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COMMENTS OF THE GREEN POWER INSTITUTE ON THE DRAFT WMP GUIDELINES – PACKAGE 1

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The Green Power Institute (GPI), the renewable energy program of the Pacific Institute for Studies in Development, Environment, and Security, provides these *Comments of the Green Power Institute on the Draft WMP Guidelines – Package 1*.

Introduction

GPI has reviewed the Draft WMP Guidelines – Package 1, issued on November 12, 2024. We generally support the improvements made to the 3-year Base WMP Guidelines. Guideline design is critical for ensuring the resulting WMPs include relevant and sufficiently detailed information necessary to assess whether utility wildfire mitigation plans achieve acceptable levels of system reliability, sustainability (inclusive of safety), and affordability. GPI applies these core tenants in our review of the Draft WMP Guidelines – Package 1. We provide comments, inclusive of major and minor revision recommendations, on the following topics roughly in order of Package 1 contents:

- Post workshop slides and recordings prior to comment deadlines.
- GPI supports CalAdvocates proposed 2026-2028 WMP Filing schedule for mid-June.
- GPI generally supports the revised WMP Technical Guideline sub-heading levels.
- GPI generally supports the new WMP Excel reporting requirements.
- GPI recommends addressing inconsistent confidentiality statutes in response to Section II.2.2 Mapping Requirements.
- OEIS should clarify whether it intends to reinstate elements of the August 2017 CPUC-Cal FIRE MOU as it relates to WMP development.
- Expand Section III Performance Metric reporting requirements to specifically require metric projections and actuals.
- GPI cautions against implicating program "maturity" unless it related to the Maturity Survey.

- Design Basis Scenario requirements are not in alignment with existing utility wildfire risk planning models or model application approaches and would require additional implementation requirements as well as compliance mechanisms to result in meaningful outputs and outcomes.
- Strengthened language and references to combined mitigations and portfolio evaluation is an improvement but more is needed to advance layered mitigation assessments.
- Section 7 PSPS is over-simplified to only consider PSPS impact mitigation versus judicious use of PSPS as a tool for efficiently managing wildfire risk during low likelihood and extreme risk events.
- Amend the QA and QC reporting requirements to include quantitative pass rates.
- GPI supports the addition of revised Wood and Slash Management, Integrated Vegetation Management, and Post-fire Restoration sections, with minor revisions.
- Add a new WMP Guideline section requiring utilities to report on integrated distribution system planning as it pertains to wildfire risk mitigation via Grid Design, Operations and Maintenance, coordination with existing distribution planning processes, and future proofing distribution system design to support increasing demand and a High DER future.

Post workshop slides and recordings on the website prior to comment deadlines

GPI was unable to locate the slide deck, workshop recording, or Q&A transcript for the November 26, 2024 Workshop on Draft Wildfire Mitigation Plan Guidelines (Package 1) via the OEIS WMP-Guidelines Docket, listserv, or official 2026-28 Wildfire Mitigation Plan Guidelines website.[1,2] GPI respectfully requests that future workshop materials, including presented slide decks, workshop recordings, and Q&A transcripts be made publicly available at least one week in advance of related comment deadlines.

[1] OEIS Docket #WMP-Guidelines. https://efiling.energysafety.ca.gov/EFiling/DocketInformation.aspx?docketnumber=WMP-Guidelines Accessed December 4, 2024.
[2] 2026-28 Wildfire Mitigation Plan Guidelines https://energysafety.ca.gov/what-we-do/electrical-infrastructure-safety/wildfire-mitigation-and-safety/wildfire-mitigation-plans/2026-28-wildfire-mitigation-plan-guidelines/ Accessed December 4, 2024.

GPI supports CalAdvocates proposed 2026-2028 WMP Group 1 Filing schedule for mid-June

During the November 26, 2024, Workshop on Draft Wildfire Mitigation Plan Guidelines (Package 1), CalAdvocates' recommended a 2026-2028 WMP filing deadline of no sooner than mid-June. While this issue is in scope for the forthcoming Process Guidelines in "Package 2," GPI supports CalAdvocates' recommendation in advance to support proactive schedule development. The time needed to finalize the WMP Technical Guidelines and yet to be issued Process Guidelines and Maturity Survey warrants a mid-year WMP filing requirement that allows Utilities to prepare updated Base Plans while still affording substantive time for Plan review and comments. We also generally support a strategic filing timing that considers other related wildfire processes at the CPUC and OEIS. We offer these comments in advance of the Draft Process Guidelines and Package 2 to support a swift plan development and approval process.

GPI generally supports the revised WMP Technical Guideline subheading levels

GPI appreciates efforts by OEIS staff to improve the 2026-2028 Base WMP framework and heading structure. In past comments GPI supported CalAdvocates' recommendation to reduce the number of header levels in the Base WMP, and offered additional suggestions on how to achieve this.[3] We commend OEIS staff for restructuring the WMP Technical Guidelines to reduce the number of sub-heading levels and parse information into more narrowly focused Sections that will facilitate plan review.

GPI generally supports the new WMP Excel reporting requirements

The Draft WMP Guidelines Section II.2.1 include a new requirement for utilities to file an Excel Workbook containing all Plan tables in separate spreadsheets. GPI generally supports this new requirement for its capacity to facilitate review of data tables that were previously only provided in PDF format. We do hope, however, that this new filing requirement can be implemented efficiently to manage filing scope creep for the already gargantuan Base WMP filing requirement and overlapping QDR requirements. We encourage staff to consider whether overlapping

[3] GPI Comments on the draft 2023 WMP Guidelines, Ocotber 26, 2022, pp. 37-39.

content filings in multiple different formats can be streamlined to only require the most optimal filing format (i.e. Excel) for each part of the WMP, while maintaining maximum public access and transparency.

