

# Attachment 1

## PG&E Response to October 25, 2021, Request for Information Submitted on November 8, 2021

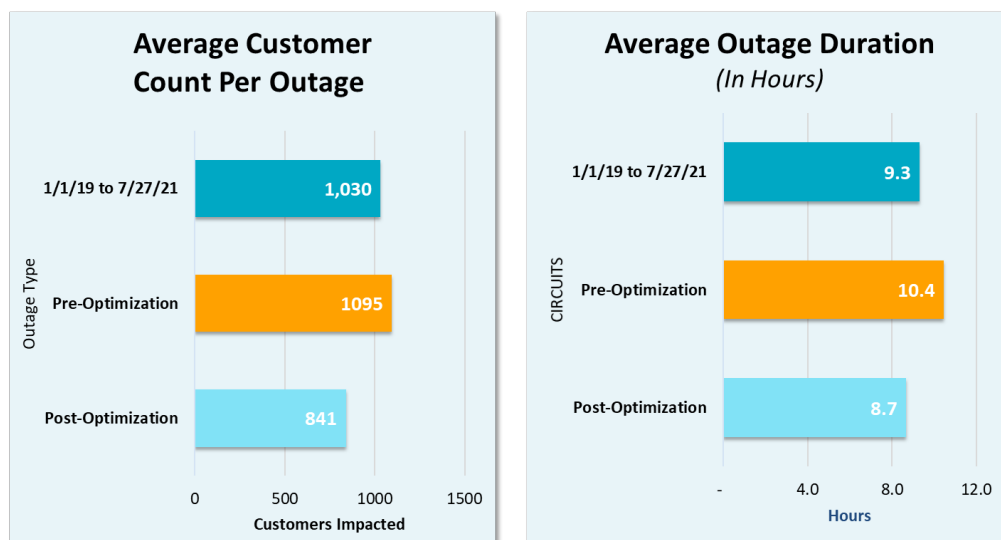
### 1. What level of analysis did PG&E conduct in advance of deploying Fast Trip settings regarding the potential impacts of Fast Trip on outage frequency and duration? How do the scope and duration of outages that have occurred align with estimates from any analysis conducted pre-deployment?

We know the hardship that outages have on our customers, and we did not take the decision to implement this new safety measure lightly. Given the extreme fire danger we saw earlier this year in our service area, with wildfires spreading outside of typical wind-driven events and on non-Red Flag Warning conditions, we knew we had to take every action available to reduce the risk of ignitions from our system for our customers. Fuel and terrain driven fires such as the Dixie, Monument, River, McFarland, Caldor, Tamarack and Fawn fires signaled the urgent need to act for the safety of the communities we serve.

This threat required bold new safety measures. Enhanced Powerline Safety Settings (EPSS) was undertaken with the understanding that it could potentially impact customer reliability but, given we had not taken this step for wildfire risk reduction before, we did not have an analysis on the potential reliability impacts.

Since the implementation of EPSS, we have performed a reliability analysis and compared performance from the perspectives of pre-implementation (normal configuration), initial implementation (pre-optimization of devices) and final implementation (post-optimization of devices). The results of device optimization have reduced the reliability impact relative to outage size and duration to pre-EPSS levels:

**FIGURE 1: EPSS Impact on Customer Reliability: Outage Size & Duration**

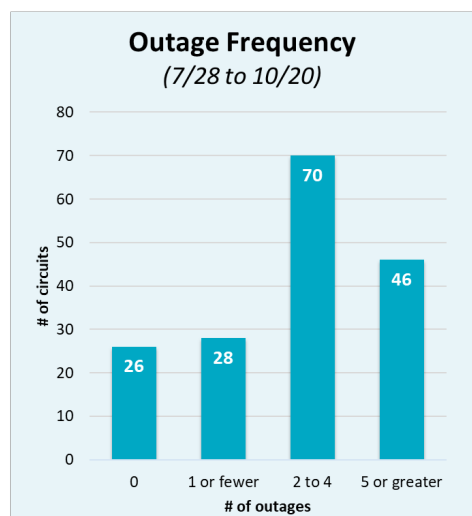


Data through 10/20/21

Relative to outage frequency, the reliability impact has not been evenly distributed across our service area. Since the EPSS program was initiated on July 28, 2021, 32% of circuits have

