Pacific Gas and Electric Company ™

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Dear Wildfire Safety Advisory Board:

Re: **PG&E's Comments on the Wildfire Safety Advisory Board's Recommendations on the 2021 Wildfire Mitigation Plan Updates for Large Investor-Owned Utilities**

PG&E appreciates the engagement of the Wildfire Safety Advisory Board (Board) in providing these recommendations on the *2021 Wildfire Mitigation Plan Updates for Large Investor-Owned Utilities*. The Board's recommendations provide a valuable perspective on the current and future Wildfire Mitigation Plan (WMP) processes. Many of these recommendations relate to utilities providing additional data, plans, or details. While PG&E generally does not oppose many of the Board's recommendations for additional information, it is important to be cognizant of the fact that doing so requires adequate lead time for the utilities to understand the requirements, including the templates or expected format, and to gather the information in advance of the WMP filing date.

PG&E also appreciates and is aligned with the Board's focus on providing the Wildfire Safety Division (WSD) with the information needed for an effective WMP review. However, it is important to keep in mind that, with a myriad of state and federal agencies addressing wildfire related topics, there is a significant risk of duplication in efforts. As the Board noted in Recommendation 1.4 in its June 2020 recommendations, it is important to consider "[w]hether all of the data requested in the 2020 WMP Guidelines are necessary for evaluation of utility WMPs or whether a streamlined, simplified subset of data would be sufficient for evaluation and decision-making purposes." All parties who participate in or follow the WMP process will benefit from an appropriately focused and targeted set of information and documentation. The streamlining and clarification of data and reporting to avoid duplication and allow parties to focus their resources on the necessary, critical information will be important topics for the Board and WSD to consider when developing the 2022 WMP Update Guidelines.

PG&E's comments below are organized around the subset of Board recommendations for which we have comments, suggestions, or questions and are provided in the same order and a similar structure as that provided by the Board.

Section 2. Risk Assessment, Mapping & Resource Allocation

2.1 WSD should evaluate whether the WMP Updates provide enough information about modeling methods and assumptions for the WSD to complete its evaluation.

PG&E understands the Board's recommendation for WSD to evaluate WMP Updates to determine if the information provided concerning modeling methods and assumptions is

sufficient to complete WSD's evaluation and agrees with this recommendation. PG&E believes that we provided substantial details regarding our risk models in the 2021 WMP and provided additional information through the WSD workshops and through extensive discovery. However, we also recognize that risk modeling is a critical, foundational aspect of wildfire mitigation activities and thus it is important for all parties to understand the utilities' respective risk modeling approaches. To the extent WSD believes that additional risk modeling information is needed, PG&E would be happy to engage in and support future workshops or technical working groups to inform the next WMP update process. We believe that using working groups to address certain key technical issues, like in-depth understanding of risk modeling, could be very useful. The process of submitting written comments and reply comments can be frustrating as parties may not fully understand an issue or another parties' perspective or can easily miss the point being made. We believe, as do other parties who have commented in the 2021 WMP proceeding, that a substantial amount of progress can be made during the year, beyond the compressed WMP review window, in working groups and other avenues to address specific, complex aspects of wildfire mitigation, such as risk modeling. Similarly, as it relates to the Board Recommendations 2.2 and 2.3 on diving deeper into evaluation errors or risk modeling outcomes, PG&E believes that technical workshops or similar working groups would be the most productive venue to explore these topics in the appropriate venue to encourage fuller understanding, collaboration and continuous improvement.

2.4 WSD should establish a peer review process from the scientific community to evaluate the accuracy of the data, assumptions, methods, results, and interpretations for the different models. Alternatively, the WSD could direct the IOUs to establish a peer review process that WSD could monitor as part of its compliance activities. The WSAB is available for collaboration on how this recommendation can be implemented to safely ensure that confidential data remain confidential.

PG&E understands, and in concept agrees, that a scientific community peer review process could add value in contributing expertise to the various risk modeling tools and approaches used by the utilities. As we explained in the 2021 WMP, PG&E is currently having its risk models reviewed and validated by outside experts.[1] We believe that additional model review could, if not duplicative of efforts already underway, benefit all parties in identifying future potential model improvements.

