

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA



FILED

08/07/26

04:59 PM

A2602005

Joint Application of Pacific Gas and Electric Company (U39E), Southern California Edison (U338E) and San Diego Gas & Electric Company (U902E) Requesting Commission Approval of Proposals for a BCR Calculation Methodology, Audit Methodology, and Cost Recovery Conditions as Specified in Resolution SPD-37.

Application 26-02-005

OPENING BRIEF OF THE PUBLIC ADVOCATES OFFICE

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August 7, 2026

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SUMMARY OF RECOMMENDATIONS

Cal Advocates recommends that the Joint IOUs' proposals for a BCR methodology, audit methodology, and additional balancing account conditions presented in Application (A.) 26-02-005 be rejected. Cal Advocates recommends that the Commission adopt the recommendations detailed below:

Incorporate avoided future operation and maintenance costs

- Cal Advocates supports SPD's recommended adoption of a "disaggregated" BCR formulation, which includes all realized costs (capital and O&M) in the denominator and all avoided costs (risk reduction benefits and avoided O&M) in the numerator.

Risk-Averse Scaling

- In the upcoming RDF rulemaking,¹ the CPUC should develop a unified approach to incorporating risk aversion based on the expected utility framework. This framework would provide explicit guidance to the utilities, ensure transparency, and ensure that risk-based decisions are not a function of idiosyncratic models of risk aversion.
- The shortcomings of the current approaches should not be allowed to affect mitigation decisions and project selection in the EUP. Instead, immediate decisions on selection of EUP projects should be made using risk-neutral BCRs.
- Only after an acceptable, unified framework is adopted into the RDF should IOUs be allowed to base decisions on risk-adjusted BCRs.²

Reliability Risk Calculations

- Value of service (VOS) derived from the ICE calculator should use location-specific inputs in order to align with the behavioral model underlying the ICE calculator.

¹ R.26-04-016. Order Instituting Rulemaking to Refine the Risk-Based Decision-making Framework for Electric and Gas Utilities.

² Basing mitigation decisions on unscaled BCRs while a unified framework is developed in the RDF is unlikely to constrain the utilities. According to PG&E's response in DRU16714-System Hardening Projects, they have 1,696 circuit segments accounting for 10,634 overhead miles where the risk-neutral BCR for undergrounding is greater than one.

- Lookback data used to calculate VOS should include all events that affect ratepayers and therefore the VOS calculation derived from the ICE model. This data should include MED and PSPS/EPSS.
- Lookback data used to calculate VOS should only include years during which operational measures, such as PSPS and EPSS, were active.

Discounting

- The Joint IOUs should use the same discount rate for evaluating mitigation projects.

Choice of Baseline

- For the calculation of BCRs, the Joint IOUs should be required to use a baseline scenario that includes all existing mitigations. While this may vary based on IOU and location, it is reasonable to expect a baseline to consist of bare overhead wire, PSPS, fast-trip programs, and current O&M and vegetation management programs.

Incorporate Indirect Capital Costs or Present Value Revenue Requirement (PVRR)

- The Commission should require the Joint IOUs to incorporate all costs, both direct and indirect, incurred by undergrounding projects into their BCR calculations, be it via PVRR multipliers or some other method.

Determine when a project or subproject is measured against the cost cap

- Any subproject deemed used and useful in a given year should be considered a Qualifying Project and counted against the *cost cap* during that audit period.
- Any subproject deemed used and useful in a given year should be considered a Qualifying Project and counted against the *average unit cost cap* during that audit period.

Properly weigh subprojects toward aggregate BCR calculations

- A miles-weighted average BCR calculation should be used to measure a given portfolio's performance against the average BCR threshold set in Phase 2.

Additional cost recovery conditions

- All subprojects must have a BCR greater than one (1) for inclusion in the balancing account.

- Any subproject with a BCR less than one (1) will be moved to the memorandum account for further evaluation.

Location-specific measurements of subproject risk

- Location-specific risk calculations should be required for the calculation of subproject-level risk reduction (benefits).

Uncertainty factor

- The uncertainty factor proposed by the Joint IOUs should not be adopted.
- If an uncertainty factor is adopted, it should be set at 15% (mid-range on the AACE recommendations) and accompanied by a net benefits requirement.

Portfolio-level BCR conditions

- A dynamic BCR threshold should be adopted requiring the aggregate BCR for a given portfolio be greater than the aggregate BCR of the remaining EUP eligible projects.

I. INTRODUCTION

The Public Advocates Office at the California Public Utilities Commission (Cal Advocates) hereby submits this Opening Brief pursuant to Rule 13.12 of the Rules of Practice and Procedure (Rules) of the California Public Utilities Commission (Commission), and the Assigned Commissioner's Scoping Memo and Ruling.³

This proceeding presents the Commission with a critical opportunity to establish a standardized and economically sound framework for evaluating undergrounding projects under Senate Bill (SB) 884. The methodology the Commission adopts will directly influence how utilities request ratepayer funding for billions of dollars in future wildfire-mitigation investments that the utilities propose. Undergrounding is among the most capital-intensive wildfire mitigation measures available to California's investor-owned utilities (IOUs). As such, it is essential that the Commission adopt a framework that accurately measures costs and benefits, promotes consistent decision-making across utilities, and ensures that ratepayer funds are directed toward the most efficient wildfire-risk reduction strategies. The Joint IOUs' proposal does not satisfy these objectives.

Throughout this proceeding, the Joint IOUs have advanced methodological proposals that systematically increase the calculated benefit-cost ratios (BCRs) of undergrounding projects. This serves only to make the projects appear more economically attractive than they actually are. Most notably, the Joint IOUs propose to treat avoided operations and maintenance (O&M) costs as reductions to implementation costs rather than as benefits. This treatment is inconsistent with established economic principles, standard cost-benefit analysis practice, and the guidance previously provided by the Commission's Safety Policy Division (SPD). The Joint IOUs also propose to use utility-specific risk-aversion methodologies that are not grounded in a common analytical framework and that materially inflate forecasted project benefits. These proposals are particularly concerning because even modest changes to BCR methodology can

³ Assigned Commissioner's Scoping Memo and Ruling, April 10, 2026.

substantially alter project rankings, portfolio composition, and ultimately the amount of capital spending borne by ratepayers.

The Commission should reject the Joint IOUs' proposals and instead adopt Cal Advocates' recommendations. Cal Advocates' recommendations are firmly grounded in established principles of economics and cost-benefit analysis, promote consistency across utilities, and provide a transparent framework for evaluating whether undergrounding projects are economically justified. Specifically, the Commission should: adopt SPD's recommended disaggregated BCR formulation (referred to as method 3);⁴ require the use of risk-neutral project evaluations unless and until a unified risk-aversion framework is developed through the appropriate rulemaking process;⁵ require location-specific reliability and risk calculations; and ensure that BCR calculations reflect the full costs that the utilities would have ratepayers bear. The Commission should also adopt appropriate audit and cost-recovery safeguards so as to ensure that only efficient projects are eligible for balancing-account recovery.

At its core, the issue before the Commission is how to ensure that wildfire-mitigation investments are evaluated using a methodology that accurately reflects their true costs and benefits. By adopting Cal Advocates' recommendations, the Commission can advance the statutory requirements of safety and reliability while fulfilling its equally important obligation to protect ratepayers from unjust and unreasonable expenditures.

