpose:** PSPS events can cause significant disruption to communities and customers. PG&E plans to continue implementing our transmission segmentation strategy to minimize the number of customers impacted during future PSPS events by narrowing down the segments of a circuit to de-energize.

**Description:** Prioritization of new or upgraded transmission sectionalizing devices is based on circuit HFTD location, likelihood of potential de-energization during future PSPS events (based on a study of ten years of weather data), and potential customer impact. Switch upgrades are typically identified at line junctions and substations, where operational flexibility may be most beneficial.

Execution of switch installations is dependent on constraints in addition to the overall program priority. Access challenges, permitting issues, clearance restrictions, etc. are key drivers of the order switches may be installed. Approximately, 200 additional switches are planned to be installed in the next three to five years.

## 6.8 Emergency Backup Generation at PG&E Facilities Metric

**Purpose:** Provide PG&E facilities with emergency backup power to support the entire campus for the purpose of longer duration PSPS events.

**Description:** This project has a commitment to have 52 high priority facilities completed by 12/31/2022. Through 12/31/2021, 37 facilities have been completed, and 15 facilities are targeted for completion by 12/31/2022. Completed facilities include emergency generation system capable of backing up the campus in its entirety. To achieve this, existing emergency generators, automatic transfer switches, and in most cases, main switchboards, are either being replaced or reconfigured to attain emergency generation back up for the entire site.

**For information on further metrics related to wildfire mitigation and PSPS** see 2022 Wildfire Mitigation Plan.

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# 7 Training and Exercises

## 7.1 Training Program

PG&E supports and conducts various training platforms throughout the year relating to and supporting PSPS response activity. This includes emergency preparedness, response principles, the *CERP*, and activity unique to a PSPS response.

PG&E's emergency preparedness and response efforts function on Incident Command System (ICS) principles. ICS and Standardized Emergency Management System (SEMS) training courses are assigned to all emergency and coordination center personnel. Each role in the EOC requires a specific set of SEMS/ICS training.

### 7.1.1 PSPS Specific Training Program

The PSPS Specific Training Program is designed to prepare personnel to respond to PSPS events. This training program delivers general PSPS specific content to all personnel who would respond to a PSPS event. Additionally, this training program includes tailored curriculum paths designed for specific roles in EOC which are only activated during a PSPS event.

Supplemental role specific training is designed and developed to address PSPS specific responsibilities all-hazards roles assume during a PSPS event. All PSPS specific trainings include activities and exercises to facilitate learning, performance support tools to support the learning inside and outside the learning environment, and knowledge and skill checks to ensure competence and instill confidence.

The training content is updated each year to reflect the improvements to PG&E's PSPS program. The delivery of PSPS specific trainings aligns with the start of the PSPS season and evaluated for effectiveness at the end of each PSPS season.

## 7.2 Exercise Program

PG&E's Emergency Preparedness & Response Strategy & Execution Exercise Team plans, coordinates, and conducts the exercises for PSPS and other hazards.

All exercises are designed and executed in accordance with Homeland Security Exercise and Evaluation Program (HSEEP) methodology and in alignment with the California Standardized Emergency Management System (SEMS), the National Incident Management System (NIMS), and the PG&E EP&R S&E Multi-Year Training and Exercise Plan (MYTEP). The conduct of emergency preparedness exercises also fulfills a key component of compliance with CPUC GO 166, specifically Standard 3, parts *a* and *b.*

In support of PSPS readiness, PG&E is required to conduct both a table-top exercise (TTX) and a functional exercise annually prior to July 1st.

Training for the PSPS program is updated and administered annually. For more information see *CERP* section 3.7, "Training and Exercises Program".

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# 8 Documenting PSPS Event

## 8.1 Internal PG&E

### 8.1.1 OIC Decision Records

The PSPS Recorder documents the OIC's decision to de-energize, update scope or re-energize using templates for OIC decision-making records. The Recorder is also responsible for taking notes during other meetings involving the OIC, as needed.

### 8.1.2 After Action Report

The After-Action Report (AAR) summarizes key information related to activation response and recovery activities. In accordance with *CERP* section 3.7.3, PG&E conducts an After-Action Review with responding incident leadership to identify strengths and opportunities for improvement. The responsible emergency management organization solicits and analyzes feedback from key leaders who supported the activation and then prepares a draft AAR.

The AAR includes an Improvement Plan with recommended corrective actions, which may be used to enhance existing procedures and planning future emergency response exercises.

Corrective Actions deemed significant (or which remain pending) may be submitted into the Corrective Action Program (CAP). CAP entries are assigned ownership from the responsible functional business units who actively track and evaluate to ensure completion.

## 8.2 External

In addition to data provided to external partners during an event, PG&E is required to file two forms/reports that document the PSPS event: Cal OES PSPS State Notification Form updates and CPUC De-energization Report.

### 8.2.1 Cal OES PSPS State Notification Form

The Cal OES PSPS Notification Form is the official notification of PSPS updates from a utility to the Governor's Office of Emergency Services. The form provides critical information on PSPS event timing and scope and is intended to provide a general summary overview of potential and current impacts in a timely manner. The online form, PDF form, instructions, past submissions, and Standard Operating Guide are all located on the Cal OES Public Safety Power Shutoff Hub (to access need ArcGIS online account).

The Situation Unit in the Planning Section is responsible for filling out the Notification Form and seeking review and approval from the Planning Chief and EOC Commander. At the beginning of the event, the Deputy Planning Section Chief or PSPS Deputy Planning Section Chief should request delegation of authority from the Planning Chief and EOC Commander. The Situation Unit will then submit the form and notify the Deputy Planning Section Chief or PSPS Deputy Planning Section Chief and PSPS Communications

Coordinator. The Deputy Planning Section Chief, PSPS Deputy Planning Section Chief, or delegated authority will call the Warning Center at Cal OES to confirm form submission and receipt for only the first submission.

The Cal OES Form should be submitted a minimum of twice a day (0700 and 1500), or in the event of a stage change or significant change in scope. A significant change in scope is an impact of +/- 10,000 customers and/or +/- a county.

- **Activating PSPS Protocols / Potential to De-energize** – IOU is considering a PSPS event due to incoming weather.
- **Decision to De-energize** – IOU has determined it will shut off power to some or all areas considered in the PSPS event.
- **De-energization Initiated** – IOU has begun process of shutting off power to areas determined in prior notifications/stages.
- **Re-energization Initiated** – IOU has determined that the weather event has subsided and has begun to assess power lines for re-energization.
- **Event Concluded** – IOU has re-energized all lines shut off due to PSPS event or no lines were shut off and the period of concern has passed.

Figure 8-1 shows example of the online form and Figure 8-2 shows example of the PDF form to be used as back-up for tech-down situations. Figure 8-3 is an example of the dashboard for a past online form submission.

**Figure 8-1: Example Cal OES PSPS State Notification Form (online form)**

**Figure 8-2: Example Cal OES PSPS State Notification Form (PDF form)**

Public Safety Power Shutoff (PSPS) State Notification Form

Please complete this form per instructions provided, save as a PDF, and send to the California State Warning Center at warning.center@oes.ca.gov. **Upon submission of form, call the CSWC at (916) 845-8911 to confirm receipt.** Please call with any questions.

# PSPS Notification Form

**Primary IOU representative contact information:**

**Secondary contact information:**

**Daily Executive Briefing Information:**

**Daily Operations Briefing Information:**

EXAMPLE

| 1a | RMATION |
|---|---|
| | Utility Submitting Report: Select Utility |
| | Date: Time: |
| | Event Name: |
| | Time Data Pulled: |
| | Submission Number: |
| | Weather Event Window: |
| | Link to Detailed GIS Data: |

**Cal OES to remove page before distribution**

**Confidentiality Notice:**

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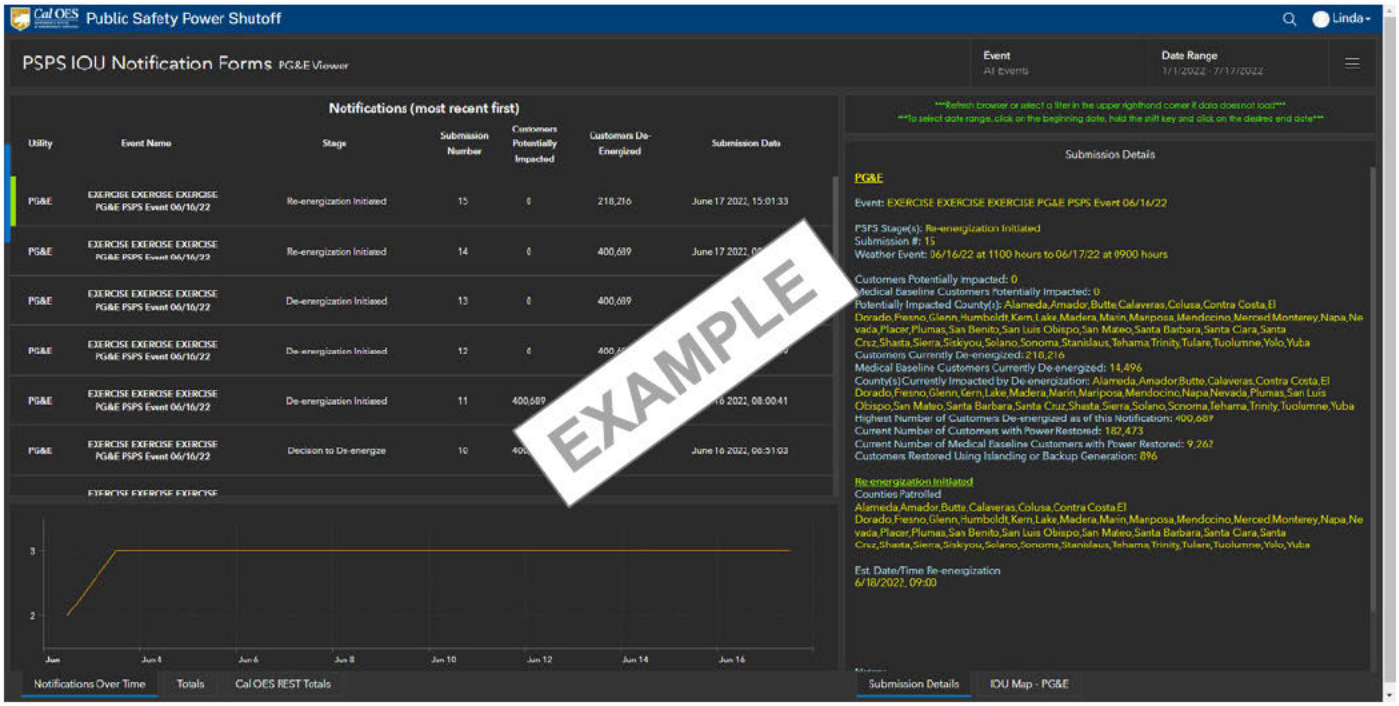
*Revised 05/19/2021* *For Official Use Only – FOUO*

**Figure 8-3: Example Cal OES PSPS Dashboard - PSPS IOU Notification Forms**




## 8.2.2 CPUC De-Energization Report

In accordance with CPUC Resolution ESRB-8,Decision (D.) 20-05-051 all Investor Owned Utilities (IOUs) are required to file a report with the director of the Commission's Safety and Enforcement Division (SED) no later than 10 business days following an event. This also applies to circumstances after high-threat events where the IOU provided notifications to local government, agencies, and customers of possible de-energization but no de-energization occurred.

