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OF THE STATE OF CALIFORNIA**

Office of Energy Infrastructure Safety
Wildfire Safety Division

**COMMENTS OF THE GREEN POWER INSTITUTE
ON THE LIBERTY 2026-2028 BASE WILDFIRE MITIGATION PLAN**

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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 Liberty 2026-2028 Base Wildfire Mitigation Plan*.

Introduction

GPI performed a review of the Liberty 2026-2028 Base Wildfire Mitigation Plan (WMP) with a general focus on Risk Methodology and Assessment; Wildfire Mitigation Strategy; Grid Design, Operations, and Maintenance; and Vegetation Management. We examined these issues with respect to how they affect the Liberty electrical system.

Liberty has a relatively small customer base of 48,000+ customers spread across 1,484 acres, 94 percent of which are within the Tier 2 and 3 HFTD. This means wildfire mitigation grid hardening investments are born directly by ratepayers that reside in the HFTD, such that the costs are not dampened through socializing across a substantive non-HFTD customer base. Liberty's small size and recent PEDS deployment make statistical analysis of wildfire and PSPS/PEDS outage risk relatively challenging. However, the 2020 Mountain View Fire highlights wildfire risk in Liberty territory, while recent PEDS investments and PSPS events in 2024 suggest a likelihood for wildfire risk mitigation-driven outages going forward. Liberty's low CPUC-reportable ignitions and outages should be considered in the context of territory size and early-stage deployment, and not simply as lack of risk.

Our comments and recommendations cover the following topics:

- Risk Methodology and Assessment: Risk event data collection.
- Risk Methodology and Assessment: Liberty should revisit its risk model methodology, which places wildfire and PSPS consequence on the same scale.

- Risk Methodology and Assessment: Eight-hour fire simulations offer an indicator of final fire size.
- Risk Methodology and Assessment: Liberty should revisit averaging wildfire and outage risk.
- Risk Methodology and Assessment: Liberty should provide a detailed improvement plan and timeline for its planning risk model.
- Wildfire Mitigation Strategy: Liberty should provide additional detail on how it is applying its DRAT model and mitigation effectiveness results in mitigation planning.
- Wildfire Mitigation Strategy: Liberty should assess pathways to address permitting challenges.
- Wildfire Mitigation Strategy: SRP and PSPS are “long-term”, complimentary mitigations. [See also Emergency Preparedness, Collaboration, and Community Outreach]
- Grid Design, Operations, and Maintenance: Liberty should justify its slowed rate of overhead system hardening.
- Grid Design, Operations, and Maintenance: Liberty should clarify its grid hardening plans for Stateline and Tahoe Vista.
- Grid Design, Operations, and Maintenance: Establish an estimate of time to complete asset replacements at the current rate of work.
- Grid Design, Operations, and Maintenance: Traditional overhead hardening effectiveness and deployment decision making.
- Grid Design, Operations, and Maintenance: High Impedance Fault Detection
- Grid Design, Operations, and Maintenance: Provide a plan to close backlogged Priority 2 work orders that includes risk-informed prioritization.

- Grid Design, Operations, and Maintenance: Risk informed detailed inspections
- Grid Design, Operations, and Maintenance: Drone/Aerial distribution asset inspections
- Grid Design, Operations, and Maintenance: Reconsider infrared inspections on all HFTD Transmission lines.
- Vegetation Management: Liberty should establish clear standards for vegetation residue removal from VM worksites.
- Vegetation Management: VM contractors should be required to manage removed organic debris according to California's Short-Lived Climate Pollutant Reduction Strategy.
- Vegetation Management: Defensible space considerations should be included in all VM wood and slash management protocols.
- Vegetation Management: IVM and fuels management scope of work and reporting.
- Emergency Preparedness, Collaboration, and Community Outreach: Liberty should evaluate the benefit-cost of DER solutions for customers in elevated PEDS and PSPS risk. [See also Wildfire Mitigation Strategy]

Risk Methodology and Assessment: Risk event data collection.

BVES notes that:

Failure rate: Liberty's outage management system records equipment failures but does not currently record failures by equipment type. Additionally, Liberty does not have an exact count of all listed assets, such as connectors or splices, in the field. Using the available data, including all equipment failures and all inventoried assets, the likelihood of failure is 0.84% for all equipment types.¹

Liberty should be ordered to clarify whether/how it records outages and failures by equipment type and driver. If it does not, it should be ordered to begin doing so in the 2026-2028 WMP

¹ Liberty 2026-2028 WMP, p. 148.

cycle. Liberty should also be required to refine its likelihood of failure rate for specific equipment types, especially those with above-average failure rates. While Liberty is relatively small, it should develop a more nuanced understanding of equipment-specific failure risk within its territory based on outage data, all ignition data, and external data sets. Findings should inform risk models as well as preventative equipment replacements and repair, and risk-informed inspections.

A substantial portion of Liberty’s projected 3-year “Equipment/Facility failure or damage” “wire down events” are identified as having an “unknown” driver (32% per year).² This suggests Liberty has not identified the root cause of these wire-down events.³ During the 2026-2028 WMP, Liberty should improve its understanding of otherwise “Unknown” wire down event drivers. This information should be used to inform overhead hardening targets and prioritization to strategically address risk across its territory.

Liberty has had few CPUC-reportable ignitions. As Liberty sees it, its CPUC-reportable ignitions have limited statistical significance – this is at least in part due to its relatively small size. It should therefore expand its event tracking to improve on its understanding of ignition risk as a function of failure event within its territory. The IOUs record non-CPUC-reportable ignitions and are beginning to use this data to inform wildfire risk mitigation. This data may be even more critical to the SMJU’s understanding of wildfire risk. Liberty should be ordered to track all ignitions beginning in 2026, including non-CPUC reportable ignitions, and should incorporate the data into its risk assessment.

