BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Wildfire Safety Division
California Public Utility Commission

COMMENTS OF THE GREEN POWER INSTITUTE

ON THE 2020 WILDFIRE MITIGATION PLAN RESOLUTIONS

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Gregory Morris, Director
Zoë Harrold, Scientist
The Green Power Institute
   a program of the Pacific Institute
2039 Shattuck Ave., Suite 402
Berkeley, CA 94704
ph: (510) 644-2700
fax: (510) 644-1117
gmorris@emf.net

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Pursuant to the May 7, 2020, Memo from Director Caroline Thomas Jacobs, the Green Power Institute, the renewable energy program of the Pacific Institute for Studies in Development, Environment, and Security (GPI), provides these Comments of the Green Power Institute on the 2020 Wildfire Mitigation Plan Resolutions (WSD-002-009).

Opening Comments on Wildfire Mitigation Plans

GPI appreciates the progress made in the 2020 WMP filing cycle relative to past cycles of wildfire risk planning, and generally supports WSD-002 through WSD-009. There is, however, still a need for substantial improvements in the LSEs' plans as evidenced from the many general and LSE-specific Resolution guidance Deficiencies/Conditions and low maturity scores for many aspects of the WMPs. GPI's comments encompass three aspects of the resolutions: (1) Corrections to the Resolution records regarding April 7 GPI comments on the WMPs; (2) Recommendations to include a new guidance, or alter an existing guidance to require that all LSEs describe their existing vegetation residuals management plans including plans to enable value-added end-use pathways for vegetation-management (VM) residues; (3) Adjustments and additions to general (WSD-002) and individual LSE (WSD-003 through WSD-008) Resolution guidance requirements.

Updates to Public and Stakeholder Comments section regarding GPI comments

Aspects of GPI's comments on the 2020 WMPs, filed on April 7, 2020, were misrepresented or incomplete in the WSD-General and LSE-specific Resolutions. For example, GPI comments recommending a value-added management strategy for VM residues was only recorded in the BVES and Liberty Resolutions, WSD-006 and WSD-007, respectively. However, the proposal is applicable to all LSEs, and in particular to the IOUs. The description of GPI's comments in the Liberty Resolution WSD-007 is

thorough and contains numerous elements that were specified as applicable to all LSEs, but are only reflected in Liberty's WSD Resolution, or are inconsistently recorded in the other LSE Resolutions. We recognize that the General Resolution WSD-002 does not include a summary of Public and Stakeholder Comments that were applicable to all LSEs, and therefore request adjustments to each WSD resolution to reflect GPI's universal comments which apply to all LSE's. We also request adjustments to specific WSD resolutions to better reflect our LSE-specific comments. The GPI respectfully requests that Resolutions WSD-003 through WSD-009 be updated to reflect GPI's comments as follows:

GPI comments to add to all LSE Resolutions WSD-003 through WSD-009

- All LSEs that test and/or adopt alternate vegetation management strategies should provide VM-treatment-specific, wildfire-risk-mitigation data.
- WMPs should include underlying RR and RSE calculations and a description of the data and/or assumptions used to determine these values.
- GPI advocates for using outcome metrics alongside program metrics to assess the success of achieving WMP objectives.
- A clearer connection and more established information exchange between the Microgrid Proceeding and the WMP would facilitate installation of microgrids that support wildfire and PSPS-mitigation objectives.
- All LSEs should disclose/describe their threshold for asset replacement
- The WMPs should include comprehensive plans to obtain and assess customer outreach efforts and analyze feedback information regarding PSPS and customer-utility communications.
- All initiatives that can reduce wildfire risk, either directly or indirectly, existing or new, should include RR and RSE values.
- Integrate SME recommendations into established, written protocols and methodologies.
- GPI recommends developing an approach to actively promote the complete removal of VM residues from the site after trimming is complete, including

segregating any commercially usable material for shipment to sawmills, particle board mills, or similar manufacturing facilities, and chipping the remaining materials and shipping it to biomass generating facilities.

GPI comments to add to all IOU Resolutions, WSD-003 through WSD-005

- WMPs should include the IOUs' complete wildfire risk bowtie analysis assessment.
- IOUs should clearly indicate how their foundational wildfire risk bowtie analyses, MAVF and RSE results informed and are factored into determining WMP activities, expenditures, and prioritization.
- IOUs should formulate an initiative to actively promote the complete removal of VM residues from the site after trimming is complete, including segregating any commercially usable material for shipment to sawmills, particle board mills, or similar manufacturing facilities and chipping the remaining materials and shipping it to biomass generating facilities.