The PG&E PSPS De-energization Report to the CPUC (also called the 10-Day Report), is broken into 12 sections, each of which is assigned to a PSPS workgroup. Each section has a respective job aid, which the teams fill out during the event and finalize shortly after restoration.

At the start of EOC activation, the PSPS PMO 10-day report lead will notify responsible individual(s) to maintain information necessary for the CPUC report. The sections of the report and responsible business owners are outlined in Table 8-1.

**Table 8-1: PG&E PSPS Report to the CPUC – Sections**

| Section | Section Name | Responsible Individuals |
|---|---|---|
| 1 | Executive summary | • PSPS PMO 10-day report Lead |
| 2 | Decision-Making Process | • PSPS PMO 10-day report Lead<br>• Meteorology and Fire Science<br>• PSPS PMO<br>• Risk vs Benefit Team |
| 3 | De-energized Time, Place, Duration and Customers | • PSPS PMO 10 day report Lead<br>• PSPS Ops Data Engineer |
| 4 | Damage and Hazards to Overhead Facilities | • Electric Incident Investigations |
| 5 | Notifications | • PSPS PMO Business Analyst<br>• CC PSPS Program Team<br>• CC WFM Business Analysis<br>• LROE (Liaison & Regulatory Operations & Engagement) |
| 6 | Local and State Public Safety Partner Engagement | • LROE (Liaison & Regulatory Operations & Engagement)<br>• LCE Planning and Operations<br>• Substation Construction Mgmt & Temp Generation<br>• PSPS Product Management (Portal) |
| 7 | Complaints & Claims | • CC PSPS Program Team<br>• LROE (Liaison & Regulatory Operations & Engagement) |
| 8 | Power Restoration | • Emergency Field Operations<br>• PSPS PMO |
| 9 | Community Resource Centers | • Community Resource Center Strategy Group |
| 10 | Mitigations to Reduce Impact | • PSPS Scoping and Process Team<br>• Substation Construction Mgmt & Temp Generation<br>• LCE Planning and Operations |
| 11 | Lessons Learned from this Event | • PSPS PMO<br>• Emergency Preparedness & Response<br>• Meteorology and Fire Science |
| 12 | Other Relevant Information (PG&E addition, not required by CPUC) | • PSPS PMO 10 day report lead<br>• Meteorology and Fire Science |
| | Officer Verification | • Regulatory Relations - CPUC Communications |
| | Appendix | • PSPS PMO<br>• Meteorology and Fire Science<br>• CC PSPS Program Team<br>• |

**NOTE:** The format of the CPUC De-energization Report is subject to change depending on regulatory requirements.

Prior reports can be accessed at external PG&E website.

### 8.2.2.1 R. 18-12-005 Phase 1 (D. 19-05-042) Requirements

In addition to the reporting requirements in Resolution ESRB-8, CPUC decision R. 18-12-005 Phase 1 (D. 19-05-042) requires the electric IOUs to provide further information in the 10-Day Report including:

- Decision criteria leading to de-energization, including an evaluation of alternatives to de-energization that were considered and mitigation measures used to decrease the risk of utility-caused wildfire in the de-energized area.
- A copy of all notifications, the timing of notifications, the methods of notifications and who made the notifications (the utility or local public safety partners).
- If the utility fails to provide advanced notification or notification according to the minimum timelines set forth in these Guidelines, an explanation of the circumstances that resulted in such failure.
- A description and evaluation of engagement with local and state public safety partners in providing advanced education and outreach and notification during the de-energization event.
- For those customers where positive or affirmative notification was attempted, an accounting of the customers (which tariff and/or AFN population designation), the number of notification attempts made, the timing of attempts, who made the notification attempt (utility or public safety partner) and the number of customers for whom positive notification was achieved.
- A description of how sectionalization, i.e., separating loads within a circuit, was considered and implemented and the extent to which it impacted the size and scope of the de-energization event.
- An explanation of how the utility determined that the benefit of de-energization outweighed potential public safety risks.
- The timeline for power restoration (re-energization) in addition to the steps taken to restore power as required in Resolution ESRB-8.
- Lessons learned from the de-energization event.
- Any recommended updates to the guidelines adopted in Resolution ESRB-8 and this decision (19-05-042).

### 8.2.2.2 R. 18-12-005 Phase 2 (D. 20-05-051) Requirements

CPUC decision R. 18-12-005 Phase 2 (20-05-051) adds further requirements to the 10-Day including:

- Each electric investor-owned utility shall report on all potential or active de-energization events in its post event reports. These reports shall include a thorough and detailed description of the quantitative and qualitative factors it considered in calling, sustaining, or curtailing each de-energization event (including information regarding why the de-energization event was a last resort option) and a specification of the factors that led to the conclusion of the de-energization event.
- The electric IOUs should explain any false communications in the post event reports by citing the sources of changing data, and lessons learned should be incorporated

in ongoing de-energization communications and notifications to increase their accuracy and effectiveness.

- For any circuits that require more than 24 hours to restore, the utility should explain why it was unable to restore each circuit within this timeframe in its post event report.

#### 8.2.2.3 R. 18-12-005 Phase 3 (D. 21-06-034) Requirements

CPUC Decision 8.2.2.3 R. 18-12-005 Phase 3 (21-06-034) adds further requirements to the 10-Day including:

- In its post-event reports, each electric investor-owned utility must provide the number of customers notified in comparison to the number of customers de-energized.

For more information about reporting requirements in Phase 3, see Phase 3 Decision, Appendix A, section K.

#### 8.2.2.4 I. 19-11-013 PSPS Order Instituting Investigation (D. 21-06-014) Requirements

CPUC decision I. 19-11-013 PSPS Order Instituting Investigation (OII) (D. 21-06-014) adds further requirements to the 10-Day Report including:

- Quantification of public risk and harms and how they were weighed in decision making.
- Separate sections on PSPS as a last resort, alternatives considered, mitigation measures employed.
- Best Practices discussed in Joint-IOU Working Group Meetings.

For more information about reporting requirements in PSPS OII see CPUC Decision 21-06-014.

### 8.2.3 Pre-Season Report

The Pre-Season Report is an annual CPUC requirement for all IOUs. This report is to be filed annually by July 1st and used to describe "actions the IOUs have taken, or are taking, in preparation for potential PSPS events during the upcoming wildfire season."

For more information on requirements for the Pre-season Report see Phase 3 Decision section 6.11 and Appendix A, section K.

Within the report, PG&E provides information in response to specific question from the CPUC via:

- **Narrative Section:** Includes written responses to ten sections, which are drafted by subject matter experts (see Table 8-3, on page 8-10, for a list of the functional business units that drafted each section).
- **Excel File:** Includes quantitative data. A confidential and public version are provided to the CPUC.

PG&E filed their 2022 PSPS Pre-Season Report on July 1. The Report is also located on PG&E's website.

Table 8-2 shows section name and responsible individuals.

**Table 8-2: PG&E PSPS Report to the CPUC – PSDR**

| Section | Section Name | Responsible Functional Business Unit |
|---|---|---|
| Section I | Authorities | N/A |
| Section II | Community Resource Center<br>Table 1 CRC List<br>Table 2 CRC Recommendation<br>Table 3 CRC Metrics<br>Table 4 CRC Feedback<br>Table 5 CRC Challenges | Customer |
| Section III | Critical Facility Infrastructure<br>Table 6 CFI List<br>Table 7 CFI Requests | Customer |
| Section IV | PSPS Exercise Reports<br>Table 8 Exercise Summary<br>Table 9 Exercise Participants | EP&R |
| Section V | Education and Outreach<br>Table 10 Survey Summary<br>Table 11 Outreach Recommendation | Customer<br>Liaison |
| Section VI | Notification Plan<br>Table 12 List of Joint Efforts on AFN Notification Plan<br>Table 13 AFN Population Subset Notification Plan | Customer<br>Liaison<br>Portal |
| Section VII | PSPS Event Lessons Learned<br>Table 14 Lessons learned | PSPS PMO |
| Section VIII | High Risk Circuits<br>Table 15 High Risk PSPS Circuits | PSPS PMO |
| Section IX | Others<br>Table 16 JUPSPSWG Meetings | PSPS PMO<br>Customer, Liaison |
| Section X | Tree Overstrike | PSPS PMO<br>Meteorology |

## 8.2.4 Post-Season Report

The Post-Season Report (POSTSR) is a requirement by the CPUC for all IOUs to file annually by March 1st. In general, the purpose of the post-season reports is to describe all the actions the IOUs took with respect to calling PSPS events, including specific notifications and measures taken to mitigate the impacts of PSPS events on different customer segments and communities.

For more information on requirements for the Post-season Report see Phase 3 Decision section 6.11 and Appendix A, section K.

POSTSR is divided into four deliverables: POSTSR 1 – Narrative, POSTSR 2A (Geospatial GDB) & 2B (Non Geospatial Excel File) – Census Tract (Tabular and Non-Tabular), POSTSR 3 – Education and Outreach Cost Tracking, and POSTSR 4 – Complaint tracking.

Table 8-3 shows section name and responsible individuals.