Risk Methodology and Assessment: Liberty should revisit its risk model methodology, which places wildfire and PSPS consequence on the same scale.

Liberty’s overhauled risk model was developed by Direxyon and leverages Technosylva fire spread simulations. Circuit level outage program risk is orders of magnitude higher than its wildfire risk. For example, its MEY3400 circuit, has a wildfire and outage risk score of 0.0000062 and 0.111945, respectively. It is of course possible for outage risk to exceed wildfire

² Liberty 2026-2028 WMP, Liberty_2026WMP_R0.xlsx, July 7, 2025.

³ See also 2024 07 26 Liberty_2024_Q1_Tables115_R1.

risk. However, an initial, high-level “gut check” suggests that there may be issues with Liberty’s approach to the scaling and weights applied to wildfire versus outage consequence. The relatively high consequence of a wildfire event compared to PSPS or PEDS events can often elevate granular wildfire risk above outage risk scores even when wildfire likelihood is lower than the likelihood of a PSPS or PEDS outage (i.e. LoRE x CoRE). GPI is concerned that Liberty’s consequence valuation methodology is incorrectly elevating outage risk relative to wildfire risk across its territory.

Direxion risk model documentation details the wildfire and PSPS/PEDS consequence valuation methodology.⁴ Wildfire consequence includes buildings destroyed, population impacted, and acres burned based on Technosylva 8-hour fire spread simulations at the circuit segment level, which are aggregated to the circuit level. To combine the disparate wildfire consequence units, the model methodology normalizes each component on a territory-wide based scale of 0 to 1.⁵ The justification provided is that: “This ensures that no single metric dominates the overall evaluation, allowing for a balanced and fair comparison across all factors.” “[U]sing them in their original form can result in a skewed overall risk assessment,” and “the consequence with the largest numerical range may disproportionately influence the final score, potentially overshadowing other critical factors.”⁶

A method is required to aggregate disparate consequence units. However, the spread of wildfire consequence component scales and societal value, such as value of a statistical life (VSL) and serious injury (i.e. population impacts), cost of buildings destroyed, and value of acreage burned, is a model *feature* that is critical to granular wildfire risk scores. Put another way, the point is that wildfire (and outage event) outcomes are not “equal.” The multi-attribute variable functions (MAVF) and more recent cost valuations applied by the IOUs reflect differences in societal value and risk tolerance for each consequence element through attribute specific scaling and/or monetization. For example, VSL versus cost per building destroyed essentially identifies loss of a life as more costly to society compared to a structure loss. Similarly, a higher cost per structure

⁴ Liberty 2026-2028 WMP, Appendix B.1.

⁵ Ibid, p. 21.

⁶ Ibid, Appendix B.1, p. 21.

destroyed compared to cost per acre burned drives higher consequence values for assets in proximity to communities. As described in PG&E's 2023-2025 WMP:

As a probability, the LoRE components are produced on a range of 0 to 1. When the consequences of CoRE are calibrated within the MAVF framework, then the resulting risk values are comparable.⁷

At the time, PG&E's MAVF-derived CoRE values for predictive fire conditions ranged from 0.0670 to 267.⁸

In contrast, Liberty's approach of normalizing population, structure, and acreage *consequence* on a scale of 0-1 based on territory wide scores, assigns equivalent scaling to all three consequence elements. Its wildfire consequence metric then applies weights of 0.5 and 0.25, to population impact, and buildings destroyed and acres burned, respectively. However, there is no justification provided for the weights selected other than subject matter expert input. The attribute weights in combination with normalized consequence attributes does not resolve the issue of applying uniform scaling for each of the three wildfire consequence values. In a simplified example, the largest simulated fire in terms of acreage, regardless of number of acres burned, could have an equivalent consequence score (CoRE = 1) as the simulation resulting in the most buildings burned (CoRE = 1), regardless of the number of structured destroyed. Liberty's methodology incorrectly equalizes and oversimplifies the relative contributions of each wildfire consequence element instead of reflecting attribute-specific costs and risk tolerances.

The issue is exacerbated by applying the same normalization methodology to its outage consequence model. PSPS consequence is defined as having reliability, financial, and safety impact values measured in customer minutes interrupted (CMI), cost per CMI, and expected number of fatalities, respectively.⁹ The model scales each attribute from 0-1 based on territory wide scores and presumably aggregates them in a PSPS outage impact value without any apparent value weighting – although a total outage consequence score equation is not provided.

⁷ PG&E 2023-2025 WMP, p. 143.

⁸ Ibid, p. 165.

⁹ Ibid, Appendix B.1 p. 30-32.

This assumes that each consequence element has an equal contribution to the total outage consequence score.

Even more problematic is that the methodology values outage consequence on the same 0-1 scale as wildfire consequence. Power outages often have lower financial and safety consequences compared to a wildfire in the same area – hence the use of PEDS and PSPS as wildfire mitigation tools. Valuing the consequences of these two disparate risk events on the same 0-1 scale, combined with a higher likelihood of a PSPS/PEDS outage, may be incorrectly driving a higher modeled outage risk compared to wildfire risk across Liberty’s territory. Applying the model results in its mitigation plan may prioritize grid hardening based on outage risk versus wildfire risk.

Liberty’s wildfire and outage consequence valuation methods require additional work to ensure that it properly values and scales consequences independently and within a single overall utility risk metric. GPI recommends requiring Liberty to justify and/or update their wildfire and outage consequence valuation methodology in a Revision Notice. This may include interim provisions for risk-informed mitigation work and a plan to make model revisions by the next WMP Update filing. An update and/or justification should include comparison to existing IOU methodology and current best practices. Liberty should consider migrating to a more up-to-date cost-benefit framework, with consequences valued in USD, such as VSL, cost per structure destroyed, and cost per acre burned. Consequence cost metrics reflect current best practices and offer a standardized unit while also intrinsically introducing consequence attribute scaling.

