BEFORE THE PUBLIC UTILITIES COMMISSION

OF THE STATE OF CALIFORNIA

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Joint Application of Pacific Gas and Electric Company (U 39-E), Southern California Edison (U 338-E) and San Diego Gas & Electric Company (U 902-E) Requesting Commission Approval of Proposals for a BCR Calculation Methodology, Audit Methodology, and Cost Recovery Conditions as Specified in Resolution SPD-37.	A.26-02-005

JOINT COMMENTS OF PACIFIC GAS AND ELECTRIC COMPANY (U 39-E), SOUTHERN CALIFORNIA EDISON (U 338-E) AND SAN DIEGO GAS & ELECTRIC COMPANY (U 902-E) ON STAFF BCR WHITE PAPER

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JOINT COMMENTS OF PACIFIC GAS AND ELECTRIC COMPANY (U 39-E), SOUTHERN CALIFORNIA EDISON (U 338-E) AND SAN DIEGO GAS & ELECTRIC COMPANY (U 902-E) ON STAFF BCR WHITEPAPER

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Pursuant to the May 12, 2026 Assigned Administrative Law Judge DeAngelis' Email Ruling Granting Parties Opportunity to File Comments on Staff White Paper on June 9, 2026 (Ruling), Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE) and San Diego Gas & Electric Company (SDG&E) (collectively, the Joint Investor-Owned Utilities "Joint IOUs")[1] respectfully file these joint comments on Safety Policy Division's ("SPD") Staff White Paper ("White Paper") addressing the treatment of avoided Operations and Maintenance ("O&M") costs and savings in Benefit Cost Ratio ("BCR") calculations for Electrical Undergrounding Program ("EUP") projects pursuant to Senate Bill 884 ("SB 884").[2]

The Joint IOUs respectfully submit that the EUP application process is not the appropriate venue to evaluate or adopt material changes to BCR methodology, including the

[1] Pursuant to Rule 1.8(d), counsel for SCE confirms that counsel for PG&E and SDG&E have authorized SCE to file this Joint Motion on their behalf.

[2] Staff White Paper on Benefit-Cost Ratio Methodology (April 10, 2026), A.26-02-005, at §4.1–§4.3 (discussing how inconsistent baseline and O&M treatment can distort cross project comparisons and undermine transparency).

treatment of O&M costs and O&M savings. As Staff acknowledges, BCR formulation is a foundational analytical tool whose assumptions must remain consistent, transparent, and comparable across proceedings. Any modification to this framework will necessarily extend beyond undergrounding projects and affect the evaluation of mitigation alternatives and utility investments across enterprise risks, including those considered in Risk Assessment and Mitigation Phase (RAMP) and General Rate Case (GRC) proceedings. Therefore, the proper venue to evaluate changes to the BCR calculations, if deemed necessary, is in the Refinements to the Risk-based Decision-making Framework (RDF) proceeding[3] and not in this narrowly focused application.

Without undermining the critical point that this EUP proceeding is not the correct venue for this discussion, and because the CPUC has put forth this White Paper in this application, the Joint IOUs provide the following comments related to the BCR methodology discussion.

I. Introduction

The Joint IOUs appreciate the opportunity to provide comments on the White Paper. As Staff recognizes in its analysis, the treatment of O&M costs and savings is a foundational component of BCR formulation, and differing methodological approaches for this component can materially alter the interpretation, comparability, evaluation, and outcomes of project cost-effectiveness across proposed undergrounding investments and alternatives.[4]

In the White Paper, SPD Staff provide three alternative methodologies for calculating the BCR that must be used for comparing alternative mitigations in future EUPs. The Joint IOUs summarize those methodologies in Table 1-1 below and provide key features of each approach:

[3] Rulemaking (R.) 26-04-016 (opened April 30, 2026).

[4] Staff White Paper on Benefit-Cost Ratio Methodology, at §2 and §4 (recognizing that O&M treatment is a structural element of BCR formulation and affects comparability and interpretation).

Table I-1
Summary of Methods 1, 2 and 3 BCR Formulations and Key Features[5]

Approach	Formula	Key Features
Method 1	$BCR_{M1} = \frac{Risk\ Reduction\ Benefits}{Capital\ Costs - Net\ O\&M}$[6]	Emphasizes risk reduction; O&M as cost offset preserves analytical clarity
Method 2	$BCR_{M2} = \frac{Risk\ Reduction\ Benefits + Net\ O\&M}{Capital\ Costs}$[7]	Reclassifies Net O&M as benefit; Obscures total lifecycle cost; Weakens relationship between risk reduction per dollar spent
Method 3	$BCR_{M3} = \frac{Risk\ Reduction\ Benefits + O\&M\ Savings}{Capital\ Costs}$	Co-mingles benefits; Weakens the relationship between risk reduction per dollar spent; May prioritize low risk reduction, high O&M savings projects

The Joint IOUs support Method 1, also referred to herein as the "Risk-Benefit Net-Cost Ratio" (RBNCR), in which monetized risk-reduction benefits are reflected in the numerator and all lifecycle costs, including net O&M, are reflected in the denominator. This structure directly preserves the relationship between risk reduction and total cost, consistent with the Commission's Safety Model Assessment Proceeding (S-MAP) and subsequent Risk-Based Decision-Making Framework (RDF), as well as the statutory intent of SB 884. The Joint IOUs do not support Methods 2 and 3 because they dilute the "risk reduction per dollar spent" principle by elevating financial cost offsets to the same level as monetized safety, reliability, and financial benefits, thereby conflating fundamentally distinct benefit streams and undermining analytical clarity. Method 1, or RBNCR, supported by robust implementation guardrails, as

[5] Increased O&M costs are assumed to be zero; however, Staff defines Method 1 as incorporating Net O&M (i.e., O&M Savings − O&M Costs) in the denominator.
[6] Net O&M is O&M Savings - O&M Costs.
[7] *Id.*

described in further detail below, delivers the most transparent, auditable, and durable framework that enables prioritization of mitigation projects based on their ability to maximize risk reduction per dollar spent.

