

PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

ENERGY DIVISION

Agenda ID #23922

RESOLUTION G-3618

January 15, 2026

R E S O L U T I O N

Resolution G-3618. Pacific Gas and Electric Company's Gas Research, Development, and Demonstration Investment Plans for Calendar Years 2024 (Advice Letter 5077-G-A) and 2025 (Advice Letter 5069-G).

PROPOSED OUTCOME:

- Denies Pacific Gas and Electric Company's (PG&E's) Gas Research, Development, and Demonstration (RD&D) Investment Plans with a budget of \$8,092,000 for Calendar Year 2024 (as requested in Advice Letter 5077-G-A) and \$8,267,000 for Calendar Year 2025 (as requested in Advice Letter 5069-G), totaling \$16,359,000, pursuant to California Public Utilities Commission Decision (D.)23-11-069. Denies PG&E's additional cost recovery request for \$7,207,712 incurred during Calendar Years 2023 and 2024. For further consideration of its 2024 and 2025 Plans directs PG&E to submit revised Gas RD&D Investment Plans via Tier 3 Advice Letters with modifications described in this Resolution.
- Establishes additional Gas RD&D Program schedule requirements.

SAFETY CONSIDERATIONS:

- There are no safety considerations associated with this Resolution.

ESTIMATED COST:

- Denies \$8,092,000 in ratepayer costs for Calendar Year 2024 and \$8,267,000 for Calendar Year 2025 as authorized in D.23-11-069 upon Commission approval of Gas RD&D Investment Plans submitted via Tier 3 Advice Letter. Total proposed Ratepayer Cost is \$16,359,000 for these Investment Plans. Denies additional cost

recovery request for \$7,207,712 incurred during Calendar Years 2023 and 2024.

By Advice Letter 5077-G-A for Calendar Year 2024 filed on August 18, 2025, and Advice Letter 5069-G for Calendar Year 2025 filed on May 30, 2025.

SUMMARY

This Resolution denies Pacific Gas and Electric Company's (PG&E) Advice Letters (AL) 5077-G-A and 5069-G with proposed Gas Research, Development, and Demonstration (RD&D) Investment Plans (Gas RD&D Plans or Plans) for Calendar Years (CYs) 2024 and 2025. PG&E's Gas RD&D Program was established pursuant to Decision (D.)23-11-069, requiring PG&E to submit, and the Commission to approve, an annual Tier 3 AL describing PG&E's proposed Gas RD&D Investment Plan prior to utilizing authorized funds.¹ Based on Commission review of requirements, the California Public Utilities Commission (CPUC or Commission) denies PG&E's Gas RD&D Plans with proposed budgets of \$8,092,000 for CY 2024 and \$8,267,000 for CY 2025, totaling \$16,359,000.² These budgets include administrative budgets of 10% for total administrative costs of \$809,200 for 2024 and \$826,700 for 2025. This Resolution denies PG&E's request to recover \$7,207,712 in expenses for Calendar Years 2023 and 2024. The Commission directs PG&E to submit revised 2024 and 2025 Gas RD&D Investment Plans via respective Tier 3 Advice Letters with required modifications as described below.

This Resolution directs additional PG&E Gas RD&D Program schedule requirements as summarized in the table below outlining the CY 2026 Plan Schedule. Unless otherwise advised by Energy Division (ED), future annual program cycles shall mirror this schedule:

¹ [D.23-11-069](#): Decision on Test Year 2023 General Rate Case (GRC) for Pacific Gas and Electric Company.

² See Resolution G-3618 at Appendix A: PG&E's 2024 & 2025 Plans Proposed Budgets.

Table 1: Calendar Year 2026 Plan Schedule	
Timeline:	Action:
September 2025	Coordinate on 2026 Plans across program administrators to promote synchronicity in implementing CPUC policies and avoid duplicative RD&D activities.
October 2025	Submit pre-submittal Consultation Plan proposal materials to Energy Division for initial feedback.
November 2025 – January 2026 ³	Conduct pre-submittal Consultation with CPUC staff to promote alignment with CPUC policies and proceedings.
By March 1, 2026 <i>*Prior to workshop⁴</i>	Submit Annual Gas RD&D Report from prior year (2025).
By March 1, 2026 ⁵	Host coordinated and diverse stakeholder Public Workshops to present the results of the previous year's RD&D programs demonstrating RD&D outcomes and continuity in obtaining input regarding proposed 2026 Plans informed by CPUC staff, under guidance from Energy Division staff.
By June 1, ⁶ 2026	Submit Proposed 2026 Plan via Tier 3 AL.

BACKGROUND

Public Utilities Code Section 740.1 and Decision (D.)23-11-069 adopting PG&E's Test Year (TY) 2023 General Rate Case (GRC) detail Commission requirements for developing, reviewing, and approving PG&E's Annual Gas RD&D Investment Plans.

³ Consistent with [Resolution G-3571](#) (2020): Approving the California Energy Commission (CEC) FY 2020-2021 Gas RD&D Plan at Ordering Paragraph (OP) 5a. "At least three weeks in advance of the public workshop on the proposed budget plan, coordinate with CPUC staff on development of the Draft Plan."

⁴ [D.23-11-069](#) at p. 220. "(7) Prior to the workshop, PG&E should submit its RD&D annual report to Energy Division staff..."