GPI comments to add to PG&E Resolution WSD-004

- Supports normalizing data to RFW circuit mile day per year within HFTDs, versus system-wide, as a beneficial parameter for assessing changes in wildfire risk in addition to the existing normalization methodology.

GPI comments to add to SCE Resolution WSD-004

- Provide additional information regarding the chemicals and other methodologies used to achieve a low growth buffer zone, including the anticipated maintenance schedule and the efficacy of the IVM program.

GPI comments to add to SDG&E Resolution WSD-005

- Should require SDG&E to complete Table 31 prior to accepting their WMP.

- Accelerate the adoption of digitized VM tracking systems to support data-driven insight on the efficacy of adopted VM activities
- The overall per circuit mile ignition probability in SMJUs is likely not less than the IOUs, masked in part by the large difference in territory, and therefore dataset size.

LSEs, in particular IOUs, should develop end-use pathways for VM and EVM residues

The VM and Enhanced vegetation management (EVM) activities proposed by the LSEs, and the IOUs in particular, are likely to result in large amounts of VM residues that have value-added, end-use potential, including lumber, particleboard manufacturing, and biomass, among other uses. The IOUs, especially PG&E and SCE, are anticipated to have the largest biomass residue production based on their large territories and proposed aggressive EVM initiatives. Tree removal plans for the IOUs total tens of thousands of trees. This is in addition to trimming trees back between 12 to 25' from over 50,000 miles of overhead distribution lines in Tier 1 and Tier 2 HFTDs. Leaving the residues in place according to a lop and scatter approach may increase ground fuels in locations where VM and EVM activated are performed. Addressing this methodology for VM/EVM treatment falls under the WMP Guideline 5.3.5.5: "Include a discussion of how the utility's overall vegetation management initiatives address risks that may arise from trimming or removing trees, including but not limited to erosion, wind, flooding, etc." Risks incurred may include increased wildfire ignition potential, or consequences due to increased ground fuels near lines where VM/EVM activities took place and the residuals were left in place.

Additional considerations include customer satisfaction with VM/EVM activities. Many of the residues are the property of landowners where transmission and distribution lines run through private property subject to right-of- way agreements with the utility companies. Some landowners are reported to submit grievances on account of vegetation residues being left strewn about their property. The IOUs also have stated encountering

issues and pushback when utilities approach landowners about VM activities on their properties. Supporting value-added pathways for VM residues, including those from full tree removal, may improve Utility-landowner relations and even facilitate VM activities that are otherwise stalled by landowners.

VM activities should be comprehensive programs that include removing the residual materials for the purpose of customer support and reduction of fuels near Utility assets. As noted in our opening comments on the individual LSE WMPs, there are currently no specific guidelines or requirements for LSEs on how to manage the residues of VM activities. We also highlighted how generalized and vague many of the LSE's VM plans were in terms of VM residue management. Briefly, SCE is the only LSE that indicates a value-added end use pathway for some of its VM residues via biomass generation. SDG&E and SCE state they will chip or lop and remove tree trimming residues off site. Liberty describes plans to chip or lop and remove or distribute the residues depending on location. In WSD-006, BVES comments are summarized as stating that VM waste disposal is at the discretion of the contractor, such that rules regarding biomass disposal are inappropriate. While BVES is using contractors to complete much of their VM work, and those contractors may have end-use pathways within their business plans, BVES is also encouraged to develop more robust in-house VM capabilities, at which point they will need to take on the associated vegetation residue disposal. In instances where contractors are providing VM disposal services, those services should include value-added pathway options. The IOUs are primarily relying on in-house VM personnel, and should therefore provide more robust VM residue management plans that include value-added end-use pathways. Notably, PG&E did not provide a VM residue management plan and only provided vague plans to discuss with the USFS regarding fuel management. SDG&E stated in their reply comments on the 2020 WMPs:

> SDG&E detailed during WMP workshops in February 2020, it partners with a local environmentally sustainable composting vendor to turn green waste into recyclable and landscaping material. In 2018 and again in 2019 SDG&E diverted over 3,500 tons of green waste material to this facility. SDG&E contractors continue to partner with local firewood companies to utilize the larger wood. SDG&E is working with its tree contractors on a partnership with local vendors to refurbish select wood from tree trunks into furniture and

artisan pieces. Through an RFP process SDG&E is also investigating the feasibility and
viability of repurposing biomass into alternative, sustainable options. [SDG&E 2020 WMP
Reply Comments, p. 33.]

Existing value-added vegetation residue end-use programs such as those described by
SDG&E should be included in the official WMP record, rather than being solely presented
in workshops. This type of programmatic information aligns with information requested
in WSD-003 Deficiency PGE-23, Class B: "Vegetation waste and fuel management
processes unclear" and in particular Condition (iv): "The types of vegetation waste
treatments it uses across its grid, including how it chooses where to use each treatment,
and how effective each of these vegetation waste treatments are in the location where they
are deployed."