**Table 8-3: PG&E PSPS Report to the CPUC – POSTSR 1**

| Section | Section Name | Responsible Individuals |
|---|---|---|
| 1 | Overarching Requirements<br>(No action required) | • N/A |
| 2 | Amendments to Post-Event Reports | • PSPS PMO 10-day report lead |
| 3 | Decision Specified Requirements | • Substation Construction Mgmt & Temp<br>• Generation<br>• PSPS Scoping and Process Team<br>• CC PSPS Program Team<br>• LCE Planning and Operations |
| 4 | SED Specified Requirements | • Meteorology and Fire Science<br>• Risk vs Benefit Team<br>• Emergency Preparedness & Response<br>• Liaison & Regulatory Operations & Engagement (LROE)<br>• CC PSPS Program Team |

POSTSR 2A is the geospatial data (shapefile / GDB) that has 15 statistics requested per tract per event. POSTSR 2B is the tabular data (non- spatial) request at census tract level in excel format with 8 metrics requested per census tract.

POSTSR 3 consists of 6 fields of information for each education and outreach program.

POSTSR 4 consists of 9 fields of information per complaint received.

### 8.2.5 Post-Season Data Report

The Post-Season Data Report (PSDR) is a data request from the Safety and Enforcement Division (SED). It is assumed that this will be an annual data request due by March 1st. In general, the purpose of the post-season data report is to aggregate all data points within the post-event reports, as well as additional data points requested from SED. This data report consists of 344 data points in 14 different tabs for each de-energization event in the calendar year prior (January – December).

Table 8-4 shows section name and responsible roles.

**Table 8-4: PG&E PSPS Report to the CPUC – PSDR**

| Tab | Section Name | Responsible Roles/Departments |
|---|---|---|
| 1 | Dashboard | • PSPS PMO 10 day report lead<br>• Various |
| 2 | Decision Factors | • Meteorology and Fire Science<br>• Risk vs Benefit Team |
| 3 | Distribution | • PSPS PMO 10 day report lead |
| 4 | Transmission | • PSPS PMO 10 day report lead<br>• PSPS Scoping and Process |
| 5 | Counties | • PSPS PMO 10 day report lead |
| 6 | Tribes | • PSPS PMO 10 day report lead |
| 7 | CONF – CFCI | • PSPS PMO 10 day report lead |
| 8 | Backup Power Resources | • Substation Construction Mgmt & Temp Gen |
| 9 | Mitigation | • PSPS Ops Data Engineer<br>• PSPS Scoping and Process |
| 10 | CRCs | • Community Resource Center Strategy Group |
| 11 | Damages | • Electric Incident Investigations |
| 12 | Hazards | • Electric Incident Investigations |
| 13 | Claims | • Claims Investigator Team<br>• PSPS PMO 10-day report lead<br>• CC PSPS Program Team |
| 14 | EM & EM exercises | • Emergency Preparedness & Response |

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# 9 Appendices

Appendix A, Acronyms and Glossary

Appendix B, Supporting Documents and Links

Appendix C, Catalog of Notification Scripts.

Appendix D, PSPS Portal – Instructions to Request Access

Appendix E, Example Customer Communication Materials for PSPS

Appendix F, PSPS Business Continuity

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# Appendix A. Acronyms and Glossary

## A.1 Acronym List

| Acronym | Meaning |
|---|---|
| AAR | After Action Report |
| ADA | American with Disabilities Act |
| AFN | Access and Functional Needs |
| BC(P) | Business Continuity (Plan) |
| BES | Business Energy Solutions |
| CAISO | California Independent System Operator |
| CAL FIRE | Department of Forestry and Fire Protection |
| Cal OES | Governor's Office of Emergency Services |
| CAP | Corrective Action Program |
| CCAs | Community Choice Aggregators |
| CCECC | Customer Contact Emergency Coordination Center |
| CERP | Company Emergency Response Plan |
| CEUA | California Emergency Utilities Association |
| CFILC | California Foundation for Independent Living Centers |
| CIMC | Corporate Incident Management Council |
| CRC | Community Resource Center |
| CRESS | Corporate Real Estate |
| CSO | Customer Strategy Officer (EOC) |
| CWSP | Community Wildfire Safety Program |
| DCC | Distribution Control Center |
| DMS | Distribution Management System |
| DSO | Distribution System Operation |
| Dx | Distribution |
| EDEC | Electric Distribution Emergency Center |
| EDGIS | Electric Distribution Geospatial Information System |
| EOC | Emergency Operations Center |
| EP&R SE | Emergency Preparedness and Response Strategy and Execution |
| ETEC | Electric Transmission Emergency Center |
| ETOR | Estimated Time of Restoration |
| FERC | Federal Energy Regulatory Commission |
| FIA | Fire Index Area |
| FORCE | Field Operations Resource Calculator ETOR |
| FPI | Fire Potential Index |
| FSS | Field Safety Specialist |
| GCC | Transmission Grid Control Center |
| GEC | Gas Emergency Center |

| Acronym | Meaning |
|---|---|
| GIS | Geographic Information System |
| HAWC | Hazard Awareness and Warning Center |
| HFRA | High Fire Risk Areas |
| HFTD | High Fire Threat District |
| I&I | Intelligence and Investigations |
| ICS | Incident Command Structure |
| ILC | Independent Living Center |
| IOU | Investor Owned Utility |
| IPW | Ignition Probability Weather |
| IOU | Investor Owned Utility |
| ITCC | Information Technology Coordination Center |
| LCE | Local Customer Experience |
| LNO | Liaison Officer (EOC) |
| MBL | Medical Baseline |
| MIC | Meteorologist-in-Charge |
| MW | Megawatt |
| NERC | North American Electric Reliability Corporation |
| NOAA | National Oceanic and Atmospheric Administration |
| OAFN | OES' Office of Access and Functional Needs |
| OE | Operations Engineer/Operations Engineering |
| OEC | Operations Emergency Center |
| OIC | Officer-in-Charge (EOC) |
| OMT | Outage Management Tool |
| OPW | Outage Producing Winds Index |
| OWF | Other Wildfire Areas |
| PIH | Pre-installed interconnection hub |
| PIO | Public Information Officer (EOC) |
| POL | Privately Owned Line |
| POMMS | PG&E's Operational Mesoscale Model System |
| PSIP | PSPS Situational Intelligence Platform |
| REC | Regional Emergency Center |
| RH | Relative Humidity |
| SBFW | Santa Barbara Wildfire Area |
| SCADA | Supervisory Control and Data Acquisition |
| SCE | Southern California Edison |
| SDG&E | San Diego Gas & Electric |
| SED | CPUC Safety and Enforcement Division |
| SIPT | Safety and Infrastructure Protection Teams |
| SIV | Self-identified Vulnerable |

| Acronym | Meaning |
|---|---|
| SOC | State Operations Center |
| STOEC | Substation Transmission Operations Emergency Center |
| T&D | Transmission and Distribution |
| T-Line | Transmission Line |
| Tx | Transmission |
| WIV | Wildfire Incident Viewer |

## A.2 Glossary

**Access and Functional Needs (AFN) populations:** Individuals who have developmental or intellectual disabilities, physical disabilities, chronic conditions, injuries, limited English proficiency or who are non-English speaking, older adults, children, people living in institutionalized settings, low income, homeless, or transportation disadvantaged, including, but not limited to, those who are dependent on public transit or those who are pregnant.

**After-Action Report (AAR**): A structured review or de-brief process of an event, focused on performance standards, that enables participants to discover for themselves what happened, why it happened, and how to sustain strengths and improve on weaknesses. After action reviews, informal or formal, follow the same general format, involve the exchange of ideas and observations, and focus on improving performance. (from NWCG)

**CPUC De-Energization Report**: In accordance with Resolution ESRB-8, all IOUs are required to file a report with the director of the Commission's Safety and Enforcement Division no later than 10 business days after an event. This also applies to circumstances after high-threat events where the IOU provided notifications to local government, agencies, and customers of possible de-energization though no de-energization occurred.

**Critical Facilities (Critical Infrastructure Customers)** "Critical Facilities" and "Critical Infrastructure" refer to facilities and infrastructure that are essential to the public safety and that require additional assistance and advance planning to ensure resiliency during de-energization events.

The CPUC adopted the following interim list of Critical Facilities and Critical Infrastructure, as aligned with Department of Homeland Security's Critical Infrastructure Sectors:

- Emergency Services Sector: Police Stations, Fire Stations, Emergency Operations Centers.
- Government Facilities Sector: Schools, Jails and prisons.
- Healthcare and Public Health Sector: Public Health Departments, Medical facilities, including.
- hospitals, skilled nursing facilities, nursing homes, blood banks, health care facilities, dialysis centers and hospice facilities.

- Energy Sector: Public and private utility facilities vital to maintaining or restoring normal service, including, but not limited to, interconnected publicly owned utilities and electric cooperatives.
- Water and Wastewater Systems Sector: Facilities associated with the provision of drinking water or processing of wastewater including facilities used to pump, divert, transport, store, treat and deliver water or wastewater.
- Communications Sector: Communication carrier infrastructure including selective routers, central offices, head ends, cellular switches, remote terminals and cellular sites.
- Chemical Sector: Facilities associated with the provision of manufacturing, maintaining, or distributing hazardous materials and chemicals.

**NOTE:** Some customers meet the criteria of being both a Public Safety Partner & Critical Facility, which include Emergency services sector, water and wastewater providers, communication service providers and emergency hospitals.

**CSV file:** Comma-separated values. A CSV file is a simple file format used to store tabular data, such as a spreadsheet.

**De-energization / De-energize:** The process of shutting off power.

**Distribution System Operation (DSO) Storm Outage Prediction Project (SOPP) Model**: The DSO SOPP is a modeling system (a collection of models) that is used to predict the number of transformer level and above Sustained Outages (SOs) per division for each of the next four days.

**Electric Compliance (EC) Tag/Notifications:** The SAP record that holds the data identifying a compelling abnormal or regulatory condition.

**Emergency Preparedness and Response Strategy and Execution (EP&R S&E**): An overarching organization that leads initiatives focused on enhancing company-wide emergency preparedness and response.

**Emergency Operations Center (EOC):** A central command and control facility responsible for carrying out the principles of emergency preparedness and emergency management, or disaster management functions at a strategic level during an emergency and ensuring the continuity of operation of a company.

**Fire Ignition Utility Threat Index:** a CPUC index that provides information about where utility caused fires of high consequence are probable based on topography, fuel types, and proximity to utility assets (similar basis of analysis for determining Tier 2 and 3 HFTDs.