⁵ [D.23-11-069](#) at p. 220. "PG&E shall hold an annual workshop prior to submitting its Tier 3 Advice Letter Annual Gas RD&D Investment Plan and shall consult with Energy Division to develop the workshop agenda. The annual workshop shall be held at least 90 days before submitting its annual Gas RD&D research plan to the CPUC to allow sufficient time to incorporate stakeholder feedback."

⁶ [D.23-11-069](#) at p. 218.

Public Utilities Code Section 740.1

Public Utilities Code Section 740.1⁷ directs the Commission to consider the following guidelines in evaluating proposed Gas RD&D investments:

- (a) Projects should offer a reasonable probability of providing benefits to ratepayers.⁸
- (b) Expenditures on projects which have a low probability for success should be minimized.
- (c) Projects should be consistent with the corporation's resource plan.⁹
- (d) Projects should not unnecessarily duplicate research currently, previously, or imminently undertaken by other electrical or gas corporations or research organizations.¹⁰
- (e) Each project should also support one or more of the following objectives:
 - (1) Environmental improvement.
 - (2) Public and employee safety.
 - (3) Conservation by efficient resource use or by reducing or shifting system load.
 - (4) Development of new resources and processes, particularly renewable resources and processes which further supply technologies.
 - (5) Improve operating efficiency and reliability or otherwise reduce operating costs.¹¹

The Commission approved a TY 2023 Gas RD&D budget forecast of \$7.414 million in PG&E's 2023 GRC D.23-11-069 based on 2020 Gas RD&D costs as the most measurable basis.¹² D.23-11-069 approved an escalation factor authorizing an \$8.09 million annual

⁷ California Public Utilities Code Section 740.1.

⁸ See Resolution G-3618 at Appendix C: Guidance on Gas RD&D Plans Provided to PG&E During Pre-Submittal Consultation with CPUC Staff (March 2025) at (1); (2); & (3).

⁹ The Commission's compliance assessment of this requirement is captured in the compliance assessment of AL 5077-G-A and AL 5069-G with [D.23-11-069](#) at (2) and (4) listed below. See below fns. 50 and 70.

¹⁰ Consistent with [D.23-11-069](#) at p. 217-218. See Resolution G-3618 at Appendix C: Guidance on Gas RD&D Plans Provided to PG&E During Pre-Submittal Consultation with CPUC Staff (March 2025) at (5) & (6).

¹¹ Consistent with [Executive Order \(EO\) N-5-24](#) (Newsom, 2024) On reducing rates.

¹² [D.23-11-069](#) at p. 217.

budget for PG&E's 2024 Plan and \$8.267 million annual budget for its 2025 Plan.¹³ To utilize authorized funds, D.23-11-069 requires PG&E to submit, and the Commission to approve, an annual Tier 3 AL describing PG&E's proposed Gas RD&D Investment Plan. Upon Commission approval of the Plan, PG&E may record Gas RD&D program expenses in a one-way balancing account. PG&E shall not record any Gas RD&D program expenses in a one-way balancing account until an annual Tier 3 Advice Letter outlining its Gas RD&D Budget Plan is approved.¹⁴

Decision 23-11-069 Adopting PG&E's 2023 Revenue Requirement in PG&E's General Rate Case and Gas RD&D Investment Plan Funds Upon Approval of a Tier 3 Advice Letter

Decision (D.)23-11-069 requires PG&E to submit its annual Gas RD&D Investment Plan as follows, consistent with prior Commission Decisions and Resolutions guidance:¹⁵

- (1) The annual research plan should detail budgets broken down by research sub-program area and explain how the projects improve reliability, safety, equity, affordability, and environmental benefits, and incorporates input from key stakeholders, such as the Disadvantaged Communities Advisory Group.¹⁶
- (2) The annual research plan should include a proposed benefits analysis framework, created in consultation with Energy Division staff. This framework should provide sufficient quantitative estimates of potential safety, reliability, operational efficiency, improved affordability, environmental-related benefits, benefits to underserved communities, and numeric targets or a specified numeric range of potential benefits for projects.¹⁷
- (3) PG&E should cap its administrative costs for Gas RD&D at 10% PG&E's annual research plan should provide detail about administrative costs and require PG&E to allocate these cost categories to its administrative budget as outlined below.¹⁸

¹³ [D.23-11-069](#) at p. 740.

¹⁴ [D.23-11-069](#) at p. 217-218.

¹⁵ [D.23-11-069](#) at p. 218-221.

¹⁶ [D.23-11-069](#) at p. 218.

¹⁷ [D.23-11-069](#) at p. 218-219.

¹⁸ [D.23-11-069](#) at p. 219. See Resolution G-3618 at Appendix B: Administrative Budget Cost Categories.