experienced either a single outage, or no outages, and 73% have experienced four or fewer (see **Figure 2**, below). For the customers and communities that have been more heavily impacted, we have a targeted plan to reduce the outage frequency including animal protection installation, additional vegetation clearing and component asset hardening.

**FIGURE 2: EPSS Impact on Customer Reliability: Outage Size & Duration**



Data through 10/31/21

Given the urgency created by drought and wildfire conditions this summer, we launched EPSS quickly, without adequately communicating about the potential impacts to our customers in advance. Since implementing the program, we have worked hard to correct this by engaging in information sharing sessions with our customers about the program, taking accountability for customer electric reliability impacts and informing customers about program improvements. We will continue to engage with customers and communities to ensure they are informed.

We have seen how effective this measure has been at mitigating potential wildfires.

Implementation of EPSS resulted in an approximate 46% reduction in CPUC-reportable ignitions in high-fire threat areas compared to the three-year historical average and an 80% reduction for circuits with EPSS settings enabled.<sup>1</sup>

**2. Describe PG&E's understanding of how its Fast Trip settings and the specific parameters used to configure devices differ from similar settings Southern California Edison Company and San Diego Gas & Electric Company are using or have used on their systems to prevent ignitions.**

In comparison to our peer California Utilities, our current and best understanding is that the fast trip capabilities PG&E has implemented are as fast, if not faster, resulting in rapid de-energization of a circuit protection zone when a fault is detected downstream. Our revised fast trip settings, based on detailed studies that inform the appropriate set points for each of our unique circuits as compared to using manufacturer's fast curve settings, now have the added benefit of reducing the number of customers impacted from an outage event while still

<sup>1</sup> Period between 7/28/2021 and 10/17/21 relative to 3-year historical averages

maintaining fast tripping that greatly reduces the potential of an ignition event. In addition, it is our current understanding that fast trip capabilities at PG&E are more broadly applied on our circuits, in terms of circuit miles, in comparison to our peers.

It is also our current and best understanding that based on the protective devices where we have enabled fast trip settings, 3-phase protection is provided in lieu of single-phase protection. Three-phase protection and operation eliminate the potential for backfeed conditions that traditional protection schemes do not detect as compared to single-phase fuse protection, in areas where 3-phase load exists (e.g., commercial, industrial loads). The 3-phase protection is a key element of our fast-tripping scheme, targeted to eliminate ignitions resulting from potential backfeed conditions.

In addition, we applied fast trip settings during the fire season, in specific Elevated (Tier 2) and Extreme (Tier 3) areas within the High Fire-Threat District (HFTD). It is our current understanding that other California Utilities apply fast trip settings primarily on days where the National Weather Service has issued a Red Flag Warning, or on other elevated fire condition days as determined by the respective utility.

We are continuing to engage with peer California Utilities, which may further inform the similarities and differences between our programs and may change our current understanding and approach moving forward.

**3. Describe the operational details, with timelines, for how PG&E will manage its Fast Trip settings approach and how objectives such as reduced scope, duration and frequency of outages are prioritized.**

Public safety, including eliminating catastrophic wildfires originating from our equipment, is PG&E's highest priority. We are encouraged by the results we are seeing from our comprehensive wildfire mitigation programs, including EPSS. This year, we have reduced our overall CPUC reportable ignitions in HFTD areas by 46% compared to the prior three-year average (data through 10/17/21).