⁴ See Staff White Paper on Benefit-Cost Ratio Methodology, filed as attachment to Scoping Memo, April 10, 2026.

⁵ R.26-04-016, Order Instituting Rulemaking to Refine the Risk-Based Decision-Making Framework for Electric and Gas Utilities (referred to as the RRDF). This Rulemaking scopes risk tolerance in Track 3, which will begin in Q4 of 2026. While the rulemaking does not explicitly scope risk aversion, it would be appropriate and reasonable to develop a unified risk-aversion framework in order to accurately estimate the public's tolerance for risks such as large wildfires.

II. THE COMMISSION SHOULD REJECT THE JOINT IOUS' PROPOSED BENEFIT COST RATIO (BCR) METHODOLOGY AND ADOPT CAL ADVOCATES' FRAMEWORK

A. Avoided O&M Costs Must Be Treated as Benefits Rather Than Negative Costs.

The proper treatment of avoided O&M costs is central to the integrity of the BCR methodology the Commission adopts in this proceeding. The Joint IOUs propose to reduce the denominator of the BCR by subtracting projected avoided O&M costs from realized implementation costs.⁶ While presented as a methodological refinement, this proposal fundamentally departs from accepted principles of economics, established cost-benefit analysis (CBA) practice, and the Commission's own Risk-based Decision-making Framework (RDF).⁷ The Commission should reject the Joint IOUs' proposal and instead adopt the SPD recommended “disaggregated” BCR methodology.⁸

1. The Joint IOUs' Proposal to Consider Avoided Operation and Maintenance Costs as a Negative Cost in the BCR Obscures the Actual Burden on Ratepayers.

The Joint IOUs' proposal obscures the distinction between actual expenditures that will be recovered from ratepayers and modeled savings that may or may not materialize in the future. Capital expenditures and realized O&M expenses are observable, recorded, auditable, and ultimately recovered through established ratemaking mechanisms. Avoided O&M costs, by contrast, represent hypothetical expenditures that might have occurred under a counterfactual scenario.⁹ As the Joint IOUs acknowledge, actual O&M savings cannot be directly validated after implementation.¹⁰

⁶ Joint IOU Application Re SPD-37 (“Application”) at 6.

⁷ Cal Advocates Comments at 13.

⁸ This methodology places all realized project costs in the denominator and all avoided costs—including avoided O&M expenditures—in the numerator as project benefits.

⁹ Cal Advocates Comments at 18.

¹⁰ Application at 24.

This distinction has important regulatory consequences. Ratepayers will pay the full cost of constructing underground facilities regardless of whether or how much projected maintenance savings are ultimately realized. Treating speculative future savings as though they reduce actual implementation costs understates the true costs borne by ratepayers, diminishes the transparency of the Commission's cost-efficiency analysis, and misrepresents the true economic cost of the investment.¹¹

2. The Joint IOUs' Proposal to Consider Avoided Operation and Maintenance Costs as a Negative Cost in the BCR is Contrary to Established Economic Principles.

The Joint IOUs' proposal, in addition to obscuring the burden on ratepayers, is contrary to established economic principles. Economics recognizes opportunity costs as what must be given up to make a choice. The opportunity cost framework acknowledges the duality between costs and benefits: that a forgone benefit is a cost and an avoided cost is a benefit.¹² Thus, under well-established economic theory, realized capital expenditures and realized O&M costs represent resources consumed, which could have been allocated elsewhere, to implement a mitigation project and therefore constitute costs. By contrast, avoided future expenditures represent a benefit that occurs because the project eliminates the need for future spending.

The Joint IOUs' proposal improperly blurs this distinction by treating hypothetical future savings as a negative cost that reduces the resources necessary to implement undergrounding. This approach is inconsistent with the fundamental concept of opportunity cost and the longstanding principle that avoided expenditures are properly recognized as project benefits.¹³ Standard economic literature (as well as public statements made by the Joint IOUs)¹⁴ recognizes that cost avoidance (or cost savings) is a

¹¹ Cal Advocates Comments at 18.

¹² Cal Advocates Comments at 15-16 (citing Krugman, P. R., & Wells, R. (2024). *Microeconomics* (7th ed.). Worth Publishers).

¹³ Cal Advocates Comments at 15-16 (citing Krugman, P. R., & Wells, R. (2024). *Microeconomics* (7th ed.). Worth Publishers).

¹⁴ Cal Advocates Reply Comments at 13 (citing PG&E's public webpage, which identifies "lowers

benefit, because it reflects resources that society no longer needs to expend as a consequence of the investment.¹⁵

3. The Joint IOUs' Proposal is Inconsistent with Established Cost-Benefit Analysis Guidance and Misconstrues Commission Precedent.

The Joint IOUs' proposed methodology is also inconsistent with accepted cost-benefit analysis guidance issued by federal agencies and recognized throughout the academic literature. Both the Federal Emergency Management Agency (FEMA)¹⁶ and the United States Department of Transportation (DOT)¹⁷ classify avoided operating costs as project benefits. Similarly, economic literature addressing public-sector cost-benefit analysis consistently treats avoided expenditures as benefits appearing in the numerator of the BCR calculation.¹⁸

Notably, the Joint IOUs' proposal is not supported by the Commission's own RDF in the way they claim. The Joint IOUs rely on RDF language describing implementation costs while inserting language that materially alters the Commission's adopted language to suggest that avoided costs should also be included.¹⁹ The RDF describes costs as incremental expenditures made necessary by the investment—not expenditures avoided

maintenance and operating costs" as one of the principal benefits of undergrounding).

¹⁵ Cal Advocates Comments at 15-16 (citing Krugman, P. R., & Wells, R. (2024). *Microeconomics* (7th ed.). Worth Publishers).

¹⁶ Federal Emergency Management Agency (FEMA). *Introduction to Benefit-Cost Analysis: Unit 3 — The Benefit-Cost Model, Instructor Guide*. June 2019, Version 2.0.

¹⁷ U.S. Department of Transportation. *Benefit-Cost Analysis Guidance for Discretionary Grant Programs*. Washington, DC: Office of the Secretary, December 2023. <https://www.transportation.gov/office-policy/transportation-policy/benefit-cost-analysis-guidance>.

¹⁸ Cal Advocates Comments at 15-17 (See, e.g., Cellini, Stephanie Riegg, and James Edwin Kee. "Cost-Effectiveness and Cost-Benefit Analysis." In *Handbook of Practical Program Evaluation*, 3rd ed, 493–530; Electric Power Research Institute, *Methodological Approach for Estimating the Benefits and Costs of Smart Grid Demonstration Projects*; University of Memphis, Department of Civil Engineering, Lecture 24 – Benefit/Cost Analysis, CE 4111 course materials).

¹⁹ Cal Advocates Comments at 13.

because the investment was undertaken.²⁰ The Joint IOUs therefore rely upon an interpretation that is unsupported by Commission precedent.²¹

4. The Joint IOUs' Proposal Artificially Inflates Benefit-Cost Ratios.

Beyond its conceptual flaws, the Joint IOUs' methodology produces systematically biased results. As is evident through both economic analysis and mathematical proof, subtracting avoided O&M costs from the denominator will increase calculated BCRs whenever a project generates positive net benefits.²² This inflation is not merely theoretical. SPD's White Paper similarly demonstrates that placing avoided O&M in the denominator consistently produces larger BCRs than treating those avoided costs as benefits.²³

The consequences of this inflation are significant. Undergrounding projects generally generate larger projected O&M savings than alternative wildfire mitigations because underground assets require less vegetation management and routine maintenance.²⁴ By artificially increasing BCRs through denominator adjustments, the Joint IOUs' proposal structurally favors undergrounding over competing mitigation alternatives irrespective of their actual economic efficiency. Such a methodology risks directing billions of dollars toward projects that appear cost-efficient only because of the Joint IOUs' inappropriate accounting treatment.²⁵

The Joint IOUs' proposal also produces mathematically unstable and economically nonsensical outcomes.²⁶ As projected avoided O&M costs approach

²⁰ Cal Advocates Comments at 13.