- (4) In its annual research plan, PG&E should explain how its proposals for low carbon research projects (rather than zero/no carbon projects) support the State's aggressive zero-carbon goals.¹⁹
- (5) The annual research plan should include information on funds encumbered, spent, and unspent. The plan should also outline co-funding and collaborative partners and explain how PG&E engages with diverse academic populations. Further, PG&E should describe how its research plan will benefit underserved communities.²⁰
- (6) PG&E shall hold an annual workshop prior to submitting its Tier 3 Advice Letter Annual Gas RD&D Investment Plan and shall consult with Energy Division to develop the workshop agenda. The annual workshop shall be held at least 90 days before submitting its annual Gas RD&D research plan to the CPUC to allow sufficient time to incorporate stakeholder feedback. At these workshops, PG&E shall present the results of the previous year's RD&D program and obtain input regarding its proposed spending for the following calendar year. The workshop shall follow the guidance of D.19-09-051 Ordering Paragraph 30.²¹
- (7) Prior to the workshop, PG&E should submit its RD&D annual report to Energy Division staff describing prior years' RD&D program including a summary of ongoing and completed projects; funds expended, funding recipients, and leveraged funding; and an explanation of the process used for selecting RD&D project areas as well as the structure of PG&E's RD&D portfolio.²²
- (8) PG&E shall provide Energy Division staff with the workshop presentation materials as well as documentation on stakeholders consulted in the development of RD&D projects, both at least one week before the workshop.²³
- (9) PG&E shall engage relevant stakeholders to encourage their attendance at the workshop, such as the California Energy Commission, the Disadvantaged Communities Advisory Group, the U.S. Department of Energy, and other organizations engaged in gas research and development.²⁴

¹⁹ [D.23-11-069](#) at p. 219-220.

²⁰ [D.23-11-069](#) at p. 220.

²¹ [D.23-11-069](#) at p. 220.

²² [D.23-11-069](#) at p. 220.

²³ [D.23-11-069](#) at p. 220-221.

²⁴ [D.23-11-069](#) at p. 221.

- (10) PG&E's research plan should allocate approximately \$296,400 to an evaluation or audit.²⁵
- (11) PG&E's research plan may separately allocate and track funds for gas research development and deployment in one database that tracks all ratepayer-funded R&D and Development projects across these industries.²⁶

Summary of PG&E Advice Letter 5077-G-A: Cost Recovery and 2024 Gas RD&D Plan

PG&E submitted its proposed 2024 Plan via Tier 3 AL 4931-G on July 1, 2024. PG&E later withdrew AL 4931-G on May 12, 2025, after consultation with CPUC staff. PG&E resubmitted its 2024 Plan (AL 5077-G) on June 25, 2025, and subsequently submitted its modified 2024 Plan via supplemental AL 5077-G-A on August 18, 2025.

PG&E Request for 2023 & 2024 Cost Recovery

In AL 5077-G-A, PG&E requests to recover \$7,207,712 in expense revenue requirements, including total actual Gas RD&D (MAT GZA) expenses recorded in Calendar Years 2023 (\$3,532,835) and 2024 (\$3,674,877).²⁷

PG&E Request for 2024 Gas RD&D Plan

PG&E also seeks approval of its proposed Gas RD&D Investment Plan for Calendar Year 2024 in AL 5077-G-A, authorized by D.23-11-069 at \$8,092,000 with the following proposed budget allocations to various Initiatives:²⁸

²⁵ [D.23-11-069](#) at p. 221.

²⁶ [D.23-11-069](#) at p. 221.

²⁷ AL 5077-G-A at p. 61.

²⁸ AL 5077-G-A at p. 47.

Table 2: 2024 Gas RD&D Plan Proposed Budget		
Investment Theme	Initiative Title	2024 Plan Budget
Gas System Integrity	Proactive Geohazard Risk Management	\$594,126
	Innovative and Cost-Effective Integrity Management	\$1,398,644
	Advanced Leak Detection and Repair	\$1,819,428
	Emission Reduction Activities and Refined Reporting	\$982,542
Decarbonization	Clean Fuels Integration	\$2,191,660
Program Evaluation		\$294,400
Administrative		\$809,200
ANNUAL TOTAL:		*\$8,090,000

**Actual sum of PG&E's proposed budget allocations is \$8,090,000; approved budget amount is \$8,092,000.*

Gas System Integrity Theme Proposed Initiatives

PG&E states that it seeks to develop Initiatives within the Gas System Integrity Theme to advance technologies to improve gas system integrity and reduce methane emissions.²⁹

- Proactive Geohazard Risk Management

PG&E states that it seeks to develop projects within the Proactive Geohazard Risk Management Initiative to advance the development of more capable inline inspection devices, less-intrusive monitoring systems, and sophisticated modeling tools. PG&E states that it intends to improve visibility into asset conditions, lower maintenance and repair costs, and reduce the likelihood of service disruptions or safety incidents. PG&E proposes to allocate \$594,126 in its 2024 Plan.³⁰

- Innovative and Cost-Effective Integrity Management

PG&E states that it seeks to develop projects within the Innovative and Cost-Effective Integrity Management Initiative to advance a new generation of

²⁹ AL 5077-G-A at p. 47.

³⁰ AL 5077-G-A at p. 48-50.

integrity management tools and practices by integrating 3D mapping, AI-enabled sensors, on-demand and/or real-time monitoring solutions. PG&E states that it intends to enhance safety, reduce maintenance costs, ensure compliance with federal and state regulations, and improve operational efficiency. PG&E proposes to allocate \$1,398,644 in its 2024 Plan.³¹

- Advanced Leak Detection and Repair

PG&E states that it seeks to develop projects within the Advanced Leak Detection and Repair Initiative to advance next-generation leak detection and repair solutions, including mobile leak detection, aerial leak detection (drone, helicopter, fixed-wing, satellite), and continuous monitoring options. PG&E states that it intends to reduce emissions, increase operational reliability, and help meet evolving state policy goals. PG&E proposes to allocate \$1,819,428 in its 2024 Plan.³²

- Emission Reduction Activities and Refined Reporting

PG&E states that it seeks to develop projects within the Emission Reduction Activities and Refined Reporting Initiative to deploy technologies that further reduce operational emissions while refining emissions reporting frameworks through more precise data collection. PG&E states that it intends to support gas system safety and reliability and reduce methane emissions. PG&E proposes to allocate \$982,542 in its 2024 Plan.³³

Decarbonization Theme Proposed Initiatives

PG&E states that it seeks to develop Initiatives within the Decarbonization Theme to develop or advance technologies to decarbonize the gas system by conducting foundational research that better informs the industry's understanding of the challenges and impacts of integrating cleaner fuels into existing pipelines and system assets, as well as into customer applications and end uses.³⁴

³¹ AL 5077-G-A at p. 50-52.