Relevant operational details include:

- **July 28, 2021:** EPSS program initiated with "Hot Line Tag" (HLT) settings, or initial implementation (pre-optimization of devices), on 11,500 HFTD circuit miles (~45% of our Distribution overhead line miles in HFTD areas)
- **August to October 2021:** Optimized and coordinated EPSS circuit settings, or final implementation (post-optimization of devices), are engineered and implemented across the EPSS program scope.
  - Device optimization has resulted in the return of average outage duration and outage average customer impact to pre-EPSS levels.
  - Reallocation of resources, dedicated aircraft, enhanced inspections on worst performing circuits and operational coordination calls for response supported the reliability improvements
- **August to November 2021:** Bolstered customer outreach and support, including:

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- 14 customer webinars with impacted communities across 17 counties – including one “All Impacted Counties” webinar
  - Email notice and/or postcard sent to all customers who may be impacted
  - Sprinter mobile command vehicle on site of outages in select locations
  - Social media postings targeted to highly impacted communities
  - Letters to customers on highly impacted circuits
  - Engagement with local elected officials, hospitals, schools, water agencies, and telecommunication customers
  - Automated calls supporting enhanced reliability patrols and EPSS outages
  - County progress reports on EPSS program status, updates and reliability statistics (in progress)
- **October 21, 2021:** In preparation for the October 24 rainfall event, which impacted much of PG&E’s Central and Northern service territory, 166 of 170 EPSS circuits were returned to their “normal” system configuration as the risk of catastrophic wildfire reduced.
  - **October 28, 2021:** 40 of the 166 EPSS circuits that were disabled for the October 24 rainfall event were re-enabled on EPSS given drying fuel moisture levels and increasing risk of ignition potential and fire spread.

PG&E continues to monitor weather and fuel conditions to determine the appropriate system configuration, balancing customer reliability impacts and the risk of catastrophic wildfire. As the 2021 wildfire season closes, PG&E will return circuits to their pre-EPSS settings. However, should high wildfire risk remain, EPSS with optimized settings will remain enabled to reduce catastrophic wildfire ignition risk.

Future operational details that are in progress through Q1 2022 include:

- Development and installation of optimized EPSS device settings for all HFTD area circuits
- Development and refinement of localized, risk-informed criteria for activation and de-activation of EPSS settings in alignment with similar seasonal mitigation programs, such as when we disable automatic reclosing during wildfire season each year
- Execution of specific enhancements or mitigations designed to limit EPSS impacts when settings are enabled, including the installation of additional animal protection on our equipment, targeted vegetation clearing to prevent branch and tree fall-ins, and targeted asset hardening and inspections
- Proactive customer and community engagement based on feedback from 2021 engagement and outreach programs, including continuation of monthly reporting to the Commission as requested

Reducing the customer reliability impact from EPSS is a critical focus for our team, and our 2022 Wildfire Mitigation Plan (WMP) will include the relevant analysis and details regarding the 2022 EPSS program described above, based on the refinements and lessons learned from the EPSS program in 2021.

#### 4. What conditions or criteria will PG&E use to determine when to suspend use of Fast Trip in a particular location?

**5. What conditions or criteria will PG&E use to determine when to deploy Fast Trip in a particular location in the future?**

EPSS settings are suspended, or returned to normal configuration, based on localized fire spread risk, which is measured using PG&E's Fire Potential Index (FPI) Scale – specifically when the conditions are at R2 or R1 levels. EPSS settings are enabled when conditions are forecasted to be at R3, R4 or R5 levels.

FPI is a daily and hourly measurement tool used to drive operational decisions to reduce the risk of utility-caused fires.<sup>2</sup> The FPI model outputs the conditional probability from 0–100% that a fire will be small, large or catastrophic. This probability is translated into a fire danger rating scale from R1 (low) to R5 (extreme) based on breakpoints. These breakpoints were established by reviewing historical FPI percentiles as well as the FPI for historic fires in the PG&E territory from 2008–2020. This methodology is identical to how numeric outputs of the Energy Release Component or Burning Index from the federal National Fire Danger Rating System (NFDRS) are translated to fire danger ratings from low to extreme.

