

PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

EXECUTIVE OFFICE

Resolution M-4856  
August 5, 2021

**R E S O L U T I O N**

**Resolution M-4856. Ratifies the Executive Director's Letter to Pacific Gas and Electric Company (PG&E) Directing PG&E to Comply with Certain Requirements Pertaining to PG&E's Implementation of Tree Overstrike Criteria in its Public Safety Power Shutoff (PSPS) De-Energization Decision-Making.**

PROPOSED OUTCOME:

- Ratifies and modifies in part the June 28, 2021 letter sent by the Executive Director of the California Public Utilities Commission (Executive Director Letter) directing Pacific Gas and Electric Company (PG&E) to comply with certain additional requirements pertaining to PG&E's implementation of tree overstrike criteria in its Public Safety Power Shutoff (PSPS) de-energization decision-making.
- Measures include requirements for additional noticing, public safety partner coordination, reporting, assessment of additional emergency resource deployment, and adjustments to or cancellations of tree overstrike criteria-based decision-making.

SAFETY CONSIDERATIONS:

- PG&E has an operational responsibility to implement PSPS as a tool to promote public safety by decreasing the risk of wildfire ignited by electric infrastructure. PG&E is required to deploy PSPS as a measure of last resort and justify why PSPS is deployed over other possible measures.
- This Resolution and Executive Director Letter ensure PG&E's compliance with PSPS requirements and its obligation to promote public safety in implementing tree overstrike criteria in its PSPS decision-making.

ESTIMATED COST: None.

**SUMMARY**

This Resolution ratifies the June 28, 2021 letter (Executive Director Letter) by the Executive Director of the California Public Utilities Commission (the Commission or CPUC) to Pacific Gas and Electric Company (PG&E), directing PG&E to comply with specific additional requirements with regard to PG&E's reliance on tree overstrike criteria in its public safety power shutoff (PSPS) de-energization decision-making during the 2021 wildfire season. These requirements include additional noticing, public safety partner coordination, reporting, assessment of additional resource deployment, and protocol for adjustments or cancellations of PG&E's reliance on tree overstrike criteria.

This Resolution does not exempt PG&E from complying with the Commission's PSPS Guidelines and other requirements adopted in the PSPS rulemaking, R.18-12-005, or other PSPS orders. Further, nothing in this Resolution alters the Commission's authority to impose additional requirements on PG&E associated with PSPS or tree overstrike criteria.

**BACKGROUND**

On January 26, 2017, PG&E was criminally convicted of violating the United States Pipeline Safety Act and obstructing an agency proceeding in association with its role in the deadly 2010 San Bruno gas pipeline explosion.<sup>1</sup> PG&E was sentenced to probation for a term of five years.<sup>2</sup>

After PG&E's probation began, the utility's equipment was involved in igniting catastrophic wildfires in 2017 and 2018.<sup>3</sup> The federal court judge overseeing PG&E's probation added probation conditions in April 2019, requiring the assessment of specific wildfire mitigation efforts including vegetation management and power inspections and maintenance.<sup>4</sup> In August 2020, the court added further conditions of probation requiring in-house management at PG&E to oversee workforce resources, and document the age and expected useful life of critical asset components.<sup>5</sup>

Following the September 2020 Zogg Fire that ignited in Shasta County, killing four people and destroying 204 structures, the court proposed additional new probation

---

<sup>1</sup> *United States v. Pacific Gas and Electric Co.*, Case No. 3:14-cr-00175-TEH, Dkt. No. 905, Sentencing Memorandum (N.D. Cal. Jan. 9, 2017); Dkt. No. 922, Judgment (Jan. 31, 2017).

<sup>2</sup> *Id.* at Dkt. No. 922, Judgment (Jan. 31, 2017).

<sup>3</sup> *Id.* at Dkt. No. 1277, Order to Show Cause Re Conditions of Probation (Dec. 29, 2020) at 2-4.