The Board notes in its observations that some models may be proprietary and the associated data confidential. PG&E agrees and recognizes that protocols need to be created for this condition, as the WSAB notes. Not all models or data must be treated as proprietary or confidential, but some are. Cutting-edge and industry leading consultants, experts and vendors may not be willing to partner with California utilities if they know that their proprietary models and methodologies will be made public through a scientific review process. This process must be established with appropriate intellectual property safeguards so as not to unintentionally limit the access of California utilities to the best and brightest minds, ideas and tools in the marketplace.

2.5 The WSD should continue to explore its options working with the IOUs to develop a data access portal for interconnected data repositories and permission hierarchy.

[1] 2021 WMP at p. 139.

The WSD has indicated it will incorporate this recommendation following the standardization of data metrics, processing, and analysis, however, it may be necessary to begin work on a platform now, especially if a CPUC rulemaking or IOU application proceeding is required.

PG&E agrees with this recommendation that a well-managed data repository will enhance the WMP process and potentially streamline reporting, access and collaboration across a number of parties. PG&E also appreciates the Board's focus on data security and ensuring appropriate data policies are in place to carefully manage any sensitive utility data being gathered through this process. Successfully navigating these challenges while incorporating data from different utilities with different data systems will be a significant task which may require a considerable amount of time to effectively develop and implement. PG&E looks forward to working with the WSD and other parties and partners to design the protocols and details of the Data Repository being recommended.

Section 3. Vegetation Management: Inspections, Strategies and Pilots

3.1 The WSD should consider the impact of the IOUs vegetation management and tree removal practices on the environment, climate change, and wildfire risk. The WSD should consider whether the IOUs consulted with ecologists to plan vegetation management practices to reduce environmental impact.

PG&E works with internal teams and external parties to develop vegetation management practices that are compliant with environmental laws, rules, and regulations and minimize local environmental impacts as appropriate. Going beyond compliance with environmental protection regulations to considerations of the impacts of vegetation management, and other wildfire risk mitigation activities, on climate change and other large-scale environmental trends would require a much broader engagement with a large set of stakeholders. For example, considering the Board's concern of not having a direct tree replacement program, given the size, diversity and complexity of PG&E's service area, a tree replacement program would impact the various state, federal and local jurisdictions who would need to be included in those discussions. PG&E suggests that the WMP may not be the ideal venue for this discussion and encourages the Board and WSD to consider the appropriate approach, timeline and audience to pursue such conversations.

3.4 The WSD should direct PG&E to stop the practice of removing healthy trees following wildfire events without some kind of environmental review by an ecologist. Singed and even burned trees may still be healthy, not threatening to utility infrastructure, and be a valuable asset to its environment.

Wildfires, unfortunately, significantly impact the trees and environment surrounding PG&E's electric facilities, whether those facilities have been damaged or destroyed or remain intact. The immediate focus after wildfires is to have our trained arborists identify the trees adjacent to our powerlines that will pose a hazard either to our assets, our workforce or the public. PG&E agrees, as the Board notes, that some singed or damaged trees may not pose a threat to public

safety or our assets. However, some fire-impacted trees may be damaged or otherwise at risk to the point that they do pose a threat. Addressing the trees that have been identified by a trained arborist as posing a threat must be addressed (trimmed or removed) to protect the community and our workforce so as to allow the repair or rebuild of our assets and allow PG&E to restore electrical service to our customers. While PG&E is happy to further discuss this post-wildfire response vegetation management work, we do not agree with this recommendation and believe the implementation of this recommendation would be counterproductive. The identification of which trees are a hazard after a wildfire is complex and location specific. Determining if a tree is "healthy" in the wake of a wildfire is similarly complex and subject to the professional judgement of a trained arborist. A blanket prohibition on "removing healthy trees" may or may not be feasible to implement and may drive considerable unintended consequences, like the risk of preventing PG&E from removing trees that truly do pose a threat to public, workforce or electric system safety. PG&E strongly recommends that this topic be evaluated and discussed in much more depth before any action is proposed or taken.

3.5 The WSD should explore the possibility of directing the IOUs to create a statewide database of tree species, traits, growth rates, morphological characteristics, and locations along environmental gradients.