We also believe that there is still room for substantial improvement by all LSEs in terms
of the stipulations in PGE-23, such as condition (*iv*), and where each LSE chooses to use
each treatment. We recommend that PGE-23 be relocated to the General Resolution
WSD-002 and applied to all LSEs. The GPI also recommends that WSD-002 and the
aforementioned deficiency/condition regarding: "Vegetation waste and fuel management
processes unclear" include an additional condition (*vi*) that requires a description of any
value-added end-use pathways the LSE will support/enable in regards to VM/EVM
residuals from tree removal and trimming activities; the anticipated timeline for
establishing those pathways; and a 10-year plan for maturing their VM residue
management approach. In the event that PGE-23 is not converted to a general guidance,
GPI recommends that VM residue management be included as a separate Class C
guidance in WSD-002 requiring inclusion in first quarter report according to the proposed
condition (*iv*) above. These descriptions will provide additional insight for developing
future guidelines and/or requirements regarding VM residue management that includes the
removal of vegetation residues and enables value-added, end-use pathways.

Recommendations regarding resolutions WSD-002 through WSD-008

Recommendations regarding General Resolution WSD-002

1. *Off-Ramp Proposals* - We support the new requirement that LSEs report initiative Off-Ramp decisions in the WMP filings (WSD-002 Section 5.6 WMP Off Ramps). IOUs and SMJUs alike must prioritize their initiatives to ensure their limited resources are allocated in such a way that both maximally reduces wildfire risk in the near term, and leads to a mature wildfire mitigation approach in the long-term. This new requirement aligns with GPI's stance that program metrics are insufficient to determine the success of an LSE's WMP achievements. Rather, outcome metrics are fundamental to developing a cost-effective approach that achieves maximum wildfire mitigation potential, including tracking and applying outcome metrics to determine the efficacy of initiatives, inform prioritization, and terminate, reduce, or accelerate activities. We agree that this may include adjustments to the proposed WMP initiatives based on data that show an initiative is or is not effective for wildfire mitigation.

WSD-002 establishes a new filing in the form of a letter to the WSD, which serves to expand the number of filings within the WMP, and may make the review process more cumbersome because underlying data and information regarding each initiative's off-ramp or acceleration decision will be scattered among the WMPs, quarterly reports, 2021 WMP updates, and Remedial Compliance Plans. GPI recommends that off-ramp decisions be more narrowly defined as reducing or ending mitigation measures, and that these decisions be described in detail in the second and fourth quarter reports, commensurate with 6 and 12 months following WMP approvals. This will retain WMP outcome metrics, assessments, and the application of those metrics in one cohesive document. We appreciate the fact that the proposed letter format includes an opportunity for stakeholder comment, and we request that this opportunity to comment on off-ramp requests be extended to our proposed format for the requests.

Furthermore, the Resolution should require that all off-ramp proposals include quantitative data, risk models (i.e. from G-3), RSE values (i.e. as per G-1 and G-2), and other outcome metrics (e.g. requirements in G-7 and G-9,) to the maximum extent

possible, and explain how they were applied to arrive at the proposed action, including whether alternatives are proposed. This is a particularly important stipulation in order to move past the equivocating language predominant in the WMPs and discouraged in WSD-002 Guidance-8, Class C.

GPI agrees that attempts to increase program size or expense should require separate applications at the discretion of the WSD and/or the Commission. Increases in program size or the addition of new programs/initiatives should not be termed "off-ramps," and should be described in a letter to the WSD with opportunity for stakeholder comment within 15 days of submission.

2. *Guidance-1, Class B* – GPI recommends that Guidance- be expanded to specify that LSEs must provide RSE values as well as the inputs to the risk models described in (iii). Initiatives also have varying lifetimes for replacement (e.g. annual VM versus 10+ year lifespan GH). Near- and long-term initiative maintenance schedules should be specified, and LSEs should explain how the maintenance costs are considered in terms of risk spend-efficiency and the final decision to implementation any given initiative at the proposed scale. GPI also recommends reclassifying Guidance-1 as Class A with reporting in the Remedial Correction Plan along with Guidance-3. G-1 and G-3 are intrinsically linked since G-1 calls for RSE data and risk models needed to inform model-based decision-making mandated by G-3. RSE values and descriptions of risk models were also required within the WMP Guidance and are therefore subject to disclosure in a Remedial Compliance Plan (RCP). Guidance-3 should also require LSEs to describe their wildfire risk bowtie analyses in detail, and how they inform initiative selection and prioritization.