**Fire Index Area (FIA):** Boundaries originally designated by the California Department of Forestry and Fire Protection and United States Forest Service for the purpose of establishing a fire-danger rating for that area based on local conditions. There are 109 rating areas in the Company service territory. A map of the FIAs can be viewed at http://wwwt2/Weather/EO/FireIndex/fireindex_2011.pdf.

**Fire Index Rating:** A rating used by fire agencies to determine the risk of fire and its likely behavior. Its calculation considers fuel moisture, humidity, wind speed, air temperature, and historical fire occurrence. These ratings are as follows:

- **R1** – Very little or no fire danger
- **R2** – Moderate fire danger.
- **R3** – When fire danger is so high that care must be taken using fire-starting equipment. Local conditions may limit the use of machinery and equipment to certain hours of the day.
- **R4** – Fire danger is critical. The use of equipment and open flames are limited to specific areas and times.
- **R5** – Fire danger is so critical that the use of equipment and open flames are not allowed at any time.
- **R5-Plus** – Fire danger is at R5 "plus" high risk weather trigger of strong wind.

**Fire Potential Index (FPI):** see Utility Fire Potential Index.

**First/Emergency Responders:** Individuals who, in the early stages of an incident, are responsible for the protection and preservation of life, property, evidence, and the environment, including emergency response providers. The term “emergency response providers” includes federal, state, and local governmental and nongovernmental public safety, fire, law enforcement, emergency response, emergency medical services providers (including hospital emergency facilities), and related personnel, agencies and authorities.

**Geographic Information System (GIS):** A system that integrates many types of data that are designed to capture, manage, analyze, and present geographic and spatial information.

**Hazard Awareness and Center (HAWC):** The physical operations center that monitors for wildfires. The HAWC leadership communicates and informs other PG&E Business Units and Executive Leadership about potential wildfire impacts.

**High Fire Risk Area (HFRA):** The HFRA Map considers catastrophic fire risk factors and utility infrastructure and was developed by considering incremental changes to the HFTD map boundaries to add areas where risk factors for the potential of catastrophic fire from utility infrastructure ignition during offshore wind events is higher.

**High Fire Threat Districts (HFTDs):** Per D.17-01-009, areas of the State designated by the CPUC and CAL FIRE to have elevated wildfire risk, indicating where utilities must take additional action (per GO 95, GO 165, and GO 166) to mitigate wildfire risk.

The districts have three levels:

- **Zone 1:** High Hazard Zones on the U.S. Forest Service-California Department of Forestry and Fire Protection (CAL FIRE) joint map of Tree Mortality High Hazard Zones.
- **Tier 2:** Elevated risk for utility-associated wildfires.
- **Tier 3:** Extreme risk for utility associated wildfires.

**High Impact Critical Customers:** Non-residential customers that may present a significant community impact in the event they experience a sustained outage but do not meet the CPUC criteria for a Critical Facility Customer.

**High Priority Vegetation Tag: "**Priority 1" and "Priority 2" vegetation tags which are created when trained vegetation inspectors identify trees or limbs that currently present elevated risk and must be worked on an expedited basis. Inspectors use Priority 1 tags for vegetation (i) in contact or showing signs of previous contact with a primary conductor; (ii) actively failing or at immediate risk of failing and which could strike PG&E's facilities; or (iii) presenting an immediate risk to PG&E's facilities. Inspectors use Priority 2 tags for vegetation that does not rise to the level of Priority 1 but has encroached within the PG&E minimum clearance requirements or has an identifiable potential safety issue requiring expedited work.

**KMZ file:** KMZ stands for Keyhole Markup language Zipped. KMZ is a file extension for a placemark file used by Google Earth Pro. It is a compressed version of a KML (Keyhole Markup Language) file. KMZ files are zipped .KML files, which make them easier to distribute with multiple users.

**Large Fire Probability Model for Distribution (LFPD):** The Large Fire Probability Model for distribution is the product of the probability of an outage (OPW Model) and probability of large fires (FPI Model). This model is used for PSPS events.

**Large Fire Probability Model for Transmission (**$LFP_T$**):** The Large Fire Probability Model for transmission is the product of the probability of an outage (OA Model) and probability of large fires (FPI Model). This model is used for PSPS events.

**Life Support Equipment:** A medical device to sustain life as defined by PG&E at https://www.pge.com/en_US/residential/save-energy-money/help-paying-your-bill/longer-term-assistance/medical-condition-related/medical-baseline-allowance/life-support-equipment.page

**Medical Baseline:** A PG&E financial assistance program for residential customers who have special energy needs due to certain qualifying medical conditions.

**Notification:** A communication intended to inform recipients of an unscheduled event for which contingency plans are in place.

**Officer-in-Charge (OIC):** PG&E maintains an Officer-in-Charge on-call list during wildfire season (typically June through October). Prior to a PSPS event, the on-call list will be used to identify the Officer-in-Charge for PSPS decision-making. The power shutoff decision will be made by the designated (OIC) with the support from Emergency Operations Center (EOC) leads.

**Outage Areas:** Shared via ESRI compliant GIS files per the Joint Letter issued by CPUC, Cal OES, CAL FIRE. OAs are provided as generalized polygons that display potential or actual circuit areas for de-energization in a PSPS event. Outage Areas are subject to change during the course of an event.

**Patrol Inspection:** In accordance with GO 165, a simple visual inspection of applicable utility equipment and structures that is designed to identify obvious structural problems and hazards. Patrol inspections may be carried out in the course of other company business.

**PG&E Operational Mesoscale Modeling System** (POMMS**)**: PG&E Operational Mesoscale Modeling System (POMMS) that provides a high-resolution numerical weather prediction system. Technosylva Suite of wildfire simulation software applications whose propagation and consequence outcomes are based on available fuels, topography, and weather; as well as building and population locational data. Technosylva simulation outputs are used as the source of spatially resolved fire severity data that is the primary input into the spatial consequence calculations.

**Playbooks** (PSPS):

- **De-energization Playbook:** The list of transmission lines and distribution circuits planned to be de-energized as part of the PSPS event. The De-energization Playbook has 4 main versions A, B, C, D, each playbook updates the previous. Version A is initial distribution impacts. Version B is distribution impacts including abnormal conditions and confirmed mitigations. Version C is distribution abnormal and transmission direct impacts, also including downstream impacted transmission lines. Version D is distribution abnormal and transmission direct and indirect impacts including System Protection. The letter “E” is not used for playbooks.
- **Restoration Playbook F:** The Restoration Playbook contains a list of all circuits by Division, impacted by the PSPS Event, along with the associated All Clear Zones for each circuit and the segment/patrol guides. Prior to the first OIC Decision F meeting, Meteorology provides a forecast of Distribution all clear times for each All Clear Zone in the Playbook, which are then input in the Playbook. At this stage, the Restoration Playbook is named “Restoration Playbook F01_Forecast”.

  When the first Decision F meeting occurs, the approved all clear times for each approved All Clear Zone are input in the Restoration Playbook, and the corresponding forecast times are grayed out. After the first OIC Decision F meeting, the Restoration Playbook F01_Forecast is then renamed “Restoration Playbook F01_Approved”. This playbook thus notes which areas have been approved for weather “all clears” and which areas will have to be approved in subsequent OIC Decision F meetings.

**Polygon** (meteorology)**:** When GIS software is an enclosed area, the resulting shape is known as a polygon. For PSPS, PG&E is providing potential outage areas through buffering protection zone portions of circuits as polygons in both shapefiles and KMZ files.

**Priority 1** (P1)**Condition:**

A Priority 1 condition is a hazard that meets any of the following scenarios:

- The vegetation is in contact or showing signs of previous contact with a primary conductor.
- The vegetation is actively failing or at immediate risk of failing and could strike the facilities.
- The vegetation presents an immediate risk to the facilities.

A PG&E Vegetation Management Priority 1 classification aligns with CPUC General Order (G.O.) 95, “Reporting and Resolution of Safety Hazards Discovered by Utilities,” Rule 18, Priority Level 1 definition as stated: An immediate safety and/or reliability risk with high probability for significant impact. Take action immediately, either by fully repairing the condition or by temporarily repairing and reclassifying the condition to a lower priority.

**Priority 2** (P2) **Condition:**

A Priority 2 condition is a hazard that meets at least one of the following scenarios:

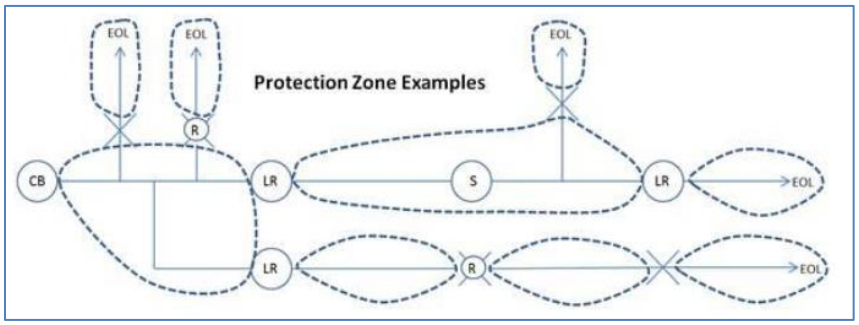
- A Priority 2 condition meets at least one of the following scenarios
- The vegetation has encroached within the PG&E minimum clearance requirements and is not in contact with a conductor

The vegetation has an identifiable integrity issue that does not classify as a Priority 1 condition, is likely to strike facilities, and may manifest into a risk before the next scheduled inspection.

A PG&E Vegetation Management Priority 2 classification aligns with and often exceeds the CPUC General Order (G.O.) 95, “Reporting and Resolution of Safety Hazards Discovered by Utilities,” Rule 18, Priority Level 2 definition as stated: A variable (non-immediate high to low) safety and/or reliability risk. Take action to correct within specified time period (fully repair, or by temporarily repairing and reclassifying the condition to a lower priority). Time period for correction to be determined at the point of identification by a qualified company representative (overhead: 0-59 months).

**Protection Zone:** The area between two protective devices (i.e., starts at the device that relayed and/or locked out or blown) such as a Circuit Breaker (CB), Line Recloser (LR), Switch (S), Fuse (X), Interrupter (I), TripSaver, and End of Line (EOL), and continues downstream until all of the next protective devices are reached which could include multiple branches of the circuit. See Figure 9-1.

**Figure 9-1: Protection Zones**




**Public Safety Partner:** First/emergency responders at the local, state and federal level, water, wastewater and communication service providers, affected community choice aggregators, publicly owned utilities/electrical cooperatives, the CPUC, the California Governor’s Office of Emergency Services and the California Department of Forestry and Fire Protection.