In these comments, the Joint IOUs briefly discuss general areas of alignment in the White Paper. Following that discussion, the Joint IOUs analyze the three BCR methodologies presented in the White Paper and explain their support for Method 1 over Methods 2 and 3.[8] Finally, the Joint IOUs discuss several guardrails that will sufficiently address any Staff concerns regarding the interpretability and stability of the Method 1 BCR methodology.

The Joint IOUs' positions are summarized below and discussed in greater detail in the sections that follow:

- Adopt Method 1 with Guardrails (Risk Benefit Net Cost Ratio / RBNCR)
    - Maintains risk reduction benefits in the numerator and all lifecycle costs (including net O&M) in the denominator.
    - Best preserves the "risk reduction per dollar spent" principle.
    - Aligns with the Commission's existing RDF guidance and SB 884 objectives.
    - Enhances transparency, comparability, and auditability.
- Do not adopt Methods 2 or 3
    - Improperly reclassifies O&M savings as benefits.
    - Dilutes the clarity of risk reduction performance.
    - Co-mingles risk-reduction benefits with O&M savings, obscuring analytical transparency
    - May prioritize projects with greater cost savings but lower risk reduction.
    - Reduces transparency, auditability, and comparability.
    - Complicates ratemaking and cost recovery alignment.

[8] In the discussion of Methods 2 and 3, the Joint IOUs address Method 3 in more detail because that is the methodology recommended by the Commission in the White Paper.

- Do not use this application to adjust BCR methodology
    - Maintain consistency with the Commission's existing RDF methodology.

  Evaluate any BCR methodological changes in the RDF proceeding instead

II. Areas of Alignment with the White Paper

The Joint IOUs agree with SPD Staff that a consistent "No-Build" baseline is foundational to any SB 884 BCR framework, because it establishes the reference point against which incremental costs and incremental risk-reduction benefits are measured.[9] Consistent baseline assumptions are critical to preserving comparability across projects and alternatives, avoiding distortions in BCR formulations, and preventing the double counting of costs or benefits associated with existing, funded measures. Maintaining this baseline discipline is also essential to ensure that BCR results remain aligned with SB 884's statutory objectives, which require evaluating underground investments based on their ability to substantially reduce wildfire risk and improve reliability.[10]

The Joint IOUs also agree with Staff that transparent, disaggregated reporting of O&M inputs is critical to auditability and traceability. In particular, reviewers must be able to separately identify modeled baseline O&M, increased O&M (added costs), and avoided O&M (savings) relative to the No-Build baseline so that BCR results can be reproduced, audited, and back-casted as assumptions evolve over time.[11] This is consistent with the SB 884 cost-recovery

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[9] Staff White Paper on Benefit-Cost Ratio Methodology at §4.1–§4.3 (pp. 14–16) (explaining the significance of baseline definition and noting that inconsistent baseline assumptions can materially affect BCR outcomes and comparability).

[10] *Id.* at §4.1–§4.3 (pp. 14–16) (emphasizing that consistent baseline selection is necessary to ensure incremental impacts are measured and compared on an "apples-to-apples" basis).

[11] *Id.* at §4.8 (p. 21) (stating that effective implementation particularly of disaggregated approaches requires explicit reporting of No-Build baseline O&M, avoided O&M (savings), and incremental O&M costs).

and audit framework, which places a premium on transparency, comparability, and traceability in evaluating undergrounding proposals.[12]

III. Joint IOU Support for Method 1

As discussed above, the Joint IOUs support Method 1, or the RNBCR,[13] in which monetized risk-reduction benefits are reflected in the numerator, and O&M savings are reflected as cost offsets in the denominator. This structure preserves the relationship between risk reduction and mitigation costs, consistent with the Commission's S-MAP and subsequent RDF decisions, which require utilities to evaluate mitigation effectiveness based on risk reduction per dollar spent, linking all mitigation costs, including capital and net O&M, to directly compare to quantified reductions in safety risk to the cost of those reductions.[14] This approach reflects the intent of SB 884, which requires that undergrounding plans be evaluated based on their ability to "*substantially reduce the risk of wildfire*" and "*substantially increase electric reliability.*"[15] These sources reinforce that project prioritization should be driven by risk-reduction outcomes rather than the benefits associated with potential O&M cost offsets as a result of individual mitigation selection choices.

More specifically, under Method 1, monetized safety, reliability, and financial risk-reduction benefits are reflected in the numerator, while all lifecycle costs, including capital expenditures and net O&M savings, are captured in the denominator. This structure preserves a clear and consistent definition of net costs, meaning capital costs plus the net of any increased

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[12] Resolution SPD-37, Attachment A (Phase 2 Application Requirements—BCR Calculation), at pp. 5–6 (directing applicants to explicitly address O&M costs and O&M savings in BCR methodology proposals and to promote transparency, traceability, and auditability).

