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To: [Wildfire Safety Advisory Board](#)
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Dear Wildfire Safety Advisory Board:

I write to provide comments on the WSAB's June 17, 2021 Draft Recommendations on the 2022 Wildfire Mitigation Plan Guidelines, Performance Metrics, and Safety Culture Assessment.

As a general matter, the efforts of the WSAB are to be applauded in seeking out means by which wildfires can be reduced, PSPS events can be limited and eventually eliminated, performance can be gauged, and safety culture assessed. These efforts appear well aimed at the safe and reliable delivery of electric power while simultaneously seeking to reduce losses due to wildfires.

Section 1, "Structure and Scope"

In this section, the Board recommends the creation of separate guidelines for SMJUs and ITOs so as to relieve these entities of certain reporting requirements.

Existing (and new) reporting requirements collect data that has been deemed valuable in working together to combat the risk of wildfires. There ought to be concern that if certain entities are relieved from the obligation to report the same data (or with the same frequency), then it suggests that this data is not really helpful in achieving the mission. If that is the case, then all parties should be relieved from reporting this data.

If that is not the case, and the data and the frequency with which it is reported is valuable, then allowing these entities to not report (or report less frequently) exposes the larger community to a more significant wildfire risk, and that should not be an acceptable result. Assuming the data is valuable, then the objective should be to obtain that data. If SMJUs and ITOs truly lack the resources to perform a needed reporting function, then the better solution would seem to be to provide the SMJUs and ITOs (based on need) with the ability to collect and report this data, not relieve them from the obligation to report it.

Section 2, "Risk Assessment: Risk Modeling, GIS Mapping, and Resource Allocation"

The Board's recommendations in this section are sensible and are correctly aimed at improving data collection and risk modeling by seeking to better organize and improve the data that is collected and by then applying such data to improved risk modeling. The Board's recommendation to seek support and input from the scientific community at large (presumably both inside and outside California) for assistance in peer review and other input is also well thought out.

Of concern, however, is what appears to be a reliance on existing data streams without considering whether new, different, or additional data might be beneficial in modeling wildfire risk. The Board should consider making an additional recommendation to reach out to key scientific leadership to determine what new, different or additional data might be helpful to obtain in order to better model wildfire risk.

Also of concern is the potential limitation of data collection to information obtained from utilities. There are numerous stakeholders who either already collect (or who have the capacity to collect) data that utilities cannot (or simply do not) collect. As an example, CalFire performs inspections for defensible space, as do numerous Fire Safe Councils and various municipal and county governments or their agencies. The federal government is a very large landholder in California, and it too has an obligation to collect certain wildfire risk data. For optimal wildfire protection rooted in a more complete picture of what all the data points to concerning wildfire risk, all of this data should be incorporated into a single master model that can then lead to better analysis.

There is also nothing in this section concerning the measurement of the loss of carbon capture resulting from the removal of so many trees each year. The result of spending billions of dollars each year removing trees, without spending much (or anything) on tree planting, is, of course, hotter and drier weather with windier conditions. These environmental factors exacerbate the existing wildfire risk. There is no argument that the removal of the wrong trees growing in the wrong places is necessary as a protective measure, but planting the right trees in the right places is also necessary to combat environmental degradation. There are existing tools that can measure the carbon capture loss caused by the removal of trees, and these same tools can be utilized to determine what carbon capture gain can be caused not only by planting new trees generally, but also by planting new trees in particular locations to provide energy efficiency/energy savings.

Section 3, "Public Safety Power Shut Offs: Reducing Scale, Scope and Frequency"

The Board appears, in this section, to take the correct position - that PSPS events are a current necessity, but one that should be limited in scale, scope and frequency - with the ultimate goal of not having PSPS events on a regular basis in the future.

The only way to achieve this goal, though, is to have better and more sustainable

vegetation management.

Given the very significant public concern with power interruption, particularly as more and more people work from home, it is important to require utilities that have held PSPS events to report on whether the PSPS event was successful in avoiding a fire resulting from vegetation and powerline conflicts. If the PSPS event was successful in this manner, then the utility should report on the location of the successful avoidance, the species and size of the vegetation involved, the voltage of the impacted line, and other related data to demonstrate that the PSPS event was successful in saving lives and/or property from wildfire. The next step, of course, would be to determine why the vegetation and powerline conflict occurred in the first place and to make plans to prevent future such occurrences.

Additionally, considerations as to defensible space should factor in decision-making with respect to PSPS events. Areas with a significant distribution of properties that have not properly adhered to defensible space requirements should anticipate a higher likelihood of PSPS events until the defensible space problem has been alleviated. Conversely, areas with a significant distribution of properties that are in proper adherence with defensible space requirements should generally experience fewer PSPS events. Utilities, however, do not have the legal authority - on their own - to perform complete defensible space investigations. Assistance will be needed from CalFire, municipal and county governments, and from federal agencies as well, in assessing defensible space and associated risk. Again, the involvement of these additional stakeholders is important and should not be disregarded.