²¹ See Decision (D.) 25-08-032, RAMP Phase 4 Decision.

²² Cal Advocates Comments at 16.

²³ See California Public Utilities Commission, Safety Policy Division. Staff White Paper on Benefit-Cost Ratio Methodology: CPUC Senate Bill 884 Application 26-02-005. April 10, 2026.

²⁴ Cal Advocates Comments at 17.

²⁵ Cal Advocates Comments at 17.

²⁶ Cal Advocates Comments at 17-20.

realized implementation costs, the denominator of the BCR approaches zero, causing BCRs to approach infinity. If projected avoided costs equal implementation costs, the BCR becomes undefined. If avoided costs exceed realized costs, the denominator becomes negative, producing nonsensical results even where project benefits remain positive, which implies that benefits could be achieved at negative costs to the ratepayers. A methodology capable of generating such absurd outcomes cannot reasonably serve as the Commission's principal decision-making tool.

5. The Commission Should Adopt SPD's Disaggregated Benefit-Cost Ratio Methodology.

SPD's proposed disaggregated BCR methodology avoids each of the deficiencies discussed above. It maintains the distinction between realized costs and avoided costs by placing all incurred capital and O&M expenditures in the denominator while recognizing avoided wildfire losses and avoided O&M expenditures as benefits in the numerator. This approach is consistent with accepted economic principles, federal cost-benefit analysis guidance, and the Commission's Risk-based Decision-making Framework.

Just as importantly, SPD's methodology produces stable and comparable BCRs that accurately reflect the economic efficiency of competing wildfire mitigation alternatives without introducing systematic bias toward any particular mitigation strategy. Because the Commission's adopted BCR methodology will guide billions of dollars in future investments, it should adopt the framework that most faithfully measures true economic costs and benefits.

Accordingly, the Commission should reject the Joint IOUs' proposal to include avoided O&M costs in the denominator of the BCR, which can result in nonsensical conclusions, and instead adopt SPD's recommended disaggregated methodology supported by economic principals and Commission precedent.

6. The Joint IOUs Incorrectly State That Method 3 Undermines the Core Policy Construct Embedded in the RDF.

The Joint IOUs state: “In supporting Method 3, TURN and Cal Advocates effectively elevate O&M savings to the same analytical footing as risk-reduction benefits, thereby undermining the core policy construct embedded in the RDF, SB 884, and Energy Safety guidance.”²⁷ This statement overlooks the fact that the benefit-cost ratio, by monetizing risk, *intentionally* places disparate costs and benefits on the same footing. If properly monetized, a dollar of avoided O&M savings is equivalent to a dollar of wildfire cost reduction, or a dollar of reliability risk reduction.²⁸

While it is reasonable to assume that the public will be averse to potential wildfire losses, the appropriate way to address this is through a unified risk-aversion framework grounded in the field of expected utility theory. Expected utility theory is well suited to capture public aversion to large risks (i.e., uncertain losses), such as wildfire risks, whereas O&M costs are deterministic expenditures and are not subject to risk-aversion adjustments.²⁹

The Joint IOUs are incorrect in their statement that the location of a given cost or benefit in the BCR calculation inappropriately “elevates” that benefit to the same analytical footing as other benefits. Instead, the fundamental economic theory behind benefit-cost-ratios, as Cal Advocates has clearly shown, dictate that avoided costs are a benefit and should be tracked in the same manner as any other benefit.

²⁷ Joint IOU Reply Comments at 10.

²⁸ See D.22-12-027 at 18: “While the MAVF approach relies upon the sum of weighted scores for each Attribute, each with its own stated range, scaling function, and weight parameter, Staff’s proposed Cost-Benefit Approach uses dollar values taken from independent government and industry sources, which makes the assignment of Attribute ranges and weights no longer applicable.” In other words, monetizing outcomes places all outcomes on the same footing. This is necessary to meet the intended goal of a BCR, e.g., to measure “whether the Benefits from a proposed mitigation measure exceeds its costs.”

²⁹ Cal Advocates Comments at 27 (citing Stewart, et al., Homeland security: A case study in risk aversion for public decision-making. *International Journal of Risk Assessment and Management*, 15(5-6), 367-386; EPRI Report, Value Modeling for Reliability of Distribution and Transmission Systems, 1012501).

Furthermore, the IOUs allege: “As a result, Method 3 risks obscuring the very signal the RDF is designed to provide, namely: *How much wildfire risk is reduced per dollar spent?*”³⁰ If this is true, then it follows that *only* wildfire risk reduction should be included in the benefits portion of the BCR calculation. However, the Joint IOUs have separately argued that non-wildfire benefits such as reduction in public contact with downed infrastructure, or monetary benefits from improved reliability should be included in the benefit calculations.³¹ As stated above, a dollar that is not spent on O&M is functionally equivalent to a dollar of wildfire damage that does not occur or a dollar of reliability that is not spent on an wildfire damages, and therefore both reliability and O&M savings are appropriately counted as benefits.

The Joint IOUs’ argument that the BCR should only measure risk-reduction per dollar spent also rests on an incorrect characterization of the purpose of a benefit-cost ratio. They repeatedly describe the relevant objective as measuring “risk reduction per dollar spent.”³² However, that is not the purpose of a BCR. A BCR measures whether the total monetized benefits of a project exceed its total costs. Once all relevant impacts have been appropriately monetized, the economic framework does not distinguish between dollars arising from avoided wildfire losses, avoided reliability losses, or avoided O&M expenditures. All represent benefits accruing to ratepayers.

B. The Commission Should Reject Utility-Specific Risk-Aversion Methodologies

The Joint IOUs recommend the use of risk-adjusted benefit-cost ratios (BCRs) when evaluating eligible undergrounding projects.³³ While Cal Advocates does not dispute that risk aversion may, in appropriate circumstances, play a role in evaluating

³⁰ Joint IOU Reply Comments at 11.

³¹ For example see PG&E’s response to data request CalAdvocates-PGE-NonCase-MMH-11242025-SPD37-Changes, Question 4, December 10, 2025, “DRU16714_Q04_Atch02_SPD-37 November CPUC Meeting_Redacted.pdf”

³² For example, see Joint IOU Reply Comments at 13.

³³ A.26-02-005 at 6.

low-probability, high-consequence events, the methodologies proposed by the Joint IOUs do not provide a sufficiently reliable, consistent, or economically supported basis for doing so. The Commission should therefore decline to adopt the proposed risk-scaling methodologies and instead require project selection to be based on risk-neutral BCRs unless and until a uniform risk-aversion framework is developed through the rulemaking to refine the Risk-based Decision-making Framework (RRDF) proceeding.