The term “emergency response providers” includes federal, state, and local governmental and nongovernmental public safety, fire, law enforcement, emergency response, emergency medical services providers (including hospital emergency facilities), and related personnel, agencies and authorities.

**PSPS Event:** The time period from the first public safety partner notified of a planned public safety de-energization to the final customer re-energized.

**PSPS Patrol:** After the severe weather has passed, a PSPS patrol consists of a visual assessment of assets to identify any condition that would prevent a circuit or portion thereof from being safely energized.

**Public Safety Partner:** First responders at the local, state, and federal level; water, wastewater, and communication providers; Community Choice Aggregators; affected Publicly Owned Utilities/electric cooperatives; CPUC; Cal OES; and CAL FIRE.

**Public Safety Power Shutoff Program (PSPS):** A Program to proactively de-energize distribution and transmission lines that traverse the high fire-risk area under severe weather.

**Re-energization / Re-Energize:** The process of turning the power back on.

**Red Flag Warning:** A warning issued by the National Weather Service to alert fire officials and firefighters of potentially dangerous and imminent fire weather conditions.

**Safety and Infrastructure Protection Team (SIPT)**: in-house team that can be used for pre-treatment, standby, and asset protection. These teams will engage at the operational level with internal and external. They provide inspection, assessment, and medical standby services for day-to-day high-risk work being performed in the system. They also provide field observations for PSPS events.

**Sectionalizing:** The process of creating segmented power lines by separating loads within a circuit.

**Section of Segments:** The portion of power line that has been bounded by sectionalizing devices or the end of the distribution line.

**Self-Identified Vulnerable:** a category for residential (AFN) to supplement Medical Base Line that is made up of customers that have self-identified vulnerable program.

**Shapefile:** a simple, non-topological format for storing the geometric location and attribute information of geographic features. Geographic features in a shapefile can be represented by points, lines, or polygons (areas).

**SOPP Model (**The Distribution System Operation (DSO) Storm Outage Prediction Project (SOPP) Modeling System): a modeling system (a collection of models) that is used to predict the number of transformer level and above Sustained Outages (SOs) per division for each of the next four days.

**Standardized Emergency Management System:** The system required by Government Code §8607 (a) for managing response to multi-agency and multi-jurisdiction emergencies in California. SEMS provides for a multiple level emergency response organization and is intended to structure and facilitate the flow of emergency information and resources within and between the organizational levels.

**Step Restoration:** When a substation is re-energized, and circuits are subsequently safely energized in segments as patrols continue to confirm areas are free of damage or hazards.

**Sustained Wind:** The average observed wind speed value over a two-minute period.

**System Hardening:** Contiguous sections of overhead facilities built to the wildfire rebuild design guidance (TD-9001B-009 rev 2) where the most prominent feature is the covered conductor and minimized exposed energized components.

**Transmission Impacts**:

- **Direct Impact (D):** Lines considered to have an unacceptable level of ignition risk, wildfire consequence or combination thereof and thus scoped for de-energization on a particular PSPS event.
- **Direct Impact Plus (D+):** Lines and substations identified using TARA to have lost connectivity to the grid given the set of direct impacts.
- **Indirect Impact (I):** Lines and substations that will be de-energized due to operational setups identified through Power Flow and Fault Duty studies to ensure safety, security or stability of our system given the set of Direct Impact and Direct Impact Plus lines and substations.

**Wildland Fire:** A fire in an area of combustible vegetation occurring in rural areas.

**Wind gust:** a rapid fluctuation of wind speed with variations of 10 knots or more between peaks and lulls, typically, determined by averaging observed values over a three-second period.

**Utility Fire Potential Index (FPI):** The Fire Potential Index Model, also referred to as the FPI Model or the Utility FPI Model, combines several factors including a fire weather index (wind, temperature, and humidity) with fuel moisture data (10-hour dead fuel moisture and live fuel moistures), and landcover type (grass, shrub/brush, or forest). The FPI Model outputs the probability of a small fire becoming a large fire. The FPI forecast describes the potential for fires to spread rated on a scale from “R1” (lowest) to “R5” (highest). The FPI Model is run at 2 x 2 km resolution and provides hourly forecasts out 4 days.

**Vulnerable Populations:** Individuals who have physical, developmental, intellectual disabilities; chronic conditions or injuries, are limited English proficient or non-English speaking; older adults, children, people living in institutionalized settings, low-income, homeless and/or transportation-disadvantaged (i.e., dependent on public transit) and pregnant women.

**Weather “all-clear”:** The Officer-in Charge gives approval to start restoration and can be issued for all impacted areas at once or for specific areas.

# Appendix B. Supporting Documents and Links

## B.1 Supporting Documents

The following documentation and procedures are supplemental to this Guidance Document and should be referenced as necessary for PSPS preparation and execution.

| Document Name | Owner |
|---|---|
| EMER 3001M, *Company Emergency Response Plan (CERP)* | EP&R S&E |
| PSPS-1000S, *Public Safety Power Shutoff (PSPS)* | PSPS Organization |
| PSPS-1000P-01, *Public Safety Power Shutoff for Distribution and Transmission* | PSPS Organization |
| EMER-3105M, *Wildfire Annex* | EP&R S&E |
| PSPS-4999-B001, *Mobile generator use during Public Safety Power Shutoff (PSPS)* | Temp Gen (to become Standard PSPS-4000S targeted publishing September, 2022) |
| TD-1464S, *Preventing and Mitigating Fires While Performing PG&E Work* | Electric Ops/HAWC |
| Customer Notifications | Customer Care |
| Wildfire Mitigation Plan (WMP) | Community Wildfire Safety Program |

## B.2 Links related to PSPS

| Topic/ SharePoint/ Webpage | Link |
|---|---|
| EOC Incidents SharePoint | Incidents (sharepoint.com) |
| EOC SharePoint for Data Retention | https://pge.sharepoint.com/sites/EOCResources/SitePages/EOC%20Training.aspx |
| EOC Learning Center | EOC Learning Center (sharepoint.com) |
| PG&E Utility Fire Potential Index (FPI) Forecast | To self-subscribe or unsubscribe to these notifications, navigate to the Subscribe/Unsubscribe page. |
| PSPS Landing Page | pge.com/psps |
| PSPS Event Updates Page | pge.com/pspsupdates |
| Wildfire Safety Landing Page | pge.com/wildfiresafety |

| Topic/ SharePoint/ Webpage | Link |
|---|---|
| Wildfire Safety Landing Page | pge.com/wildfiresafety |
| MBL Program | pge.com/medicalbaseline |
| PSPS Updates and Alerts | pge.com/en_US/residential/outages/publicsafety-power-shuttoff/psps-updates-andalerts.page |
| PG&E Disability and Aging (AFN) Page | pge.com/disabilityandaging |
| PSPS Support | pge.com/en_US/residential/outages/publicsafety-power-shuttoff/psps-support.page |
| Prepare for PSPS | pge.com/en_US/residential/outages/publicsafety-power-shuttoff/prepare/prepare-forpsps.page |
| Why PSPS Events Occur | https://www.pge.com/en_US/residential/outages/public-safety-power-shuttoff/why-psps-events-occur.page |
| Minimizing PSPS Events | pge.com/en_US/residential/outages/publicsafety-power-shuttoff/minimizing-pspsevents.page |
| Wildfire Recovery and Support | pge.com/en_US/residential/outages/publicsafety-power-shuttoff/psps-support.page |
| PSPS Event Reports | pge.com/pspsreports |
| Wildfire Mitigation Plan | https://www.pge.com/en_US/safety/emergency-preparedness/natural-disaster/wildfires/wildfire-mitigation-plan.page?WT.mc_id=Vanity_wildfiremitigationplan |

# Appendix C. Catalog of Notification Scripts.

**Catalog of Notifications Scripts**

1. T-66 – ADVANCED PRIORITY PARTNER NOTIFICATION
2. T-24-48 HOURS – WATCH
3. T-4-0 HOURS – WARNING
4. CANCELATION
5. DE-ENERGIZATION
6. UPDATE
7. INSPECTING
8. RESTORED

For current scripts see link to location with notifications folder.

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# Appendix D. PSPS Portal – Instructions to Request Access

## D.1 Internal PSPS Portal Access Job Aid

PSPS Portal Job Aid

PORTAL ENTERPRISE ACCOUNT—PGEGISPORTAL

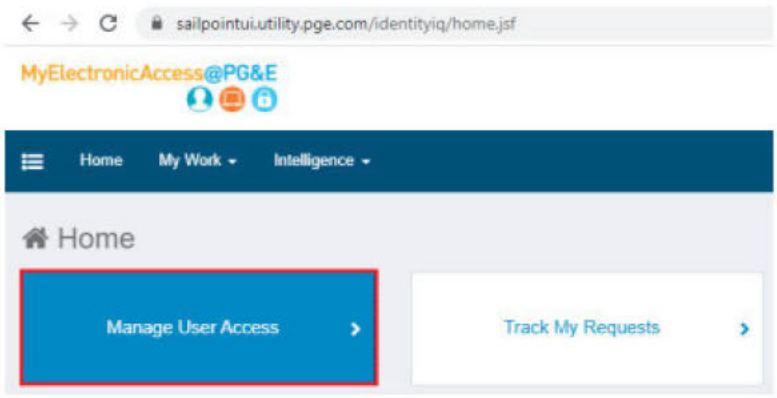
July 2021

**Purpose:** Provides step-by-step instructions to create PSPS Portal Enterprise Account and complete access set-up

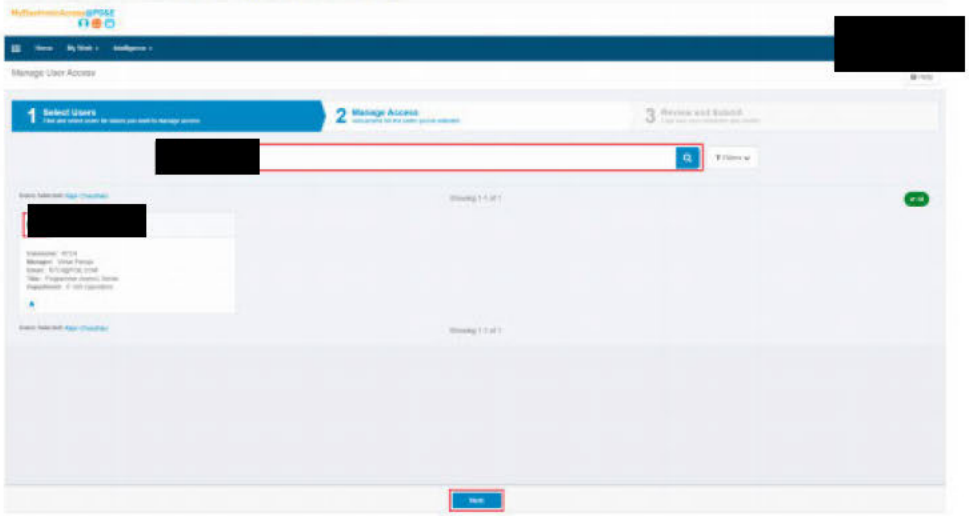
**PORTAL ENTERPRISE ACCESS REQUEST INSTRUCTIONS**