<sup>4</sup> *Id.* at Dkt. No. 1040, Order (Apr 3, 2019).

<sup>5</sup> *Id.* at Dkt. No. 1243, Order (Aug 7, 2020).

conditions relating to PG&E's PSPS decision-making.<sup>6</sup> The proposed probation conditions would have required PG&E to de-energize power lines during the 2021 fire season based on "tree overstrike" criteria to be incorporated in PG&E's PSPS decision-making.<sup>7</sup>

The Commission held a workshop on April 20, 2021 to provide transparency to PG&E's stakeholders and customers of the potential impact of the tree overstrike criteria.<sup>8</sup> The Commission noted its concerns before the federal court that the tree overstrike criteria could dramatically increase the scope, frequency, and duration of PSPS events in certain areas. At the workshop, PG&E stated that it planned to add tree overstrike criteria to its model used to determine which power lines to de-energize. The model uses wind and vegetation conditions like those precipitating the Zogg Fire.

On April 29, 2021, the federal court issued an order on the proposed conditions of probation regarding the tree overstrike criteria.<sup>9</sup> Rather than *requiring* PG&E to institute tree overstrike criteria in its PSPS decision-making, the federal court *recommended* PG&E take such criteria into account when determining which circuits to preemptively de-energize.<sup>10</sup>

In a letter addressed to the Commission dated May 20, 2021, PG&E indicated that it would incorporate tree overstrike into its PSPS decision-making. Furthermore, PG&E provided information showing that the inclusion of tree overstrike data in its implementation of PSPS would likely increase the frequency, duration, scope and scale of proactive de-energization, particularly in rural counties. In some counties, PG&E's projections showed that the frequency and duration of PSPS events could increase threefold.

In a letter addressed to PG&E dated June 28, 2021, the Executive Director highlighted the Commission's concerns about PG&E's planned use of tree overstrike criteria in its PSPS decision-making during the 2021 wildfire season, and set forth its expectations about PG&E's use of the same. In consideration of the Commission's concerns, the letter

---

<sup>6</sup> *Id.* at Dkt. No. 1277, Order to Show Cause Re Conditions of Probation (Dec. 29, 2020) at 10.

<sup>7</sup> *Id.* "Tree overstrike" in the context of PSPS means that PG&E identifies trees and vegetation that may strike distribution power lines in the event of a windstorm. The category also includes trees and vegetation for which PG&E has not completed trimming, despite being identified as a priority.

<sup>8</sup> See CPUC Tree Overstrike Workshop on PG&E's Proposed Implementation of Proposed Probation Conditions in its PSPS Program (<https://www.cpuc.ca.gov/calEvent.aspx?id=6442468667>).

<sup>9</sup> *United States v. Pacific Gas and Electric Co.*, *Supra.* at Dkt. No. 1386, Order (Apr. 29, 2021).

<sup>10</sup> *Id.*

directed PG&E to comply with certain additional reporting and noticing requirements in addition to those required by Commission orders and decisions.

### **NOTICE**

Notice of Resolution M-4856 was published in the Commission's Daily Calendar on July 1, 2021.

### **COMMENTS AND REPLIES**

This Resolution was served on all parties on the service lists for R.18-12-005 and R.18-10-007 pursuant to Public Utilities Code section 311(g)(1), allowing for at least 30 days public review. Section 311(g)(2) provides that this 30-day review period and 20-day comment period may be reduced or waived upon the stipulation of all parties in the proceeding. The 30-day review and 20-day comment period for the draft of this Resolution was neither waived nor reduced.

We received comments and replies from PG&E, the Public Advocates Office at the Commission (Cal Advocates), Rural County Representatives of California (RCRC), and collectively from the Counties of Kern, Marin, Mendocino, Napa, Nevada, San Luis Obispo, Santa Barbara, and Sonoma, and the City of Santa Rosa (Joint Local Governments). These comments and replies are summarized as follows, categorized by subject matter in the order each subject was addressed by the Draft Resolution.