Risk Methodology and Assessment: Eight-hour fire simulations offer an indicator of final fire size.

The 8-hour Technosylva fire simulations offer indicators of final fire size. SCE bases final fire potential according to actual fire size at 8-hours versus final fire size and applies this as an 8-hour fire size threshold that informs mitigation packages. PG&E utilizes simulation fire spread rate and flame length correlated to actual final fire metrics to establish simulation thresholds, as well as average actual fire consequences as a function of fire potential criteria (e.g. FPI, wind, HFTD location). Liberty’s ongoing model development efforts should consider that 8-hour simulations do not necessarily directly reflect final fire size/consequence, and therefore risk.

Risk Methodology and Assessment: Liberty should revisit averaging wildfire and outage risk.

Liberty averages wildfire risk and outage program risk to derive Overall Utility Risk for the purpose of applying equal weight to these two high level risk components. There is no clear logic for averaging wildfire and outage risk, and the method contrasts with IOUs whose Overall Utility Risk is the sum of wildfire and outage risk scores.^{e.g.10} GPI recommends requiring Liberty to align with current best practices for high level granular risk score calculations, including for the purpose of at least minor advancements towards a common planning risk model framework.

Risk Methodology and Assessment: Liberty should provide a detailed improvement plan and timeline for its planning risk model.

Liberty's Direxyon Risk Assessment Tool (DRAT) and documentation includes multiple areas for improvement that align with concerns also identified by GPI. For example, Liberty and the Direxyon documentation identified shortcomings in terms of limited asset failure models that do not include asset specific risk. GPI is also concerned by the use of only 1-2 years of wind and FFWI data for modeling PSPS probability, given that weather is stochastic and a limited dataset applied via a Monte Carlo statistical model approach can skew the output depending on the weather year used.¹¹ Direxyon's own documentation finds these same limitations.¹² Other shortcomings appear to include the number of simulations.

Despite these identified modeling shortfalls, it's not clear whether Liberty is aware of the limitations of its third-party developed risk planning model. Nor has Liberty identified a trackable plan with prioritized, actionable next steps for the 3-year WMP cycle that will remedy the most impactful risk planning model shortcomings. Half of Liberty's proposed risk assessment improvement plan is focused on past and completed work. Its forward-looking plans are vague:

¹⁰ PG&E 2026-2028 WMP, 2025 04 04 pge-2026-2028-base-wmp-vol1-r0, p. 46.

¹¹ Liberty 2026-2028 WMP, Appendix B1 pp. 25-28.

¹² Ibid.

- RA-1: Business processes for assessment, aims to implement its risk model in the decision-making process including for mitigation and project selection. GPI is not confident that Liberty's risk planning model is capable of properly weighting wildfire and outage risk or of identifying outage risk based on limited data input years. Direxion also finds that the model assessment of Undergrounding projects at Tahoe Vista and Stateline has application limitations. These issues suggest that DRAT may not be ready for application or it may only be suitable for limited mitigation selection applications at this time, such as project prioritization informed by risk ranked wildfire or outage risk, not overall risk. At a minimum, Liberty should be required to identify the WMP areas where it intends to integrate its existing risk planning model (e.g. grid hardening selection versus prioritization, risk informed asset inspections), how it will assess model suitability for the application, and when it plans to begin applying the model (i.e. development timeline). Liberty should demonstrate an understanding of model limitations and necessary revisions prior to applying it in risk-informed decision making.
- RA-2: Risk Presentation, focuses on developing distributable risk model output formats. GPI generally supports this effort. However, its plan lacks a timeline and a prioritization plan, such as model outputs for risk informed asset inspections versus grid hardening selection.
- RA-3: Lessons Learned for Model Iteration and RA-4: Review Process, both address iterative improvements to model design and inputs. The Direxion model documentation has already identified specific, actionable model shortcomings that impact planning risk model accuracy and relevance. GPI also identified issues with wildfire and outage consequence scaling that skew risk scores (see comments above). In Section 6.1.2 Risk-Informed Prioritization, Liberty plans to "develop internal capabilities to analyze risk outputs at the circuit segment level." There are multiple concrete, actionable next steps that Liberty can initiate to improve its planning risk model. Some of these issues, such as limited data inputs and consequence scaling issues are prudent to address in advance of model application (RA-1), or at least prior to model application across all WMP sectors. Liberty should be ordered to develop a prioritized list of actionable planning risk model improvements and a timeline for implementation in 2026-2028. While Liberty is likely to identify additional improvement opportunities over the 3-year plan cycle, this does not preclude establishing a clear plan for resolving known model shortcomings in its WMP.

Liberty is relatively small compared to its IOU counterparts. It is especially critical for it to develop an efficient, strategic plan aimed at targeting the most impactful improvements to its risk planning model to ensure its usefulness in downstream wildfire and outage risk-informed mitigation applications. GPI recommends issuing Liberty a Revision Notice ordering it to update

its risk assessment improvement plan to include prioritized, actionable, and traceable planning risk model improvements with work completion targets (i.e. milestones and a timeline).

Wildfire Mitigation Strategy: Liberty should provide additional detail on how it is applying its DRAT model and mitigation effectiveness results in mitigation planning.

Liberty cites current efforts and ongoing plans to integrate DRAT planning risk model outputs into its mitigation selection and prioritization. However, it fails to report on any risk model output thresholds it is currently applying to derive granular risk and resulting mitigation effectiveness. Its WMP also reports both negative and >100 percent activity effectiveness scores regarding both wildfire and outage program risk. For example, covered conductor is identified as having an effectiveness of -61% for wildfire risk and +202% for outage program risk.¹³ It's not clear how replacing bare wire with covered conductor will result in negative wildfire risk reduction (e.g. an increase in wildfire "risk after" relative to the baseline) and at the same time mitigate 2-times the existing baseline outage risk. These outputs suggest underlying modeling methodology issues and present challenges with applying its DRAT model in a risk mitigation effectiveness assessment and mitigation strategy.