**1.** To request for Portal Enterprise access, on your web browser, go to SailPoint site (also known as MyElectronicAccess)

*Click Manage User Access

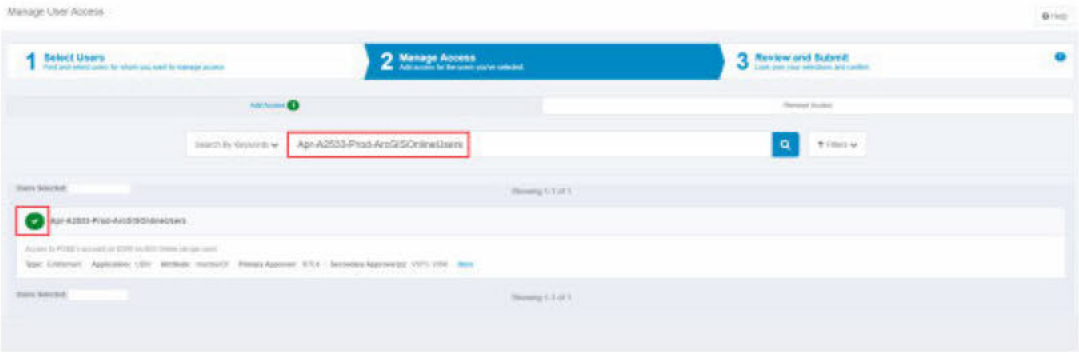



**2.** Select Users (Search for them if you're requesting access on someone else's behalf). The user's name should be on the top left corner. Click the check mark next to your name to turn the circle Green. A Blue 'Next' button will appear in the bottom of the browser window. Click 'Next' at the bottom of the screen



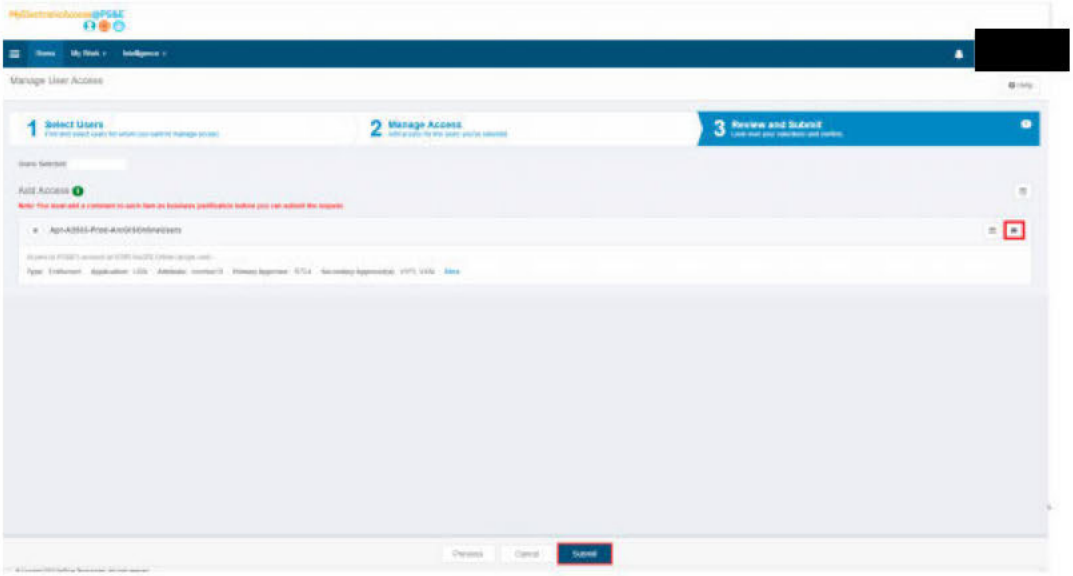

1

3. In the search box type keyword "**GeoHub-PROD-Creator**" and click search icon




Click the Check mark icon next to the "**GeoHub-PROD-Creator**" so that the circle turns Green, just like when you were selecting your name. This will also bring up the 'Next' button at the bottom of your browser. Please click the 'Next' button

4. Type in a Justification: to do this Click on the Comment Icon to the right of the "**GeoHub-PROD-Creator**" selection rectangle. Don't forget to **Save** the Comment.




Example Comment: "I need to be able to view the PSPS Impacted Area Maps, and Impacted Customer Lists in pgegisportal in order to provide support to Public Safety Partners, in an effort to assist the customers in a PSPS event."

5. Indicate the **Start Date** and **End Dates** for the access requested by clicking on the calendar icon next to the Comments button


You can track your request's progress through the MEA link at the top of the page under 'Track my Requests' (directly to the Right of 'Manage User Access').

***Note:*** *Your request will be routed to your supervisor first and then to site owners of pgegisportal within the IT GISCOE. For follow-up questions for the IT GSICOE, please contact* GeoMart OnM Support

## NEXT STEPS (once you get access to Enterprise Login)

1. Try logging into https://pgegisportal.maps.arcgis.com using the "**Sign In**" button on the top right corner of the web page


2. Once you click on sign in, you'll be directed to the Sign In options window from which pick up the "**Enterprise Login**" option


3

3. Clicking on the blue PG&E Enterprise Portal button may present the following two (or just one) windows in which you'll need to enter your 4 character LAN ID and network password to finally be able to login into the pgegisportal site.



**Note:** In case of any issues while logging into the pgegisportal site using your LAN ID and password and Enterprise login option, reach out to the GeoMart O&M support team by raising a ticket at the GeoMart Ops front door web page and choose Application as **AGOL - ArcGIS Online** and Request types as "**Other**" as shown in the screenshot given:


## ACTION ITEMS ON YOU:

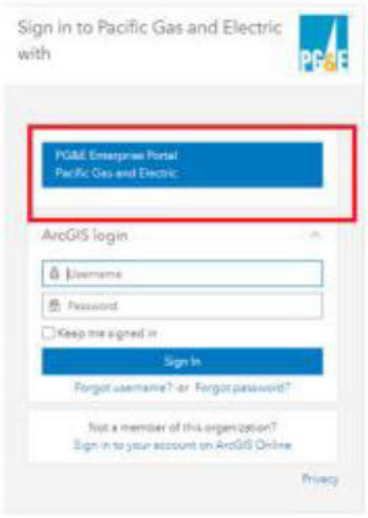
*Since '**Public Safety Power Shutoff Portal Members**' group does not exists in PGEGISPORTAL, we are unable to add you in that group but your Enterprise account in pgegisportal is invited to join the group, you are also made a member of new group '**PSPS Portal Members**' in PGEGISPORTAL.*

*Your PGEGISPORTAL Enterprise user ID role is changed to 'PSPS Portal Users' if your current role was 'Viewer', else it remains unchanged.*

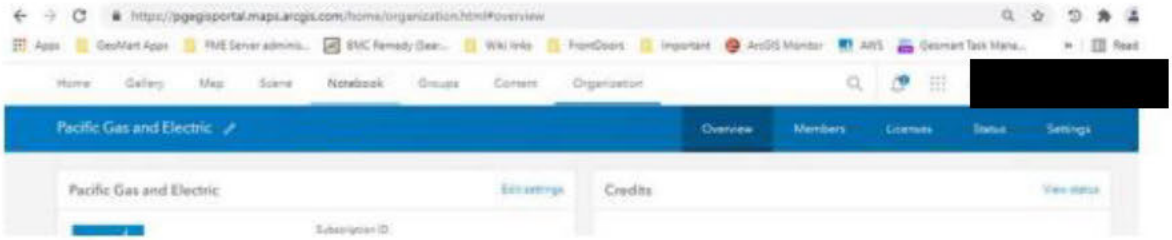
1. Login to https://pgegisportal.maps.arcgis.com/ with your Enterprise Account.
2. It should take you to this page, where you have to click Sign In option.


4

3. After clicking, you should get this window, where you have to click this blue button to login on "Enterprise"

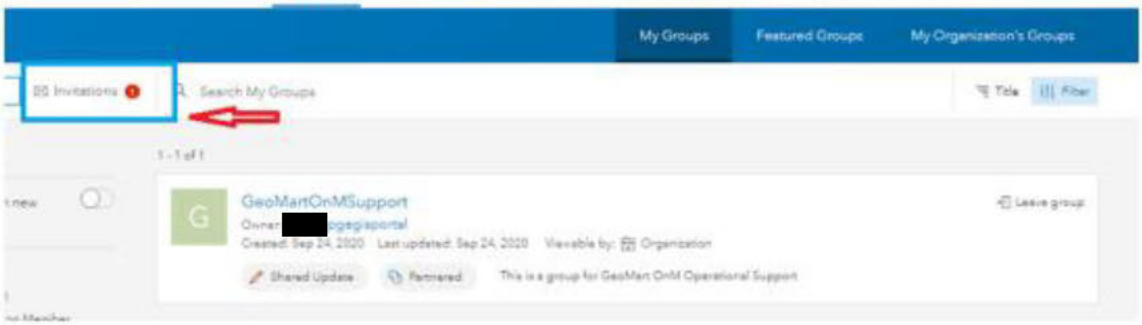



4. After clicking on this, you should land on the following page:

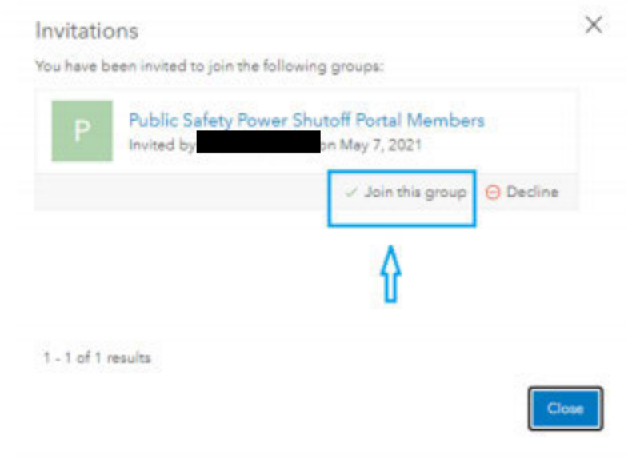



5. Go to "Groups" tab.


6. Inside My Groups, on the top left corner, You should see invitations, click on that.



7. After clicking "Invitations" following pop-up window should appear, click on join the group.




***Note:*** Please also verify if your **role** was "Viewer", it should have been **updated to "PSPS Portal Users"**

Your new enterprise account in PGEGISPORTAL should be member of all groups where your current PSPS portal account is member of (except those which does not exist in PGEGISPORTAL and groups out of PGEGISPORTAL, which means groups maintained by other organizations/ vendors).