#### *(1) Noticing*

PG&E states "it will be impossible to analyze circuit data to determine what circuits would be de-energized solely or primarily as impacted by tree overstrike as a factor" and therefore "identifying specific customers to notify would likewise not be possible."<sup>11</sup> To meet the Commission's noticing directives, PG&E plans "to notify all customers who are more likely to be impacted by PSPS events (customers served by lines that traverse HFTDs [High Fire Threat Districts]) that they may see power shutoffs this year due to PSPS program changes."<sup>12</sup> PG&E says these communications will direct customers to PSPS event resources, will be sent via email to those with a valid email address on file with PG&E, and via mail to customers without an email address on file.<sup>13</sup> Citing the lead time necessary for production, PG&E requests the Commission's noticing deadline be extended from July 31, 2021 until August 31, 2021.<sup>14</sup>

---

<sup>11</sup> PG&E Comments at 5.

<sup>12</sup> *Id.*

<sup>13</sup> *Id.*

<sup>14</sup> *Id.*

*(2) Public Safety Partner Coordination*

PG&E reports that potential impacts as a result of tree overstrike modeling have been communicated to public safety partners through engagement channels including: regional working groups, the PSPS Advisory Committee, wildfire safety working sessions, webinars for critical facilities and customers, and targeted communications to local jurisdictions, tribes, critical facilities and other stakeholders.<sup>15</sup> PG&E promises to continue informing cities, counties, tribes and key stakeholders as a part of its ongoing engagement.<sup>16</sup>

*(3) PSPS Reporting on Tree Overstrike*

PG&E commits to updating and providing new PSPS criteria including tree overstrike to the Commission in August 2021 but references the inclusion of other holistic criteria as influencing its PSPS decision-making such that tree overstrike is not considered as a standalone factor.<sup>17</sup> PG&E acknowledges that although it previously reported that tree overstrike considerations would likely increase the frequency, duration, scope and scale of proactive de-energization, the inclusion of “other factors as modelling criteria holistically may have different impacts” on PG&E’s decision-making and to the public than what PG&E communicated in its May 20, 2021 letter.<sup>18</sup> PG&E states that its “modeling as revised is designed such that it is not possible to isolate tree strike as a criteria component that could tie as a sole or substantial contributing factor triggering de-energization” and consequently, “it will be impossible to analyze post-event circuit data to determine what circuits were de-energized solely or primarily as impacted by tree overstrike as a factor.”<sup>19</sup>

Instead of providing the reporting specified in the Draft Resolution, PG&E states it can “perform a look back of circuit outages implemented under [PG&E’s] 2021 modelling criteria compared to previous year data under [PG&E’s] past model criteria.”<sup>20</sup> PG&E proposes to submit the comparative analysis in its post-season reporting rather than in its post-event reporting. PG&E states this will provide a more robust comparison of circuit

---

<sup>15</sup> *Id.*

<sup>16</sup> *Id.* at 6.

<sup>17</sup> *Id.* at 2.

<sup>18</sup> *Id.* at 3.

<sup>19</sup> *Id.*

<sup>20</sup> *Id.*

outage data compared to “single events that have no basis for true apples to apples comparison until the seasons are complete.”<sup>21</sup>

PG&E’s comments identify similar issues with proposed requirements in the Draft Resolution to track and report costs relative to PG&E’s implementation of tree overstrike criteria into its PSPS decision-making at a circuit level. PG&E instead proposes to provide “high-level ‘backcast’ year-over-year comparisons based on an average cost per line-mile metric.”<sup>22</sup>

While acknowledging the complexity of PSPS modeling, Joint Local Governments call out PG&E’s claim that tree overstrike criteria are inextricably commingled with other criteria when “PG&E’s analysis shows that tree overstrike criteria will likely increase the number of de-energization events.”<sup>23</sup> Joint Local Governments point out that the “only narrative PG&E has provided regarding the incorporation of tree overstrike criteria into de-energization decisionmaking is that it will increase the number of events over the next decade” and “[i]f PG&E is going to subject its customers and communities to a likely increase in de-energizations over the coming decade, PG&E should be able to account for the data driving that increase.”<sup>24</sup>