[13] Joint IOU Application A.26-02-005 (requesting approval of a standardized BCR calculation methodology, audit methodology, and cost-recovery conditions consistent with Resolution SPD-37).

[14] D.14-12-025; Decision (D.) 18-12-014 (S-MAP); Rulemaking (R.) 20-07-013 (Risk-Based Decision-Making Framework).

[15] Cal. Pub. Util. Code § 8388.5(d)(2), emphasis added.

O&M costs or O&M savings, required to implement and maintain a project.[16] By treating avoided O&M as a capital cost offset rather than a benefit, a BCR under Method 1 preserves the integrity of the BCR as a measure of effectiveness of a mitigation in reducing risk-related outcomes. This helps ensure that all parties have a transparent and consistent accounting of incremental costs relative to the No-Build baseline, thereby supporting comparability across projects and avoiding distortion in BCR outcomes driven by alternative cost classifications.[17]

Method 1 also best supports the Commission's SB 884 audit and cost-recovery framework. By preserving a clear separation between risk-reduction benefits and cost components, Method 1 enables straightforward reproduction, reconciliation, and back-casting of BCR results over time. Changes in BCR outcomes can be directly attributed to updates in risk modeling, capital costs, or O&M assumptions, without requiring post-hoc disaggregation of co-mingled benefit streams.[18] This transparency is critical to supporting prudency review, ensuring consistency with Resolution SPD-37, and providing a durable, auditable framework for evaluating safety-driven investments.[19]

The Joint IOUs disagree with Staff that Method 1 is deficient because it may occasionally produce a negative BCR.[20] A negative BCR reflects denominator behavior under high O&M savings conditions and does not, by itself, indicate that a mitigation lacks economic or policy value. Instead, the presence of negative BCR results reflects the inherent limitations of monetizing safety outcomes in isolation, absent consideration of statutory obligations and risk

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16 Staff White Paper on Benefit-Cost Ratio Methodology at §3.1 (distinguishing between costs as resource inputs and benefits as project outcomes and emphasizing the importance of maintaining this separation for analytical transparency and comparability).

17 *Id.*, at §3.1 and §4.5–§4.6 (distinguishing costs as resource inputs, including capital and O&M, and describing the cost-basis formulation in which net O&M is reflected in the denominator relative to the No-Build baseline).

18 *Id.*, at §4.8 (stating that formulations that include O&M savings in the numerator require additional benefit-side reconciliation and may reduce interpretability).

19 Resolution SPD-37, Attachment A, at pp. 5–6 (requiring transparent tracking, reporting, and auditability of costs and BCR inputs for SB 884 cost recovery).

20 Staff White Paper on Benefit-Cost Ratio Methodology, at §4.6 (noting that certain BCR formulations may produce negative or undefined values under high O&M savings conditions, reflecting structural limitations of ratio-based metrics rather than inherently invalid outcomes).

tolerance standard thresholds alongside quantitative metrics. Consistent with this broader context, Section VI below describes practical guardrails to ensure negative BCR outcomes are managed in a consistent manner, while preserving comparability, interpretability, and alignment with the Commission's policy objectives.

The Commission has long recognized that utility safety investments must be evaluated within a broader public safety and policy context, including the objective of achieving a safer system at the "lowest practicable cost," rather than solely on the basis of monetized benefits.[21] Within this context, the role of a BCR is to provide a consistent and reliable screening metric that accurately reflects relative risk-reduction performance. Method 1 best fulfills this role by maintaining a numerator focused solely on risk-reduction outcomes and a denominator that captures total lifecycle cost.

For these reasons, the Joint IOUs agree that Method 1 provides the most transparent, consistent, and policy-aligned structure for evaluating mitigation cost-effectiveness under SB 884, while preserving the Commission's core objective of prioritizing investments based on their ability to reduce wildfire and reliability risk per dollar spent.[22]

IV. Limitations of Method 2

Method 2 (and 3) described in the White Paper obscure the "risk reduction per dollar spent" construct by reclassifying financial cost offsets as benefits in the numerator and thereby placing them on the same analytical footing as monetized safety, reliability, and financial risk reduction benefits. This approach can reduce the clarity of interpreting the risk reduction per dollar spent by incorporating cost offsets alongside monetized risk-reduction benefits, thereby diluting the interpretability of BCR results. As a result, if implemented, Method 2 (and 3) would shift the focus of project evaluation and mitigation selection away from risk reduction outcomes

[21] *See* D.14-12-025, at § 2, pp. 9-14 (establishing the principle that safety investments should be evaluated within a broader framework to achieve risk mitigation at the lowest practicable cost).

[22] *See* D.22-12-027 and D.25-08-032 (establishing the BCR as a core metric to evaluate mitigation effectiveness based on monetized benefits relative to cost within the RDF).

and reduce the alignment with the RDF's and SB 884's core interpretation of risk reduction per dollar spent, most notably for projects with relatively lower risk reduction compared to O&M cost savings.

In addition to this core issue, the limitations of Method 2 largely mirror those identified for Method 3. Specifically, both approaches present similar challenges related to the treatment and placement of O&M savings, including reduced transparency, diminished comparability across mitigation alternatives, and the instability that arises from reclassifying analytically distinct impacts based solely on whether they are positive or negative. Accordingly, to avoid duplicative discussion, the Joint IOUs refer to Section V below, which addresses these shared limitations in detail in the context of Method 3.