PG&E agrees with this recommendation and notes that implementing it would require developing a collaborative, consistent approach to data gathering and review that all utilities could leverage. Consistency and alignment on the data gathering and the identified characteristics of certain tree species could be beneficial in providing a baseline of information that supports the needs of all stakeholders. In alignment with previous Board recommendations regarding Scientific Advisory Panels, PG&E suggests that it may be most effective to have an independent partner (*e.g.*, university or research entity) coordinate and facilitate this "statewide database of tree species" into which the utilities contribute. PG&E looks forward to future discussion or guidance from the Board or WSD on the role we can play and the data standards that would be associated with a statewide database.

Section 4. System Design and Management: Grid Hardening, Operations, Inspections, and Emerging Technology

4.1 The WSD should consider the results of PG&E's 2020 progress metrics in grid hardening compared to the 2020 WMP targets.

PG&E acknowledges the concern from the Board regarding the 180 line mile system hardening commitment for 2021 compared to the 342 line miles completed in 2020 (in excess of the 2020 WMP target). As we discussed in our 2021 WMP, PG&E's updated 2021 Wildfire Distribution Risk Model was used to inform the 2021 System Hardening Program workplan.[2] This risk model represents a significant improvement over previous risk models[3] but its implementation has led to a shift in our understanding about where to target system hardening resources. The

[2] 2021 WMP at pp. 557-558.

[3] 2021 WMP at pp. 130-131 (describing significant improvements in risk modeling).

outputs from the updated 2021 Wildfire Distribution Risk Model are materially different from the previous risk rankings, resulting in the pausing of some previously-planned projects, on circuit segments no longer assessed to be high risk, and the launching of new projects on circuit segments now identified as some of the highest risk. Because the standard cycle time (including scoping, design, permitting, and construction) for a system hardening project exceeds 12 months, pursuing only the projects in the highest risk reduction tranche results in the 2021 target miles of system hardening work being less than the mileage executed in 2020.

Despite hardening fewer miles in 2021, we will be reducing more risk than if we had executed the prior 2021 workplan developed using the 2019-2020 Wildfire Risk Model. This reduction from the 2020 mileage target is a result of the previously referenced model change. While this issue has been discussed in some depth in PG&E's 2021 WMP and through workshops and the discovery process, PG&E would be happy to engage further on this topic.

4.2 The WSD should request the IOUs evaluate the risk involved in keeping idle lines or equipment energized versus disconnecting completely when not in use. The WSD should request that the IOUs to identify any equipment or lines that may still be energized and not in service and require the IOUS to remove or de-energize lines and equipment from service, which would lower the risk of those assets failing and causing a fire. If the IOUs have adopted the practice of de-energizing idle lines, then the WSD should request that they explain this in their WMPs.

PG&E agrees with the Board on the importance of addressing idle lines and having a process to remove them from service. We have established procedures for addressing idle facilities for the electric distribution (TD-2459P) and transmission (TD-1003P) lines. These documents outline the process for de-energizing and decommissioning idle facilities. PG&E is currently expediting the process to identify and remove as many idle facilities as are appropriate prior to the 2021 Public Safety Power Shutoff (PSPS) season. We are happy to engage further on this topic or share the procedures referenced above regarding the management of idle facilities.

4.3 The WSD should request that the IOUs explain their protocols to ensure the safety of its workforce during the removal, installation, and repair of equipment, especially when introducing new technologies or equipment, and implementing new work practices.

PG&E shares the Board's focus on the safety of our workforce. To that end, we agree that it is important that workers performing utility work, and particularly wildfire-related work, be well trained and prepared. If there is concern in this area, PG&E is very open to more fully explaining the standards, procedures, and training provided to employees and contractors, including with regard to the use of new technologies, equipment or work practices.

4.4 The WSD should request the IOUs provide more detail about how they will ensure the workforce will become qualified, their training plans, including start, length of the training, etc.

As noted above, PG&E agrees with the Board's focus on workforce safety and training. It is important that workers performing electric utility work, and particularly wildfire-related work

and inspections, be well trained and qualified professionals. While additional material was added to the 2021 WMP templates (*see* 2021 WMP, Section 5.4) and completed by the utilities, if there is remaining concern or need to expand on this topics, PG&E is very open to more fully explaining the training provided to and qualifications of our workforce.