GPI recommends addressing inconsistent confidentiality claims in response to Section II.2.2 Mapping Requirements

Plan Section II.2.2 Mapping Requirements addresses the challenge of integrating service territory and detailed distribution plan maps into a PDF. This reporting requirement is not updated from the 2023-2025 WMP Guidelines. In the 2023-2025 WMP filing, SCE identified their geospatial wildfire risk ranking maps for "Top-Risk Areas within the HFRA" as confidential.[4,5] In contrast PG&E provides non-confidential WDRM geospatial maps for the same reporting requirement.[6] Notably, the Commission requires IOUs to provide public access to web-based distribution interconnection capacity maps, excepting those circuits which do not pass the 15/15 confidentiality rule, indicating that granular distribution system maps can be made public.[7] GPI recommends assessing whether there is a material difference between utility geospatial risk model output maps that warrant inconsistent confidentiality statuses. We further recommend requiring supplemental geospatial risk modeling maps to be formatted so that they qualify as non-confidential to the maximum extent possible (e.g. circuit level granularity versus asset level maps).

GPI generally supports the addition of Section II.2.6 Best Practices

The revised WMP Guidelines include a new Section II.2.6 Best Practices, stating "Energy Safety may provide guidance or best practices documents or white papers to electrical corporations for reference."[8] This alludes to future OEIS guidance that is outside of, but that feeds into, the technical WMP Guidelines and Evaluation process. We look forward to additional specifics on

[4] Southern California Edison Company's Application for Confidential Designation Pursuant to the Office of Energy Infrastructure Safety's Emergency Rules of Practice and Procedure, 2/12/2023.
[5] SCE 2023-2025 Wildfire Mitigation Plan R1-1, 6/4/2024, p. 722.
[6] PGE 2023-2025 Wildfire Mitigation Plan R1, 4/6/2023, pp. 852-853.
[7] CPUC D.24-10-030, p. 147.
[8] Draft Wildfire Mitigation Plan Guidelines – Package 1, November 12, 2024, p. 5

the proposed best practice documents and white papers envisioned by this Guideline addition, including how they will be implemented.

Clarify if stakeholders are permitted access to utility Pre-submission WMPs

The Draft WMP Guidelines retain the Pre-Submission Check (Section II.4.1.1).[9] We recognize the intention of the Pre-submission check to ensure all required components are included in the WMP. However, this additional review step has multiple drawbacks. First, it permits incomplete WMP submissions by the filing deadline, affording additional WMP development time while OEIS conducts the completeness review, with no repercussions and the benefits of an extended filing requirement. Second, this pre-submission process costs stakeholders and the OEIS valuable review time on Plans that continue to grow in volume with each iteration. Third, some utilities have been reluctant to provide stakeholder access to pre-submission filings and may invoke confidentiality agreements. This is especially confounding since the Pre-submission WMPs presumably contain the same, if not less information compared to the public WMP submissions.

It may have been prudent to conduct a Pre-submission Check on the first round of 3-year Base WMPs under the modern Guideline framework to prevent these plans from becoming outdated before stakeholder comments were submitted. However, based on our review of the Draft 2026-2028 WMP Guidelines, the Plan content requirements have begun to stabilize, and proposed changes are generally minor. This suggests that utilities will be able to extensively leverage past Plan content and have direct experience regarding what is expected for the 3-year plan filing.

GPI recommends either eliminating the Pre-submission Check or, at a minimum, explicitly requiring that Pre-submission Check filings be made publicly available based on: (*i*) the benefit of existing 2023-2025 WMP content; (*ii*) direct OEIS feedback on the general adequacy of that content; (*iii*) the equivalent confidentiality status of pre-submission and final WMP content; and (*iv*) the drawbacks of a Pre-submission Check on review and OEIS Decision timelines.

[9] Draft Wildfire Mitigation Plan Guidelines – Package 1, November 12, 2024, p. 7.

OEIS should revive elements of the August 2017 CPUC-Cal FIRE MOU as it relates to WMP development

In August 2017 the CPUC and CAL FIRE signed an MOU aimed to: "…cooperatively develop consistent approaches to forest management, safety and energy programs."[10] This MOU expressly scoped holistic approaches to wildfire risk mitigation including priorities to "work together to develop consistent approaches to forest management, wildfire prevention, public safety, and energy programs," among other commendable strategies, such as: "develop a statewide biomass/bioenergy/biofuel strategy," and "assist one another in preparing for, responding to, and mitigating the effects of wildfires."[11] The MOU also identifies WMP-specific CalFIRE responsibilities, including: "Upon request, review utility wildfire mitigation plans in accordance with Public Utilties Code Sections 8385-8387. Assist CPUC in developing criteria and standards to be used in wildfire mitigation plans."[12] GPI recognizes that WMP development is no longer under CPUC jurisdiction. However, the relevance of the CPUC-CalFIRE MOU today and its holistic vision for energy-sector wildfire mitigation supported by interagency coordination should not be overlooked.

GPI is concerned that present-day WMPs are increasingly siloed work plans that fail to maintain critical pathways for transparent interagency input (e.g. CPUC and CalFIRE) that can support holistic and cost-effective solutions to utility and state-wide wildfire risk reduction. The Draft 2026-2028 WMP Guidelines Section II.4.2.2 Evaluation Inputs, states: "To assess a WMP, Energy Safety may rely upon the following … Input from the California Department of Forestry and Fire Protection (CAL FIRE)." The absence of transparent CalFIRE input into WMP Guideline development and Plan review in recent years, and the Draft 2026-2028 WMP Guidelines' equivocal statement about seeking CalFIRE input falls far short of what the CPUC envisioned for WMP development.