3. *Guidance-4, Class B* – GPI recommends adding a condition (vi.), which requires LSEs to provide detail on the costs incurred by PSPS and considered in PSPS RSEs, including the costs of customer impacts and utility support programs, and how those costs are considered when scoping and prioritizing other initiatives that can reduce the extent, duration, and frequency of PSPS events.

4. *Guidance-7, Class B* – GPI recommends requiring LSEs to include RSE values, as well as all risk-models and inputs, in regards to providing "…detail on [the] effectiveness of 'enhanced' inspection programs."

5. *Guidance-12, Class B* - We recommend adding an additional condition to G-12, Class B which requires Utilities to describe how they might prioritize/reprioritize their efforts assuming they achieve their 2020 WMP program goals. See additional discussion in recommendation 26. (Liberty) below.

Recommendations regarding PG&E Resolution WSD-003

6. GPI supports adding HFTD RFW normalized data as per PG&E's recommendation. These data should be permitted in WMP updates and quarterly reports so long as they are in addition to the RFW circuit mile days normalization established in the WMP Guidelines. In future WMPs, normalizing to HFTDs could be beneficial to reveal whether initiative and asset prioritization is in fact reducing wildfire risk in the most at-risk regions of an LSE's territories. We note that differences in terrain, weather patterns, and ratios of HFTD-to-total territory area for each LSE may skew the RFW circuit-mile-days-normalized outputs, rendering them more difficult to compare between LSE's than previously envisioned. For example, on May 18, 2020, an RFW was issued for part of Southeast CA, much of which appears to have encompassed desert terrain, including Death Valley, which is not classified as a HFTD. Including such data as these in the normalization while focusing wildfire mitigation activities in HFTDs may mask the impacts of initiative prioritization and targeted asset management.

7. *Vegetation contact, ignitions and mitigation approach* – The WSD-003 states that:

> … vegetation contact was the largest ignition driver representing 25 percent of all PG&E ignitions (45 percent of all contact from object ignitions). PG&E's second largest ignition driver was conductor failure, making up 19% of all ignitions. While these ignition drivers make up significant percentages of other large electrical corporation's ignitions, PG&E experiences these types of ignitions the most – especially when considering its higher rate of ignition per overhead circuit mile. Hence, it is prudent for PG&E to focus on vegetation management to measurably reduce the risks of vegetation contact drivers. [WSD-003, p. 20.]

GPI cautions against making a statement in the Resolution that it is prudent for PG&E to focus on vegetation management to reduce the risk of vegetation contact. This may be the case, however, the LSEs failed to show any cost-benefit analysis for alternative solutions. For example, it is conceivable that strategic placement of covered conductors could reduce ignitions from both vegetation contact and conductor failure. Although this is dependent on underlying data, such as where, how, and why conductor failure is PG&Es second highest ignition driver, the unknowns in the data provided must be explored prior to lauding PG&E's approach. That is, there is still room for data-driven optimization and initiative prioritization within all LSE's WMPs, including in the realm of vegetation management, the proposed program and inspection expansions and their associated risk-mitigation and cost effectiveness.

8. *PGE-14, Class B and PGE-15, Class A* – These two deficiencies are inextricably linked in that they both address potential underlying issues surrounding a spike in PG&E's Level 3 findings. Both include conditions that require PG&E to describe how it classifies each finding:

> How it determines the priority level of its inspection findings in accordance with high, moderate, and low risk to safety and reliability, as detailed in GO 95, Rule 18. [WSD-003, PGE-14, p. 42.]

and

> A description of the value and effectiveness of these enhanced inspections in identifying GO 95 violations and safety hazards that present greater than "low" risk of potential impact, including quantitative metrics, and a detailed explanation of how it classifies findings by Level and how it plans to ensure that front-line inspection staff are properly classifying findings. [WSD-003, PGE-15, p. 43.]

GPI recommends combining PG&E-14 and PG&E-15 and maintaining the Class A designation, or at a minimum removing the redundancy.

9. *PGE-23, Class B* – As per our recommendations regarding VM/EVM residue management, GPI recommends PGE-23 Deficiency/Condition, titled "Vegetation waste and fuel management processes unclear…," should be moved to the General Resolution

WSD-002. LSEs only provided vague descriptions of their residue management plans. These plans, and the Conditions in this guidance, should require LSEs to describe how they will allow for and enable value-added end-use pathways for their VM residues, such as lumber production or biomass generation.

10. *PGE-24, Class B; PGE-27, Class B* – These deficiencies are applicable to all LSEs and should be moved to the general resolution accordingly.