The fire danger rating scale is shown below compared to the NFDRS adjective rating; moving up the scale from R1 to R5 increases the forecasted conditional probability that a fire will grow to be larger than 1,000 acres.

**FIGURE 3: Fire potential index scale versus NFDRS rating and color scale**

| NFDRS SCALE | PG&E FPI SCALE |
|-------------|----------------|
| Low         | R1             |
| Medium      | R2             |
| High        | R3             |
| Very High   | R4             |
| Extreme     | R5             |

**6. How is PG&E identifying medical baseline customers, critical infrastructure providers, and public safety partners who may be impacted on the circuits where Fast Trip settings have been implemented?**

- What specifically tailored outreach has occurred to each of these groups?
- If none has occurred, what are PG&E's plans for specifically tailored outreach to each of these groups?
- What actions is PG&E taking to support these customers and minimize the impacts of outages? For example, is PG&E working with its Disability Disaster Access and Resources (DDAR) program and appropriately providing funding, and are local Independent Living Centers notified as soon as a Fast Trip outage occurs?

We began this program with an unwavering focus on safety and recognize that we previously did not have the necessary communications in place. Our customers and key stakeholders were

<sup>2</sup> See PG&E's 2021 Revised Wildfire Mitigation Plan (WMP) Initiative 7.3.2.4 (p. 502-507) for additional details

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rightly surprised and frustrated in locations where these settings resulted in more frequent and longer duration outages than they were accustomed to. To help remedy this, we bolstered our communications and conducted multiple rounds of outreach through a variety of channels to Medical Baseline customers, public safety partners and critical infrastructure providers throughout our service area.

In addition to notifying all customers potentially impacted by these outages via direct mail and email, Medical Baseline customers received additional outreach to help ensure they are aware of the potential for outages, why they are necessary and the resources available to them. Since 83% of EPSS-impacted Medical Baseline Program customers either live in high fire-threat areas or have experienced two or more Public Safety Power Shutoff (PSPS) outages, they are eligible for PG&E's resiliency programs that offer rebates for batteries and generators or permanent behind-the-meter battery solutions through the statewide Self-Generation Incentive Program. If they are also low-income, they are eligible for portable batteries.

**TABLE 1: Medical Baseline customers who have experienced at least one EPSS-related outage on one of the 170 EPSS-enabled circuits**

|   | EPSS-impacted MBL Customers | % of total  |
|---|-----------------------------|-------------|
| <b>Eligible for Resiliency programs</b><br>(reside in HFTD or experienced 2+ PSPS)                        | 11,496                      | 83%         |
| <b>Not eligible for Resiliency programs</b><br>(reside outside of HFTD and experienced fewer than 2 PSPS) | 2,418                       | 17%         |
| <b>Total MBL impacted population</b>  | <b>13,914</b>               | <b>100%</b> |

This month, we will be mailing a postcard to all Medical Baseline customers who have been impacted by EPSS and are most likely to qualify for one of our resiliency programs. It will provide information about the Generator and Battery Rebate Program, Self-Generation Incentive Program, Portable Battery Program and the Disability Disaster Access & Resources program. As of September 30, 2021, approximately 14% of EPSS-impacted Medical Baseline customers have participated in PG&E's resiliency programs. Of note, this number does not include customers who may have obtained a portable backup battery from CFILC's DDAR program as PG&E does not have access to customer and account level information for this program. PG&E will continue to offer these programs to eligible customers to mitigate the impacts of EPSS outages. Since EPSS outages are not planned and are typically shorter duration outages, back-up power obtained before an outage occurs is deemed to be the best solution for these customers. We do not, as a general practice, notify local Independent Living Centers about EPSS outages since the majority of outages are less than 8 hours.