GPI strongly encourages the OEIS to reengage CalFIRE in the Draft 2026-2028 WMP Guideline and WMP review processes, inclusive of reporting on any opportunities for interagency

[10] August 2017 CPUC-CalFIRE MOU. https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/news-and-outreach/documents/news-office/mous/170907-cpuc-cal-fire-mou-final-signed.pdf.
[11] Ibid.
[12] Ibid.

coordination that can support more holistic wildfire mitigation planning and plan design. GPI further recommends that the interagency coordination effort should not be limited to CalFIRE engagement. Important distribution and transmission system planning is happening at the CPUC, which directly intersects with wildfire risk management (e.g. siting new busbars for resource interconnection, biomass siting considerations, integrated distribution planning processes that includes wildfire risk informed design, system needs informed by climate change forecasting). Moreover, many of these CPUC processes use outdated HFTD maps and are not currently considering the most up-to-date granular risk maps applied to overhaul the distribution system. While not readily implementable in the 2026-2028 WMP Guidelines, GPI urges the OEIS to explore how it can engage in interagency discussions and processes towards more holistic, and less siloed, electric sector wildfire mitigation planning.

Expand Section III Performance Metric reporting requirements to specifically require metric projections and actuals

The Draft 2026-2028 WMP Guidelines eliminated multiple performance metric tables required in the 2023-2025 WMP.[13] Section III.3.5 Performance Metrics, collates reporting for utility-selected performance metrics that are not otherwise required in the OEIS Data Guidelines. The remainder of performance metric reporting is now required through the OEIS Data Guidelines. GPI's primary concerns are the general lack of quantitative reporting requirements in the new Performance Metric section, as well as the uncoupling of mitigation plan narrations and performance metrics.

The Draft 2026-2028 WMP Guidelines require utilities to report performance metrics "beyond those required by Energy Safety" (i.e. not required in the Data Guidelines) in Section III.3.5. Section III.3.5 instructions and the minimum acceptable level of information only require utilities to report the "Performance Metric [Name or type]," "Assumption that underlies the use of the metric," and "Mitigation Selection associated with the Performance Metric." The

[13] e.g. Table 8-5. Example of Grid Design, Operations, and Maintenance Performance Metrics Results by Year; Table 8-16. Example of Vegetation Management and Inspection Performance Metrics Results by Year; Table 8-24. Example of Situational Awareness and Forecasting Performance Metrics Results by Year; Table 8-36. Example of Emergency Preparedness Performance Metrics Results by Year; Table 8-57. Example of Community Outreach and Engagement Performance Metrics Results by Year; Table 9-6. Example of PSPS Performance Metrics Results by Year.

minimum requirements do not mandate that a utility report quantitative actual or forecasted performance metrics (e.g. the number of annual ignitions). GPI recommends revising the "minimum acceptable level of information" requirements and example table to require utilities to report the quantitative actual (e.g. past 3-years and completed plan-years), forecasted, and/or targeted performance metrics. Note that performance metric "quantitative targets" may vary from mitigation initiative targets (e.g. hardware units deployed).

Aggregating utility elective performance metrics in Section III.3.5 may help streamline the WMP. However, it also uncouples these important metrics from the relevant mitigation initiatives that result in performance metric trends as well as forecasts. GPI recommends updating the Draft WMP Guidelines to also require cross-refencing of relevant performance metrics provided in Section III.3.5 within the associated Mitigation Section narrations. The WMPs should offer a direct connection between how planned mitigations are anticipated to result in performance metric trends and improvements.

Further standardize and clarify mapping requirements for Frequently Deenergized Circuits (Section III.4.3)

GPI supports the addition of a new Frequently Deenergized Risk map requirement (Section III.4.3).[14] We recommend improving this mapping requirement by establishing standardized colors for frequency or impact "bins" (e.g. top 5 percent of circuits based on PSPS risk in red). GPI also recommends improving the Example Table 4-3 by eliminating multiple data entries per row to ensure a standardized table format is reported in the new Excel spreadsheet filing requirement. Excel spreadsheets with multiple data entries per row have limited value, or the sample table could result in variable formatting across utilities. In either case, it could limit the value of the new Excel filing requirement. We suggest clarifying how many years in the past (for deenergization event data), and how many years forward (for estimated annual decline in deenergization/impacts) a utility should report in the required table. Standardization will facilitate comparability.

[14] Draft Wildfire Mitigation Plan Guidelines – Package 1, November 12, 2024, pp. 24-25.

GPI cautions against implicating program "maturity" unless it related to the Maturity Survey

Risk Methodology and Assessment Section 5.2.3 Key Assumptions and Limitations states: "More mature programs regularly monitor and evaluate the scope and validity of modeling assumptions."[15] GPI cautions against implicating plan or program maturity unless its evaluation is directly linked to Maturity Survey results.

Design Basis Scenario requirements are not in alignment with existing utility wildfire risk planning models or model application approaches and would require substantial revision to result in meaningful outputs and outcomes

The Draft 2026-2028 WMP Guidelines include the same Design Basis Scenario (DBS) requirements (Section III.5.3.1) as the 2023-2025 WMP Guidelines.[16] GPI remains concerned that this section of the WMP will not result in the envisioned outputs due to the following issues: (1) Producing multiple DBS outputs does not align with existing utility wildfire risk planning models or model application approaches; (2) There are no DBS output reporting requirements; (3) There is no compliance mechanism enforcing the output and application of multiple DBS; (4) The objective of producing and applying multiple DBS and the intended outcome is not well defined. We address each of these issues.