³² AL 5077-G-A at p. 52-54.

³³ AL 5077-G-A at p. 54-55.

³⁴ AL 5077-G-A at p. 55-56.

- Clean Fuels Integration

PG&E states that it seeks to develop projects within the Clean Fuels Integration Initiative to assess the technical, operational, and economic implications of clean fuel integration (renewable natural gas, renewable hydrogen, and synthetic methane). PG&E states that it intends to support carbon reduction, system reliability, and energy affordability. PG&E proposes to allocate \$2,110,660 in its 2024 Plan.³⁵

Program Administration

PG&E proposes to allocate ten percent of its annual total budget to administrative costs, translating to \$809,200 in its 2024 Plan.³⁶

Program Evaluation

PG&E proposes to allocate \$294,400 in its 2024 Plan for its proportional share of a comprehensive Gas RD&D Program Evaluation to be conducted by Energy Division.³⁷

Summary of PG&E Advice Letter 5069-G: 2025 Gas RD&D Plan

PG&E submitted its proposed 2025 Plan via Tier 3 AL 5069-G on May 30, 2025.

PG&E Request for 2025 Gas RD&D Plan

PG&E seeks approval of its proposed Gas RD&D Investment Plan for Calendar Year 2025 in AL 5069-G, authorized by D.23-11-069 at \$8,267,000 with the following proposed budget allocations to various Initiatives:³⁸

³⁵ AL 5077-G-A at p. 56-58.

³⁶ AL 5077-G-A at p. 47.

³⁷ AL 5077-G-A at p. 47.

³⁸ AL 5069-G at p. 54.

Table 3: 2025 Gas RD&D Plan Proposed Budget		
Investment Theme	Initiative Title	2025 Plan Budget
Gas System Integrity	Proactive Geohazard Risk Management	\$639,127
	Innovative and Cost-Effective Integrity Management	\$1,493,196
	Advanced Leak Detection and Repair	\$1,923,080
	Emission Reduction Activities and Refined Reporting	\$1,035,943
Decarbonization	Clean Fuels Integration	\$1,703,363
	Sustainable Energy Solutions	\$588,602
Gas RD&D Database Development		\$56,987
Administrative		\$826,700
ANNUAL TOTAL:		*\$8,266,998

**Actual sum of PG&E's proposed budget allocations is \$8,266,998; approved budget amount is \$8,267,000.*

Gas System Integrity Theme Proposed Initiatives

PG&E states that it seeks to develop Initiatives within the Gas System Integrity Theme to advance technologies to improve gas system integrity and reduce methane emissions.³⁹

- Proactive Geohazard Risk Management

PG&E states that it seeks to develop projects within the Proactive Geohazard Risk Management Initiative to advance the development of more capable inline inspection devices, less-intrusive monitoring systems, and sophisticated modeling tools. PG&E states that it intends to improve visibility into asset conditions, lower maintenance and repair costs, and reduce the likelihood of service disruptions or safety incidents. PG&E proposes to allocate \$639,127 in its 2025 Plan to this initiative.⁴⁰

- Innovative and Cost-Effective Integrity Management

³⁹ AL 5069-G at p. 54.

⁴⁰ AL 5069-G at p. 55-57.

PG&E states that it seeks to develop projects within the Innovative and Cost-Effective Integrity Management Initiative to advance a new generation of integrity management tools and practices by integrating 3D mapping, AI-enabled sensors, on-demand and/or real-time monitoring solutions. PG&E states that it intends to enhance safety, reduce maintenance costs, ensure compliance with federal and state regulations, and improve operational efficiency. PG&E proposes to allocate \$1,493,196 in its 2025 Plan to this initiative.⁴¹

- Advanced Leak Detection and Repair

PG&E states that it seeks to develop projects within the Advanced Leak Detection and Repair Initiative to advance next-generation leak detection and repair solutions, including mobile leak detection, aerial leak detection (drone, helicopter, fixed-wing, satellite), and continuous monitoring options. PG&E states that it intends to reduce emissions, increase operational reliability, and help meet evolving state policy goals. PG&E proposes to allocate \$1,923,080 in its 2025 Plan to this initiative.⁴²

- Emission Reduction Activities and Refined Reporting

PG&E states that it seeks to develop projects within the Emission Reduction Activities and Refined Reporting Initiative to deploy technologies that further reduce operational emissions while refining emissions reporting frameworks through more precise data collection. PG&E states that it intends to support gas system safety and reliability and reduce methane emissions. PG&E proposes to allocate \$1,035,943 in its 2025 Plan to this initiative.⁴³

Decarbonization Theme Proposed Initiatives

PG&E states that it seeks to develop Initiatives within the Decarbonization Theme to develop or advance technologies to decarbonize the gas system by conducting

⁴¹ AL 5069-G at p. 57-59.