V. Limitations of Method 3

The Joint IOUs do not support Method 3 because it also obscures the distinction between fundamentally different benefit types and undermines the consistent evaluation of risk reduction per dollar spent. In the White Paper case study (Examples 2–5 under elevated O&M conditions), Method 3 adds avoided O&M savings (e.g., $35–$150 million) directly to monetized risk-reduction benefits in the numerator. As a result, the total benefit value in the numerator is dominated by cost savings rather than risk reduction.[23] This outcome demonstrates that Method 3 can produce BCR results that reflect a combination of cost savings and risk reduction, rather than isolating the cost-effectiveness of a mitigation in reducing safety, reliability, and financial risk. This reduces the interpretability of the BCR metric and undermines its role as a consistent measure of risk-reduction performance. As discussed in greater detail below, these issues raise important considerations regarding transparency, traceability, as well as the Commission's overall safety focus objectives within the context of the RDF.

[23] Staff White Paper on Benefit-Cost Ratio Methodology at Table 2 (Examples 2–5) (illustrating scenarios where avoided O&M savings reach tens to hundreds of millions of dollars and are combined with risk-reduction benefits in the numerator under Method 3).

Specifically, Method 3 alters the role of the BCR metric away from SB 884's statutory purpose by combining analytically distinct risk reduction benefits and O&M savings. This construct weakens the BCR's ability to function as a measure of risk reduction per dollar spent by obscuring the underlying relationship between risk reduction and total lifecycle costs. Accordingly, projects with relatively higher O&M savings but lower risk reduction may be prioritized over projects that deliver greater risk reduction per dollar spent. Illustrative examples of these effects are provided in the sections below, as well in Appendix A to these Joint IOU Comments.

As Staff notes, combining risk reduction benefits with O&M savings under Method 3 as part of the BCR calculation introduces interpretability, audit, and reconciliation challenges.[24] This approach also departs from the Commission's S-MAP and RDF frameworks, which require utilities to evaluate mitigations based on the relationship between risk reduction and total mitigation cost by consistently separating benefits and costs to support clear and comparable analysis across mitigation alternatives.[25] These issues are important particularly in the context of SB 884, where BCR results are used to support prudency review and cost recovery.

Conceptually, O&M savings represent a reduction in the cost of implementing a mitigation relative to a No-Build Baseline and, therefore, should be treated as a cost offset within the denominator and not as a risk reduction benefit. This treatment conforms with well-established principles of benefit-cost analysis. Academic research supports this approach, for example, Robinson et al. (2019) distinguish between inputs and outputs: costs are the inputs or investments required to implement and operate a policy, while benefits (and *disbenefits*, or negative benefits) are the resulting outputs. Under this framework, inputs, including avoided costs, remain in the denominator, while outputs remain in the numerator.[26] Robinson et al.

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[24] *Id.*, at § 4.8 (p. 20) (stating that Method 3 requires additional benefit-side reconciliation due to inclusion of O&M savings in the numerator).

[25] D.18-12-014 (S-MAP); R.20-07-013 (RDF).

[26] Robinson, L. A., Hammitt, J. K., & O'Keeffe, L. (2019). Conducting benefit-cost analysis in low- and middle-income countries: Introduction to the special issue. *Journal of Benefit-Cost Analysis, 10*(S1), 1–14, *available at* https://doi.org/10.1017/bca.2019.4.

(2019) further emphasize that "counterbalancing effects are assigned to the same category as the impact they offset." Accordingly, cost savings are grouped with costs in the denominator, while disbenefits (e.g., monetized environmental damages) are grouped with benefits in the numerator. This ensures internal consistency and prevents the misclassification of cost reductions as benefits.[27]

This classification issue also illustrates a broader conceptual problem with Method 3 (and Method 2). If avoided costs may be reclassified as benefits and moved to the numerator, then the same reasoning would imply that disbenefits may be reclassified as costs and moved to the denominator. An example helps illustrate the point. Consider a covered conductor project with safety settings applied, which is a required mitigation alternative under the Energy Safety EUP Guidelines. In that scenario, the safety settings may increase outage risk on the system, which would constitute a disbenefit. If that disbenefit were large enough to exceed the wildfire risk-reduction benefit, the resulting BCR could become negative under Methods 2 and 3. To avoid a negative BCR, using the same logic implicit in Methods 2 and 3, this negative benefit should then be treated as a cost and added to the denominator, thereby increasing the apparent cost of the covered conductor project. This reclassification would result in a lower BCR for this mitigation. This example underscores the conceptual instability of reclassifying analytically distinct impacts based solely on whether they are positive or negative.

The White Paper reflects this conceptual foundation, stating "costs represent the resources expended to implement a project"[28] and that the BCR is intended to evaluate benefits relative to those costs. Blurring this distinction by reclassifying avoided costs as benefits

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[27] *See* also Boardman et al., *Cost-Benefit Analysis: Concepts and Practice* (2018) "(already partially present) support the same interpretation through the opportunity-cost foundation of benefit-cost analysis in which costs measure the value of resources used in implementing an alternative, so avoided O&M reduces the opportunity cost of the alternative rather than becoming a risk-reduction output. This too argues that avoided O&M remains in the denominator. Similarly, McEwan (2012) states that benefit-cost analysis "relies on the identification of all resources or ingredients consumed in an intervention and the valuation of each ingredient. This, in turn, is used to estimate the incremental costs of the intervention." The key to this view is that O&M reductions are a reduction in the incremental cost and should be recorded with costs, in the denominator.