(1) Producing multiple DBS outputs does not align with existing utility wildfire risk planning models or model application approaches

Utility models are not currently designed to output multiple "DBS" as described and required in the WMP Guidelines. Without getting into the weeds, the specifics are detailed in utility planning risk model method summaries and supplemental documentation. The IOUs make this fact clear in their 2023-2025 WMP filings. PG&E stated:

> The selection, preparation, and use of data, including those representing wind, weather, and vegetation, within the Risk Model Framework and Methodology are designed to produce the most predictive probability (LoRE) models and representative consequence (CoRE) models. The framework presented by Energy Safety in the WMP guidelines presents a different paradigm for the risk modeling that could be conducted for a range of potential future scenarios. The risk

[15] Ibid. p. 35.
[16] Ibid, p. 38-41.

modeling framework employed by PG&E aims to account for all scenarios in a single predictive model that are represented by the historical data sets used in model development. In doing so, some conditions considered by the extreme scenarios outlined by Energy Safety may not be represented in the historical data at this time. As part of PG&E's goal to continuously improve our risk modeling, we will seek methods to appropriately account for extreme scenarios in the future.[17]

SCE stated:

SCE utilizes a design scenario that most closely reflects Wind Loading Condition 1, Wind Loading Condition 2, Weather Condition 2, Vegetation Condition 1, and Vegetation Condition 3 for mitigation planning purposes in its MARS and IWMS Risk Frameworks. … SCE notes that it uses scenarios that reflect Wind Loading Condition 2, Weather Condition 1, and Vegetation Condition 1 for the purpose of evaluating potential PSPS de-energization decisions. See Section 9.2 for additional detail.[18]

SDG&E stated:

The WiNGS-Planning model currently uses a single set of criteria for each variable. …The initial design scenarios are based on the worst probable conditions during Santa Ana events. For instance, the WiNGS-Planning model uses the highest recorded wind gust per segment as recorded via the segment's associated weather station. This practice coincides with the description for SDG&E defined Wind Load Condition 3 – Extreme.

At this point in the evolution of the WiNGS-Planning models, Weather Condition 1 – Anticipated Conditions is used. The rationale behind this approach is that weather conditions can only be based on the lifespan of the circuit segments' weather stations. The majority of these devices were installed starting in 2009, so a full 30-year history at the fine spatial granularity needed by the model is unavailable until approximately 2040. In addition to weather condition design scenarios, SDG&E is currently evaluating climate change models with multiple design scenarios to help account for changing climate conditions over the decades to come. The WiNGS-Planning model currently employs an adjustment factor for expected wildfire frequency to account for climate change conditions. This approach results in an adjustment factor equating to one wildfire occurring every 15 years.

The vegetation design scenario currently focuses on field conditions, which corresponds to Vegetation Condition 1 – Existing Fuel Load (based on potential fire season conditions).[19]

[17] PG&E 2023-2025 WMP R1, pp. 183-4.
[18] SCE 2023-2025 WMP R1, p. 152.
[19] SDG&E 2023-2025 WMP R2-1, pp. 75-76

It is highly unlikely that the utilities have altered their wildfire risk planning models to enable the output of multiple DBS, or that they are prepared to apply multiple DBS in mitigation initiative selection or prioritization. GPI encourages feedback from the utilities on this point, and/or encourages the OEIS to directly connect with the utilities to assess whether outputting multiple planning risk model DBS is feasible by mid-2025. We strongly suspect that the DBS Section in the 2026-2028 WMP filing will elicit the same responses from the IOUs as reported in the 2023-2025 WMPs. For example the directive "For wind loading on electrical equipment, the electrical corporation must use at least four statistically relevant design conditions" will likely go unmet by the IOUs. We also note that the SMJUs have yet to debut their overhauled planning risk models. It is not unreasonable to suspect that the SMJUs may also not have DBS capabilities.

We note that our 2023 WMP Guideline comments raised related concerns, that utilities would have insufficient time to develop and implement DBS in time for the 2023-2025 WMP filing.[20] The 2023-2025 WMPs allude to even deeper-set challenges due to existing model design and other compounding factors addressed below.

(2) There are no DBS output reporting requirements

Section III.5.3.1 Design Basis Scenarios includes requirements for inputs as well as data and model documentation. For example (emphasis added):

> For wind loading on electrical equipment, the electrical corporation *must use at least four statistically relevant design conditions*. It *must calculate wind loading based on locally relevant 3-second wind gusts over a 30-year wind speed history during fire season in its service territory… The data and/or models* the electrical corporation uses to establish locally relevant wind gusts for these design conditions *must be documented* in accordance with the weather analysis requirements described in Appendix B.[21]

[20] GPI Comments on the Draft 2023 WMP Guidelines, pp. 21-22.
[21] Draft Wildfire Mitigation Plan Guidelines – Package 1, November 12, 2024, pp. 38-39.

The only model output and application reporting requirements include a narration on "the design basis scenarios used in its risk analysis" and a summary table that includes a scenario ID, the scenario inputs, and the purpose.[22]

The Draft WMP Guidelines largely focus on documenting the inputs, while DBS output reporting and the intended outcomes/applications present more like an afterthought. The DBS Section suggests that multiple risk planning model outputs are expected, but no model outputs are required in either tabulated or mapped format. The lack of any quantitative reporting requirement makes it difficult to measure/enforce compliance or assess the functional value of DBS outputs (i.e. outcomes/application) if they are generated.