**TABLE 2: Medical Baseline EPSS-impacted customers who have participated in resiliency programs**

| <b>Resiliency Program Participation</b>   | <b>MBL EPSS-Impacted Customers</b> |
|---|------------------------------------|
| Portable Battery Program                  | 1,583                              |
| Generator & Battery Rebate Program        | 85                                 |
| Self-Generation Incentive Program         | 226                                |
| <b>Total Program Participants</b>         | <b>1,894</b>                       |
| <b>Total MBL EPSS-impacted population</b> | <b>13,914</b>                      |
| <b>% participation</b>                    | <b>14%</b>                         |

We have also been working closely with critical facilities, including hospitals, water agencies and telecommunication providers, in the highest impact areas, and when feasible, have been providing backup power. To date, PG&E has provided back up power to two highly impacted hospitals. In addition, we have been providing public safety partners with key updates on the program, so they are able to better support the communities they serve before and during potential outages. We have also taken action to reduce the impact of outages for both critical facilities and Medical Baseline customers, as well as residential customers generally. Our focus on operational improvements to reduce the size, frequency and duration of EPSS outages has helped make them more similar to an unplanned outage that occurs under “clear sky” conditions due to a variety of factors.

As we move into 2022, we will be refining our outreach programs to provide more tailored information to various customer groups. We are also taking action to provide better support to these key customers and stakeholders to minimize the impact of these outages. Our customer resiliency programs were originally designed for PSPS and targeted to customers who either reside within the HFTDs or have experienced two or more PSPS outages. The majority of EPSS-impacted customers meet those criteria; however, approximately one-third of the population does not. PG&E will explore expanding resiliency program eligibility in 2022 to include EPSS-impacted customers who reside outside of HFTD areas and have not experienced two or more PSPS outages. Program support in 2022 will include:

- Partnering with our Community Based Organizations (CBOs) on customer outreach and education efforts focused on emergency preparedness. This will include training customers on making a plan in case of a prolonged power outage and educating them on the variety of resources and services available to support them.
- Providing batteries through our Portable Battery Program.
- Providing batteries through the CFILC's DDAR Program.
- Offering financial incentives for installing battery storage through our Self-Generation Incentive Program (SGIP).
- Offering generator rebates to customers who rely on well water, customers in our Medical Baseline Program and certain small businesses.
- Continuing our partnership with 211, a free, confidential calling and texting service available to support PG&E customers 24/7. 211 is available to connect individuals with local social services specific to their community.



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- Encouraging high fire-risk area customers reliant on power for medical or independent living needs to visit their local DDARC or [disabilitydisasteraccess.org](https://disabilitydisasteraccess.org) for assistance with emergency planning and resources.

**7. How is PG&E ensuring that customers who rely on electricity to maintain necessary life functions will be able to weather the full duration of a Fast Trip outage?**

- a) How many customers who rely on electricity to maintain necessary life functions, including for durable medical equipment and assistive technology, does PG&E estimate have been impacted by Fast Trip outages to date?**
- b) Does PG&E have a well-defined list of customers who rely on electricity to maintain necessary life function who are on circuits subject to Fast Trip settings?**
- c) If it does not have a list, what actions is PG&E taking to have a clear understanding of where these customers are located?**

We recognize the importance of maintaining reliable electric service, particularly for those who rely on it for medical equipment. That is why we are taking steps to reduce the impact of EPSS outages for all our customers and helping our most vulnerable customers with portable batteries and assistance programs. This is outlined further in the above response.

The closest proxy we have for customers who rely on electricity to maintain necessary life functions are our Medical Baseline customers as well as those who self-certify for Vulnerable Customer Status. The latter customer group can register if they, or someone in their household, have a serious illness or condition that could become life threatening if their electric or gas service is disconnected.

On the 170 EPSS-enabled circuits, there are a total of 20,062 Medical Baseline customers and 730 Vulnerable Customer Status members. Of that total population, 13,914 have been impacted by EPSS-related outages to date. This month, we will be sending an informational postcard to roughly 11,000 Medical Baseline customers impacted by EPSS or PSPS who are most likely to qualify for one of our resiliency programs. It will inform them of the backup power options available to them for planned and unplanned outages. We are also planning to conduct additional outreach in advance of wildfire season in 2022, with a focus on customers who rely on power for medical equipment.