⁴² AL 5069-G at p. 59-60.

⁴³ AL 5069-G at p. 61-62.

foundational research that better informs the industry's understanding of the challenges and impacts of integrating cleaner fuels into existing pipelines and system assets, as well as into customer applications and end uses.⁴⁴

- Clean Fuels Integration

PG&E states that it seeks to develop projects within the Clean Fuels Integration Initiative to assess the technical, operational, and economic implications of clean fuel integration (renewable natural gas, renewable hydrogen, and synthetic methane). PG&E states that it intends to support carbon reduction, system reliability, and energy affordability. PG&E proposes to allocate \$1,703,363 in its 2025 Plan to this initiative.⁴⁵

- Sustainable Energy Solutions

PG&E states that it seeks to develop projects within the Sustainable Energy Solutions Initiative to develop and deploy technologies such as networked geothermal systems, smart energy controls, storage, and hybrid heating technologies. PG&E states that it intends to improve affordability, reliability, and environmental outcomes, potentially in collaboration with the California Energy Commission (CEC) Gas RD&D Program. PG&E proposes to allocate \$588,602 in its 2025 Plan to this initiative.⁴⁶

Program Administration

PG&E proposes to allocate ten percent of its annual total budget to administrative costs, translating to \$826,700 in its 2025 Plan.⁴⁷

Gas RD&D Database Development

PG&E proposes to allocate \$56,987 in its 2025 Plan for its proportional share of

⁴⁴ AL 5069-G at p. 62-63.

⁴⁵ AL 5069-G at p. 63-65.

⁴⁶ AL 5069-G at p. 65-67.

⁴⁷ AL 5069-G at p. 54.

developing a comprehensive Gas RD&D Database.⁴⁸

NOTICE

Notice of Advice Letter 5077-G-A was made by publication on the Commission's Daily Calendar on August 25, 2025. Notice of Advice Letter 5069-G was made by publication on the Commission's Daily Calendar on June 6, 2025. PG&E states that copies of the Advice Letters were mailed and distributed in accordance with Section 4 of General Order 96-B.

PROTESTS

Advice Letters 5077-G-A and 5069-G were not protested.

DISCUSSION

Compliance Assessment of AL 5077-G-A - 2024 Gas RD&D Plan

The Commission conducted a compliance assessment of PG&E's AL 5077-G-A⁴⁹ proposing its 2024 Gas RD&D Investment Plan and requesting recovery of other costs incurred in 2023 and 2024. As described above, staff assessed PG&E's 2024 Plan based on consistency with requirements set in D.23-11-069 and Public Utilities Code 740.1,⁵⁰ among other Commission guidance.⁵¹ In summary, the Commission finds that PG&E is not compliant with these requirements in AL 5077-G-A for the following reasons (see Appendix F for details):

⁴⁸ AL 5069-G at p. 54.

⁴⁹ See Resolution G-3618 at Appendix F: Compliance Assessment of AL 5077-G-A.

⁵⁰ The Commission's compliance assessment of California Public Utilities Code 740.1 at (c) is captured in the compliance assessment of AL 5077-G-A and AL 5069-G with [D.23-11-069](#) at (2) and (4).

⁵¹ [D.23-11-069](#) at p. 218: "Consistent with prior Commission decisions and resolutions approving other gas R&D and Development Programs, PG&E shall submit an annual R&D and Development research plan for Commission approval." See Resolution G-3618 at Appendix C: Guidance on Gas RD&D Plans Provided to PG&E During Pre-Submittal Consultation with CPUC Staff (March 2025) & Appendix E: Electric Program Investment Charge (EPIC) Foundational Principles for the Development of a Uniform Impact Analysis Framework.

1. PG&E requests “that the approval of this Annual Plan will also allow PG&E to recover approximately \$7.2 million in total for 2023-2024 revenue requirements, all of which is expense revenue requirement”⁵² despite that PG&E did not submit an RD&D Plan associated with these costs via a Tier 3 AL as required and therefore PG&E is not authorized to record Gas RD&D expenses in a one-way balancing account.⁵³
2. PG&E does not demonstrate ratepayer benefits attributable to each proposed Initiative:⁵⁴
 - a. PG&E included in its “Assumptions” subsection in the “Benefits” chapter describing its proposed impacts analysis methodology that “[n]ot all projects should be required to conduct an impacts analysis. Smaller projects may be more exploratory in nature and the effort associated with the analysis may be unduly burdensome.”⁵⁵
 - b. PG&E does not demonstrate that impacts should be attributed⁵⁶ to the Innovative and Cost-Effective Integrity Management Initiative as opposed to the related Pipeline and Hazardous Materials Safety Administration (PHMSA) Mega Rule and mandates from the California Geological Energy Management Division (CalGEM) as referenced.⁵⁷
 - c. The primary objective of PG&E’s proposed Emission Reduction Activities and Refined Reporting Initiative⁵⁸ appears to be meeting regulatory goals.
 - d. PG&E proposes projects neither located in the State of California nor affiliated with a federal lab,⁵⁹ including Open Solutions for Historical Climate Data for California; ADV JIP Integrity Management of Hard Spots

⁵² AL 5077-G-A at p. 61.

⁵³ [D.23-11-069](#) at p. 217-218.

⁵⁴ [D.23-11-069](#) at p. 218-219 & California Public Utilities Code 740.1 at (a).

⁵⁵ AL 5077-G-A at p. 39.