(3) There is no compliance mechanism enforcing the output and application of multiple risk planning model DBS

The 2023-2025 WMP Guidelines did not result in utilities producing (or applying) the required DBSs (see 1 above). Failure to generate any alternative risk planning model scenarios did not result in any punitive actions by the OEIS. WMP filings were not rejected at the Pre-Submission Check on account of not completing any of the required DBS. To our knowledge, WMP quality was not evaluated based on whether utilities generated or applied any DBS's beyond their singular planning risk model outputs. There are no WMP Evaluation Criteria (Section II.4.2.1) that explicitly require a utility to develop and apply multiple DBS. No ACI were issued on account of a utility not complying with the 2023-2025 WMP Guideline DBS requirements, and no 2023-2025 WMP was Denied on the basis of failing to complete any risk planning model DBS's. As such there is no record of any Base WMP enforcement mechanism that did, or would, require a utility to comply with requirements in Section III.5.3.1 Desing Basis Scenarios. This aspect of planning risk model design and scenario modeling was also not specifically addressed in the RMWG or acted upon in any way that would trigger actionable outputs and outcomes. It follows that it is unlikely for this 2026-2028 WMP Guideline section and its requirements to result in an output or outcome different from the 2023-2025 WMP filings.

[22] Ibid, pp. 40-41.

(4) The objective of producing and applying multiple DBS and the intended outcome is not well defined

Section III.5.3.1 only provides high-level guidance for the anticipated outcome of DBS outputs, stating (emphasis added):

> The electrical corporation must provide a brief narrative on the design basis scenarios *used in its risk analysis*. If the electrical corporation includes additional design scenarios, it must describe these scenarios and their *purpose in the analysis*.[23]

The example reporting table suggests generalized DBS "purposes" such as "ignition likelihood calculation" and "long-term fire behavior calculation."[24] However, it's not clear what OEIS envisions is the "purpose" of DBS modeling, for example as it applies to "ignition likelihood calculations," how they should be applied to mitigation selection and prioritization, or other WMP applications (e.g. risk tolerance, cost-effectiveness assessment), and the anticipated outcomes of those applications. Without a clear framework for how and why to apply risk planning model DBS in risk tolerance, cost-effectiveness, and mitigation selection applications, we anticipate that Section III.5.3.1. requirements will remain both unacted upon and inactionable.

GPI is NOT implying that scenario modeling has no value to long-term mitigation planning. Rather, we believe that scenario modeling is important for evaluating critical aspects of electric sector wildfire risk management, including but not limited to assessing the balance between acceptable wildfire risk tolerance, mitigation selection impacts (e.g. outages, costs, open risk positions, etc.), and impact tolerance. Or, more succinctly, scenario modeling as it applies to risk planning models can and should inform the appropriate balance for the "three-legged stool" of system safety, reliability, and affordability. We alluded to this in our 2023 WMP Guideline comments and concerns regarding the Design Basis requirement:

> Section 6.3 Risk Scenarios, introduces a new concept of design basis scenarios. GPI interprets this as a move towards defining risk planning standards that inform electric system designs capable of

[23] Ibid, p. 40.
[24] Ibid.

safe operation during a set of defined environmental conditions (e.g. see comments above regarding vague language and the role of planning standards).[25]

We offer one conceptual example of sensitivity modeling. What would be the outcome of a system (A) engineered (i.e. grid design) to operate with no reliability interruptions under 1-in-50-year wildfire conditions, as compared to a system (B) engineered to operate without interruptions under 1-in-10-year conditions. System A would likely benefit from very high reliability and safety (wildfire risk based) that would come at a high cost (e.g. more widespread undergrounding). System B would likely experience more PSPS and PEDS (est. 1-in-10 year) outages and impacts to achieve the same risk reduction but would likely be a lower cost design (e.g. less undergrounding required). In this example, the marginal cost of going from a 1-in-10-year system design to a 1-in-50-year system design could tip the balance due to affordability. System A, designed with a 1-in-10-year loss of reliability (i.e. PSPS and PEDS outages) *risk tolerance*, could strike a better balance between acceptable reliability losses and system cost for the same residual risk.

The Integrated Resources Planning (IRP) proceeding, and its predecessor the Long-term Planning Process (LTPP), apply similar principles to strike an acceptable balance between reliability (1-in-10-year loss of load expectation, i.e. widespread outages), ratepayer cost (the amount of excess capacity required above average peak demand), and sustainability. IRP resource portfolio modeling also regularly applies scenario modeling to assess possible alternative solutions (e.g. different resource mixes), and/or cost-benefit outcomes of possible futures (cost-benefit sensitivity to changes in demand, cost, generation profiles, etc.). The same approach to scenario modeling, driven by a clear purpose, anticipated outcomes (e.g. cost-benefit metrics), and informed inputs could be developed to drive successful wildfire risk and risk management scenario modeling.

Between the looming 2026-2028 WMP filing deadline (circa Q1-Q2 of 2025) and the aforementioned deficits, GPI is not confident that Section III.5.3.1 "Design Basis Scenarios" can be reworked in time for the 2026-2028 WMP Guidelines, or that utilities would even have sufficient time to implement DBS. GPI recommends consulting Jensen Hughes, the new risk

[25] GPI Comments on the Draft 2023 WMP Guidelines, p. 21.

modelling consultant, on whether and how to revise Section III.5.3.1 "Design Basis Scenarios" towards achieving meaningful outputs and outcomes. At this phase of Guideline development, however, we further recommend pausing, or removing, utility filing requirements for Section III.5.3.1 unless and until they are substantially revised prior to the 2026-2028 filing deadline. As a first pass at improving wildfire risk scenario modeling efforts, it may be more impactful to drive this process forward in a parallel development track, spearheaded by Jensen Hughes, that includes S.M.A.R.T. objectives, outputs, and outcomes informed by other successful applications of scenario modeling in energy system planning applications (e.g. IRP).