Over the past several years, we have made a concerted effort to identify and enroll customers who may be eligible for the Medical Baseline Program and who may self-identify for Vulnerable Customer Status. A central focus on that outreach is working with community-based organizations to drive enrollment into these programs. However, these programs serve as proxies for customers who have medical needs and are not necessarily specific to customers who rely on electricity to maintain necessary life function.

**8. What post-Fast Trip outage outreach is PG&E conducting to customers on circuits that have been highly impacted by Fast Trip?**

- a) Does PG&E provide information on how to enroll in its medical baseline program and make customers aware of resiliency programs like DDAR and the portable back up battery program?**



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We began this program with a hyper-focus on protecting communities from the growing threat of wildfire. At the same time, we fell short in proactively communicating these changes to our customers who have borne these burdens.

To help improve our communications, both before and during outages to all potentially impacted customers, our efforts include:

- Improving the notifications that we provide to customers during outages, with more accurate information about when they can expect power to be restored.
- Increasing our outreach and communications to impacted customers, including via email and direct mail.
- Increasing our social media and local media outreach efforts to grow awareness, including posts on social media sites Nextdoor and Facebook.
- Utilizing paid advertising on local radio and social feeds.
- Creating an EPSS-dedicated web page with key information and resources  
([pge.com/epss](https://pge.com/epss))

We have also been holding public webinars since September for regions who have been frequently impacted by these outages. These events have fostered productive discussions on how we can better serve our communities while allowing customers to learn more about the new wildfire safety device settings and the steps we are taking to improve reliability. A full list of these communities, presentation materials and meeting recordings can be found at [pge.com/firesafetywebinars](https://pge.com/firesafetywebinars). From September through November, we completed 14 webinars which are reflected below.

**TABLE 3: Customer webinars for EPSS**

| Date     | Location                                   |
|----------|--|
| 9/23/21  | Santa Cruz County - Corralitos/Watsonville |
| 9/23/21  | Santa Cruz County - San Lorenzo Valley     |
| 9/29/21  | El Dorado County                           |
| 9/30/21  | Tuolumne County                            |
| 10/4/21  | Madera County                              |
| 10/5/21  | San Mateo County                           |
| 10/6/21  | Napa County                                |
| 10/7/21  | Lake County                                |
| 10/12/21 | San Luis Obispo and Santa Barbara County   |
| 10/18/21 | Amador, Calaveras and Mariposa County      |
| 10/19/21 | Placer, Nevada and Sierra County           |
| 10/20/21 | Marin and Sonoma County                    |
| 10/28/21 | Santa Cruz County                          |
| 11/2/21  | All Impacted Counties Webinar              |

In addition, we have been developing comprehensive progress reports for the most impacted areas, which outline the causes, duration and number of customers affected by recent outages.

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Additionally, these reports outline ongoing system updates and improvements that have already helped reduce the impact of these outages. For example, we have optimized all circuits in Santa Cruz County and the average duration of EPSS-related outages has dropped by 33%. These reports will be posted to PG&E's website at [pge.com/epss](http://pge.com/epss) as they are finalized.

Regarding the Medical Baseline Program, PG&E actively promotes it to customers who have a propensity to be qualified, but are currently not enrolled, through direct mail and digital marketing as part of our annual acquisition campaign. This is part of our established process to increase customer enrollment in the Medical Baseline Program. Customers can apply for the Medical Baseline Program by filling out the online application or mailing in an application at [pge.com/medicalbaseline](http://pge.com/medicalbaseline).