RCRC supports the requirement of “additional data-driven criteria that would parse out PSPS events using tree overstrike criteria.”<sup>25</sup> RCRC recommends the Commission “hold a future public workshop on the progress of PG&E’s system hardening and enhanced vegetation management activities” in HFTDs affected by tree overstrike considerations in PSPS decision-making “in order to evaluate meaningful progress on holistic wildfire mitigation efforts.”<sup>26</sup> RCRC also recommends PG&E include tree overstrike criteria in its 2022 pre-season PSPS report in the event that PG&E’s reliance on tree overstrike criteria continues.<sup>27</sup>

Cal Advocates agrees with the proposals in the Draft Resolution and recommends clarifying that the additional reporting requirements will continue beyond the 2021 fire

---

<sup>21</sup> *Id.* at 3-4.

<sup>22</sup> *Id.* at 4.

<sup>23</sup> Joint Local Governments Reply Comments at 1.

<sup>24</sup> *Id.* at 2.

<sup>25</sup> RCRC Comments at 1.

<sup>26</sup> *Id.* at 2.

<sup>27</sup> *Id.*

season.<sup>28</sup> Cal Advocates also recommends referring to PG&E's PSPS modeling in general, not only to the Outage Producing Winds (OPW) model.<sup>29</sup>

## **DISCUSSION**

PG&E and applicable electric utilities serving California are allowed to use PSPS as a measure of last resort where conditions show turning off power can mitigate the risk of wildfire ignited by electric infrastructure.<sup>30</sup> The utilities must deploy de-energization as a measure of last resort and must justify why de-energization was deployed over other possible measures or actions.<sup>31</sup> The Commission has repeatedly expressed concern about the negative impacts of PSPS on Californians, and the need for electric utilities to make all reasonable efforts to mitigate those impacts.

PG&E's use of tree overstrike criteria in its PSPS decision-making during the 2021 wildfire season stems from the federal court's orders in PG&E's criminal probation proceeding and not from any Commission requirement to rely on tree overstrike criteria in this way. PG&E acknowledges that including tree overstrike data in its implementation of PSPS will likely increase the frequency, duration, scope and scale of de-energization during the 2021 wildfire season. The Commission's concerns about the negative impacts of PSPS are heightened by these acknowledgments. These concerns are not negated by PG&E's comments on the Draft Resolution that tree overstrike considerations might not have the impact on PSPS that PG&E had previously forecasted.

PG&E's goal to notify all customers more likely to be impacted by its updated PSPS modeling is consistent with the Commission's intent that such customers be forewarned of such impacts. The timing of this Resolution will allow PG&E to send such notices by August 31, 2021. PG&E should continue to ensure that customers, public safety partners, critical facilities, stakeholders, state, local and tribal officials are fully informed about and prepared for any increases in PSPS that might result from PG&E's updated modeling.

We adjust our reporting structure in response to PG&E's comments stating tree overstrike considerations are inextricably commingled with other criteria in its PSPS modeling. PG&E must, however, provide insight into its PSPS modeling in light of its predictions that tree overstrike considerations may have such a significant impact on the frequency, duration, scope and scale of PSPS. PG&E's difficulties or inability to separately report on the impacts of tree overstrike, with its inclusion of "other criteria" into its PSPS

---

<sup>28</sup> Cal Advocates Comments at 3.

<sup>29</sup> *Id.*

<sup>30</sup> See CPUC Resolution ESRB-8.

<sup>31</sup> D.19-05-042, Appendix A - De-Energization (PSPS) Guidelines, Overarching Guidelines, at 1.

modeling, does not outweigh the Commission's and the public's need for information. It is also concerning that PG&E has not explained what those other criteria are, which is confusing to stakeholders and limits our ability to reconcile how the other criteria interact with the tree overstrike criteria to render them inseparable.