Strengthened language and references to combined mitigations and portfolio evaluation is an improvement but more is needed to advance layered mitigation assessments

The Draft 2026-2028 WMP Guidelines included updated language regarding combined mitigations and mitigation portfolios. For example:

> The electrical corporation *must* also evaluate mitigating risk through a portfolio of combined multiple initiative activities. The electrical corporation is expected to use its procedures discussed in Section 9 to:
> • Develop potential initiative activities approaches to address each risk
> • Characterize the potential initiative activities to provide internal decision makers with information required to support decision making (e.g., costs, material availability), including an assessment of uncertainties.
> • Document the results of the evaluation[26]

The Draft WMP Guidelines also require utilities to describe two or more mitigations or mitigation portfolios, inclusive of mitigations deployed in combination, for each risk driver.[27]

First, we note that the reference to Section 9 covers "Vegetation Management and Inspections," and does not appear to be related to layered mitigation evaluation methods. In the 2023-2025 Guidelines, Section 9 covers PSPS. It is not clear what is envisioned by the statement "The electrical corporation is expected to use its procedures discussed in Section 9…"

[26] Draft Wildfire Mitigation Plan Guidelines – Package 1, November 12, 2024, p. 60.
[27] Ibid, p. 61.

Earlier Guidelines on evaluating layered mitigations and mitigation portfolios were more equivocal, stating utilities "may" instead of "must' evaluate. While a step in the right direction, GPI fears the draft WMP Guidelines updates are insufficient to elicit substantial change, such as generating multiple alternative mitigation portfolios and/or layered mitigation scenarios and evaluating their respective granular and aggregate cost-benefits. Developing "potential" mitigations, characterizing their attributes for utility decision makers, and documenting the "evaluation" comes up far short from conducting alternative mitigation and layered-mitigation scenario assessments. Similarly, the requirement to assess two or more mitigation solutions for individual risk drivers at a specific location and report on estimated risk reduction and cost does not provide any insights into balancing cost-benefits at the system level.

As is, the draft WMP Guidelines are more likely to lead to a further entrenchment of the current mitigation planning methods, which generally includes a list of potential mitigations and their attributes (generic percent risk reduction and cost), location-agnostic comparisons, followed by the evaluation and advancement of a single solution to wildfire risk reduction based on mitigation selection defaults. Layered mitigation and alternative mitigation portfolio development could instead take the form of adjusting factors such undergrounding implementation thresholds (more or less undergrounding, balanced with covered conductor deployment), developing a least-cost portfolio that achieves a threshold risk reduction, portfolios that include mitigation "packages" or layered mitigations (e.g. SCE's CC++), or heavier reliance on PSPS and PEDS with customer impacts mitigated by Distributed Energy Resource (DER) deployment (e.g. rooftop PV and/or premise energy storage that can island). Each scenario is likely to have different costs and benefits, inclusive of risk reduction and risk buy-down at the circuit and system levels.

Different scenarios allow for evaluation in the context of the "three-legged stool" – system safety, reliability, and affordability. For example, a portfolio heavily dependent on undergrounding to reduce wildfire risk may result in very high safety and reliability at a high cost to ratepayers. An alternative portfolio that combines covered conductor plus PEDS, and more frequent PEDS and PSPS outages, plus on-site DER (e.g. residential energy storage such as the Tesla Powerwall), could strike a different balance between reliability and cost for the same or similar risk reduction within *risk tolerances* (i.e. reliability and safety). Optimal mitigation

solutions in the best interest of ratepayers that balance the three-legged stool are unlikely to materialize unless and until the utilities are required to evaluate and report on the cost-benefits of multiple mitigation solutions and alternative bottom-up system portfolios, inclusive of forecasted costs, risk reduction, reliability, and ancillary benefit assessments (e.g. DER can provide support during other emergency situations such as possible LOLE events during heat waves). We reiterate that cost considerations must be included to appropriately balance safety, reliability, and affordability *in the best interest of the ratepayer*.

Reporting on utility risk attitude and tolerance is an improvement but is unlikely to result in meaningful change

The Draft WMP Guidelines include a new reporting requirement for "Identifying and Evaluating Initiative Activities," which requires utilities to report:

> How the electrical corporation defines different aspects of risk considerations, including: Risk Attitude, Risk Tolerance, Uncertainty, and Tail Risk in its risk mitigation strategies.
>
> o Must break out each by safety and reliability (PSPS and PEDS), as applicable
>
> o Must include a discussion of how each aspect impacts mitigation selection and prioritization[28]

This marks the first introduction of risk tolerance narrations into the WMPs, and is therefore an improvement. However, GPI anticipates that this requirement to define utility risk tolerance, risk attitude, and uncertainty will have little to no material effect on wildfire risk mitigation solutions for two reasons: (1) Essentially zero risk tolerance is already built into wildfire risk mitigation expectations and associated WMP evaluation; and (2) Describing utility-specific risk tolerances only amounts to information sharing in the next 3-years, not change.

Risk tolerance and risk attitude is already baked into the existing wildfire risk management planning standard and WMP evaluation guidelines. The existing wildfire risk management planning standard targets no catastrophic wildfires. With no probabilistic component, this planning standard leaves zero space for wildfire risk tolerance *under any possible future*

[28] Ibid, p. 62.

conditions (e.g. 1 in 2,000-year conditions). It also does not include a metric for acceptable reliability risk due to wildfire mitigation.