1. The Joint IOUs Have Not Presented a Standardized or Economically Supported Risk-Aversion Framework.

One of the stated objectives of this proceeding is to establish a standardized methodology for evaluating undergrounding projects across California's large electric utilities.³⁴ The Joint Application, however, proposes no common methodology for incorporating risk aversion. Instead, the Joint IOUs' proposal provides that each utility would be permitted to continue applying its own independently developed "risk scaling" methodology. This patchwork approach is fundamentally inconsistent with the purpose of establishing a standardized evaluation framework. Risk aversion is intended to reflect societal preferences regarding uncertain outcomes—not utility-specific preferences or analytical choices. If materially identical mitigation projects produce different BCRs depending solely upon which utility performs the analysis, the resulting methodology is not standardized, transparent, or comparable across utilities. The Commission should not adopt a framework under which similarly situated ratepayers are subject to materially different investment decisions because each utility employs a different method for valuing the same categories of wildfire risk.

2. The Proposed Risk-Scaling Methodologies Are Not Grounded in Accepted Cost-Benefit Analysis Principles.

Although the economic literature recognizes that risk aversion can, under certain circumstances, be incorporated into cost-benefit analysis,³⁵ the accepted approaches are

³⁴ Scoping Memo at 5.

³⁵ For example, in A.25-05-009, Exhibit No. PG&E-14, at 1-18. PG&E cite: Stewart, M. G., Ellingwood, B. R., & Mueller, J. (2011). Homeland security: A case study in risk aversion for public decision-making.

generally founded on well-established expected utility theory.³⁶ The methodologies proposed by the Joint IOUs do not follow those established frameworks. Instead, the proposed methodologies rely upon analytical assumptions and proxy measures that have not been shown to accurately represent Californians' willingness to pay to avoid wildfire risk.³⁷ Consequently, the Joint IOUs' proposed scaling factors do not provide a reliable basis for increasing the calculated benefits of undergrounding projects.³⁸ More importantly, the utilities have not demonstrated that any of their methodologies are appropriate for statewide adoption. Rather, the record demonstrates that the utilities employ materially different approaches that produce materially different results.

3. The Joint IOUs Mischaracterize Differences in “Risk Scaling” as an Accommodation of Utility-Specific Conditions.

The Joint IOUs state: “Differences in risk-scaling approaches across the IOUs are not a deviation from the framework, but rather an intended feature that reflects differences in system characteristics, risk exposure, and operational context. The RDF framework is designed to accommodate utility-specific conditions while maintaining overall analytical rigor.”³⁹ Although there are undoubtedly differences in service territories, customer characteristics, and wildfire risk across the large IOUs, the differences in the utilities' “risk scaling” methodologies are not designed to capture those differences. Rather, PG&E and SDG&E employ fundamentally different methodologies that are unrelated to one another and are calibrated using entirely different approaches. As shown in Cal Advocates' opening comments, under PG&E's “risk scaling” approach,

International Journal of Risk Assessment and Management, 15(5-6), 367-386.

³⁶ Cal Advocates Comments at 22 (see, e.g., Seminal work by von Neumann and Morgenstern 1953. Theory of Games and Economic Behavior. 3rd ed. Princeton, NJ: Princeton University Press).

³⁷ Cal Advocates Comments. See Sections III.B.2 and III.B.3.

³⁸ Cal Advocates Comments at 33-34.

³⁹ Joint IOU Reply Comments at 16.

the maximum multiplier would approach 7.5 for very large events.⁴⁰ Under SDG&E’s “risk scaling” approach, there is no maximum, and multipliers could easily exceed 20.⁴¹ This dramatic difference cannot reasonably be attributed to differences in service territory or customer characteristics. Nor is it reasonable to assume that Californians in SDG&E’s service territory are significantly more risk averse to large wildfires than Californians in PG&E’s service territory.

Moreover, the methods that PG&E and SDG&E use to derive their risk multipliers bear little resemblance to one another and are not linked by any common economic theory.⁴² Although both are presented as measures of risk aversion, neither is derived from the expected utility framework that underpins the economics literature on decision-making under uncertainty. Instead, each utility employs its own ad hoc methodology, producing substantially different multipliers that cannot reasonably be interpreted as reflecting genuine differences in ratepayer preferences. If differences in customer risk preferences across utility territories are believed to exist, the expected utility framework provides a theoretically grounded means of estimating and incorporating those differences while maintaining a consistent analytical framework across California.

A concept as fundamental as risk aversion should not vary in methodological application according to the utility serving a customer; rather, it should be represented using a single, theoretically grounded methodology that can be calibrated, if and where appropriate, to reflect genuine differences in ratepayer preferences.

4. The Utilities’ Individual Methodologies Illustrate the Lack of a Unified Framework.

The absence of a common methodology is illustrated by the utilities’ own proposals. PG&E employs a “market-based” approach derived from financial risk-transfer markets, while SDG&E applies a methodology originally developed to

⁴⁰ Cal Advocates Comments at 23.

⁴¹ Cal Advocates Comments at 29.

⁴² Cal Advocates Comments. Section III.B.

characterize societal aversion to multi-fatality events. Although the Joint IOUs assert that the RDF's "risk-scaling" approach "originated from expected utility theory,"⁴³ neither methodology is actually derived from the expected utility theory framework. Rather, PG&E infers consequence multipliers from insurance and catastrophe-bond markets, while SDG&E applies a nonlinear consequence-scaling function derived from literature concerning aversion to catastrophic fatalities. These are fundamentally different analytical approaches, they cannot reasonably be characterized as different implementations of a common expected utility model.⁴⁴

Cal Advocates demonstrated that neither approach has been shown to reliably measure societal risk preferences or to provide an appropriate basis for evaluating wildfire mitigation investments.⁴⁵ More importantly, the existence of two fundamentally different methodologies employed by peer utilities demonstrates why the Commission should not approve utility-specific "risk-scaling" methods in this proceeding.

5. Inflated Risk Adjustments Can Lead to Inefficient Capital Spending.

The Commission's BCR methodology directly determines which projects qualify for balancing-account recovery and, ultimately, which costs are borne by ratepayers. If risk-adjusted benefits are overstated, BCRs likewise become overstated, causing projects that are not economically efficient to appear cost-efficient. Cal Advocates demonstrates that the magnitude of the selected "risk-scaling" methodology can significantly alter mitigation portfolio composition.⁴⁶ Because undergrounding projects require substantial capital investment and their costs may ultimately be recovered from ratepayers, even modest overstatements of project benefits can result in billions of dollars of inefficient investment.⁴⁷ The Commission's obligation is not simply to reduce wildfire risk, but to

⁴³ Joint IOU Reply Comments at 22.

⁴⁴ See Cal Advocates Comments at 21-35.

⁴⁵ See Cal Advocates Comments. Sections III.B.2 and III.B.3.

⁴⁶ Cal Advocates Comments. Section III.B.4.

⁴⁷ Cal Advocates Comments at 2-3. At a cost of approximately \$3 million per mile to underground (in

ensure that utility expenditures are just and reasonable.⁴⁸ A methodology that systematically inflates project benefits will not lead to just and reasonable outcomes, and thus must be rejected.