Nevertheless, in response to PG&E's comments we will not require tree overstrike impacts in PG&E's ten-day post-event reporting. We instead require PG&E to include in its post-season report, its best estimate of the relative contribution of tree overstrike considerations, distinct from other factors newly included in the 2021 PSPS modeling, on PG&E's PSPS decision-making and how such considerations affected PG&E's total scope of 2021 PSPS events. We expect more than the year-over-year comparison that PG&E proposed to provide in its post-event reports. We adopt Cal Advocates' recommendations not to limit PG&E's reporting to its OPW modeling, and not to limit PG&E's tree overstrike reporting to the 2021 wildfire season. We also adopt RCRC's recommendation for PG&E to include tree overstrike information in its pre-season reports. We agree with RCRC that a PSPS post-season workshop would enhance communication. The Commission will host a workshop at which PG&E will report on how tree overstrike impacted its PSPS decision-making.

Finally, we note that other oversight exists that is intended to ensure PG&E's modeling and reporting are valid. PG&E's 2021 Wildfire Mitigation Plan (WMP) might require PG&E to undertake a peer review process or develop a granular, circuit level model to assess the impacts of PSPS de-energizations. Commission staff will monitor and continue working to maintain transparency around PG&E's implementation of PSPS modeling and its impacts.

This Resolution ratifies, with modifications, the Executive Director's Letter of June 28, 2021, with regard to PG&E's reliance on tree overstrike criteria in its PSPS decision-making, in addition to those contained in the Commission's PSPS Guidelines.

The requirements are as follows:

(1) Noticing.

PG&E must provide one-time notification no later than August 31, 2021, to those customers, public safety partners, and critical facilities that PG&E reasonably forecasts will be impacted by the inclusion of tree overstrike criteria in its PSPS decision-making. PG&E's notice may be accomplished via mail, e-mail, bill insert, text message, or other mode of communication that PG&E knows with reasonable certainty will reach individual customers. The notice must alert the recipient that they may experience de-energization for the first time, more frequently, or for a longer time, during the 2021 wildfire season. If applicable, the notice should inform the



recipient of the availability of any resources increased in accordance with this Resolution. PG&E must otherwise comply with the Commission's PSPS notification requirements.<sup>32</sup>

(2) Public Safety Partner Coordination.

PG&E must coordinate with public safety partners expected to be affected by PG&E's inclusion of tree overstrike criteria in its PSPS decision-making, so that those public safety partners can adequately prepare in advance for any anticipated increase in de-energization.

(3) PSPS Reporting on Tree Overstrike.

(a) Updated May 20, 2021 Letter Attachments.

Consistent with the assurances included in its May 20, 2021 letter, PG&E must update the attachments to that letter to include the full analysis of customer impact anticipated by implementing tree overstrike criteria into PG&E's PSPS decision-making. These updated attachments must be provided to the Director of the Commission's Safety and Enforcement Division (SED) by August 31, 2021, and served upon the service list for Rulemaking (R) 18-12-005.

(b) PSPS Modeling Information.

By August 31, 2021, PG&E must provide to the Director of SED a written brief describing any changes to PG&E's PSPS modeling used to forecast probability of failure by tree-caused outage. PG&E shall include or cite to any other relevant information that demonstrates the predictive accuracy of the PSPS modeling. The written brief must also be served upon the service list for Rulemaking (R) 18-12-005.

(c) Tree Density and Risk/Hazard Shapefiles.