11. *PGE-26, Class C* – This guidance overlaps with guidance SDGE-13 and SCE-12. GPI therefore recommends moving this guidance, regarding "effectiveness of increased vegetation clearances," to the general resolution, and updating it to explicitly require that IOUs coordinate with each other in regard to conditions (i) and (ii). GPI recommends adding a third condition that directs SMJUs to coordinate with IOUs to learn from these studies, and develop a plan to integrate increased vegetation clearances contingent upon the outcome of the studies conducted by the IOUs.

Recommendations regarding SCE Resolution WSD-004

12. *Clarify the predominance of "other" as an ignition driver* – WSD-004 correctly highlights a concern that in 2019 SCE reports that "70% of near misses were driven by "other" causes (WSD-004, p. 5)." GPI recommends the resolution include a Class C guidance requiring that SCE evaluate its near miss and ignition driver monitoring program, propose updates to the monitoring program and/or classification methodology in order to reduce the number of "other" designations, and revisit the existing ignition and near-miss data to evaluate whether those incidences can be attributed to specific drivers. These data are foundational to understating an LSE's predominant risk driver, and selecting and prioritizing initiatives to reduce the associated wildfire risk.

13. *Unmanned aerial systems* – PAO recommended an evaluation of the unmanned aerial system study and potential termination of the program. GPI supports a study and subsequent evaluation of SCEs proposed unmanned aerial inspections, to minimally include its RSE, inputs to the RSE, assessment of its efficacy, and an estimated timeline

for methodology maturation. Program termination may stall progress in cutting-edge initiatives that have potential but are in their infancy in terms of efficacy and viability. The unmanned aerial program may be a good candidate for a full-circle application of RSE values and additional study findings, adjustments to the extent of program implementation, and perhaps ongoing pilot study efforts to mature the methodologies for future use in wildfire mitigation inspections.

14. *Metrics and Underlying Data and lessons learned* – GPI agrees with WSD-004 where is states that:

> SCE's WMP is generally lacking in sufficient detail on lessons learned from 2019 and incorporation of those lessons into its 2020 WMP. SCE's WMP describes major themes and lessons learned from 2019 WMPs and from implementation of 2019 wildfire mitigation initiatives, but its discussion is generally not useful. SCE's focus is almost entirely on measuring the number of mitigation activities it conducted in 2019, and meeting more of its numerical goals in 2020. However, meeting program targets does not necessarily mean the activity was effective in reducing utility-caused wildfire risk, so continuing to focus on such targets in 2020 does not demonstrate that SCE has learned any lessons. (WSD-004, pg. 13)

We continue to stress that the progress and outcome metrics required in the 2020 WMPs are imperative for assessing each LSE's progress as well as the validity and efficacy of the proposed WMPs. GPI recommends adding a Class C guidance requiring all LSE 2021 WMP Updates to include updated progress and outcome metrics along with descriptions on how these metrics are driving data-based decision making, including initiative prioritization, asset management, and off-ramps.

15. *SCE-12, Class C* – This guidance requires the same actions as PGE-16 and SDG&E-13. GPI recommends this guidance be relocated to WSD-002, and adjusted according to PGE-26 recommendations above.

Recommendations regarding SDG&E Resolution WSD-005

16. *Undergrounding* – SDG&E plans to underground a "few hundred miles" of "highest risk" circuits in Tier 2 and 3 HFTDs and WUIs. Several parties raise concerns about the

RSE of this plan, how undergrounding will reduce other initiative costs such as eliminating the need for VM along undergrounded circuits, and assessment of lower cost alternatives to undergrounding that may be equally as effective. GPI recommends adding a Class C guidance specific to undergrounding with conditions that address the above concerns and queries. Alternatively, these conditions could be combined with SDGE-5 (Class B) and the deficiency expanded to state: "SDG&E does not provide sufficient detail justifying its extensive, high cost, undergrounding initiative or its need for regulatory assistance."

17. *SDGE-13, Class C* – This guidance requires the same actions as PGE-16 and SCE-12. GPI recommends this guidance be relocated to WSD-002 and adjusted according to PGE-26 recommendations above.

18. *SDGE-14, Class B* – This condition addresses "Granularity of 'at-risk' species" with concerns that using tree genus, instead of species, is too broad for determining at-risk trees. GPI recommends that this guidance be moved to WSD-002 as a general guidance, and expanded to address the shortcomings of all LSEs in determining at-risk tree species. SCE only refers to targeting "fast-growing species." PG&E references "… 10 species of trees that were responsible for nearly 75 percent of the investigated vegetation-caused outage events in HFTD (2020 WMP, p. 5-195)." However, PG&E does not specify which species they are targeting in their 2020 WMP. Condition (i) should be updated to read "all tree genera, and species therein, identified on an LSE's list of 'at-risk' trees".