The DRAT event consequence quantification method may be inadvertently elevating outage risk above wildfire risk. This is explored in comments above. The implications flow through into the wildfire mitigation strategy via the "circuit prioritization list based on overall utility risk." This list includes "probability of PSPS" as the top risk driver for each scoped circuit. GPI is concerned that wildfire risk may be inadvertently overshadowed as a risk driver for the purpose of mitigation prioritization.

Liberty should revisit, and revise as needed, its risk model methodologies and/or provide a justification regarding its risk reduction and mitigation effectiveness metrics in WMP Section 6, including how it interprets and applies negative and >100 percent effectiveness scores in its mitigation strategy. Liberty should also provide additional transparency regarding the methods and applications it intends to improve and/or develop over the 3-year WMP cycle. For example, whether Liberty will pursue the model improvements proposed in the Direxion documentation

¹³ Liberty 2026-2028 WMP, p. 102.

for undergrounding assessment or if it will develop/pilot risk-informed inspections beyond existing minimum statutory requirements.

Wildfire Mitigation Strategy: Liberty should assess pathways to address permitting challenges.

Liberty cites complex permitting in the Tahoe region as a barrier to mitigation activity planning and execution.¹⁴ Permitting is referenced as a challenge for most if not all utilities in the context of WMP implementation. We encourage Liberty to explore and report on novel pathways to address the unique and complex permitting challenges it faces in the Tahoe region, in support of timely long-term grid hardening. For example, SCE reported on strategies it employed to streamline the permitting process, such as through agency coordination and agreements.¹⁵ Similar avenues may be available with agencies operating in Liberty's service territory.

Wildfire Mitigation Strategy: SRP and PSPS are “long-term”, complimentary mitigations. [See also Emergency Preparedness, Collaboration, and Community Outreach].

Liberty lists the Sensitive Relay Profile program as its primary interim mitigation. In November 2024, Liberty also enacted three PSPS events. SRP and PSPS are mitigation strategies that will complement a hardened overhead grid for the long-term. Recognizing SRP and PSPS as operational mitigations for the foreseeable future is necessary to appropriately scope mitigations that address outage frequency, scale, duration, and consequence.

Liberty's PSPS outage management strategy focuses on grid hardening, situational awareness, sectionalizing, and PEDS. Its SRP impact mitigation approach also includes visible fault indicators to reduce fault location identification and power restoration time. Liberty has yet to consider distributed energy resources (DER) as solutions to PSPS and SRP outage consequences. DER encompass a wide range of technologies and capabilities, from portable batteries to in-front-of-meter hybrid power systems such as solar plus storage installations. The benefit-cost ratio of various DER solutions as it applies to outage risk mitigation depends on the scale, scope, duration and consequence of SRP and PSPS outages, which includes factors such as customer

¹⁴ Liberty 2026-2028 WMP, p. 87.

¹⁵ SCE 2026-2028 WMP, p. 479, 487.

classes affected. For example, AFN customers may be disproportionately impacted by SRP or PSPS outages, increasing the benefit-cost ratio and outage mitigation risk reduction associated with DER deployment to these ratepayers.

GPI recommends that Liberty initiate and report on a preliminary assessment of SRP and PSPS consequence mitigation via DER deployment in its WMP Updates over the 3-year WMP cycle. This should be completed in conjunction with an assessment of its outage risk modeling approach and limitations, especially given the novelty of its SRP program and recent PSPS experience. Liberty's outage mitigation models include limited weather years, which may impact its ability to forecast SRP and PSPS outage risk. These known risk planning model limitations, as well as limited early-stage data on SRP caused outages, could have downstream impacts on its risk-informed outage mitigation strategy, such as sectionalizing and DER deployment. It is prudent for Liberty to establish an actionable plan, as part of its 3-year WMP, to improve its understanding of outage risk under new SRP settings and PSPS event experience, as well as explore all outage risk mitigation options, including DER.

Grid Design, Operations, and Maintenance: Liberty should justify its slowed rate of overhead system hardening.

Liberty has over 1,300 overhead distribution circuit miles in the HFTD. A review of Liberty WMPs going back to 2019 suggest reconductoring mitigations to date in the range of 50 miles. It appears that Liberty may have substantial bare overhead conductor exposure within the HFTD. While recent widespread PEDS deployment will mitigate some wildfire risk, risk gaps persist. It's not readily apparent how much of the overhead distribution system has been hardened, and how much remains to be replaced with covered conductor.

Liberty's 2026-2028 WMP departs from its prior 2023-2025 WMP plans by eliminating undergrounding mileage targets and reducing covered conductor and traditional overhead mileage targets. GPI generally supports Liberty's wildfire mitigation focus on overhead grid hardening combined with its recent deployment of PEDS capabilities (i.e. Sensitive Relay Profiles [SRP]). GPI also appreciates Liberty's reassessment of undergrounding through risk modeling efforts

and due to its alpine geography.¹⁶ A focus on covered conductor installation should support a faster rate of wildfire risk reduction across Liberty’s distribution system, as well as help to manage costs incurred by its relatively small customer base, most of which reside in the HFTD. However, this does not appear to be the case. Given its decision to eliminate undergrounding and downscale its traditional hardening scope in 2026-2028, it is not clear why Liberty has also reduced its conductor hardening scope (Table 1).

Table 1. Liberty grid hardening mileage targets for the 2023-2025 and 2026-2028 WMP cycles for undergrounding (UG), covered conductor (CC), and traditional hardening (TH).