Section 4, "Vegetation Management: Strategies and Environmental Stewardship"

Again, the Board's recommendations here are well intended in order to provide for better vegetation management in order to both reduce wildfire risk and improve stewardship of the environment. Among the Board's recommendations, for example, is the improvement of utility tree removal and replacement programs. It should be kept in mind that replacement of removed trees by utilities is not a regular occurrence, and that utilities will need assistance in developing and/or improving tree removal and replacement programs. Any such programs should also take into account carbon capture loss and gain as well as energy efficiency/energy savings with respect to proper planting, and right tree / right place planting principles as well.

Notably absent from the Board's recommendations in this area is the problem of "ingrowth" - the growth of new trees under powerlines (this includes both intentional and natural growth of new trees). By at least one utility's measurement, ingrowth represents a doubling of the vegetation management that the utility needs to perform approximately every seven years. The result of all of this added vegetation management is an increased frequency of future tree and powerline

conflicts (resulting in outages and/or wildfires), electrocutions, unnecessary risk to line workers (including tree crews), and the attendant substantially higher cost of the delivery of electric power. Utilities need to be free to remove all inappropriate ingrowth. With respect to deliberate plantings of trees which, at (or prior to) maturity have the potential to contact powerlines, policy should be adopted to mandate right tree / right place principles.

Also, from a policy perspective, it is important to note that many properties feature trees with strike potential that are outside of utility-rights-of-way or other authority to act. These trees represent a significant danger of wildfire risk to the community at large. But utilities are currently powerless to remove such trees without homeowner consent. Nonetheless, if such trees contact powerlines and cause wildfires or other damage, the utilities are nonetheless held responsible for the damage. The only sensible thing to do would be to either provide utilities with legal authority to resolve such conflicts in a swift a decisive manner (with due regard to the level of risk involved), or, alternatively, relieve them of the consequences should disaster strike.

Section 5, "System Design and Operation: Grid Hardening, Workforce Management, Asset Inspections, and Emerging Technology"

The Board's recommendations in this section are clearly aimed at improving the quality of infrastructure and the qualifications and safety of the persons who inspect, remove, replace and build utility infrastructure.

These recommendations are quite thorough and among other points, concern a process in which inspectors be mandated to have certain qualifications. While higher qualified inspectors are both more likely to provide better quality inspections and also perform their inspections with a better eye toward personal and public safety, consideration should be given to the availability of sufficient numbers of such qualified personnel. If there is a shortage of such workers, then utilities should be encouraged to provide training to improve personnel qualifications and should not be required to make a Hobson's choice between (a) sending out inspectors with lower certifications to inspect infrastructure and (b) not inspecting that infrastructure at all due to lack of qualified personnel. Utilities should - in the same way that they are evaluating wildfire risk - determine infrastructure risk and assign their lowest qualified (or trainee) inspectors to the lowest risk infrastructure and their best qualified inspectors to the highest risk infrastructure.

Section 6, "Communication and Community Outreach: Performance Metrics and Improving Stakeholder Outreach Efforts"

In this section, the Board quite properly notes that substantial progress has been made and the Board's concern for further improvement is clear from the

recommendations made.

Still, it should be recognized that in many communities, the relationship between the population - and even the government - and the utilities that serve them is hostile. As a result, persons employed by the utilities (both directly and as contractors) are subject to extraordinary risk. Injuries and threats to utility workers and utility contractors by private persons occur, system-wide, on at least a weekly basis. The public is understandably frustrated by (a) too-frequent power interruptions; (b) very frequent visits by line and tree inspectors and tree crews with the consequent imposition on privacy and property rights; (c) tree trimming and removal activities that leave trees in an unsightly condition or which remove trees to which an emotional importance had previously attached; and (d) despite such events, a continually worsening, year-on-year, of both wildfire threat and damage.

Utilities need to be encouraged and supported in efforts aimed at both education and at building trust. Efforts to unite communities with their utilities - particularly those communities that are most at risk - in combating the threat of wildfires should likewise be encouraged and supported. To the extent that utilities, or the CPUC (or both) can make efforts to ameliorate not only financial losses but also emotional losses when these occur due to vegetation management problems, trust and reconciliation will have an opportunity to build.

Section 7, "Safety Culture Assessment"

The development of metrics to determine the safety culture is important as an initial step to improving safety in the industry, which is recognized as one of the most - if not the singlemost - industry in America. The Board's recommendation that contractors performing work for utilities (in addition to the utilities themselves) complete the safety culture survey is right and proper, but the recommendation is short on a critical factor: the contractors need to be in position to respond anonymously. It should be understood by the Board that the contractors' business survival depends on good and strong relationships with their utility customer clients, and it should be understood that contractors may be nervous about providing criticism - however constructive it may be intended - about the utilities they serve.