[28] *Id.*, p. 10.

introduces ambiguity to the metric and reduces its effectiveness as a decision-making tool. More broadly, the reclassification of analytically distinct elements into a single blended benefit stream introduces additional interpretation and comparability issues into the BCR metric.

Below, the Joint IOUs provide additional details and illustrative examples of the issues raised by use of Method 3 when calculating BCRs for future EUPs.

A. Method 3 Co-Mingles Distinct Benefit Streams, Undermining Project Prioritization by Risk Reduction Benefit

As discussed above, Method 3 fundamentally alters the function of the BCR metric by combining monetized risk reduction benefits and O&M cost savings within a single numerator. This construct weakens the BCR's role as a measure of risk reduction per dollar spent and instead introduces a composite metric that does not reasonably reflect the effectiveness of a mitigation in reducing risk. The end result is that Method 3 can cause the BCR to function as a savings-prioritization metric, not a risk-reduction metric, resulting in mitigations that may not fully reflect or address the wildfire and reliability risk in that location. In other words, project prioritization under Method 3 may be influenced by the magnitude of cost savings rather than the level of risk reduction achieved. This can lead to the prioritization of projects with relatively higher O&M savings but lower risk reduction over projects that deliver greater risk reduction per dollar spent. In practical terms, this would have the greatest impact on projects further down the risk buydown curve, where O&M savings approach or exceed risk reduction values.

To illustrate this impact more clearly, consider two competing mitigation projects under Method 3:

Project A (Higher Risk Reduction)

- Risk reduction: $200K
- O&M savings: $20K
- Total benefits (Method 3 numerator): $220K

Project B (Lower Risk Reduction, Higher Cost Savings)

- Risk reduction: $120K
- O&M savings: $150K
- Total benefits (Method 3 numerator): $270K

Assuming equal capital costs (set to $500K), the resulting BCR under Method 3 would be:

- Project A: $220K / Capital Costs = 220/500 = 0.44
- Project B: $270K / Capital Costs = 270/500 = 0.54

Notwithstanding that in this example both projects have a BCR less than 1.0 and would not be selected for consideration, Project B would be ranked higher, despite delivering substantially less risk reduction than Project A. This occurs because O&M savings dominate the numerator, effectively outweighing differences in risk-reduction performance. This outcome is inconsistent with SB 884's requirement to prioritize investments based on their ability to substantially reduce wildfire risk and improve reliability.

Using the same inputs, as the example above, but instead, using Method 1, the results are:

- Project A: 200 / (Capital Cost − 20) = 200/ (500-20) = 0.42
- Project B: 120 / (Capital Cost − 150) = 120/ (500-150) = 0.34

In this example, Project A would be ranked higher, given that it delivers substantially greater risk reduction than Project B. This occurs because risk reduction dominates the numerator. This outcome is consistent with SB 884's requirement to prioritize investments based on their ability to substantially reduce wildfire risk and improve reliability.

B. Method 3 Co-Mingles Distinct Benefit Streams, Undermining Transparency

Method 3 also reduces transparency by obscuring the drivers of BCR results over time. Because the numerator combines multiple benefit streams, changes in BCRs cannot be readily attributed to changes in underlying assumptions. For example, if updates to modeling reduce risk reduction benefits (e.g., from $120K to $100K), while O&M savings remain unchanged, the

combined numerator declines from $270 to $250K. In this scenario, it is unclear whether the change in the BCR is driven by updated risk modeling, changes in O&M savings assumptions, or both. This ambiguity complicates auditability, back-casting, and reconciliation of results as models evolve over time. More broadly, the co-mingled numerator requires post-hoc disaggregation to interpret changes in results, introducing unnecessary complexity into regulatory review. This outcome is inconsistent with the Commission's emphasis on transparency, comparability, and traceability in SB 884 implementation, where BCR outputs must be clearly attributable to underlying drivers.[29]

C. Method 3 Complicates Ratemaking and Cost Reconciliation

Method 3 is also misaligned with the Commission's cost recovery and ratemaking frameworks. Under Resolution SPD-37, utilities are required to support clear tracking and reconciliation of costs through balancing accounts to enable prudency review.[30] Against that backdrop, O&M savings function as cost offsets that reduce the overall cost of service. These savings are reflected in lower recorded costs rather than as independent "benefits" subject to separate validation. By incorporating O&M savings into the numerator, Method 3 blurs the distinction between the justification for expenditures (risk-reduction benefits) and the accounting of costs eligible for recovery.[31]

The co-mingling of benefits under Method 3 complicates the Commission's ability to reconcile BCR results with cost recovery mechanisms, as it mixes elements that are typically evaluated under different regulatory standards and evidentiary showings. Maintaining a clear

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[29] Resolution SPD-37, at § 3.3 and §3.5 (pp.18-24, 25-30) (emphasizing auditability, traceability, and ratepayer protection as core objectives for SB 884 cost recovery).

[30] Resolution SPD-37, at § 3.3 and § 3.5 (pp. 18–24, 25-30) (establishing one-way balancing account treatment, audit requirements, and refund authority to ensure cost recovery aligns with actual costs incurred).