Recommendations regarding BVES Resolution WSD-006

19. *Grid Design and system hardening* – The planned rate of tree-attachment removal described in WSD-006 equates to a 3.8-year plan in order to remove all 1,200 tree attachments at a rate of 240 per year, with 273 completed by January 31, 2020. BVES estimates all attachments will be removed by 2022, which is not consistent with their rate of execution. It is also noted that BVES did not meet their 2019 goals for tree-attachment replacement. GPI recommends adding a Class B guidance that requires BVES to clarify,

in their first quarter report, how they will reach their tree-attachment goals by 2022 at the proposed rate.

20. *BVES-4, Class B* – WSD-006 states:

> BVES meets each of the foregoing requirements, except that it appears not to have completed LiDAR inspections promised for 2019. Approval of its 2020 WMP is therefore conditioned upon BVES explaining its approach to LiDAR inspections. [WSD-006, p. 22.]

This language suggests a conditional approval on the basis of the failure to perform any LiDAR analyses, contrary to their 2019 targets. In accordance with this statement GPI recommends changing the BVES-4 guidance classification from B to A, which requires that the conditions be met in the Remedial Compliance Plan within 45 days of ratifying the resolution. We believe the failure to complete any portion of their planned LiDAR program in 2019 warrants an explanation prior to approving a subsequent plan with additional LiDAR inspections.

21. *Maturity level* – The BVES maturity model scores appear to be misaligned with the actual maturity of some of their programs. For example, WSD-006 states:

> BVES describes very limited emergency planning and preparedness. It would appear the utility faces significant challenges due to its environmental conditions and terrain. At the same time, BVES' plan suggests it is aware of risk factors. It has been actively pursuing means to minimize the risks including building relationships and communications with key stakeholder groups, including the Mountain Mutual Aid Association (MMAA) to inform, prepare, and coordinate outreach and engagement. [WSD-006, p.35.]

BVES's 2020 WMP indeed describes a business-as-usual emergency preparedness plan that is based on its generalized Emergency Preparedness and Response Plan that is compliant with GO 166 (BVES 2020 WMP, p. 191). While we acknowledge that the smaller utilities may not have the resources to develop a wildfire and PSPS-specific emergency preparedness plan at this time, the description of the plan makes us question why it is classified at maturity level 4.

The WSD-006 summary also states:

BVES outlines improvements being made to its risk assessment tools, but the information provided in BVES' WMP does not clarify how these tools are used to drive prioritization of specific wildfire mitigation initiatives in order to minimize wildfire risk and PSPS (WSD-006, p. 5).

In the maturity survey however, BVES scores a 3 in 2020, and anticipates scoring a 4 by 2023 for its "Approach to prioritizing initiatives across territory." GPI is concerned that the Maturity Assessment does not align with the content of BVES's 2020 WMP. We hope some of this discrepancy will be clarified through BVES's responses to the guidance recommendations in WSD-002 and WSD-006.

Recommendations regarding Liberty Resolution WSD-007

22. *Metrics and Underlying Data, Near Misses* – WSD-007 notes that relative to near misses reported for 2015-2018, Liberty experienced a 160 percent increase in near misses in 2019, but with no correlation to ignitions (WSD-007, p. 11). The resolution concludes that this suggests an increase in near misses may signal a trend that could lead to increased ignitions in the future. GPI questions whether this could have resulted from a shift in data collection methodology or other systematic bias. For example animal contacts, which one might assume is a random occurrence, roughly doubled from 2015-2018 relative to 2019. GPI recommends including a Class C guidance requiring liberty to investigate the near miss and ignition data trends and provide a description of their findings, and how they anticipate 2020-2023 WMP activities will reverse the increase in near misses.

23. *Grid Operations and Operating Controls* – Liberty describes a continuing effort to replace older reclosers and line air switches with newer equipment. Its goals are to allow for better sectionalizing of circuits in PSPS events, and to enable Distribution Automation Control in the next three years (WSD-007, p. 22)." GPI recommends adding an additional Class C guidance requiring Liberty to provide details on whether and how advancements in reclosers and distribution automation control will support wildfire mitigation beyond PSPSs, and justify their activities as transcending general reliability upgrades. GPI recommends adding a guidance that is the same as stipulated for PacifiCorp:

Deficiency (PC-5, Class C): PacifiCorp's WMP does not report sufficient information on the risk reduction outcomes of its automatic recloser program.