2023-25	2023	2024	2025	Total (mi)
UG	5.72	5.61	2.68	14.01
CC	1.37	1.25	1.25	3.87
TH	4	2	2	8
Total	11.09	8.86	5.93	25.88

2026-28	2026	2027	2028	Total (mi)
UG	0	0	0	0
CC	3.9	3.5	3.7	11.1
TH	1.1	1.1	1.1	3.3
Total	5	4.6	4.8	14.4

Smaller mileage overhead system hardening targets for the present 3-year WMP cycle may prolong risk on Liberty’s distribution system and delay widespread deployment of modern best practices for overhead distribution system design in the HFTD. At a rate of less than 15 miles per 3-year WMP cycle, completing covered conductor grid hardening—a relatively standard mitigation within the HFTD – could take decades.

Liberty should justify its decision to downscale the total overhead conductor hardening work scope for the 2026-2028 WMP cycle as compared to the previous cycle. Liberty should also be required to report on how its WMP grid hardening scope of work fits in the context of a long-term mitigation strategy and timeline. We recognize that the WMP guidelines eliminated reporting on 10-year wildfire mitigation strategy and planning. Long-term 10-year strategies for some IOUs will likely be reported in SB884 undergrounding plans. However, the small and

¹⁶ Liberty 2026-2028 WMP, p. 121.

multi-jurisdictional utilities (SMJUs) like Liberty will not engage in SB 884 programs, creating a “black box” when it comes to long-term planning. Available resources limit SMJU’s annual grid hardening scope of work. This can lead to unmitigated wildfire risk for many years, as a slow rate of grid hardening progressively closes infrastructure risk gaps. It is therefore critical to understand how ~15 miles of covered conductor deployment in 3 years relates to total remaining overhead system risk exposure (mileage and risk scores), and when Liberty will achieve what it considers a fully hardened overhead system. Putting 3-year grid hardening plans in the context of territory wide work scope will elucidate plan sufficiency and whether Liberty should explore avenues to implement a more aggressive overhead reconductoring effort.

Grid Design, Operations, and Maintenance: Liberty should clarify its grid hardening plans for Stateline and Tahoe Vista.

It is not clear in the WMP whether Liberty is pausing its Tahoe Vista and Stateline undergrounding projects pending additional assessment, or terminating them in exchange for alternative overhead mitigations such as covered conductor.^{e.g. 17} Liberty should clarify its plan for the Stateline and Tahoe Vista distribution system, and/or how it intends to make progress towards developing a long-term grid hardening mitigation plan for these locations over the 3-year WMP cycle.

Grid Design, Operations, and Maintenance: Establish an estimate of time to complete asset replacements at the current rate of work.

Liberty completed a system-wide asset inventory in 2019-2020. Its 2019 WMP scoped a tree attachment inventory inspection slated for completion before the next plan filing (2020).¹⁸ In its 2020 WMP, Liberty scoped a “a complete system survey in 2020 that will create an asset inventory database documenting the location and condition of every overhead distribution asset in Liberty CalPeco’s service territory.”¹⁹ The scope of work included “non-exempt hardware (per CalFire), open wire secondary, cracked grey wire secondary, and copper primary conductor sections,” as well as “areas with aging hardware, outdated or missing equipment, conventional

¹⁷ Liberty 2026-2028 WMP, p. 528.

¹⁸ 2019 Liberty Utilities (CalPeco Electric), LLC Wildfire Mitigation Plan, February 4, 2019. p. 4.

¹⁹ 2020 Liberty Utilities (CalPeco Electric) LLC (U 933-E) Revised 2020 Wildfire Mitigation Plan, February 28, 2020. p. 1.

fuses, lightning arrestors, etc.”^{20,21} The completion of the survey was reported in the 2021 WMP, stating:

In 2020, Liberty conducted a system-wide inventory of all overhead assets that included enhanced G.O. 165 inspections. From this survey, Liberty now has a third-party assessment of the entire overhead system that can be used to develop programs to proactively replace its aging infrastructure. This information, although in its early development, will be used to measure future wildfire risk reductions.²²

Liberty should have the asset inventory data necessary to at least estimate the number of legacy expulsion fuses, tree attachments, and open wire/ grey wire that remain on its system. However, its 2026-2028 WMP and its workshop responses suggests Liberty does not know the amount of remaining legacy assets, and therefore the residual risk or the time it will require to complete these replacement programs.^{e.g. 23} This creates a “black box” in terms of understanding Liberty’s progress towards completing an initial hardening overhaul of its overhead distribution system. GPI’s concern is that the remaining risk from multiple asset types could persist for many years. Failure to understand the location or extent of the risk hinders the ability to implement risk-informed interim mitigations such as targeted inspections above and beyond general orders or more aggressive SRP and PSPS thresholds.

Liberty’s 2026-2028 WMP sustains its expulsion fuse and tree attachment replacement rates through the current 3-year cycle. These targets are in addition to pole replacement targets, which it reports may result in replacements above the individual WMP targets (e.g see August workshop). GPI supports Liberty’s ongoing efforts to replace known high risk and legacy equipment. In addition to this critical work, we recommend that Liberty develop a better estimate of residual risk and the years it will take at the current pace to overhaul its distribution system. The results should be reported as well as factored into WMP target setting and interim risk mitigation measures.

²⁰ Ibid p. 61.

²¹ Ibid p. 55.

²² Liberty Utilities (CalPeco Electric) LLC (U 933-E) 2021 Wildfire Mitigation Plan Update, March 5, 2021. p. 21.

²³ Liberty 2026-2028 WMP, p. 131.

Grid Design, Operations, and Maintenance: Traditional overhead hardening effectiveness and deployment decision making.