⁵⁶ [D.23-04-042](#): OIR on the Commission’s Own Motion to Consider Renewal of the EPIC Program at Appendix A.

⁵⁷ AL 5077-G-A at p. 50-52.

⁵⁸ AL 5077-G-A at p. 54.

⁵⁹ See Resolution G-3618 at Appendix C: Guidance on Gas RD&D Plans Provided to PG&E During Pre-Submittal Consultation with CPUC Staff (March 2025). References [Resolution G-3601](#) (2023): Approving Southern California Gas Company’s (SoCalGas’) 2023 Gas RD&D Budget Plan at OP 5. “All of SoCalGas’ new and future RD&D projects shall occur in the State of California. The only exception may be made for projects with out of state federal labs. In this case, SoCalGas shall explicitly justify benefits to its gas ratepayers of an out-of-state project in its Tier 3 Advice Letter (AL) annual plan.”

in Transmission Pipelines; and ADV JIP Narrow Groove Corrosion Composite Reinforcement.⁶⁰

3. PG&E does not demonstrate that Initiatives are complementary and not duplicative of RD&D currently, previously, or imminently underway,⁶¹ particularly by differentiating activities from those associated with the Natural Gas Leak Abatement (NGLA) Program, Alliance for Renewable Clean Hydrogen Energy Systems (ARCHES), hydrogen blending pilots,⁶² and other related programs and documenting coordination with other Gas RD&D administrators at the Initiative level.
4. PG&E does not allocate Program Administrative costs to specific categories using the Administrative Budget template⁶³ as required.⁶⁴
5. PG&E proposes hydrogen-specific activities⁶⁵ though the Commission has not provided guidance on the appropriate role of gas ratepayers in funding hydrogen RD&D, particularly as these projects would have further implications for ratepayer funding, including in future Gas RD&D Plans.⁶⁶
6. PG&E does not indicate which projects have been funded via previous GRC cycles or other funding mechanisms as opposed to those that may be funded within this Gas RD&D Program for clarity in reporting on funds encumbered, spent, and unspent.⁶⁷

Resubmittal of PG&E's 2024 Plan

To pursue funding for its 2024 Gas RD&D Investment Plan, PG&E shall submit a revised Tier 3 AL within 60 days addressing the compliance issues described above and as detailed in the appendix of this Resolution.⁶⁸

⁶⁰ AL 5077-G-A at Appendix B: Gas RD&D Project List.

⁶¹ California Public Utilities Code 740.1 at (d).

⁶² [D.22-12-057](#): Decision Directing Biomethane Reporting and Directing Pilot Projects to Further Evaluate and Establish Pipeline Injection Standards for Clean Renewable Hydrogen.

⁶³ AL 5077-G-A at p. 47 & 60.

⁶⁴ [D.23-11-069](#) at p. 219. See Resolution G-3618 at Appendix B: Administrative Budget Cost Categories.

⁶⁵ AL 5077-G-A at p. 55-58.

⁶⁶ See Resolution G-3618 at Appendix C: Guidance on Gas RD&D Plans Provided to PG&E During Pre-Submittal Consultation with CPUC Staff (March 2025).

⁶⁷ [D.23-11-069](#) at p. 220.

⁶⁸ See Appendix F: Compliance Assessment of AL 5077-G-A.

Compliance Assessment of AL 5069-G – 2025 Gas RD&D Plan

The Commission conducted a compliance assessment of PG&E's AL 5069-G⁶⁹ proposing its 2025 Gas RD&D Investment Plan. As described above, staff assessed PG&E's 2025 Plan based on consistency with requirements set in D.23-11-069 and Public Utilities Code 740.1,⁷⁰ among other Commission guidance.⁷¹ PG&E's 2025 Plan is largely identical to its proposed 2024 Plan⁷² and PG&E does not differentiate the Initiatives nor describe the intended progress to be made in the subsequent year. Thus, PG&E's 2025 Plan duplicates the compliance issues in its 2024 Plan, exacerbated by failing to demonstrate incremental value added. In summary, the Commission finds that PG&E is not compliant with these requirements in AL 5069-G for the following reasons (See Appendix G for details):

1. PG&E does not demonstrate ratepayer benefits attributable to each proposed Initiative:⁷³
 - a. PG&E included in its "Assumptions" subsection in the "Benefits" chapter describing its proposed impacts analysis methodology that "[n]ot all projects should be required to conduct an impacts analysis. Smaller projects may be more exploratory in nature and the effort associated with the analysis may be unduly burdensome."⁷⁴
 - b. PG&E does not demonstrate that impacts should be attributed⁷⁵ to the Innovative and Cost-Effective Integrity Management Initiative as opposed to the related Pipeline and Hazardous Materials Safety Administration

⁶⁹ See Appendix G: Compliance Assessment of AL 5069-G.

⁷⁰ The Commission's compliance assessment of California Public Utilities Code 740.1 at (c) is captured in the compliance assessment of AL 5077-G-A and AL 5069-G with [D.23-11-069](#) at (2) and (4).

⁷¹ [D.23-11-069](#) at p. 218: "Consistent with prior Commission decisions and resolutions approving other gas R&D and Development Programs, PG&E shall submit an annual R&D and Development research plan for Commission approval." See Resolution G-3618 at Appendix C: Guidance on Gas RD&D Plans Provided to PG&E During Pre-Submittal Consultation with CPUC Staff (March 2025) & Appendix E: EPIC Foundational Principles for the Development of a Uniform Impact Analysis Framework.