The three-legged stool of electric system planning is also unbalanced from the start by the WMP evaluation criterion for "resource use efficiency," which states:

> Resource use efficiency: The proposed initiative activities are an efficient use of electrical corporation resources and focus on achieving the greatest risk reduction with the most efficient use of funds and workforce resources.[29]

Baking in a "focus on achieving the *greatest* risk reduction" means that maximum risk reduction is the priority, followed by efficient fund use *to achieve that maximum risk reduction*. This leaves little to no space for accepting some level of risk tolerance. The greatest risk reduction *under all possible future conditions and risk drivers* will always be best achieved by first removing overhead lines entirely (risk elimination), and when this is unreasonable, the likely second-best option is though undergrounding (engineering controls to eliminate overhead systems). Alternative mitigation packages such as overhead covered conductor plus PEDS/PSPS and DER for reliability support may always have somewhat higher reliability and wildfire risk avoidance considering *all possible future conditions and risk drivers*.

Even if as utilities apply a range of risk tolerances for either wildfire or reliability risk, describing these tolerances will not elicit any change in utility wildfire risk management approaches. Narrations may improve transparency and downstream developments, but the latter should not be expected within the coming 3-year 2026-2028 WMP cycle.

Risk tolerance must be evaluated in context of the "three-legged stool" of safety, reliability, and affordability. GPI further recommends that any meaningful risk tolerance adjustments must include top-down agency guidance that considers safety risk tolerance (e.g. likelihood of ignition, likelihood of a consequence given an ignition, and model *output* consequence thresholds) *and* reliability risk tolerance (e.g. acceptable 1-in-10-year loss of load expectations), balanced by affordability. A system engineered to achieve zero catastrophic wildfire risk tolerance and zero reliability risk tolerance at all costs will likely look very different from a

[29] Ibid, p. 10.

system engineered to achieve very low catastrophic wildfire risk tolerance with low-to-moderate reliability risk tolerance and moderate to high regard for affordability. Unless and until additional top-down risk tolerance guidance is issued, utilities are practically expected and even incentivized to maximally reduce system wildfire risk at a high cost to ratepayers, while to the benefit of reduced electrical corporation liability and increased shareholder revenue.

Section 7 PSPS is over-simplified to only consider PSPS impact mitigation versus judicious used of PSPS as a tool for efficiently managing wildfire risk during low likelihood and extreme risk events

Section III.7 PSPS only requires utility reporting on planned approaches to mitigate the impacts of PSPS events.[30] Furthermore, PSPS impacts are not benchmarked toward achieving *acceptable* reliability risk tolerances and impacts. There is currently no metric of what "done" looks like in terms of adequate PSPS impact reduction. GPI does not support a zero reliability risk tolerance threshold for wildfire mitigation purposes. Even resource capacity procurement, which underpins the entire purpose of the electrical grid (i.e. to provide electricity), is based on a formally adopted reliability risk tolerance of 1-in-10-year loss of load expectation (i.e. widespread black/brown outs) to balance cost and prevent runaway system overbuild.

PSPS can and should remain a viable and cost-effective tool for mitigating wildfire risk during low-likelihood events, inclusive of "extreme" and "black swan" risk events. Establishing an acceptable reliability risk tolerance (e.g. 1-in-10 year outage/ impacts) will inform what a balanced risk mitigation portfolio entails in terms of combined engineering (e.g. UG, CC, PEDS, and DER) and operational controls (e.g. PEDS, PSPS, and DERMS) that strike an *acceptable balance of safety, reliability, and affordability.* The design of Section 7 advances a paradigm of PSPS as a problem for reliability versus one tool that is part of holistic wildfire risk mitigation solutions capable of balancing safety, reliability, and affordability.

[30] Draft Wildfire Mitigation Plan Guidelines – Package 1, November 12, 2024, p. 74.

Amend the QA and QC reporting requirements to include quantitative pass rates

GPI supports the separation of QA and QC method reporting within the Draft WMP Guideline QA/QC reporting sections.[31] However, it was not clear from the Guidelines whether or where utilities are required to report actual, historic (e.g. 2020-2024) QA and QC pass/fail rates. GPI recommend adding reporting requirements for actual past QA and QC pass/fail rates in WMP tables.

GPI supports the addition of revised Wood and Slash Management, Integrated Vegetation Management, and Post-fire Restoration sections, with minor revisions

GPI strongly supports the addition of revised Wood and Slash Management (Section 9.5), Integrated Vegetation Management (Section 9.7), and Post-fire Restoration (Section 9.9) Sections. We recommend expanding the Wood and Slash Management and Post-fire Restoration sections to require that utilities summarize wood and slash management methods from "cradle to grave" and "cradle to cradle." "Cradle to grave" descriptions should include wood and slash production to on-site processing methods and end point disposal such as landfills or leave in place practices. "Cradle to cradle" descriptions should include wood and slash production, on-site processing methods, and summaries of end uses such as biomass feedstocks or other products (e.g. wood pellet production). The recommended "cradle to grave" and "cradle to cradle" narration additions will not materially add to plan length while improving transparency into holistic approaches to wildfire risk management that intersect state objectives.[32,33]

GPI also recommends adding a requirement that utilities report on any partnerships with local, state, or federal agencies and initiatives as they apply to Integrated Vegetation Management (Section 9.7) efforts. For example, while utilities may not conduct prescribed fire-safety work, partnerships and data sharing may help guide land managers to implement prescribed fires in locations that mutually benefit land management and electric sector wildfire risk reduction goals.

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[31] Ibid, pp. 86-89.
[32] CPUC BioRAM Program. https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/electric-power-procurement/rps/rps-procurement-programs/rps-bioram.
[33] Sustainable Woody Biomass Industry Development in California. https://business.ca.gov/wp-content/uploads/2022/02/GO-Biz-Interagency-Biomass-Market-Development-Framework.pdf.