[31] Resolution SPD-37, at § 3.3 and § 3.5 (pp. 18–24, 25-30) (establishing one-way balancing account treatment, audit requirements, and refund authority to ensure cost recovery aligns with actual costs incurred).

separation between risk reduction benefits and mitigation costs is therefore essential to preserving consistency between cost-effectiveness analysis and ratemaking practices.[32]

D. Limited Applicability of Academic Support for Method 3

The White Paper cites federal and academic benefit cost analysis studies to support the proposition that O&M savings should be treated as a "benefit" and therefore placed in the numerator,[33] However, the sources referenced are not prescriptive with respect to the placement of cost savings within a BCR framework in a cost recovery setting.[34] Rather, these frameworks emphasize the importance of clearly defining a credible baseline and consistently measuring incremental impacts. They also recognize that BCRs are one of several tools used to evaluate cost-effectiveness and are often applied in conjunction with other broader decision-making contexts (e.g., risk reduction benefits).[35]

Accordingly, while the cited literature supports transparent accounting of costs and benefits, the primary objective of the literature does not support redefining a safety-focused regulatory metric by combining cost offsets with risk-reduction benefits in a single numerator. In the context of SB 884, where the primary objective is to evaluate risk reduction per dollar spent, preserving this analytical distinction is essential.

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[32] D.00-02-046, at and Ordering Paragraph 11 (adopting a one-way balancing account for vegetation management O&M expenditures and requiring that any underspend relative to adopted levels be returned to customers). *See also* D.08-02-036, at Ch. 7, pp. 25-28 (establishing WRAM and MCBA mechanisms to net variable cost savings against revenue deviations, thereby returning avoided costs to customers through rate adjustments rather than treating them as independent benefits).

[33] Staff's reliance on national BCA sources and framing (OMB A-94; USDOT BCA; Boardman et al.) and the "unique context of utility regulation."

[34] Staff White Paper on Benefit-Cost Ratio Methodology, at Introduction (pp. 3–4) (relying on national benefit-cost analysis guidance such as OMB Circular A-94 and USDOT BCA guidance without prescribing numerator-denominator placement in a regulatory cost-recovery setting).

[35] *Id.*, at § 2.1 (pp. 6–7) (discussing the treatment of O&M savings and acknowledging divergent methodological approaches across benefit-cost frameworks).

VI. Guardrails for Method 1 Will Preserve Clarity

Recognizing Staff's concerns regarding interpretability and stability of the Method 1 BCR approach, the Joint IOUs propose the following implementation guardrails to accompany Method 1 (RBNCR). These guardrails are designed to directly address the challenges identified in the White Paper while preserving Method 1's core advantage, which is to maintain a clear and interpretable relationship between risk-reduction benefits and total costs. Rather than redefining the structure of the BCR metric, these practical guardrails provide a transparent means to enhance consistency, auditability, and comparability across projects, while ensuring that project prioritization remains anchored in risk-reduction performance consistent with SB 884.

A. Guardrail 1: Expanded Reporting Requirements

The Joint IOUs agree with Staff that consistent baseline treatment and clear identification of individual components are foundational to a robust BCR framework. As the White Paper highlights, inconsistent treatment of assumptions, such as incremental O&M costs and savings, can materially distort BCR calculations. In response, the Commission recently released a revised SB 884 Project List Data Requirements Guidelines (May 11, 2026), which now appropriately requires expanded, standardized reporting of individual BCR components, including present value (PV) risk reduction benefits, PV capital costs, PV incremental O&M costs, PV incremental O&M savings, and baseline O&M costs for the No-Build scenario. These expanded reporting requirements will serve as a critical guardrail by ensuring that all inputs are transparent, traceable, and consistently defined across projects.[36]

Consider an Undergrounding project with a Covered Conductor alternative with the following inputs:[37]

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[36] *Id.* at §5.3–§5.4 (pp. 22–23) (describing case-study variables and noting that incremental post-mitigation O&M costs are omitted in the examples for clarity). For simplicity incremental post-mitigation O&M costs used in the Staff White Paper are omitted.

[37] This example reflects risk reductions and costs that are more representative of real-world conditions than those presented in Table 2 of the Staff White Paper.

UG: Risk reduction = 120; Capital cost = 100; O&M savings = 60

CC: Risk reduction = 72; Capital cost = 40; O&M savings = 10

In this example, the Commission can clearly evaluate the relative contributions of each component of the BCR calculation, including differences in risk reduction benefits (e.g., 120 versus 72), the relative capital cost burden (e.g., 100 versus 40), and the magnitude of cost offsets provided by O&M savings (e.g., 60 versus 10).

Under Method 1, these inputs translate into transparent BCR outcomes of 3.0 for undergrounding and 2.4 for covered conductor, thus enabling reviewers to directly observe how both risk reduction and cost structure influence project cost effectiveness.

B. Guardrail 2: Dual Presentation

Building on the transparency provided by Guardrail 1's expanded reporting requirements, Guardrail 2 addresses Staff's concern that, under Method 1, projects with O&M savings exceeding incremental capital costs may yield a negative denominator, making the BCR unsuitable for prioritization as required under SPD-37.[38] These scenarios are expected to be rare because they occur only in limited cases where lifecycle O&M savings exceed upfront capital costs and, as such, represent edge case scenarios that effectively reflect self-funding investments that deliver both risk reduction as well as net cost savings to ratepayers, which are both in the Commission's best interest. Therefore, to address these rare, edge case scenarios, the Joint IOUs propose a dual presentation approach, in which risk-reduction benefits are used as the primary basis for project prioritization, while total net economic benefits, including associated O&M savings, are presented separately to ensure full transparency.[39] [40] This approach preserves the

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[38] *Id.*, at §4.6 (p. 19) (explaining that the cost-basis formulation can yield negative or zero denominators under elevated O&M savings conditions).