8. Validate your group membership and if you think your group membership in PGEGISPORTAL is missing when compared to your respective PSPS portal, or in case of any issues kindly reach out to the GeoMart O&M Support team by raising a ticket at the GeoMart Ops front door web page

~ End of Instructions ~

6

## D.2 External PSPS Portal Job Aid

# Public Safety Power Shutoff Portal
## Registration Guide

Last Revised: November 2020

### STEP 1: Go to pge.com/pspsportal to Request Access


*Welcome screen on pge.com/pspsportal*

Once on pge.com/pspsportal, select **Request Access**.

### STEP 2: Complete Request Access Form

After selecting Request Access, complete the application form.

This form requests the following information: first and last name, email, phone number, title, organization name and organization type. Each line item on the form is required in order to process the request. A list of the organization types that are eligible for access is provided on the following page.

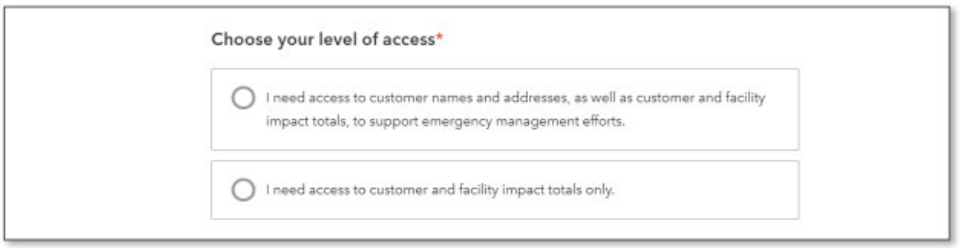

*View of the Request Access Form*

| Organization Types | Example |
|---|---|
| Federal Agency* | FEMA, US Coast Guard |
| State Agency* | Cal OES |
| County Agency* | Marin County |
| City Agency* | City of Santa Rosa |
| Tribal Agency* | Hoopa Valley Tribe |
| Community Choice Aggregator | East Bay Community Energy |
| Regional | Regional Transportation Planning Authority |
| Critical Facility<br>■ Emergency Hospital | Community Regional Medical Center |
| ■ Publicly-Owned Utility | Alameda Municipal Power |
| ■ Telecommunications Provider | AT&T, Comcast |
| ■ Water/Wastewater Agency | East Bay Municipal Utility District |
| ■ Transportation Agencies | BART, Amtrak |

**Eligible to receive confidential customer information*

## STEP 3: Agencies to Determine Level of Access Required

For agencies and tribes to complete the registration process, users must select the level of access required during PSPS events. Those that require confidential customer information, such as names and addresses, to support emergency management efforts will need to review and accept the online agreement. Accepting the online agreement assumes reasonable safeguards will be implemented to protect the information. If confidential customer information is not needed, users will still be able to view aggregated summary-level information and will not be required to accept the online agreement.




*Level of Access Selection Screen from PSPS Registration Process*

*Some of the measures included in this document are contemplated as additional precautionary measures intended to further reduce the risk of wildfires. CCC-1120-2971.*

Below is an overview of the information provided for the two levels of access:

**1 Detailed Customer and Critical Facility Information**

- Affected customer details, including names and addresses
- Medical Baseline customer details, including names and addresses
- Critical Facility customer details, including names and addresses

**2 Customer and Critical Facility Summary Totals**

- Aggregated customer counts by jurisdiction and customer type

**Note:** Critical facility customers and community choice aggregators (CCAs) will be provided with a list of their site locations and aggregate summary-level information.

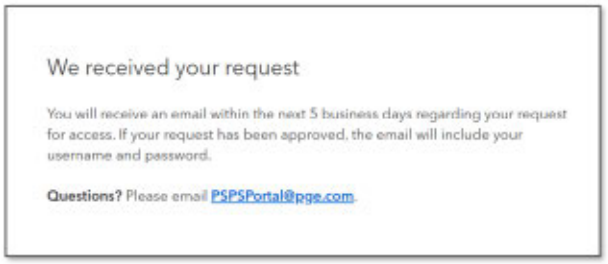
For those that only require aggregated customer and critical facility impact totals, hit **SUBMIT** at the bottom of the screen and proceed to Step 5. This will complete the access request process. For those that require customer names and addresses, please continue to Step 4.

## STEP 4: Online Agreement

For agencies that require customer names and addresses to support emergency management efforts, users will be required to read, agree to and electronically sign the online agreement. Once complete, hit **SUBMIT** at the bottom of the screen to finish the access request process.

## STEP 5: Confirmation Page

Upon submitting a request, you will be directed to a confirmation page, indicating your request was received. If your request is approved, you will receive an email from ArcGIS Notifications (notifications@arcgis.com) containing your username and a link to create your account password. Please use those credentials to log in to your account and access the PSPS Portal.




*View of Confirmation Page*

**For access questions or technical assistance, please email PSPSPortal@pge.com.**

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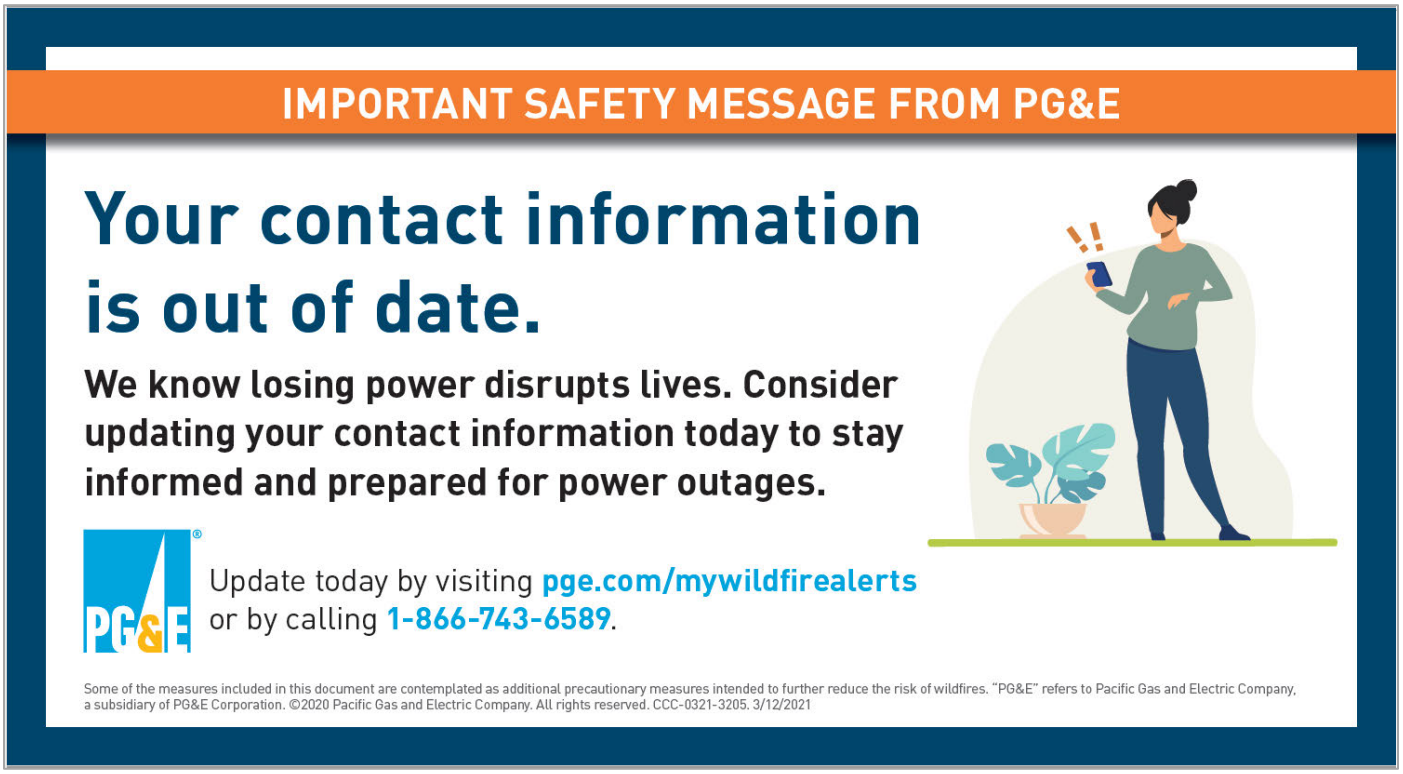
# Appendix E. Example Customer Communication Materials for PSPS

## E.1 Example CWSP PSPS Customer Postcard



**Update your contact information today in three easy steps.**

1. **Log in to your account** at pge.com/mywildfirealerts
   – OR –
   **Call us at** 1-866-743-6589
2. **Provide your phone number(s) and email address(es)** and/or an alternate contact who can reach you before an outage
3. **Select your language preference** for PG&E notifications

For translated support in over 250 additional languages, contact PG&E at: 1-866-743-6589.

Pacific Gas and Electric Company
P.O. Box 997320
Sacramento, CA 95899

# E.2 Example CWSP PSPS Medical Baseline Customer Door Hanger

PG&E

DATE:

⚠ IMPORTANT NOTICE:
Your power may be shut off for safety

**Your safety is our most important priority. Electricity at your address may be impacted today or tomorrow.**
**(see date above)**

Severe weather is forecast. For public safety, we may need to turn off power to prevent wildfires. This is called a Public Safety Power Shutoff (PSPS).