The statement that traditional overhead hardening remains suitable for “areas where forest density or terrain constraints make covered conductor ... less feasible” should be scrutinized to ensure that location-specific risk drivers are not overlooked when selecting between bare versus covered conductor mitigations.

Liberty relies on SAIDI and SAIFI metrics to estimate the effectiveness of its Traditional Overhead Hardening mitigation. It reports a 54 percent reduction in outage events that could lead to an ignition.²⁴ While outage events are indicators of risk, the data interpretation does not transparently consider likelihood of ignition given an outage. Not all outage drivers impart equivalent ignition and subsequent wildfire risk. Nor are all outage drivers mitigated by traditional overhead hardening (e.g. contact from vegetation or line slap). There is ample evidence for this in IOU outage and ignition datasets, including for environmental systems similar to Liberty’s alpine and Eastern Sierra service territory. Liberty would benefit from leveraging external datasets to better understand trends in outage risk drivers and associated ignition risk. This has relevance to its risk modeling as well as mitigation strategy, selection, and prioritization decision making.

SAIDI and SAIFI is one component of probability of ignition and does not capture potential wildfire consequence given an ignition. Mitigation selection should also be informed by granular wildfire consequence (e.g. Technosylva 8-hour wildfire simulations). It is not clear that Liberty has considered wildfire consequences in their traditional overhead hardening selection.

Outage risk due to PSPS events based on wind and fire index thresholds is also a relevant metric for informing bare versus covered conductor deployment for many utilities. For example, IOUs have established elevated PSPS thresholds for covered conductor. Liberty currently elevates its PSPS threshold based on SRP enablement. Reconductoring with bare wire is a long-term investment that may affect PSPS risk if Liberty revises its PSPS thresholds to include considerations for conductor type.

²⁴ Ibid, p. 124.

Liberty should improve its understanding of traditional overhead hardening effectiveness by assessing all relevant risk drivers, from outage drivers and driver-specific ignition risk to PSPS risk and granular wildfire consequence. For example, it may be the case that traditional overhead hardening on the Topaz circuit is appropriate – however, the WMP does not adequately substantiate this decision.

Grid Design, Operations, and Maintenance: High Impedance Fault Detection.

Liberty briefly addresses High-Impedance Fault Detection in Section 8.2.6 and ACI LU-25U-08, stating it does not plan to pursue this mitigation.²⁵ Instead, it will implement Sensitive Earth Fault to address fallen conductor events on three wire circuits, and will assess alternative solutions for four wire systems. Its ACI response includes a plan to submit its findings in a report by Q2 2026. This work is not scoped elsewhere in the WMP, though it would be appropriate to include it in Section 8.2.6. GPI recommends issuing an updated ACI requiring Liberty to report on its progress in the annual WMP Update (2026 filing) and/or order Liberty, via a Revision Notice, to update its WMP to specifically scope a fallen conductor detection and risk mitigation assessment in Section 8. It should be mandatory for Liberty to assess and timely adopt an effective fallen conductor risk mitigation method that complements its SRP program.

Grid Design, Operations, and Maintenance: Provide a plan to close backlogged Priority 2 work orders that includes risk-informed prioritization.

Liberty has 482 overdue Priority 2 work orders with the majority 181+ days overdue and located in HFTD Tier 2.²⁶ While Liberty provides a summary of Priority 2 issues, it completely fails to detail a plan to close these work orders. Its only plan is to “achieve a cadence of inspections and repairs that creates zero past due work orders.”²⁷ While a necessary objective, this largely addresses the prevention of future work order backlogs. Liberty fails to provide a plan to timely close the existing backlogged work orders and does not include any considerations for prioritization based on ignition risk. Liberty should be ordered to update its Base WMP to include a backlogged work order closure plan that closes all backlogged Priority 2 work orders

²⁵ Liberty 2026-2028 WMP, p. 125.

²⁶ Ibid, p. 157-8.

²⁷ Ibid.

by the end of the 3-year WMP cycle. The plan should include a method to prioritize the closure of open work orders with high ignition and wildfire risk.

Grid Design, Operations, and Maintenance: Risk informed detailed inspections.

Liberty performs detailed overhead asset inspections on a 5-year cycle according to GO 165. Current best practices for detailed overhead asset inspection frequency in the HFTD exceed GO 165 5-year minimums. GPI recommends requiring Liberty to develop additional, risk-informed asset inspections to reduce the 5-year detailed inspection interval in areas with elevated risks as identified by risk models. Risk-informed detailed asset inspections should also take backlogged Priority 2 work orders into consideration, as these can constitute known, unresolved ignition risk. Liberty should also track the results of its risk-informed overhead asset inspections to assess optimal inspection frequency based on factors such as rate of find, value, and effectiveness.

Grid Design, Operations, and Maintenance: Drone/Aerial distribution asset inspections.

PG&E has found that aerial inspections of overhead distribution assets complement ground-based inspections and improve identification of some asset damage that is not easily visible from the ground. In its 2023-2025 WMP, Liberty provided a summary of inspection best practices across the IOUs and SMJUs, which identifies Liberty as the only utility not currently performing detailed ground plus aerial inspections at a frequency that exceeds GO 165 requirements and complements ground inspections.²⁸ In its 2023-2025 WMP, Liberty committed to conducting detailed asset inspections with drones, as well as “Other Discretionary Inspections.”²⁹

Liberty’s 2026-2028 WMP provides no evidence that it piloted the use of drones for detailed inspections, nor any assessment of the lessons learned, outcomes, benefits, or limitations from work proposed in its 2023-2025 WMP.³⁰ It only describes and targets the use of drone inspections solely for discretionary outage event applications, including in response to LU-25U-06. Liberty identifies its 2026-2028 Patrol inspections as “Ground and Aerial” in WMP Table 8-8, but does not mention any aerial inspection methods, targets, or frequencies in the

²⁸ Liberty 2023-2025 WMP, Table F-10 and F-11, p. 529.