[39] Resolution SPD-37, Attachment A, SB 884 Program: CPUC Guidelines (Dec. 10, 2025), (pp. 5–6) (emphasizing comparability, transparency, and traceability in BCR reporting for cost-recovery review).

[40] Staff White Paper on Benefit-Cost Ratio Methodology at §4.8 (p. 21) (describing disaggregated reporting as necessary to evaluate alternative O&M formulations).

primacy of risk reduction in project selection while ensuring that all benefits are transparent. Consider the following example of this edge case scenario and guardrail:

Consider a mitigation with:

- Risk reduction benefit = $120
- Capital cost = $100
- O&M savings (compared to a no-build baseline) = $150

Under Method 1:

BCR = $120/($100−$150) =120/(−50) = - 0.8

While a negative denominator indicates a strong net economic benefit, meaning that O&M savings exceed capital costs, the resulting BCR is not as meaningful for prioritization purposes. Under the proposed dual presentation approach, the project would instead be evaluated based on its risk-reduction performance (e.g. $120), while the net economic benefit of $50 is presented separately to ensure transparency. This approach ensures that projects delivering higher levels of risk reduction are not disadvantaged by the mathematical constraints of the ratio, while still providing clear visibility into their overall economic value. In doing so, it maintains a prioritization framework that remains consistent with SB 884's objective of selecting investments based on their effectiveness in reducing wildfire and reliability risk.

C. Guardrail 3: Denominator Floor

As a complement, or alternative to Guardrail 2, the Joint IOUs propose the adoption of Guardrail 3, a denominator floor, to address similar edge cases where O&M savings exceed capital costs and produce negative (or zero) BCRs. In situations where O&M savings exceed incremental capital costs resulting in a negative denominator, the Commission could adopt a denominator floor for project prioritization purposes.[41] Specifically, when the denominator is negative, utilities would instead rank projects using an alternative BCR in which the denominator

[41] *Id.* at §5.8 (p. 26) (stating that negative or undefined BCR values are not interpretable for prioritization purposes).

is set to "1." This rule-based mechanism, similar in intent to Guardrail 2, preserves stability and interpretability in project prioritization. Importantly, this approach maintains consistency with Method 1 while directly addressing Staff's recommendation for a clear and durable solution to edge-case scenarios.[42]

This alternative treatment maintains consistency with Method 1 while aligning with Staff's recommendation. Under this guardrail, when the denominator becomes negative, it is set to a fixed value (e.g. 1) for the purpose of project prioritization, while all underlying cost components continue to be fully disclosed to maintain transparency. This approach ensures that BCR values remain stable and interpretable without altering the underlying analytical framework. Consider the following illustrative example using the same inputs as Guardrail 2, below:

Consider a mitigation with:

- Risk reduction benefit = $120
- Capital cost = $100
- O&M savings (compared to a no-build baseline) = $150= Net cost = (100 − 150) = -50

Under the denominator floor:

BCR=120/1 =120

Together, these guardrails directly respond to the interpretability and stability concerns identified by Staff without fundamentally altering the structure of the BCR metric. By preserving a clear separation between risk-reduction benefits and total costs, while enhancing transparency and providing practical solutions for edge cases, the proposed approach delivers a more durable and policy-aligned framework than proposed under Method 3.

[42] *Id.* at §6 (p. 27) (explaining that guardrails and explicit methodological choices can preserve stability without default reliance on a single formulation).

VII. Conclusion

We appreciate Staff's engagement and the analytical foundation provided in the White Paper regarding the treatment of O&M costs and savings in SB 884 BCR calculations. We agree that methodological choices are consequential and can materially affect comparability, interpretation, and auditability of BCR results, all of which are central to the Commission's SB 884 framework. However, the Joint IOUs emphasize that the EUP application is not the appropriate venue to evaluate or adopt significant changes to BCR methodology, given the broader implications across utility programs and enterprise risks. Accordingly, any proposed material changes to BCR methodology should not be evaluated in this application, but instead, should be addressed holistically within the RDF, where such impacts can be fully assessed, if deemed necessary by the Commission.

For these reasons, the Joint IOUs respectfully request that the Commission adopt the Joint IOU proposed methodology, consistent with Method 1, in which monetized risk reduction benefits remain in the numerator and O&M savings are treated as a cost offset in the denominator, supported by clear reporting guardrails. This approach preserves the fundamental "risk reduction per dollar spent" construct underpinning the Commission's existing risk-based decision-making framework and has to date been consistently applied in utility RAMP filings, GRCs, and related proceedings. By contrast, introducing an alternative methodology (e.g.,

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Methods 2 or 3) in this proceeding, prior to evaluation in the RDF, creates a material risk of inconsistency and misalignment across these regulatory applications.

Respectfully submitted,
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Appendix A

Measuring the Impact of Net O&M Changes

Appendix A: Measuring the Impact of Net O&M Changes

This appendix is intended to demonstrate how variations in Net O&M savings, holding risk reduction constant, affect BCR outcomes under each method, thereby highlighting differences in interpretability, sensitivity, and alignment with risk-based prioritization objectives.

The following example uses a hypothetical circuit segment to illustrate how long-term Net O&M savings affect BCR calculations under Method 1 and Method 3. Table A-1 summarizes the assumed input values used in the BCR analysis. The values selected for this example were intentionally structured to create a scenario in which the BCRs for both alternatives are nearly identical, thereby isolating the impact of changes in Net O&M savings on relative project prioritization.