⁷² With the exception of the Sustainable Energy Solutions proposed within the Decarbonization Investment Theme in PG&E's 2025 Plan.

⁷³ [D.23-11-069](#) at p. 218-219 & California Public Utilities Code 740.1 at (a).

⁷⁴ AL 5069-G at p. 47.

⁷⁵ [D.23-04-042](#) at Appendix A.

- (PHMSA) Mega Rule and mandates from the California Geological Energy Management Division (CalGEM) as referenced.⁷⁶
- c. The primary objective of PG&E's proposed Emission Reduction Activities and Refined Reporting Initiative⁷⁷ appears to be meeting regulatory goals.
2. PG&E does not demonstrate that Initiatives are complementary and not duplicative of RD&D currently, previously, or imminently underway,⁷⁸ including by:
- a. differentiating Initiatives from those proposed in PG&E's 2024 Plan⁷⁹ by describing specific Research Topics and discussing incremental value added,
 - b. differentiating activities from those associated with NGLA, ARCHES, hydrogen blending pilots,⁸⁰ and other related programs, and
 - c. documenting coordination with other Gas RD&D administrators at the Initiative level.
3. PG&E does not allocate Program Administrative costs to specific categories using the Administrative Budget template⁸¹ as required.⁸²
4. PG&E proposes hydrogen-specific activities⁸³ though the Commission has not provided guidance on the appropriate role of gas ratepayers in funding hydrogen RD&D, particularly as these projects would have further implications for ratepayer funding, including in future Gas RD&D Plans.⁸⁴
5. PG&E does not indicate which projects have been funded via previous GRC cycles or other funding mechanisms as opposed to those that may be funded within this Gas RD&D Program for clarity in reporting on funds encumbered, spent, and unspent.⁸⁵

⁷⁶ AL 5069-G at p. 57-59.

⁷⁷ AL 5069-G at p. 61.

⁷⁸ California Public Utilities Code 740.1 at (d).

⁷⁹ With the exception of the Sustainable Energy Solutions Initiative specific to the 2025 Plan.

⁸⁰ [D.22-12-057](#).

⁸¹ AL 5069-G at p. 54 & 67.

⁸² [D.23-11-069](#) at p. 219. See Resolution G-3618 at Appendix B: Administrative Budget Cost Categories.

⁸³ AL 5069-G at p. 62-65.

⁸⁴ See Resolution G-3618 at Appendix C: Guidance on Gas RD&D Plans Provided to PG&E During Pre-Submittal Consultation with CPUC Staff (March 2025).

⁸⁵ [D.23-11-069](#) at p. 220.

Resubmittal of PG&E's 2025 Plan

To pursue funding for its 2025 Gas RD&D Investment Plan, PG&E shall submit a revised Tier 3 AL within 60 days addressing the compliance issues described above and as detailed in the appendix of this Resolution.⁸⁶

2026 Gas RD&D Investment Plan and Beyond

Consistent with existing Commission guidance and according to the schedule detailed above, the following requirements shall apply for PG&E's Calendar Year 2026 Gas RD&D Investment Plan and beyond:

Annual Report

PG&E shall submit its Annual Gas RD&D Reports prior to holding Public Workshops in accordance with D.23-11-069,⁸⁷ each by March 1 annually. PG&E shall include information on all active and recently completed projects.⁸⁸ For clarity in reporting, PG&E shall indicate which projects have been funded via previous GRC cycles or other funding mechanisms as these are not affiliated with Investment Plans approved within this Gas RD&D Program. In future reporting, PG&E shall clearly delineate projects that may be funded within this Gas RD&D Program, including the specific Initiative and approved Investment Plan associated with each project. The Initiative Criteria described below shall serve as guidance for PG&E to demonstrate realized ratepayer benefit and provide meaningful reporting on impacts both in detail and by synthesizing major accomplishments and contributions to Gas RD&D. ED staff shall provide additional guidance via an Annual Report Template.

⁸⁶ See Resolution G-3618 at Appendix G: Compliance Assessment of AL 5069-G.

⁸⁷ [D.23-11-069](#) at p. 220. "(7) Prior to the workshop, PG&E should submit its RD&D annual report to Energy Division staff..."

⁸⁸ Public Resources Code 25620.8 at (a)(6).

Annual Investment Planning

Initiative Criteria

PG&E shall develop and propose Gas RD&D investments at the Initiative level and demonstrate the following for each, consistent with Commission guidance (see Appendix D):⁸⁹

1. **Policy Priority:** Alignment with and prioritization of critical gaps and needs identified in State goals and specific CPUC policies and proceedings to demonstrate ratepayer benefit, informed by consultation with CPUC staff.
2. **Identified Need:** Innovation and differentiation from existing RD&D activities to support complementary rather than duplicative efforts, informed by specific consultation with other Gas RD&D Administrators. Demonstrate that the Initiative will leverage existing progress while providing distinct additional value.
3. **Proposed Solution:** Describe Research Topics, anticipated near-term project outputs commensurate with the proposed funding level, and intended pathways to scale, commercialize, and otherwise utilize results from RD&D activities to promote technology transfer and market facilitation.
4. **Anticipated Impacts:**
 - a. Reasonable probability of providing California ratepayer benefit by locating projects in the State of California⁹⁰ and detailed planned methodologies for tracking and evaluating quantitative impacts from investments through the use of the EPIC Program's Uniform Impacts Analysis Foundational Principles.⁹¹
 - b. Cost-effectiveness and protection of affordability to ratepayers.