PG&E must produce hazard/threat geographic information system (GIS) multipoint shapefiles showing PG&E's service territory areas where PSPS modeling forecasts high probability of impact by tree overstrike. These shapefiles must show the tree overstrike locations newly added by PG&E for its PSPS considerations in 2021. The shapefile attribute table must include tree heights and circuit identification numbers. PG&E must deliver such shapefiles

---

<sup>32</sup> The Commission's PSPS Guidelines consist of CPUC Resolution ESRB-8, D.19-05-042 (Phase 1), D.20-05-051 (Phase 2), and D.21-06-034 (Phase 3).

to the Director of SED and to the public safety partner data portal by August 31, 2021 and provide regularly updated shapefiles to those recipients when available. The shapefiles must also be served upon the service list for Rulemaking (R) 18-12-005.

(d) Post-Season Report.

PG&E must submit PSPS post-season report(s) in compliance with the Commission's PSPS Guidelines, and within its ongoing PSPS post-season reporting framework,<sup>33</sup> PG&E must include:

- (i) Data showing PG&E's best estimate of how the inclusion of tree overstrike, distinct from other factors in its PSPS modeling, impacted PG&E's PSPS decision-making. PG&E's report should estimate the changed frequency, duration, scope and scale of PSPS events, including the additional number of customers, customer hours, and circuits that were de-energized as a result of the inclusion of tree overstrike criteria. The report should address the wildfire season overall, and each PSPS event to the extent possible.
- (ii) Information describing any material adjustments to, or canceled use of, PG&E's reliance on tree overstrike criteria in its PSPS decision-making.
- (iii) PG&E's tracking and reporting of incremental costs it incurs related to:
  - Incorporation of tree overstrike criteria into PG&E's PSPS decision-making (for example, gathering information, modeling using tree overstrike, and time associated therewith); and
  - Implementation of tree overstrike criteria into PG&E's PSPS-related de-energization activities (for example, any incremental notices, community resource centers (CRCs), batteries and other costs associated with implementing PSPS).

(e) Pre-Season Reports.

---

<sup>33</sup> The Phase 3 Guidelines contained in D.21-06-034 require a post-season report (at 138 and A14).

PG&E must submit PSPS pre-season reports in compliance with the Commission's PSPS Guidelines. Additionally, PG&E must estimate which circuits might be de-energized as a result of the inclusion of tree overstrike criteria and estimate the impacts on the frequency, duration, scope and scale of de-energization due to the utilization of tree overstrike criteria in its PSPS decision-making. PG&E should state if it intends to continue using tree overstrike criteria and include justification for its decision.

(f) Other Reporting.

The Commission reserves the right to request any additional information from PG&E associated with its PSPS decision-making relying on tree overstrike criteria, and PG&E must provide responsive information. PG&E must retain all records pertaining to tree overstrike in the event such records are responsive to future Commission requests.

(4) Additional Deployment of Backup Batteries, Community Resource Centers, and Other Resources.

PG&E shall assess whether its plan for the distribution and deployment of backup batteries, CRCs, and other resources has been or should be modified in light of expected increases in frequency, duration, scope and scale of de-energization caused as a result of tree overstrike criteria being included in PG&E's PSPS decision-making.

(5) Adjustments to / Cancellations of Tree Overstrike Criteria Based Decision-Making.

If PG&E's reliance on tree overstrike criteria in its PSPS decision-making causes or might reasonably cause unintended, unsafe results in violation of PG&E's obligation to promote public safety<sup>34</sup> then PG&E must reasonably adjust or cancel its use of tree overstrike criteria accordingly, and must notify the Commission's Executive Director and the Director of SED within five business days of the implementation of such adjustments or cancelation.

---

<sup>34</sup> PG&E's obligation to promote public safety is contained within Public Utilities Code section 451.

These requirements will help reduce the harmful impact on Californians caused by use of PSPS as a wildfire mitigation measure of last resort. Nothing in this Resolution alters the Commission's authority to impose additional requirements on PG&E associated with PSPS or tree overstrike criteria.