PacifiCorp prioritizes its automatic recloser program. PacifiCorp claims that its automatic reclosers do not emit sparks or pose an ignition risk. PacifiCorp states that it adjusted settings for reclosers and conducted line testing to assess faults before reclosing and that it will continue to investigate if amended recloser settings and conducting line testing after lockout appropriately addresses faults.

Condition (PC-5, Class C): In its 2021 annual WMP update, PacifiCorp shall: i) describe whether recloser setting adjustments and the detection and alleviation of faults reduce ignition risk along PacifiCorp's grid; and ii) report on its assessments, including all supporting data and results. [WSD-008, p. 26.]

24. *Burn per RFW correlation* – WSD-007 puts forth a somewhat misleading statement regarding the correlation between burn acreage and RFW circuit mile days:

Liberty reports its highest acreage burned rate and total acres burned in 2016. Interestingly, Appendix B, Figure 1.5b illustrates that in 2016 Liberty experienced its least amount of RFW circuit mile days in the past five years, indicating there may not be a strong correlation between these two metrics in Liberty's service territory (WSD-007, p. 23).

We discourage making a statement that Liberty's territory may not have a strong correlation between RFW circuit mile days and burn acreage based on 2016. It is important to note that Liberty encompasses a relatively small territory with ignition events ranging from 0 to 3 events per year since 2005. Only one ignition event was recorded in 2016. Normalizing very few ignition events to total RFW circuit mile days does not provide a sufficiently robust statistical basis to make a correlation between ignitions/burn acreage and RFW circuit mile days. Probability dictates that any RFW day, whether is the first or tenth of the season, has an increased probability of resulting in wildfire. Meaning that even if there was only one RFW in an entire season, an ignition and wildfire event during that day is more likely than on any other day.

Furthermore, the resultant acreage burned is not a function of any future RFW days. While we understand the intention to determine an average risk/wildfire frequency associated with the occurrence and extent of RFW days, this requires sufficient data to capture and track values with statistical significance. A region with few RFW circuit mile

days could still experience one ignition event that happens to trigger a large wildfire. While the probability of this occurring may be lower than a region with many RFW circuit miles and more ignitions, it is not impossible. What appears to be the case for Liberty is a lack of sufficient data points (ignitions, burn events, RFW circuit miles days) to determine a trend. GPI recommends removing the implication that there may not be a strong trend between burn acreage and RFW circuit mile days and instead clarify the statement to read:

> Due to their small territories, SMJUs such as Liberty may not experience sufficient events to determine a clear correlation between ignitions, burn acreage, and RFW circuit mile days. However, this does not mean that these small territories are less prone to experiencing a utility ignited wildfire, as suggested from the data in 2016 where the largest burn acreage occurred during a year with the fewest RFW circuit mile days. SMJUs are therefore encouraged to explore additional progress and outcome metrics to assess the efficacy of their programs and initiatives.

25. *Data Governance* – WDS-007 outlines some concerns regarding a relatively minimal data collection/management plan, but provides no additional guidance's or requirements. GPI recommends adding a Class C guidance requiring Liberty to report on its progress towards establishing a data storage and utilization platform. Data collection and management are foundational to data-driven risk assessment. Conditions should require that Liberty describes how this platform will support data collection that enables Liberty to assess the efficacy of their initiatives and programs. While we recognize that Liberty has a relatively small territory and therefore fewer resources, this guidance is in alignment with the vision that "Liberty's development in these foundational, enabling capabilities provides an opportunity for the WSD and the Commission to guide this development and drive towards increased transparency and standardization in decision-making."

26. *Maturity Evaluation* – We agree with the statement that "development in these foundational, enabling capabilities provides an opportunity for the WSD and Commission to guide this development and drive towards increased transparency and standardization in decision making." However, we are concerned that many of aspects of Liberty's WMP programs and initiatives are "holding steady" or "static." More guidance may be needed than what is provided in WSD-002 and WSD-007 in order to guide near-term WMP development and ensure wildfire mitigation activities are tailored to cost effectively

mitigate wildfire risk. To this end, GPI encourages additional guidance for Liberty that requires information regarding underlying metrics and data, grid operations and operating controls, and data governance as per the recommendations above.

We are also concerned with the statement that "[Liberty] intends to achieve better than incremental growth for most of its targeted capabilities. It would be expected that the results of these efforts will result in re- prioritization in the future (WSD-007, p.28)." If this is the case, it is not unreasonable to expect initiative reprioritization to be described in their 10-year outlook assuming the program and maturity targets in the 2020 WMPs are met by 2023. GPI recommends including a reference to WSD-002 general guidance G-12 to clarify that Liberty's and all LSE's ability to prioritize and subsequently re-prioritize in the future is being monitored along with the other LSEs. We also recommend adding an additional condition to G-12, Class B which requires Utilities to describe how they might prioritize/reprioritize their efforts assuming they achieve their 2020 WMP program goals (See recommendation 5 above).