6. The Commission Should Defer Adoption of Risk-Aversion Methodologies Until a Uniform Framework is Developed.

The Commission should not reject the concept of risk aversion altogether. Rather, it should recognize that this proceeding is not the appropriate forum to adopt competing, utility-specific methodologies that lack a common theoretical foundation. Until the Commission develops a single, transparent, and economically supported framework applicable to all investor-owned utilities through the ongoing RDF proceeding, project selection should be based on risk-neutral BCRs. This approach preserves consistency across utilities, promotes transparency, ensures comparability among competing mitigation alternatives, and protects ratepayers from the risk of funding projects whose apparent cost-efficiency depends primarily upon the choice of “scaling” methodology rather than their actual economic merits.⁴⁹ Accordingly, the Commission should reject the Joint IOUs' proposed “risk-scaling” methodologies and instead require that undergrounding projects be evaluated using risk-neutral benefit-cost ratios pending the development of a uniform statewide risk-aversion framework.

C. Reliability Benefits Must Be Calculated Using Location-Specific Inputs.

Reliable estimation of project benefits is fundamental to an accurate benefit-cost analysis. Because reliability benefits constitute a significant portion of the total benefits attributed to undergrounding projects, the methodology used to calculate those benefits

alignment with PG&E's 2023 GRC), PG&E's publicly-announced plan in 2021 to underground 10,000 miles would cost ratepayers nearly \$30 billion.

⁴⁸ Public Utilities Code section 451: “Every public utility shall furnish and maintain such adequate, efficient, just, and reasonable service, instrumentalities, equipment, and facilities, including telephone facilities, as defined in Section 54.1 of the Civil Code, as are necessary to promote the safety, health, comfort, and convenience of its patrons, employees, and the public.” .

⁴⁹ Cal Advocates Comments at 35-37.

must accurately reflect the conditions that customers experience at the locations where projects are proposed. The Joint IOUs' proposed approach does not do so. Instead, by relying on system-wide assumptions and historical data that fail to reflect actual operating conditions, the proposed methodology risks overstating the reliability benefits associated with undergrounding. The Commission should instead require location-specific calculations that more accurately measure the benefits each project is expected to provide.

1. The Joint IOUs Mischaracterize Cal Advocates' Position Regarding Value of Service.

The Joint IOUs state: "Further, contrary to Cal Advocates' assertion, the Joint IOUs' application does not rely on a single undifferentiated system-wide reliability value."⁵⁰ Cal Advocates correctly states that the Joint IOUs use system-wide reliability metrics to determine a system-wide value of service (VOS) for residential and non-residential customers.⁵¹ The Joint IOUs then apply those customer-class-based VOS to the specific mix of residential and non-residential customers in a given project location.⁵²

The Joint IOUs claim this method "appropriately balances standardization and granularity."⁵³ However, the two system-wide VOS values are based on non-granular data and are primarily based on reliability statistics before modern system operations protocols such as PSPS and EPSS were widely in use. As a result, the VOS for residential and non-residential customers do not reflect the variations across PG&E's vast service territory, nor do they reflect the reliability of the system as it operates today.

⁵⁰ Joint IOU Reply Comments at 19.

⁵¹ Cal Advocates Comments at 40.

⁵² Cal Advocates Comments at 41.

⁵³ Joint IOU Reply Comments at 20.

2. System-Wide Reliability Values Do Not Reflect Local Conditions.

The Joint IOUs propose to calculate reliability benefits using system-wide Value of Service (VOS) inputs.⁵⁴ While such averages may simplify analysis, they do not reasonably represent the significant differences in outage frequency, outage duration, and customer impacts that exist throughout each utility's service territory.⁵⁵ Moreover, the behavioral economic model underlying the Interruption Cost Estimate (ICE) framework recognizes that the cost of outages borne by customers varies with outage characteristics, including outage frequency and duration, rather than treating all customer outage minutes as having a uniform value.⁵⁶ Applying system-wide averages to individual undergrounding projects masks important geographic differences and reduces the accuracy of project-level BCR calculations.⁵⁷

3. System-Wide Inputs Can Overstate Reliability Benefits.

Reliability performance varies considerably across utility systems, particularly between High Fire Threat Districts (HFTDs) and other portions of the service territory. Projects located in areas that historically experience longer reliability interruptions may nevertheless receive benefit estimates based upon broader system VOS averages, resulting in inflated estimates of reliability improvements. The purpose of the BCR is to estimate the incremental benefits produced by a particular project. That objective cannot be achieved when benefits are calculated using assumptions that do not correspond to the conditions at the project location.⁵⁸

⁵⁴ Application at 10-11.

⁵⁵ Cal Advocates Comments at 43.

⁵⁶ Cal Advocates Comments at 40-43.

⁵⁷ Cal Advocates Comments at 39.

⁵⁸ Cal Advocates Comments at 41.

4. Historical Data Must Reflect Actual Operating Conditions.

The historical data used to estimate future reliability benefits should likewise reflect the conditions under which the electric system has actually operated. Excluding Major Event Day (MED), Public Safety Power Shutoff (PSPS), and Enhanced Powerline Safety Settings (EPSS) events from historical outage data understate the frequency and duration of outages experienced by customers and fails to capture the operational realities that undergrounding projects are intended to address.⁵⁹

Similarly, the selected historical lookback period should account for the operational mitigations currently employed by the utilities. A historical period that predates widespread implementation of wildfire mitigation measures, may not accurately predict the reliability improvements expected from future undergrounding projects.⁶⁰

5. The Commission Should Require Location-Specific Reliability Calculations.

The Commission should require reliability benefits to be calculated using location-specific VOS inputs together with historical data that accurately reflects current operating conditions, including MED, PSPS, and EPSS events where appropriate. Doing so will improve the accuracy, transparency, and comparability of BCR calculations and ensure that undergrounding projects are evaluated based upon the benefits they are reasonably expected to provide rather than generalized system averages.⁶¹

D. The Commission Should Require a Uniform Discount Rate.

Discount rates are a fundamental component of benefit cost analysis because they determine the present value of future costs and benefits. Even relatively small

⁵⁹ Cal Advocates Comments at 43.

⁶⁰ Cal Advocates Comments at 45.

⁶¹ For example, according to PG&E's own calculations, basing VOS calculations on HFTD characteristics (i.e., the characteristics of where undergrounding will be implemented) reduces the non-residential VOS by nearly two thirds compared to system-wide VOS calculations. (PG&E's response to data request CalAdvocates-PGE-NonCase-MMH-11042025-SPD37 Supplemental Response, November 26, 2025, "DRU16616_System Hardening_DR_CPUC_Q004Q005_Atch01.xlsx")

differences in discount rates can materially affect calculated BCRs and alter project rankings. For that reason, a standardized evaluation methodology requires a standardized discount rate.

1. Utility-Specific Discount Rates Undermine Comparability.

The Joint IOUs propose to continue using utility-specific discount rates when evaluating undergrounding projects. This approach is inconsistent with the objective of developing a common statewide methodology. If each utility discounts future costs and benefits using different assumptions, projects with identical economic characteristics may produce different BCRs solely because different discount rates were applied. The resulting differences would reflect methodological choices rather than actual differences in project value.⁶²

The RDF is intended to promote consistency in the methodologies utilities use to evaluate and prioritize mitigation investments.⁶³ That objective cannot be achieved if fundamental economic assumptions vary among utilities. Uniform treatment of discounting promotes transparency, facilitates comparison across utilities, and ensures that project-selection decisions are based on comparable economic analyses rather than utility-specific financial assumptions. Accordingly, the Commission should require all participating utilities to employ a single Commission-approved discount rate when calculating benefit-cost ratios.