## **FINDINGS**

1. On January 26, 2017, PG&E was criminally convicted of violating the U.S. Pipeline Safety Act and obstructing an agency proceeding in association with its role in the deadly 2010 San Bruno gas pipeline explosion, and was sentenced to a probation period of five years.
2. The federal court overseeing PG&E's probation reshaped PG&E's probation conditions in reaction to PG&E's involvement in causing catastrophic wildfires in 2017 and 2018.
3. In response to the 2020 Zogg Fire, the federal court ordered PG&E to show cause why additional probation conditions should not be imposed requiring PG&E to de-energize power lines during the 2021 wildfire season whenever certain "tree overstrike" criteria were met within PG&E's PSPS decision-making.
4. "Tree overstrike" in the context of PSPS means that PG&E identifies trees and vegetation that may strike distribution power lines in the event of a windstorm. The category also includes trees and vegetation for which PG&E has not completed trimming, despite being identified as a priority.
5. The Commission held a workshop on April 20, 2021 to provide transparency to PG&E's stakeholders and customers in anticipation that the federal court could order PG&E to de-energize power lines considering tree overstrike potential. At the workshop, PG&E stated that it planned to add tree overstrike criteria to its model used to determine which power lines to de-energize, modeling based on wind and vegetation conditions similar to those present in the Zogg Fire.
6. On April 29, 2021, the federal court issued an order recommending but not requiring PG&E to take tree overstrike criteria into account when determining which circuits to preemptively de-energize.
7. PG&E has indicated that it will add tree overstrike criteria to its PSPS decision-making to proactively de-energize power lines using wind and vegetation conditions like those precipitating the Zogg Fire.
8. PG&E has demonstrated that the inclusion of tree overstrike criteria in its implementation of PSPS will likely increase the frequency, duration, scope and scale

of proactive de-energization, particularly in rural counties.

9. In a letter addressed to PG&E dated June 28, 2021, the Commission highlighted its concerns about PG&E's planned use of tree overstrike criteria in its PSPS decision-making during the 2021 wildfire season, and set forth its expectations about PG&E's use of the same.

**THEREFORE IT IS ORDERED THAT:**

1. The California Public Utilities Commission's June 28, 2021 letter to Pacific Gas and Electric Company (PG&E) is ratified, with requirements pertaining to PG&E's incorporation of tree overstrike criteria in its public safety power shutoff (PSPS) decision-making restated herein.
2. Pacific Gas and Electric Company (PG&E) must provide one-time notification no later than August 31, 2021, to those customers, public safety partners, and critical facilities that PG&E reasonably forecasts will be impacted by the inclusion of tree overstrike criteria in its public safety power shutoff (PSPS) decision-making. PG&E's notice may be accomplished via mail, e-mail, bill insert, text message, or other mode of communication that PG&E knows with reasonable certainty will reach individual customers. The notice must alert the recipient that they may experience de-energization for the first time, more frequently, or for a longer time, during the 2021 wildfire season. If applicable, the notice should inform the recipient of the availability of any resources increased in accordance with this Resolution. PG&E must otherwise comply with the California Public Utilities Commission's PSPS notification requirements.
3. Pacific Gas and Electric Company (PG&E) must coordinate with public safety partners expected to be affected by PG&E's inclusion of tree overstrike criteria in its public safety power shutoff decision-making, so that those public safety partners can adequately prepare in advance for any anticipated increase in de-energization.
4. Pacific Gas and Electric Company (PG&E) must update the attachments to its May 20, 2021 letter to the California Public Utilities Commission (the Commission) to include the full analysis of customer impact anticipated by implementing tree overstrike criteria into PG&E's public safety power shutoff decision-making. These updated attachments must be provided to the Commission's Director of Safety and Enforcement Division by August 31, 2021 and served upon the service list for Rulemaking (R) 18-12-005.
5. By August 31, 2021, Pacific Gas and Electric Company (PG&E) must provide to the California Public Utilities Commission's Director of Safety Enforcement Division a written brief describing any changes to PG&E's public safety power shutoff (PSPS)

modeling used to forecast probability of failure by tree-caused outage. PG&E shall include or cite to any other relevant information that demonstrates the predictive accuracy of the PSPS modeling. The written brief must also be served upon the service list for Rulemaking (R) 18-12-005.