Add a new WMP Guideline section requiring utilities to report on Integrated Distribution System Planning as it pertains to wildfire risk mitigation via Grid Design, Operations, and Maintenance, coordination with existing distribution planning processes, and future proofing distribution system investment to support increasing demand and a High DER future.

Wildfire risk mitigation work includes substantially overhauling distribution system infrastructure. Electrical infrastructure upgrades, rebuilds, and other design considerations cannot and should not be conducted in planning vacuums such as for the sole purpose of "wildfire risk reduction," "meeting customer demand," or "enabling a high DER future." Yet existing CPUC and OEIS processes currently operate in a siloed capacity, blind to other critical design elements. Those blind spots are left to utilities to determine what constitutes best practices.

The CPUC High DER proceeding (R.21-06-017) is tasked with reviewing Utility Distribution Planning Processes (DPP) and the existing Distribution System Operator model with the goal towards change that includes integrated distribution planning enabling a High DER future and realizing positive cost-benefits. One core DPP issue is "coordination and planning through two "Key Goals" which include (1) "use long-term forecasting to proactively plan for electrification" (i.e. future proofing) and (2) "integrate with other distribution level work," such as integrated planning."[34] The first HDER proceeding Decision (D.24-10-030) "…require[s] Utilities to consider distribution planning results when performing other distribution work."[35] The Decision also mandates two workshops to "allow Utilities to explain their proposals for integrated planning and provide stakeholders an opportunity to provide input."[36] D.24-10-030 highlights transparency as a core justification for utility reporting on integrated distribution planning.[37] Utility reporting requirements for integrated planning methodologies also specifically include wildfire risk considerations:

> …focus on calculating and considering whether the increased projects from the increasing sizing and timing of any related assets are less than or equal to the risk-adjusted benefit from avoiding future projects to upgrade grid project costs and risk-adjusted benefits… The Tier 3 Advice Letter

[34] D.24-10-030, p. 28.
[35] Ibid p. 83.
[36] Ibid.
[37] Ibid pp. 86-88.

> that proposes the methodology shall also answer the following questions:… (2) How does the proposed method estimate the increased costs for current projects, and how can this estimate change or improve over time? Include increased costs for wildfire mitigation and associated R.20-07-013 Risk-based Decision-making Framework (RDF) cost benefit ratio data; (3) How does the proposed method incorporate cost effectiveness and cost efficiencies? (4) How does the proposed method adjust for risk and potential risk reduction when considering potential future capacity projects, and how can this adjustment change or improve over time; (5) How does the proposed method estimate cost of future distribution capacity projects (including increased costs for wildfire mitigation and associated R.20-07-013 cost benefit ratio data), and how can this estimate change or improve over time; and (6) How does the proposed plan address projects planned in the high fire threat districts or in areas of wildfire risk, or projects that will require new lines to be built that cross into the high fire threat districts?[38]

Wildfire risk mitigation design, distribution system future proofing, and the resulting balance between system reliability, safety, and affordability are all interconnected. GPI strongly supports integrated distribution planning that balances reliability, affordability, and safety through holistic solutions enabled by improved distribution planning process, distribution system operator models, and system design (i.e. Grid design, operations, maintenance, and DER integration).

At this nascent stage, GPI strongly recommends adding a Section 8 sub-section titled "Integrated Distribution System Planning." This subsection should require utilities to provide a narration, no longer than two pages, on their current methods for integrating distribution planning considerations in wildfire risk driven "Grid Design, Operations, and Maintenance" work. The narrations should include whether and how utilities are future proofing wildfire risk driven and post-fire undergrounding and overhead (covered conductor and traditional hardening) distribution system re-builds. Narrations should include how costs for future proofing distribution system capacity are considered in undergrounding and overhead system design and in balance with risk-based cost-benefit assessments. Summaries should also include the current and planned distribution planning forecasts and planning horizons applied in their integrated distribution system planning processes, especially as it pertains to wildfire risk informed grid design. For example, D.24-10-030 requires utilities to:

[38] Ibid, pp. 88-89.

> Extend the distribution planning forecast horizon to a minimum of 13 years and Utilities' planning horizons to 10 years but maintain the three-year minimum horizon for line section analysis.[39]

Utility "Integrated Distribution System Planning" narrations should also summarize how and when distribution system projects in the HFRA are prioritized based on grid needs assessments (e.g. thermal exceedance, demand is expected to exceed local interconnection capacity), how these projects are included in risk mitigation work plans, and the impacts of grid need driven project prioritization in the HFRA on wildfire risk buydown rate. For example, anticipated grid needs may warrant prioritizing a distribution infrastructure project on a circuit with lower wildfire risk to timely serve customer demand. The project plan should include design elements that both eliminate anticipated near *and long-term* grid needs, while also mitigating location specific wildfire risk. Increased transparency into "Integrated Distribution System Planning" from the wildfire risk reduction lens is a critical *starting point* for future distribution system planning and wildfire risk reduction optimization opportunities that balance safety, reliability, and affordability. This is especially relevant given trends in WUI growth and anticipated climate change impacts.[40,41]

Conclusion

We urge the OEIS to adopt our recommendations herein.

[39] D.24-10-030, p. 3.
[40] Relational geographies of urban unsustainability: The entanglement of California's housing crisis with WUI growth and climate change. https://www.pnas.org/doi/10.1073/pnas.2310080121#:~:text=Since%20the%201990s%20California%20has,in%20the%20state%20(10).
[41] Global expansion of wildland-urban interface intensifies human exposure to wildfire risk in the 21st century. https://www.science.org/doi/10.1126/sciadv.ado9587.

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