E. Benefit-Cost Calculations Must Be Based on Realistic Baseline Conditions.

Benefit-cost analysis measures the incremental benefits produced by a proposed investment relative to the conditions that would exist absent that investment. Consequently, accurate BCR calculations depend upon selecting an appropriate baseline.

⁶² Cal Advocates Comments at 46-47.

⁶³ Risk-Based Decision-Making Framework (RDF): R. 20-07-013. www.cpuc.ca.gov/about-cpuc/divisions/safety-policy-division/risk-assessment-and-safety-analytics/r-20-07-013.

1. Baseline Assumptions Must Reflect Actual System Conditions.

The Joint IOUs' proposed baseline does not adequately account for the wildfire mitigation measures already deployed throughout their systems. Existing operational and infrastructure mitigations—including vegetation management, PSPS, EPSS, covered conductor, and other ongoing programs—materially affect the level of wildfire risk that would exist without additional undergrounding. Ignoring these existing measures exaggerates the incremental benefits attributed to undergrounding by comparing proposed projects against a hypothetical bare-wire system without EPSS or PSPS – a system that no longer exists across much of the HFTD.⁶⁴

Because BCRs measure incremental improvements, overstating baseline risk necessarily overstates project benefits. A project cannot receive credit for reducing risks that have already been mitigated through other investments or operational practices. The Commission's objective is to identify the most efficient future investments—not to measure benefits against outdated system conditions that fail to reflect actual operations and risk mitigation tools in use.⁶⁵

Accordingly, the Commission should require the Joint IOUs to calculate BCRs using baseline conditions that accurately reflect existing infrastructure, current operational practices, and ongoing wildfire mitigation measures. This ensures that project benefits represent actual incremental improvements and that investment decisions are based on realistic assessments of future system performance.

F. Benefit-Cost Ratios Must Reflect the Full Cost to Ratepayers.

A benefit-cost ratio is only as accurate as the costs included in its calculation. While undergrounding projects impose significant long-term costs on ratepayers, the Joint IOUs' proposed methodology focuses primarily on direct construction expenditures

⁶⁴ Cal Advocates Comments at 47.

⁶⁵ Cal Advocates Comments at 48.

and therefore understates the full economic cost, and thus potential costs to ratepayers, of these investments.

1. Direct Construction Costs Alone Do Not Reflect the Full Cost of Undergrounding.

Ratepayers ultimately fund far more than the initial construction cost of undergrounding projects.⁶⁶ Utility investments also generate financing costs, taxes, depreciation, return on investment, future operations and maintenance expenses, and other costs that are recovered through rates over the life of the assets. A methodology that excludes these costs necessarily understates the resources – both in terms of ratepayer funding and in funds IOUs raise to perform capital projects - required to implement undergrounding and inflates calculated BCRs.⁶⁷

2. Indirect Costs Are Real Costs That Must Be Included.

From the perspective of economic efficiency, all costs borne by ratepayers should be reflected in the denominator of the BCR. Whether costs arise directly from construction or indirectly through financing and ratemaking mechanisms, they represent real expenditures associated with the project. Excluding indirect costs does not reduce the financial burden on ratepayers; it merely reduces the apparent cost reflected in the BCR calculation.⁶⁸

3. Comprehensive Cost Accounting is Feasible.

The Joint IOUs already employ planning models capable of estimating the long-term revenue requirement associated with capital investments. These existing methodologies demonstrate that incorporating the full costs of undergrounding into BCR calculations is both feasible and practical. Using a Present Value of Revenue

⁶⁶ In the alternative, if ratepayers will not pay any of these costs, such that the utility does not book these costs to any ratepayer funded account – meaning that shareholders or some other entity pay the costs - then it may be appropriate to exclude them from the costs of the project.

⁶⁷ Cal Advocates Comments at 49.

⁶⁸ Cal Advocates Comments at 50.

Requirement (PVRP) methodology would more accurately capture the costs ultimately borne by ratepayers over the life of each project than reliance on construction costs alone.⁶⁹

Accordingly, the Commission should require benefit-cost analyses to include all direct and indirect costs expected to be recovered from ratepayers over the life of the project. A comprehensive cost methodology will produce more accurate BCRs, improve comparability among mitigation alternatives, and ensure that investment decisions properly account for the long-term financial obligations imposed on California customers.

III. THE COMMISSION SHOULD ADOPT CAL ADVOCATES' PROPOSED AUDIT FRAMEWORK.

The Commission's adopted benefit-cost methodology will have little practical value unless it is paired with an audit framework that promotes transparency, accountability, and consistent application. Because some costs of undergrounding projects will be recovered from ratepayers, the Commission must ensure that project performance is evaluated using objective, transparent, and administrable standards that accurately reflect the costs and benefits of completed work.

The Joint IOUs' proposed audit framework does not adequately accomplish these objectives. It provides the utilities significant discretion in determining when projects are subject to review and employs portfolio-level metrics that obscure the performance of individual projects. Cal Advocates' recommendations, by contrast, establish a straightforward framework that promotes consistent audits while ensuring that ratepayer-funded investments remain economically justified.⁷⁰

⁶⁹ Cal Advocates Comments at 51.

⁷⁰ Cal Advocates Comments at 56.

A. Subprojects Should Be Evaluated When They Become Used and Useful.

The timing of Commission review is critical to an effective audit framework. The Joint IOUs propose an approach that permits completed work to be assigned among audit periods in a manner that may not correspond to when projects begin providing service to customers. Such flexibility reduces transparency and may complicate the Commission's ability to determine whether statutory cost caps and portfolio requirements have been satisfied during a particular audit period.

The more appropriate approach is to evaluate each subproject when it becomes used and useful. This standard is familiar throughout utility regulation and ties Commission review to the point at which the investment begins providing utility service and becomes eligible for cost recovery.⁷¹ Evaluating projects on this basis provides a clear and objective trigger for audit review while ensuring that completed projects are assessed in the period during which they begin delivering customer benefits.⁷²

The "used and useful" standard also promotes consistency among audit periods. It prevents the timing of Commission review from depending upon administrative choices made by the utility and instead relies upon a predictable and objective regulatory milestone that can be readily verified. This approach improves transparency for both the Commission and interested parties while facilitating meaningful comparisons across audit cycles. Accordingly, the Commission should require each undergrounding subproject to be audited during the period in which it becomes used and useful and should count that subproject toward the applicable portfolio requirements and statutory cost limitations for that audit period.

⁷¹ Decision (D.) 84-09-089, 16 CPUC 2d 205, 1984 Cal. PUC LEXIS 1013, p. 55 ("Over the years, this Commission has closely adhered to the 'used and useful' principle, which requires that utility property be actually in use and providing service in order to be included in the utility's ratebase.")

⁷² Cal Advocates Comments at 52.