6. Pacific Gas and Electric Company (PG&E) must produce hazard/threat geographic information system (GIS) multipoint shapefiles showing PG&E's service territory areas where public safety power shutoff (PSPS) modeling forecasts high probability of impact by tree overstrike. These shapefiles must show the tree overstrike locations newly added by PG&E for its PSPS considerations in 2021. The shapefile attribute table must include tree heights and circuit identification numbers. PG&E must deliver such shapefiles to the California Public Utilities Commission's Director of Safety Enforcement Division and to the public safety partner data portal by August 31, 2021, and provide regularly updated shapefiles to those recipients when available. The shapefiles must also be served upon the service list for Rulemaking (R) 18-12-005.
7. Pacific Gas and Electric Company (PG&E) must submit public safety power shutoff (PSPS) post-season reports in compliance with the California Public Utilities Commission's PSPS Guidelines. In addition, within its ongoing PSPS post-season reporting framework, PG&E must include data showing its best estimate of how the inclusion of tree overstrike, distinct from other factors in its PSPS modeling, impacted PG&E's PSPS decision-making. PG&E's report should estimate the changed frequency, duration, scope and scale of PSPS events, including the additional number of customers, customer hours, and circuits that were de-energized as a result of the inclusion of tree overstrike criteria. The report should address the wildfire season overall, and each PSPS event to the extent possible.
8. Pacific Gas and Electric Company (PG&E) must submit public safety power shutoff (PSPS) pre-season reports in compliance with the California Public Utilities Commission's PSPS Guidelines. In addition, PG&E must estimate which circuits might be de-energized as a result of the inclusion of tree overstrike criteria and estimate the impacts on the frequency, duration, scope and scale of de-energization due to the utilization of tree overstrike criteria in its PSPS decision-making. PG&E should state if it intends to continue using tree overstrike criteria and include justification for its decision.
9. Pacific Gas and Electric Company (PG&E) must include within its ongoing public safety power shutoff (PSPS) post-season reporting framework, information describing any material adjustments to, or canceled use of, PG&E's reliance on tree overstrike criteria in its PSPS decision-making.
10. Pacific Gas and Electric Company (PG&E) must include within its ongoing public safety power shutoff (PSPS) post-season reporting framework, its best estimate of

PG&E's tracking and reporting of incremental costs it incurs related to: (a) Incorporation of tree overstrike criteria into PG&E's PSPS decision-making (for example, gathering information, modeling using tree overstrike, and time associated therewith); and, (b) Implementation of tree overstrike criteria into PG&E's PSPS-related de-energization activities (for example, any incremental notices, community resource centers, batteries and other costs associated with implementing PSPS).

11. Pacific Gas and Electric Company (PG&E) shall retain all records pertaining to tree overstrike in the event such records are responsive to future California Public Utilities Commission requests.
12. Pacific Gas and Electric Company (PG&E) shall assess whether its plan for the distribution and deployment of backup batteries, Community Resource Centers, and other resources has been or should be modified in light of expected increases in frequency, duration, scope and scale of de-energization caused as a result of tree overstrike criteria being included in PG&E's public safety power shutoff decision-making.
13. If Pacific Gas and Electric Company's (PG&E) reliance on tree overstrike criteria in its public safety power shutoff decision-making causes or might reasonably cause unintended, unsafe results in violation of PG&E's obligation to promote public safety then PG&E must reasonably adjust or cancel its use of tree overstrike criteria accordingly, and must notify the California Public Utilities Commission's Executive Director and Director of Safety Enforcement Division within five business days of the implementation of such adjustments or cancellation.

This Resolution is effective today.

I certify that the foregoing Resolution was duly introduced, passed and adopted at a conference of the Public Utilities Commission of the State of California held on August 5, 2021; the following Commissioners voting favorably thereon:

---

Rachel Peterson  
Executive Director