²⁹ Ibid, p. 148, 174, 178-9.

³⁰ Liberty 2026-2028 WMP, LU-25-U-06. p. 532.

accompanying description (Section 8.3.3).^{31,32} Liberty has failed to satisfy its 2023-2025 WMP specifications, as well as LU-25U-06.

As reported by Liberty in its 2023-2025 WMP, aerial detailed inspections are currently best practices for California utilities to complement traditional ground-based inspections and increase inspection frequencies above GO 165 minimums. Liberty should be ordered to provide a full report on whether it piloted the use of drones in detailed inspections between 2023-2025, and if not, why not. It should be ordered to pilot the use of drones for detailed inspections in alignment with current best practices for California utilities. These adjustments should be made immediately, via a Revision Notice. In its next WMP update, Liberty should be required to report on the outcomes of a pilot utilizing drones in detailed inspections that complement traditional ground inspection methodologies and scheduling.

Grid Design, Operations, and Maintenance: Reconsider infrared inspections on all HFTD Transmission lines.

Infrared inspections on transmission lines identify non-visible conditions. PG&E reports low infrared find rates of 0.02% and 0.15% for transmission Priority Level 1 and 2 findings, as well as 0.53 Level 2 conditions findings per mile of distribution system. However, these damages are not readily identified through other means, making the infrared-based findings complementary to other inspections.³³

Liberty completed 0.1 miles of IR transmission inspections, found no issues, and concluded that no additional infrared inspections were necessary.³⁴ Based on PG&E find rates, Liberty's zero findings from 0.1 miles of infrared inspection is to be expected. For example, according to PG&E's infrared distribution system inspection find rates, at least 2 miles of overhead system would need to be inspected to probabilistically find one Level 2 asset condition. Liberty should consider whether its IR transmission inspection pilot was right sized and reassess whether a "one-time" or infrequent (e.g. every 5-years) infrared inspection of its entire transmission system

³¹ Ibid, p. 134.

³² Ibid, p. 137.

³³ PG&E 2026-2028 WMP, p. 235-6, 240.

³⁴ Liberty 2026-2028 WMP, p. 138.

can identify otherwise non-visible Priority 1 and 2 asset damages that are relevant to wildfire risk management.

Vegetation Management: Liberty should establish clear standards for vegetation residue removal from VM worksites.

Liberty has adjusted its VM wood and slash fuels management approach to treat material with a diameter of 12 inches or less, versus its previous 4 inches and less metric, “to minimize the accumulation of surface fuels at the work location.”³⁵ This translates to chipping and scattering or potentially removing more VM residues from worksites within 100 feet of accessible roads. The alternative approach is to lop and scatter. While its VM residue treatment threshold is more stringent, it’s not clear how much of the VM residue is removed from worksites, since removal appears to be an optional activity with no clear requirements. Consequently, it’s not clear if Liberty’s revised VM fuel management activities are reducing surface fuels at VM worksites. GPI recommends requiring VM residue debris removal protocols as well as VM removal tracking and reporting requirements for all utilities. Utilities should also be required to assess ignition and wildfire risk as a function of right of way VM and vegetation debris accumulation. This work could be completed in partnership with academia partners.

Vegetation Management: VM contractors should be required to manage removed organic debris according to California’s Short-Lived Climate Pollutant Reduction Strategy.

Liberty stipulates that “when the [VM] clean-up method is 100% removal, the contractor shall be responsible for the treatment and disposal of all woody debris.” California recently established statutory requirements to divert organic waste from landfills, including plant debris and untreated wood waste.³⁶ These requirements are designed to reduce methane emissions in accordance with CARB’s recommendations and scoping plan. Waivers are offered to low-population, rural, and high elevation jurisdictions for all or some organic waste materials. Active waivers have been issued within Liberty’s territory, including but not limited to Loyalton, Placer County, El Dorado

³⁵ Liberty 2026-2028 WMP, p. 183-4.

³⁶ Statewide Mandatory Organic Waste Collection <https://calrecycle.ca.gov/organics/slep/collection/> Accessed 8/8/2025.

County, Alpine County, and Sierra County.³⁷ GPI is concerned that these and other waivers may exempt utility VM contractors from tracking large volumes of removed VM residues and recycling these residues via biomass and other woody feedstock applications. This is particularly ironic given that the short-lived climate pollutant methane substantially contributes to climate change, which is likely to elevate wildfire risk over the course of time.

Liberty's cursory references to remove and "utilize biomass" in the VM projects does not go far enough.³⁸ OEIS should order all utilities to responsibly manage VM residues in accordance with the objectives of California's Short-Lived Climate Pollutant Reduction Strategy. All utilities should include requirements for responsible VM residue removal and recycling in VM contracts. Failure to enact changes in the present WMP cycle may contribute to the production of methane emissions and will delay associated emission reductions for at least another 3 years.

Vegetation Management: Defensible space considerations should be included in all VM wood and slash management protocols.

Liberty's VM Defensible Space activities focus on the "Substation Defensible Space initiative." There is no mention of defensible space protocols within other VM activities such as clearances, tree work (grow-in, fall-in), or slash and fuel management. Defensible space considerations apply to all VM work, whether regarding utility assets (e.g. pole clearing) or private and public land assets. In terms of private property especially, VM residue protocols that align with defensible space requirements after VM work is completed are prudent to not endanger customer property, as well as to cultivate customer access approvals and satisfaction. Defensible space considerations should also apply to utility assets as it pertains to VM residue removal and right-of-way clearing. Liberty should bolster its VM protocols by integrating defensible space considerations as a core tenet of all VM work and residue management.

Vegetation Management: IVM and fuels management scope of work and reporting.