B. Portfolio-Level Benefit-Cost Ratios Should Be Calculated Using Miles-Weighted Averages.

The Commission should also adopt an appropriate methodology for evaluating whether an undergrounding portfolio satisfies the applicable benefit-cost requirements. The Joint IOUs' proposed use of simple, unweighted averages does not accurately measure portfolio performance because it assigns equal weight to every project regardless of project size. Under such an approach, a short project with a high BCR influences the portfolio average to the same extent as a substantially longer and more expensive project with a much lower BCR. The resulting average therefore may not accurately represent the overall economic efficiency of the portfolio.⁷³

A miles-weighted average more accurately reflects the relative contribution of each project to the overall undergrounding portfolio. Because project costs and expected benefits generally increase with project length, weighting portfolio BCRs by completed miles provides a more representative measure of the economic performance of the portfolio as a whole. A weighted methodology also better aligns the portfolio metric with the Commission's underlying objective of ensuring that ratepayer dollars are invested efficiently. Larger projects account for a greater share of total investment and therefore should appropriately carry greater weight in determining whether the overall portfolio satisfies the Commission's cost-efficiency requirements. Adopting a miles-weighted portfolio BCR will improve the accuracy and integrity of Commission audits while preventing portfolio averages from being skewed by relatively small projects whose economic characteristics are not representative of the overall investment. For these reasons, the Commission should require portfolio-level BCR compliance to be determined using a miles-weighted average rather than a simple arithmetic average.⁷⁴

Together, Cal Advocates' proposed audit recommendations establish an objective and administrable framework for Commission oversight. Evaluating subprojects when

⁷³ Cal Advocates Comments at 53.

⁷⁴ Cal Advocates Comments at 54.

they become used and useful and measuring portfolio performance through miles-weighted BCRs will improve transparency, facilitate consistent audits, and ensure that statutory cost limitations are applied in a predictable and equitable manner. Most importantly, these recommendations strengthen the Commission's ability to verify that undergrounding investments continue to satisfy the economic standards adopted in this proceeding before those costs are permanently borne by California ratepayers. The Commission should therefore adopt Cal Advocates' proposed audit framework in its entirety.

IV. THE COMMISSION SHOULD ADOPT ADDITIONAL CONDITIONS ON COST RECOVERY

The Commission's responsibility extends beyond establishing an appropriate methodology for calculating benefit-cost ratios. It must also determine the conditions under which undergrounding costs become eligible for recovery from ratepayers. Because all such expenditures will ultimately be borne by California customers, the Commission should adopt cost-recovery conditions to ensure that only economically justified projects qualify for balancing account treatment. The recommendations advanced by Cal Advocates establish practical safeguards that will improve accountability, encourage efficient project selection, and protect ratepayers from unnecessary expenditures.⁷⁵

A. Individual Subprojects Must Demonstrate Economic Efficiency.

The Joint IOUs propose to evaluate cost-efficiency at the portfolio level.⁷⁶ While portfolio analysis is useful in assessing overall program performance, it does not show whether each subproject represents a prudent investment. A portfolio containing several highly cost-efficient subprojects and numerous subprojects whose costs exceed their benefits may nevertheless be cost-efficient. Permitting recovery of such subprojects simply because the overall portfolio satisfies a minimum BCR threshold undermines the

⁷⁵ Cal Advocates Comments at 66.

⁷⁶ Application at 29.

purpose of benefit-cost analysis and allows inefficient investments to be subsidized by efficient ones.⁷⁷

The Commission should instead require each undergrounding subproject to independently demonstrate economic efficiency before becoming eligible for balancing account recovery. This project-level screening better aligns with traditional utility ratemaking principles, under which the prudence of individual investments remains subject to Commission review. The Joint IOUs characterize subprojects as “arbitrarily defined subcomponents.”⁷⁸ However, their own comments acknowledge that subprojects are established for operational, construction, and accounting purposes.⁷⁹ As such, subprojects are not arbitrary; they represent choices a utility makes when it plans, constructs, and ultimately seeks to recover costs from ratepayers. Subprojects therefore provide an appropriate and administrable unit for evaluating economic efficiency.

A requirement that each undergrounding subproject demonstrates economic efficiency also promotes more disciplined project selection. Utilities will have greater incentive to prioritize economically efficient subprojects if they cannot rely upon high-performing subprojects to mask or subsidize inefficient investments elsewhere in the portfolio.⁸⁰

Accordingly, the Commission should require each subproject included in the balancing account to demonstrate a BCR greater than one. Subprojects failing to satisfy that threshold should instead be recorded in the memorandum account pending further Commission review.

B. Location-Specific Risk Measurement Should Be Required.

Accurate benefit-cost analysis requires that project benefits be measured using the risks actually present at the project location. The Joint IOUs’ proposed use of pro-rata

⁷⁷ Cal Advocates Comments at 55.

⁷⁸ Joint IOUs Reply Comments at 39.

⁷⁹ Joint IOU Reply Comments at 39.

⁸⁰ Cal Advocates Comments at 55.

calculation methods assumes that risk is distributed uniformly across larger portions of the electric system. However, wildfire risk varies considerably along individual circuits due to differences in vegetation, topography, weather conditions, infrastructure configuration, and surrounding communities.⁸¹ Consequently, allocating risk proportionally across large geographic areas may materially overstate or understate the actual benefits associated with a particular undergrounding subproject.⁸²

Location-specific risk estimates more accurately quantify the amount of wildfire risk reduced by each project and improve the Commission's ability to compare competing mitigation alternatives. Although the Joint IOUs argue that aggregation at the circuit-segment level reduces statistical uncertainty,⁸³ they have not quantified the structure or magnitude of that uncertainty. Nor have they demonstrated that any reduction in variance outweighs the systematic bias introduced by allocating risk proportionally across circuit segments with a high degree of variance in risk. In fact, the Joint IOUs have not provided a quantitative framework describing the uncertainty associated with their underlying pixel-level risk estimates that would permit such an evaluation. Location-specific risk estimates also better ensure that ratepayer investments are directed toward projects producing the greatest reduction in wildfire risk.⁸⁴ Accordingly, the Commission should require utilities to calculate subproject-level risk reductions using location-specific risk estimates rather than generalized pro-rata allocations.

⁸¹ Cal Advocates Comments at 58-62.

⁸² Cal Advocates Comments at 58-59.

⁸³ Joint IOU Reply Comments at 41.

⁸⁴ Cal Advocates Comments at 58-59.

C. The Joint IOUs' Proposed Thirty Percent Uncertainty Factor Should Be Rejected.

The Joint IOUs propose to apply a thirty-percent uncertainty factor when evaluating undergrounding projects.⁸⁵ The record does not demonstrate that this proposed adjustment reasonably reflects the underlying uncertainty associated with project benefits. Indeed, the Joint IOUs describe the proposed adjustment in multiple, conceptually distinct ways. At various points they characterize it as an uncertainty adjustment,⁸⁶ a relative performance adjustment,⁸⁷ a mechanism for accounting for the residual uncertainty associated with overhead alternatives,⁸⁸ and a means of recognizing the durability of undergrounding.⁸⁹ These fundamentally different concepts require different analytical support, yet the Joint IOUs offer no economic or engineering framework that demonstrates why a single thirty-percent factor appropriately captures each of them. Instead, the proposed factor operates primarily as an upward “performance adjustment”⁹⁰ to project BCRs, increasing the number of projects that qualify for balancing account recovery. Because the adjustment is applied uniformly rather than being tied to project-specific uncertainty, it introduces a systematic bias that favors undergrounding without demonstrating that the resulting investments are economically justified.⁹¹ Or, in other words, the utilities are asking the Commission to give them credit for not properly understanding the risks and benefits associated with the projects they select.

The Commission should be particularly cautious when adopting broad adjustments that materially affect project eligibility. Even relatively modest increases in calculated

⁸⁵ Application at 36.

⁸⁶ Joint IOU Reply Comments at 43-46.