Additionally, if the goal is truly to improve the safety culture at a utility (regardless of how positive and affirming it may already be), then consideration of additional questions to ask contractors that are not asked of utilities may be warranted. For example, asking contractors whether they provide any safety training or equipment to their personnel that is not required by the utility (or otherwise) could be instructive on making recommendations industry-wide for improvement.

While safety culture considerations are important, it should be noted that the safety community is split with regard to certain key concepts, such as whether "all" accidents are preventable (or not), and how to address such issues. Additionally, metrics utilized to measure the safety of contractors are not consistent and yield

different results depending on what factors are considered. Regularizing such metrics may not be the answer, though - instead, allowing a contractor the opportunity to a contractor to explain why the metrics are unfairly penalizing it - if correct - should result in reconsideration for that contractor and/or internal discussions as to the policies underlying the metrics.

That said, safety culture itself is only a contributing factor to the dangers faced by utility tree workers. OSHA oversight and enforcement is problematic, as the actual safety standard - which is not found in OSHA regulations but instead in the American National Standards Institute (ANSI) Z133 Standard. ANSI has recognized the need for reform and improvement of Z133 and has constituted a task force to make significant improvements to protect lives of utility tree workers. That new standard is due to be published next year, but in the meanwhile, the OSHA standards themselves have been essentially unchanged for nearly 50 years, despite the fact that there are more deaths and serious injuries in this industry than in any other.

OSHA itself needs an overhaul and pressure needs to be brought to bear on OSHA to make improvements. There are numerous, quite powerful stakeholders who can work collectively in this regard, including the State of California itself, unions, and industry groups, to name a few.

Section 8, "Expertise to Support Wildfire Safety"

The Board's recommendations are very appropriate in attempting to ensure that the transition of the WSD to OEIS does not result in the loss of expertise or capability.

However, the Board's recommendations do not speak directly to the need to ensure that the CPUC must also at least maintain (if not enhance) its own expertise.

The CPUC has a constitutional mandate to ensure the safe and reliable delivery of electricity (among other mandates), and it would be improper for the CPUC to simply divest itself of knowledge and interest in this space simply because of the transfer of WSD to OEIS. If anything, this should be viewed as an opportunity for the CPUC to enhance its knowledge and capabilities to ensure that it is fulfilling its own legal requirements. It should be anticipated that this will sometimes result in conflict between CPUC and OEIS, but any such conflicts should be viewed as opportunities - not problems - to provide a better way forward to mitigate the danger of wildfires while still ensuring the safe and reliable delivery of electricity.

Additional

It should be noted that Tulane Law School has commenced a Utility Vegetation Management Initiative. This initiative is the result of a collaboration between the Tulane Center for Environmental Law and the Tulane Center for Energy Law, two of the leading programs of their types in the country. Tulane's UVM initiative has

found the support of numerous leaders in the industry from around the country, as well as international experts, and has made some important developments that the Board should consider. Among others:

- The UVM Initiative has created a compendium of all UVM laws, regulations, ordinances and rules found in each of the jurisdictions in the United States (including its territories), Canada and Mexico, with additional foreign jurisdictions to be added in the near future. A report concerning the similarities, differences, and current issues to watch is due to be issued within the next few weeks.
- The UVM initiative has engaged in a collaborative project with Arbor Day Foundation to develop a model tree ordinance that would both enhance the protection of trees and also encourage the removal of nuisance trees (including those trees that need to be removed for protection against outages and wildfires. That Model Tree Ordinance, which will likely result in an expansion of tree planting, will incorporate right tree right place principles along with encouraging the planting of trees for energy conservation and environmental enhancements (load reduction and increased carbon sequestration).
- The UVM initiative has begun a first-of-its-kind training of law students in UVM law, practice, procedure and other challenges. These students have each joined the Utility Arborists Association (UAA) and have indicated an interest in making law and policy improvements related to UVM following graduation.
- Each of these students is co-authoring (with me) peer-reviewed law review papers to be published within the next few months, on topics that include the following:
 - Improving safety in the UVM industry through positive change at OSHA and through an improved ANSI Z133
 - Enhancing the ability of utilities to protect against outages and wildfires by making better use of already existing (but underutilized) public nuisance law
 - Right tree right place as a model for not only enhancing the safe and reliable delivery of electricity but also simultaneously providing a holistic means of combatting environmental degradation that leads to drought and hot and dry conditions that result in wildfires
 - Wise use of alternative dispute resolution mechanisms to promote social justice reform relating to UVM.
- Other law review papers will be published in the near future as well, on a variety of important topics.

- A planned CLE (continuing legal education) program to be held in September that focuses on UVM law and challenges and which is aimed at providing guidance in establishing wise UVM law and policy

The Tulane UVM initiative stands ready to lend its support and assistance to the Board, to the WSD, the CPUC, electric utilities, and others who wish to gain from the decades of knowledge, experience and expertise that Tulane has amassed. Tulane's position is entirely non-partisan and seeks to develop wise UVM public policy based on science and clear legal thinking.

Thank you for your consideration of these comments.

Respectfully submitted,

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