GPI supports Liberty's ongoing Integrated VM (IVM) efforts and in progress Right-of-Way Management Plan as part of its IVM program. Liberty's coordination with National Forests as

³⁷ Department-Approved Waivers for Reporting Entities. <https://calrecycle.ca.gov/organics/slcp/waivers/approved/>
Accessed 8/8/2025

³⁸ E.g. Liberty 2026-2028 WMP Figure 9-1, p. 187

part of its IVM forest resiliency corridor program is commendable. GPI recommends requiring Liberty to provide a timeline for completion of its initial Right-of-Way Management Plan and to provide annual updates on its right-of-way resiliency corridor work including number of miles planned and treated, and work prioritization considerations, VM residue removal, and pathways through which the resulting biomass is utilized (e.g. per Liberty Figure 9-1). This effort is likely translatable to other utilities and should therefore be reported on for benchmarking purposes.

Liberty also describes partnerships with the National Forest Foundation, Lake Tahoe Basin Management Unit, and Truckee Meadows Fire Protection District. These partnerships appear to leverage the unique access and resources of each organization to conduct coordinated fuels management projects along and in proximity to Liberty right-of-ways. These projects are commendable and align with GPI's earlier comments on IOU WMPs, in support of coordinated fuels management projects along utility rights-of-way. GPI recommends requiring Liberty to provide an initial estimate of the number of miles it will treat through these partnerships in the 2026-2028 WMP cycle. While resources and partnership objectives outside of Liberty's control may shift over the 3-year plan, a preliminary estimate of scope-of-work is relevant to understand the scope and scale of Liberty's fuel management work, as well as its cost-benefit.

Emergency Preparedness, Collaboration, and Community Outreach: Liberty should evaluate the benefit-cost of DER solutions for customers in elevated PEDS and PSPS risk. [See also Wildfire Mitigation Strategy].

Appendix F, Liberty's 2025 AFN Plan, offers the only reference to a backup battery program in response to PEDS and PSPS outages (emphasis added):

2.1.3 Back-Up Power

Medical Baseline Backup Battery Program in Development

In 2022, Liberty filed an application with the CPUC for its proposed Customer Resiliency Program ("CRP"). The proposed CRP included a behind-the-meter ("BTM") battery storage program that was intended to be offered to all of Liberty's critical needs customers, including Medical Baseline Customers. The proposed BTM battery storage component was not in the implemented version of CRP.

Now, to support resiliency for its customers that depend on power for life-sustaining medical devices, Liberty *is working to establish* a program to offer eligible Medical Baseline customers a free portable backup battery in 2025.

Given Liberty's track record for proposing but not implementing a battery backup program for even its most vulnerable customers, GPI has little confidence that this single vague sentence embedded in a WMP Appendix will lead to a robust or timely solution. A utility's primary function is to provide reliable power. Failure to do so in modern America results in a cascade of downstream impacts, including health risks and financial losses. In the case of vulnerable populations, it is perhaps additionally naive to assume that those most affected can access services at a community resource centers (CRC, e.g. by driving in inclement weather or at all), or that these services are an adequate salve for the full suite of financial and health impacts (e.g. fridge/freezer content loss). While utility CRCs can alleviate some of the impacts as it relates to portable device charging and basic needs (e.g. food, warmth, etc.), this is a far cry from instituting solutions that address the core issue: loss of power.

DER deployment to address power loss associated with wildfire mitigation is a current best practice, whether via portable batteries, residential energy storage installations, microgrids (temporary and permanent), or other solutions. The Self-Generation Incentive Program (SGIP), which incentivizes DER deployment to customers likely to be affected by PSPS, does not include support for SMJU customers. Meaning, the SMJUs should develop a clear understanding of PSPS and PEDS outage impacts in their territories and offer risk-informed DER solutions to customers, especially vulnerable customers.

GPI is concerned by Liberty's lack of plans to conduct a backup power supply need assessment and implement backup power supply solutions, especially in the context of a 3-year WMP. Ongoing delays and failure to include a comprehensive need-based program in its 3-year 2026-2028 base WMP may push backup power relief programs out to 2029 and beyond. This is unacceptable. Liberty should be ordered to revise its WMP to improve its PSPS and PEDS outage models, develop a risk informed assessment of PEDS and PSPS outage impacts, including for AFN customers, and use this assessment to develop a risk- and need-informed backup power program with traceable unit targets (e.g. 100 portable batteries), an impact assessment (e.g. will support 20% of AFN customers), and an implementation timeline. Liberty

should be required to report on the program progress and successes in its annual WMP Updates. If Liberty's assessment indicates that a backup power supply program is not needed, it should justify its findings based on risk model and other risk assessment results. Liberty's WMP should not be approved until it has scoped a meaningful effort to mollify the consequence of power outages by directly addressing power loss associated with its PEDS and PSPS mitigations.

The WMP guidelines for "Emergency Preparedness, Collaboration, and Community Outreach" do not require utilities to set quantitative targets. We encourage OEIS to develop interim and modified requirements for DER programs within the WMP that require quantitative targets and impact assessments.

Conclusions

We respectfully submit these comments on the 2026-2028 WMP of Liberty. Liberty is much smaller than California's IOUs, and hence it is unable to apply the same level of resources to their wildfire mitigation efforts compared to the IOUs. On the other hand, the smaller service territory of Liberty allows them to concentrate their efforts on the particular features of their system, and to work in greater partnership with the needs and interests of their customers. We provide herein a series of critiques and suggestions for Liberty and the OEIS to improve the Liberty base 2026-2028 WMP. It is our hope that Liberty will continue to absorb the lessons learned by the IOUs, and equally that the IOUs will learn from the SMJUs

For the reasons stated above, we urge the OEIS to adopt our recommendations herein.

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Respectfully Submitted,



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