PG&E—along with Southern California Edison and San Diego Gas & Electric—have partnered with the state's In-Home Health Supportive Services (IHSS) and Regional Centers to provide Program Managers with quarterly training and collateral so they can promote the Medical Baseline Program to their recipients. The following table reflects year-over-year growth in enrollment:

**TABLE 4: PG&E Medical Baseline Program Enrollment Counts**

| PG&E Medical Baseline Program Enrollment Counts |         |
|---|---------|
| June 1, 2019                                    | 194,940 |
| June 1, 2020                                    | 198,532 |
| June 1, 2021                                    | 256,428 |

To further support customers this year, we are providing 5,000 more batteries, which is in addition to the 6,500 batteries that we provided last year, with over 11,500 batteries in total as part of the Portable Battery Program and CFILC's DDAR Program. The batteries will be provided to those in the aging and disabled populations who rely on power for medical or independent living needs and income-qualified Medical Baseline customers in high fire-threat areas. We encourage high fire-risk area customers interested in the program to visit their local independent living center or [disabilitydisasteraccess.org](http://disabilitydisasteraccess.org) for more information.

### **9. How has PG&E increased its staffing and contracting resources to ensure that outage inspections are occurring in a manner that allows for re-energizing lines quickly and safely?**

PG&E Meteorology provides Storm Outage Prediction Project (SOPP) Model forecasts to our operational organizations daily. The SOPP Model is a weather and outage data-driven system that provides minimum staffing levels to respond to outages (please see attachment "[Attachment 2\\_Q9\\_SOPP Model Forecast\\_20211029.pdf](#)" for staffing levels forecasted for a "clear sky" day without adverse weather). On a typical day, we plan staffing of approximately 60 troublemen and 35 crews system-wide to respond to routine emergencies.

For EPSS overall operations, resource levels did not change, but we increased the number of resources allocated to respond to outages. Immediately following implementation of EPSS, we collected outage response data. The average outage required three troublemen, two crews and one helicopter. Initially, there was an average of eight EPSS outages per day, so we allocated an additional 24 troublemen, 16 crews and eight helicopters to be available to support EPSS

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outage patrols. These allocated resources were in addition to the resources predicted in the SOPP Model (60 troublemen and 35 crews) for routine emergencies. In other words, we increased emergency response staffing by more than 40% as allocated resources for EPSS outages.

In early September, we adjusted the settings and coordination between devices and were able to reduce the scope of the outages and the strain on resources to conduct full circuit patrols. From our helicopter fleet, we expanded from eight to 16 dedicated standby helicopters to support the rapid patrols. Incident command structures were also put in place to respond to each EPSS outage, which resulted in efficiency gains. We estimate the additional resources required to respond to EPSS outages dropped to about 22% over SOPP staffing levels (12 troublemen and eight crews) after the implementation of the adjusted settings and coordination between devices.

**TABLE 5: Incremental Resource Allocation for EPSS**

|                    | Incremental Resource Allocation |                    |     |                     |     |
|--------------------|---------------------------------|--------------------|-----|---------------------|-----|
|                    | SOPP Clear Sky                  | Early EPSS Outages | %   | Later EPSS Outages* | %   |
| <b>Troublemen</b>  | 60                              | 24                 | 40% | 12                  | 20% |
| <b>Crews</b>       | 35                              | 16                 | 46% | 8                   | 23% |
| <b>Helicopters</b> | 0                               | 8                  |     | 16                  |     |

### 10. How is PG&E calculating and tracking costs associated with implementation of its Fast Trip settings?

PG&E has created unique orders for the purposes of tracking incremental costs for work associated with EPSS, including costs associated with customer communication, outage response and inspection, as directed in President Batjer's October 25, 2021 letter.

Because the costs for the EPSS program are tracked in unique orders, they are separated from other wildfire mitigation activity costs in our Fire Risk Mitigation Memorandum Account (FRMMA).

The EPSS workstream leads have communicated the use of the specific EPSS orders to the teams and crews working on the EPSS program to use for cost charging and time reporting.