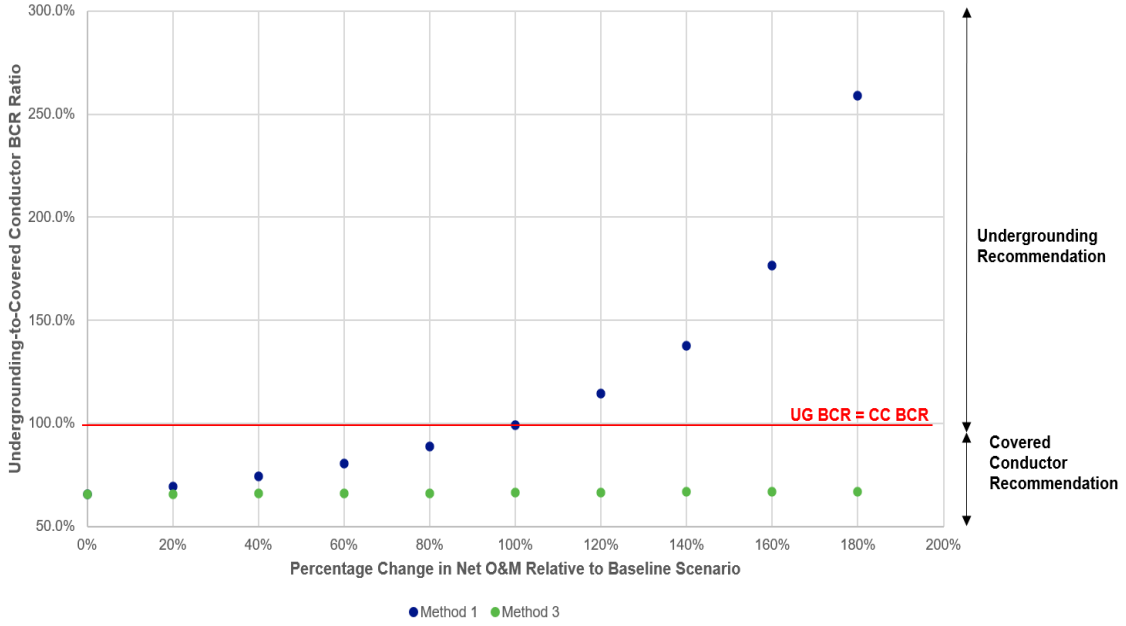
To assess the sensitivity of Methods 1 and 3 to variations in O&M savings, the analysis models both increase and decrease 20 percent relative to the baseline. This controlled comparison enables a direct evaluation of how each formulation responds to changing lifecycle cost assumptions independent of underlying risk-reduction performance.

Table A-1. Input Assumptions for the Illustrative Segment Supporting BCR Results

Description	Units	UG	CC	Ratio UG/CC
Mitigation miles, including OH to UG conversion factor	miles	6.00	5.00	1.2
UG Capital Cost	$	$ 12,000,000	$ 5,000,000	2.40
Unmitigated Overhead O&M Costs	$/year	$ 250,000	$ 250,000	1.00
Mitigation Ongoing O&M Costs	$/year	$ -	$ 210,000	0.00
O&M Savings	$/year	$ 250,000	$ 40,000	6.25
(Incremental) O&M Costs = Mitigation New O&M Costs	$/year	$ 20,000	$ -	---
Annual Existing Overhead Risk	$/year	$ 15,000,000	$ 15,000,000	1.00
Annual Risk Reduction	$/year	$ 14,700,000	$ 9,000,000	1.63
Inflation Factor	%	3.00%	3.00%	1.00
WACC	%	7.50%	7.50%	1.00
Factor for Accounting for Cumulative Present Value of Money in a 55-Year Service Life Period	---	23	23	1.00

As shown in Figure A-1 (below), which compares the UG-to-CC BCR ratios under both methods across varying Net O&M scenarios, Method 3 exhibits materially lower sensitivity to changes in O&M savings relative to Method 1. This result demonstrates that, under Method 3, changes in lifecycle cost inputs do not translate proportionally into changes in relative project prioritization when risk-reduction benefits are large. As a result, Method 3 can dampen the effect of economically meaningful cost differences, limiting its ability to reflect net cost advantages in project prioritization. From a regulatory perspective, this reduced sensitivity weakens the alignment between the BCR metric and SB 884's objective of evaluating projects based on both risk-reduction performance and efficient use of ratepayer resources.

Figure A-1: Comparative Sensitivity of Method 1 and Method 3 BCR Ratio to Net O&M Savings Assumptions



To complement the BCR comparison, Figure A-2 (below) depicts the underlying lifecycle cost trajectories for the same scenarios, illustrating the magnitude of cost divergence that is not fully reflected in Method 3 prioritization. In the example, the lifetime cost differential between undergrounding and covered conductor expands materially over the analysis horizon, reflecting the compounding impact of O&M differences. Despite this widening cost advantage, Method 3 does not correspondingly shift project preference in Figure A-1, demonstrating that the formulation can underrepresent economically meaningful cost differences when risk-reduction benefits dominate the numerator. Together, these results illustrate that Method 1 preserves a more direct and interpretable relationship between risk reduction, lifecycle cost, and project prioritization, whereas Method 3 can obscure both cost and risk signals, particularly in high-risk scenarios where risk-reduction benefits dominate the BCR numerator.

Figure A-2: Cumulative Lifetime Cost Outcomes Underlying BCR Sensitivity Analysis