Recommendations regarding PacifiCorp Resolution WSD-008

27. *Burn per RFW correlation* – Similar to WSD-007 (Liberty), WSD-008 puts forth a somewhat misleading statement regarding the correlation between burn acreage and RFW circuit mile days:

> As shown in Appendix B, Figure 2.9b, PacifiCorp reports its highest acreage burned rate and total acres burned in 2019. Interestingly, Appendix B, Figure 1.5b illustrates that in 2019 PacifiCorp experienced its second least amount of RFW circuit mile days in the past five years, indicating there may not be a strong correlation between these two metrics in PacifiCorp's service territory. [WSD-008, p. 12.]

GPI disagrees with this statement in that it implies that wildfire risk may not be strongly correlated with RFW days based on weak data. Briefly, datasets with relatively small sample numbers such as annual ignitions recorded for PacifiCorp (2 – 11 ignitions annually) and Liberty (0 – 3 ignitions annually), as well as other values based on a relatively small number of incidents (e.g. compared to IOUs) such as burn acreage and RFW circuit mile days are less reliable for tracking trends, determining correlations, and

other inferences that require more statistically robust datasets. For a more complete discussion see comment 21 above. GPI recommends changing the language in WSD-008 on page 12 to read:

> Due to their small territories, SMJUs such as PacifiCorp may not experience sufficient events to determine a clear correlation between ignitions, burn acreage, and RFW circuit mile days. However, this does not mean that these small territories are less prone to experiencing a utility ignited wildfire, as suggested from the data in 2019 where the largest burn acreage occurred during a year with the second fewest RFW circuit mile days. SMJUs are therefore encouraged to explore additional progress and outcome metrics to assess the efficacy of their programs and initiatives.

28. *Situational Awareness, Cameras* – PacifiCorp's 2020 WMP does not include any plans for installing cameras that support territorial situational awareness, despite the fact that discussing use of cameras for situational awareness is a requirement of the WMP Guidelines. Indeed, WSD-006 cites BVES for its incomplete camera coverage and includes guidance BVES-2, Class B, requiring the utility to detail: "i) whether it has sufficient cameras, including the observations from alertwildfire.org, and ii) plans, including a timeline to improve its camera coverage moving forward (WSD-006, p. 18)." To comply with the WSD guidelines and align with the expectations of BVES, the GPI recommends adding a Class B guidance requiring PacifiCorp to detail: i) how many cameras PacifiCorp currently has, its current camera monitoring program, and how it uses these data in WMP related activities; ii) whether it has sufficient cameras; and iii) plans, including a timeline to improve its camera coverage moving forward.

29. *PSPS re-energization* – WSD-008 Section 6.5.5 on Grid Operations and Operating Protocols highlights that "[PacifiCorp] does not include activities related to PSPS or re-energization as part of Grid Operations. GPI recommends adding a Class B guidance that requires PacifiCorp to develop and describe a plan for PSPS re-energization in their first quarter report. Re-energizing after a PSPS event is a fundamental aspect of PSPS preparedness planning, and clear methodologies that take into account wildfire mitigation should be in place prior to additional PSPS events.

Trans Bay Cable and Horizon West Transmission Resolution WSD-009

GPI generally supports WSD-009, and agrees with the decision to approve TBC and HWT's 2020 WMPs without conditions.
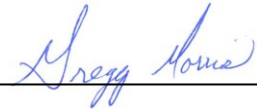
Conclusion

GPI generally supports the additional guidances set forth in WSD-002 through WSD-008, and is hopeful that these additional reporting requirements will guide the LSEs towards developing more cohesive plans that apply comprehensive wildfire mitigation risk assessments (e.g. bowtie analyses), and perform initiative and methodology testing, vetting, selection and validation based on risk-mitigation quantification and cost-effectiveness valuation. We also strongly encourage the WSD to include a guidance that directs LSEs to describe, in detail, their vegetation management residue programs and any existing value-added end-use pathways including but not limited to biomass generation, particle board and lumber production, and biochar production. This will encourage sustainable practices within the WMP, and prevent waste from business-as-usual and enhanced VM initiatives.

We recommend that the Commission adopt the positions that we have taken in these comments.

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Respectfully Submitted,

Gregory Morris, Director
The Green Power Institute
  a program of the Pacific Institute
2039 Shattuck Ave., Suite 402
Berkeley, CA 94704
ph: (510) 644-2700
e-mail: gmorris@emf.net