### 11. Is PG&E including unplanned outages caused by Fast Trip in the annual reliability reporting requirements for System Average Interruption Duration Index (SAIDI) and System Average Interruption Frequency Index (SAIFI) as laid out in Decision 16-01-008? If not, please explain why.

Yes, as with all unplanned outages, EPSS-related outages will be included PG&E's electric reliability metrics (including SAIDI and SAIFI) per the annual reliability reporting requirements pursuant to Decision 16-01-008.

### **Ongoing Transparency and Accountability Reporting**

Beginning November 8, 2021, PG&E must provide monthly reports to the Director of the Commission's Safety Enforcement Division and serve them on the service lists for the Wildfire Mitigation Plan (R.18-10-007) and PG&E Safety Culture (I.15-08-019) proceedings. The reports shall include at a minimum the information listed below and the cadence and content of the reports may be augmented at any time at the discretion of the Safety Enforcement Division.

For every Fast Trip outage on a circuit:

- Total scope of customers impacted, include specifics for
  - Number of medical baseline customers impacted
  - Number of customers who rely on electricity to maintain necessary life functions impacted
  - Number of well water customers impacted
  - Number of schools impacted
  - Number of hospitals impacted
- Duration
- Cause of outage, if known
- Efforts undertaken to clear lines and restore power within 60 minutes

The total number of times that a circuit has experienced a Fast Trip event

### **Trends of scope and duration of outages on repeatedly impacted circuits**

PG&E herein submits its first monthly report,<sup>3</sup> as follows:

Please see "Attachment 3\_EPSS Outages Monthly Report\_20211108.xlsx," tab named "Outages 072821\_103121" for EPSS-related outages between July 28, 2021 and October 31, 2021. Please note:

- **Number of well water customers impacted:** We understand the Commission seeks insight as to the impact EPSS outages have on customers who rely on electricity to power a residential water well and thus, supply their homes or businesses with potable water. PG&E shares the Commission's interest in understanding which homes and businesses rely on well water; however, this data is not readily available nor housed within PG&E's customer databases, with the exception of customers who have applied for generator rebates based on the HFTD/well water eligibility requirement.
- **Efforts undertaken to clear lines and restore power within 60 minutes:** We would like to clarify that PG&E has targeted responding to, as opposed to restoring, outages in

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<sup>3</sup> Note: the data will be undergoing quality review and could be subject to change, which will be reflected in subsequent monthly reports.

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the HFTD within 60 minutes, in order to identify and mitigate public safety hazards potentially associated with the outage and allow for quicker notification and more efficient resource allocation from public agencies (e.g., local police and fire, CAL FIRE).

Starting in August 2021, PG&E has begun to modify our response approach to outages identified in the HFTD. These outages have been dispatched and managed in an urgent fashion, just like responses to other potential emergency situations. The aspirational goal is to do so within 60 minutes or less during fire season. We have modified our systems, processes, response resources, and reporting to monitor performance and work to continuously improve.

Since August 2021, PG&E has:

- Modified our outage system so outages occurring in the HFTD are identified and visible.
- Adjusted our dispatch procedures to manage outages occurring in the HFTD as an emergency response.
- Started to identify, train, and equip other workgroups that can assist in timely response to these types of outages in more remote areas.
  - Examples include our Power Generation employees, Safety and Infrastructure Protection Team (SIPT) crews and Field Communication technicians.
- Secured and pre-staged helicopter resources on standby to support timely patrolling in remote areas.
- Begun tracking and reporting on HFTD outage performance so that continuous improvement efforts may be applied in pursuit of our aspirational goal.

Please see “Attachment 3\_EPSS Outages Monthly Report\_20211108.xlsx,” Tab “EPSS Outages\_Circuit” for the total number of times that a circuit has experienced an EPSS event.

Please see “Attachment 3\_EPSS Outages Monthly Report\_20211108.xlsx,” Tab “EPSS Outage Trends - CESO” and Tab “EPSS Outage Trends – Duration” for trends of scope and duration of outages on repeatedly impacted circuits.