4.6 The WSD should request information from the IOUs about G.O. 95 exempt equipment so that it can track and monitor this equipment. The WSD should evaluate the sufficiency of the IOUs' plans or lack thereof to mitigate the increased risk this equipment poses, especially any equipment located in the high fire threat districts.

PG&E understands the Board's recommendation to relate to existing "non-exempt equipment" and plans to replace this equipment. PG&E shares the Board's concern that non-exempt equipment can pose an increased wildfire risk and PG&E's 2021 WMP discusses our existing programs to replace non-exempt equipment in Sections 7.3.3.7 and 7.3.3.17.3. If additional information on these programs and approach to non-exempt equipment is determined to be necessary, PG&E would be happy to provide it.

Section 5. Public Safety Power Shutoffs: Reducing the Scale, Scope and Frequency

5.2 The WSD should request that the IOUs conduct independent short and long-term studies that evaluate mitigation practices including Enhanced Vegetation Management, grid hardening, etc. to assess their effectiveness in mitigating wildfires. The studies should focus on areas where mitigation efforts have taken place and evaluate the data collected during patrols after a PSPS event.

PG&E agrees with the Board that short and long-term studies to evaluate mitigation practices could be helpful in understanding the effectiveness in mitigating wildfires. PG&E is currently undertaking this type of evaluation and, as more miles are completed, the results will be increasingly useful. In addition, as part of this effort, PG&E's vegetation management team is working with the other utilities to benchmark effectiveness results.

Section 6. Emergency Planning and Communication: Emergency Preparedness, Stakeholder Cooperation, and Community Engagement

6.2 The WSD should request as part of its review that the IOUs explain what metrics were used in the 2021 WMP Updates to evaluate the effectiveness of their stakeholder engagement efforts and inform what changes were made between 2020 and 2021.

In our 2021 WMP, we described our stakeholder engagement efforts and how we captured feedback from customers, communities and other stakeholders.[4] The feedback we gathered to assess our stakeholder engagement efforts was both qualitative and quantitative. As an example, for engagements that include large numbers of stakeholders, such as Regional Working Groups, PG&E sends after-meeting surveys, including quantitative rating questions, to support data-driven assessments of the success of those engagements. PG&E has identified a number of metrics within the data we receive, including the proportion of survey recipients who evaluate the overall usefulness of the meeting as positive. The results of those surveys inform the design of future engagements. For smaller, more localized engagements, such as PSPS Listening Sessions and Wildfire Safety Working Sessions, PG&E generally takes qualitative feedback on the engagement from the audience in real time, assesses that feedback via a tracker mechanism, and acts upon as much of the localized feedback as realistically possible. PG&E would be happy to provide further detail on the feedback or data gathered through our stakeholder engagement meetings if that is determined to be necessary.

Conclusion

PG&E appreciates the thoughtful engagement of the Board in providing these recommendations on future WMPs and related topics. A number of the recommendations are productive and ready to move forward as written. Others may require a bit more refinement or consultation across multiple parties. We also wish to note that many of the Board's recommendations call for additional information to be added to the WMP process. As parties have noted through the WMP process, the volume of data and documentation in the annual WMP process is already staggering. While adding detail in high value areas may be prudent and necessary, it is important to be cognizant of that fact that doing so increases the resource demand on all parties: intervenors and the WSD to review and evaluate more information and the utilities to create it. Recalling the Board's Recommendation 1.4 from its June 2020 recommendations, PG&E agrees that it is very important to consider what data, documentation, or information can be streamlined or simplified while still allowing for a sufficient evaluation of the WMPs.

PG&E appreciates the opportunity to provide these comments and we hope that they contribute to a continued, collaborative discussion across numerous stakeholders to further improve these processes and, more importantly, further our collective goal of eliminating utility-caused catastrophic wildfires. PG&E looks forward to further discussions and engagement as we all work together to further reduce wildfire risk and continue to make the WMP process more effective and efficient.

Sincerely,

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[4] See 2021 WMP, Section 7.3.10.1 starting on p. 798.