**ACTION REQUIRED:**
**We have been unable to reach you**

- Update your contact information and set your language preference for PSPS notifications at pge.com/mywildfirealerts or by calling 1-866-743-6589.
- Watch for notifications from 1-800-743-5002, PGECustomerService@notifications.pge.com or 976-33. Answer the phone or reply "1" to let us know you have received our notifications.

**Tip:** Save PG&E's number as a contact.

**Note:** If notifications go unanswered, we will continue to try to make contact.

We know it is a hardship on our customers any time the power is turned off for safety. We are working non-stop to make our system safer, and improve PSPS events for you and the communities we serve.

**For current PSPS information, visit:** pge.com/pspsupdates

See reverse for steps you can take to prepare →

We know how important power is for your medical and independent living needs.

**Take these steps to prepare:**

**Plan for medical needs** like medications that require refrigeration or devices that need power.

Call 911 immediately if you or a family member are experiencing a medical emergency.

**Build or restock your emergency kit** with flashlights, batteries, first aid supplies, food, water and cash.

**Keep your devices charged** and **identify backup power methods**. pge.com/backuppower

**Find your local Community Resource Center** to charge devices and get basic supplies. pge.com/crc

**Discover additional resources** such as portable batteries and information on financial assistance. pge.com/disabilityandaging

Visit the **Disability Disaster Access and Resources website** for additional support during a power shutoff. disabilitydisasteraccess.org

**Find resources that can help you stay safe** during an outage. pge.com/pspssupport

**FOLLOW US FOR UPDATES AT:**
@PGE4Me + @pacificgasandelectric

For translated support in over 250 additional languages, please contact PG&E at **1-866-743-6589**.

Some of the measures included in this document are contemplated as additional precautionary measures intended to further reduce the risk of wildfires. "PG&E" refers to Pacific Gas and Electric Company, a subsidiary of PG&E Corporation. ©2021 Pacific Gas and Electric Company. All rights reserved. CCC-0321-3317. 03/30/2021.

## E.3 Example CWSP PSPS Bill Insert

AN IMPORTANT SAFETY MESSAGE

How will you be notified of a Public Safety Power Shutoff?

At Pacific Gas and Electric Company (PG&E), our most important responsibility is the safety of the customers and communities we are proud to serve. That is why we may need to turn off power to prevent wildfires during severe weather. This is known as a **Public Safety Power Shutoff (PSPS)**.

**We know how disruptive it is to be without power.**

We are listening to our customers and finding ways to reduce the impact of PSPS events, without compromising safety. To learn more, visit pge.com/pspssupport.

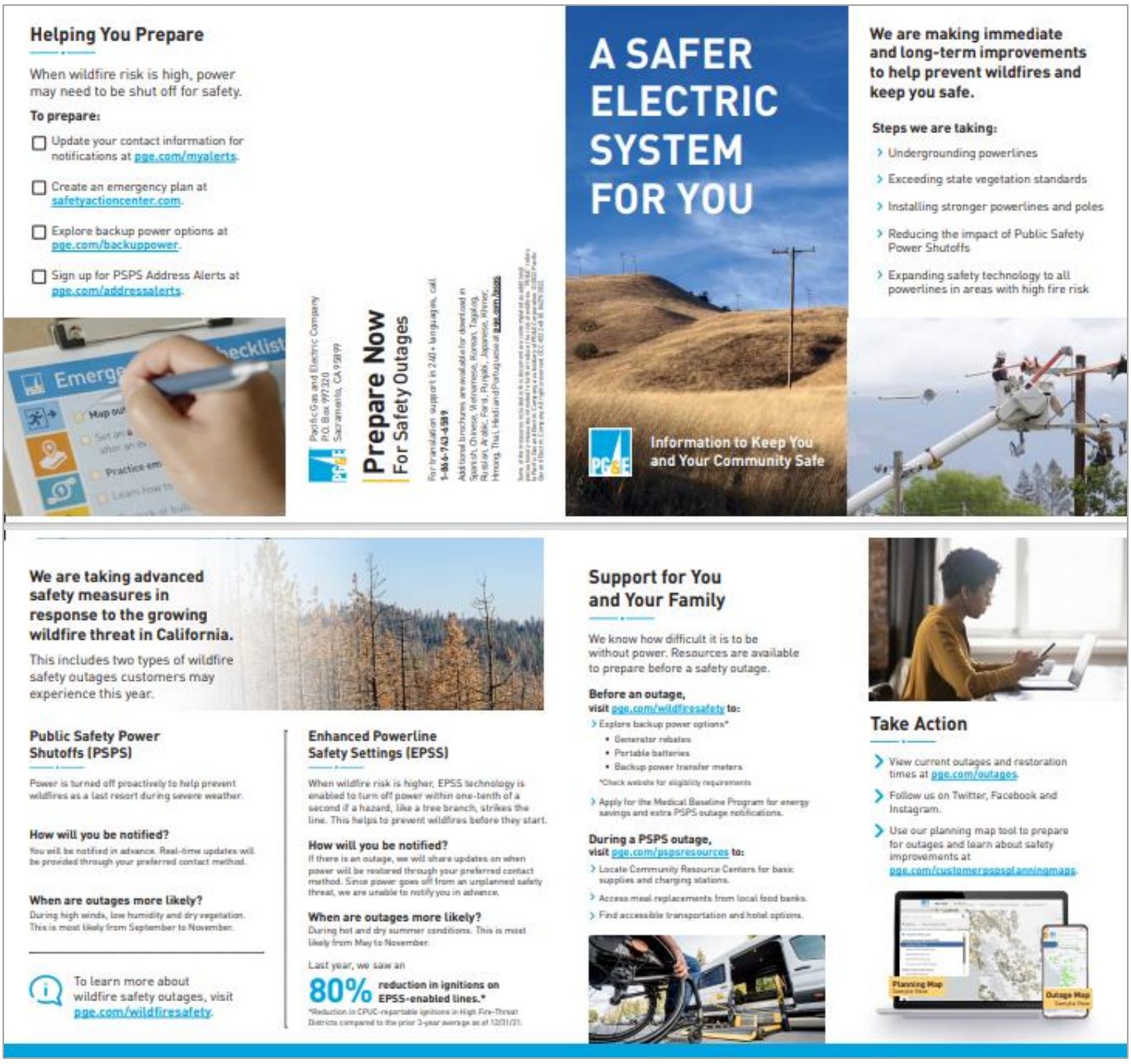
**Keep your contact information up to date so you are informed about PSPS events before and during outages.**

Visit pge.com/mywildfirealerts or call 1-866-743-6589 to update your information and select your preferred language for PSPS notifications. Notifications will be made through automated calls, texts and emails.

As a PG&E account holder, you will automatically receive notifications for your home and/or business. **If you would like to know about potential PSPS events** at other important addresses, such as work, school or family members' homes, consider signing up for Address Alerts at pge.com/addressalerts.

**For translated support in over 200 additional languages, contact PG&E at 1-866-743-6589.**

# E.4 Example CWSP PSPS Preparedness Brochure – General Version



## Helping You Prepare

When wildfire risk is high, power may need to be shut off for safety.

**To prepare:**

- ☐ Update your contact information for notifications at pge.com/myalerts.
- ☐ Create an emergency plan at safetyactioncenter.com.
- ☐ Explore backup power options at pge.com/backuppower.
- ☐ Sign up for PSPS Address Alerts at pge.com/addressalerts.



Pacific Gas and Electric Company
P.O. Box 997320
Sacramento, CA 95899

## Prepare Now
For Safety Outages

For translation support in 240+ languages, call 1-866-743-4589.

Additional brochures are available for download in Spanish, Chinese, Vietnamese, Korean, Tagalog, Russian, Arabic, Farsi, Punjabi, Japanese, Khmer, Hmong, Thai, Hindi and Portuguese at pge.com/psps.

# A SAFER ELECTRIC SYSTEM FOR YOU

Information to Keep You and Your Community Safe

## We are making immediate and long-term improvements to help prevent wildfires and keep you safe.

**Steps we are taking:**

- Undergrounding powerlines
- Exceeding state vegetation standards
- Installing stronger powerlines and poles
- Reducing the impact of Public Safety Power Shutoffs
- Expanding safety technology to all powerlines in areas with high fire risk

## We are taking advanced safety measures in response to the growing wildfire threat in California.

This includes two types of wildfire safety outages customers may experience this year.

### Public Safety Power Shutoffs (PSPS)

Power is turned off proactively to help prevent wildfires as a last resort during severe weather.

**How will you be notified?**
You will be notified in advance. Real-time updates will be provided through your preferred contact method.

**When are outages more likely?**
During high winds, low humidity and dry vegetation. This is most likely from September to November.

To learn more about wildfire safety outages, visit pge.com/wildfiresafety.

### Enhanced Powerline Safety Settings (EPSS)

When wildfire risk is higher, EPSS technology is enabled to turn off power within one-tenth of a second if a hazard, like a tree branch, strikes the line. This helps to prevent wildfires before they start.

**How will you be notified?**
If there is an outage, we will share updates on when power will be restored through your preferred contact method. Since power goes off from an unplanned safety threat, we are unable to notify you in advance.

**When are outages more likely?**
During hot and dry summer conditions. This is most likely from May to November.

Last year, we saw an

**80%** reduction in ignitions on EPSS-enabled lines.*

*Reduction in CPUC-reportable ignitions in High Fire-Threat Districts compared to the prior 3-year average as of 12/31/21.

## Support for You and Your Family

We know how difficult it is to be without power. Resources are available to prepare before a safety outage.

**Before an outage, visit pge.com/wildfiresafety to:**

- Explore backup power options*
  - Generator rebates
  - Portable batteries
  - Backup power transfer meters

*Check website for eligibility requirements

- Apply for the Medical Baseline Program for energy savings and extra PSPS outage notifications.

**During a PSPS outage, visit pge.com/pspsresources to:**

- Locate Community Resource Centers for basic supplies and charging stations.
- Access meal replacements from local food banks.
- Find accessible transportation and hotel options.

## Take Action

- View current outages and restoration times at pge.com/outages.
- Follow us on Twitter, Facebook and Instagram.
- Use our planning map tool to prepare for outages and learn about safety improvements at pge.com/customerresponseplanningmaps.

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# Appendix F. PSPS Business Continuity

In the event that the PSPS Business Continuity Plan is activated, please refer to the various Business Continuity Plans.

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