⁸⁷ Joint IOU Reply Comments at 44.

⁸⁸ Joint IOU Reply Comments at 46.

⁸⁹ Joint IOU Reply Comments at 46-47.

⁹⁰ Joint IOU Reply Comments at 44.

⁹¹ Cal Advocates Comments at 62.

BCRs can significantly expand the amount of capital investment ultimately recovered from ratepayers. The Joint IOUs' explanation confirms that the proposed adjustment is not simply an estimate of modeling uncertainty. Rather, it is a policy based adjustment that is intended to favor undergrounding where competing mitigation alternatives produce similar BCRs.⁹² Such a policy judgment should not be embedded under the pretense of a technical uncertainty factor. If the Commission concludes that an adjustment for uncertainty is appropriate, any such adjustment should be supported by substantial evidence, proportionate to the demonstrated uncertainty, and accompanied by safeguards ensuring that projects continue to provide positive net benefits.⁹³ Accordingly, the Commission should reject the proposed thirty-percent uncertainty factor. Alternatively, if an uncertainty factor is adopted, the Commission should adopt a substantially smaller adjustment and require utilities to demonstrate that undergrounding projects produce substantially greater net benefits than competing mitigations.⁹⁴

D. Portfolio-Level Cost Recovery Should Prioritize the Most Economically Efficient Projects.

Even where portfolio-level review is appropriate, the Commission should ensure that balancing account recovery encourages utilities to construct the projects providing the greatest overall benefit to ratepayers. A static portfolio threshold may permit utilities to include relatively inefficient projects simply because sufficient higher-performing projects are included in the same portfolio. Over time, this approach reduces overall economic efficiency and increases the costs ultimately borne by customers.⁹⁵

Cal Advocates' proposed dynamic BCR requirement addresses this concern by encouraging utilities to prioritize the highest-value remaining projects as undergrounding

⁹² Joint IOU Reply Comments at 44.

⁹³ Cal Advocates Comments at 63.

⁹⁴ Cal Advocates Comments at 65.

⁹⁵ Cal Advocates Comments at 64.

programs progress.⁹⁶ Under this approach, portfolio performance is evaluated relative to the remaining universe of eligible projects, thereby promoting continuous selection of the most economically efficient investments. This recommendation is consistent with the Commission’s longstanding responsibility to ensure that utility capital expenditures remain reasonable and prudent throughout the duration of major infrastructure programs rather than only at their inception.⁹⁷

Accordingly, the Commission should require portfolio-level cost recovery to satisfy a dynamic BCR requirement that reflects the economic characteristics of the remaining eligible project pool and encourages continuous prioritization of the most cost-efficient undergrounding investments.

V. THE COMMISSION SHOULD RESOLVE THE SB 884-SPECIFIC ISSUES IN THIS PROCEEDING WHILE COORDINATING WITH R.26-04-016

The Joint IOUs argue that their proposal “is consistent with the existing RDF and the Commission’s current direction” and that “broader issues raised by parties (e.g., risk tolerance, risk scaling, risk modeling) ... are more appropriately addressed in the Commission’s new Rulemaking Risk-Based Decision-Making Framework (RRDF) proceeding, R.26-04-016.”⁹⁸ The IOUs frame this as a reasonable request to defer significant policy changes to the RRDF proceeding.

R.26-04-016, like its predecessor, is broad and prospective.⁹⁹ It addresses statewide changes to the RDF and its use in RAMPs, GRCs, and other risk-informed

⁹⁶ See Cal Advocates Comments. Section V.A.2.

⁹⁷ See, e.g., Pub. Util. Code §§ 451, 701 (mandating continuous oversight to ensure utility rates and underlying costs remain just and reasonable); see also *Pacific Telephone & Telegraph Co. v. Public Utilities Com.*, 34 Cal. 2d 822, 832 (1950) (affirming the Commission's ongoing authority to disallow imprudent expenditures).

⁹⁸ Joint IOU Reply Comments at 4.

⁹⁹ See R.26-04-016, Scoping Memo, July 20, 2026, which includes questions concerning: A uniform BCR methodology across utilities; Whether avoided O&M should be placed in the numerator, denominator, or treated another way; The appropriate time horizon and possible use of present value of revenue requirement; Minimum BCR thresholds and exceptions; and Whether and how risk scaling should be incorporated into a risk-tolerance framework.

proceedings. The rulemaking includes broader questions concerning uniform BCR methodologies and risk tolerance, both of which are issues under consideration in this application. Although it overlaps with this application, this does not justify deferring the issues presented here. Under the schedule established in the July 2026 RRDF scoping memo, decisions regarding these topics are not anticipated until the second and fourth quarters of 2027.

The undergrounding plans initiated under SB 884 will cover a period of up to ten years, with the earliest such plan potentially being filed in 2026.¹⁰⁰ Adoption of the Joint IOU's proposal to defer resolution of these matters creates a substantial risk that the Commission will approve long-term undergrounding plans prior to developing a consistent, theoretically grounded framework for representing risk tolerance and risk aversion. Such an outcome would damage ratepayer protections and would not ensure that undergrounding plans are implemented in the best interests of Californians, under the most up-to-date understanding of the benefit-cost-analysis framework.

Notably, the RRDF scoping memo does not expressly include the development of a unified framework for representing risk aversion.¹⁰¹ Indeed, the Joint IOUs opposed Cal Advocates' request to include these issues within the scope of the RRDF proceeding.¹⁰² It is disingenuous for the Joint IOUs to argue that risk aversion should be deferred to the RRDF while simultaneously opposing efforts to ensure that the RRDF addresses the issue.

¹⁰⁰ A.26-02-005, Pacific Gas and Electric Company's (U 39 E) Response to President Reynolds's April 30, 2026 Letter – SB 884 Process, May 11, 2026.

¹⁰¹ The Scoping Memo in R.26-04-016 (July 20, 2026) does not include the topic of risk aversion or risk scaling in Track 2, BCR Refinements, and includes only a single question in Track 3, Risk Tolerance: "Whether and how the Commission should incorporate Risk Scaling as part of the Risk Tolerance standard or framework" at 5. There is no express intent to develop or consider a unified framework for representing risk aversion.

¹⁰² See, e.g., R.26-04-016, Reply Comments of Pacific Gas and Electric Company on the Order Instituting Rulemaking to Refine the Risk-Based Decision-Making Framework for Electric and Gas Utilities, June 16, 2026, at 6.

Given the accelerated nature of this application, it is critical that the Commission consider questions such as risk aversion now, to the greatest extent possible. The Commission should reject the Joint IOUs' recommendation to defer discussion of risk aversion and other critical items to a different proceeding. The Commission should adopt Cal Advocates' proposed methodology for purposes of SB 884, require utilities to report both risk-neutral and any separately calculated risk-scaled results, and provide that subsequently adopted statewide RRDF requirements will apply prospectively to SB 884 plans through an orderly conformance process. This approach will permit timely implementation of SB 884 while preserving the Commission's ability to adopt a broader and more durable statewide methodology in R.26-04-016.

VI. CONCLUSION

To ensure the IOUs deploy undergrounding in a targeted and efficient manner and to appropriately balance the safety, reliability, and affordability of California's electric grid, the Commission should adopt Cal Advocates' recommendations for undergrounding's benefit-cost ratios, audits to the balancing account, and additional balancing account conditions discussed herein.

Respectfully submitted,

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August 7, 2026