⁸⁹ See Resolution G-3618 at Appendix D: Commission Guidance on Gas RD&D Initiative Criteria. [D.23-11-069](#) at p. 218: "Consistent with prior Commission decisions and Resolutions approving other gas R&D and Development Programs, PG&E shall submit an annual R&D and Development research plan for Commission approval."

⁹⁰ [Resolution G-3601](#) (2023) at OP 5. "The only exception made is for projects affiliated with out-of-state federal labs, in which case Administrators shall explicitly justify benefits to California ratepayers."

⁹¹ [D.23-04-042](#) at Appendix A. Consistent with [Resolution G-3603](#) (2024): Approving the CEC FY 2023-2024 Gas RD&D Plan at OP 6.

- c. Promote equity and provide benefits to Environmental & Social Justice (ESJ) communities, informed by consultation with community-based organizations (CBOs) and the Commission's most current ESJ Action Plan.⁹²

Pre-Submittal Consultation

- Intra-Administrator Coordination

PG&E shall be proactive in collaborating with the other Gas RD&D administrators, the California Energy Commission (CEC) and Southern California Gas (SoCalGas) Company, to promote and demonstrate complementary rather than duplicative RD&D activities. PG&E shall document this coordination in Gas RD&D Plans at the Initiative level, including by differentiating proposed Initiatives from similar activities, demonstrating how research outcomes inform future proposals, and defining PG&E's specific intended role for each proposed Initiative.⁹³

- Pre-Submittal Consultation with CPUC Subject Matter Experts

PG&E shall consult with CPUC staff to seek and integrate feedback prior to Plan submittal, and this consultation shall be documented at the Initiative level in Plans. This consultation is intended to promote ratepayer benefit and create efficiencies in the Commission's Plan review and approval by proactively aligning proposed investments with priority Gas RD&D-related technology, market needs, and emerging opportunities as identified in CPUC proceedings and policies.⁹⁴

The Electric Program Investment Charge (EPIC) Strategic Goal of "Achieving 100% Net-Zero Carbon and the Coordinated Role of Gas" highlights the intrinsic

⁹² [Environmental & Social Justice \(ESJ\) Action Plan Version 2.0](#) (2022).

⁹³ [D.23-11-069](#) at p. 220. See Resolution G-3618 at Appendix D: Commission Guidance on Gas RD&D Initiative Criteria at 2.

⁹⁴ See Resolution G-3618 at Appendix D: Commission Guidance on Gas RD&D Initiative Criteria at 1. Consistent with [Resolution G-3603](#) (2024) at OP 4.

link between gas and electric investment policy and planning, particularly involving electrification and decarbonization efforts. Greater collaboration among California RD&D programs is needed to identify and scale cost-effective strategies to provide ratepayer benefit and achieve “the last 10 percent of reaching the state’s goal to be carbon neutral by 2045 economy-wide.”⁹⁵ The CPUC’s Long-Term Gas Proceeding also concludes that, “[t]o achieve California’s decarbonization goals and effectuate an equitable gas transition, a coordinated, iterative, and long-term planning process will help the State agencies and utilities align initiatives related to gas system planning efforts and analytics.”⁹⁶ Thus pre-submittal consultation with CPUC staff may be coordinated with other Gas RD&D and EPIC administrators to promote efficiencies and strategic, holistic investment planning across programs, thereby maximizing the impacts of investments.

- Public Workshop

PG&E shall coordinate with other Gas RD&D administrators to hold an Annual Public Workshop to obtain broad stakeholder input regarding proposed investments for the upcoming year prior to Plan submittal,⁹⁷ informed by feedback provided by CPUC staff.⁹⁸ PG&E shall consult ED staff on its engagement of diverse relevant stakeholders, document feedback from stakeholders, and demonstrate how feedback has been incorporated at the Initiative level in Plans, including from Environmental and Social Justice (ESJ) and Tribal communities.⁹⁹ PG&E shall also present on the results from its most recent Annual Report at the workshop.¹⁰⁰

⁹⁵ [D.24-03-007](#): Order Instituting Rulemaking (OIR) on the Commission’s Own Motion to Consider Renewal of the EPIC Program at p. 19-20.

⁹⁶ [D.24-09-012](#): OIR to Establish Policies, Processes, and Rules to Ensure Safe and Reliable Gas Systems in California and Perform Long-Term Gas System Planning at p. 6.

⁹⁷ [D.23-11-069](#) at p. 220. Consistent with [D.19-09-051](#): SoCalGas 2019 GRC Decision at OP 30.

⁹⁸ Consistent with [Resolution G-3571](#) (2020) at OP 5a.

⁹⁹ [D.23-11-069](#) at p. 220-221. See Resolution G-3618 at Appendix D: Commission Guidance on Gas RD&D Initiative Criteria at 4. Consistent with: [D.19-09-051](#) at p. 379.

¹⁰⁰ [D.23-11-069](#) at p. 220.

Annual Plan Submittal & Approval

PG&E is required to submit proposed Gas RD&D Plans to the Commission via a Tier 3 Advice Letter (AL) by June 1 annually.¹⁰¹ PG&E shall justify the total budget amount with specific citations including page numbers referring to Commission policies in which the budget or explicit escalation factor was approved. PG&E shall post proposed and approved Investment Plans publicly and easily accessible on its website and notify the CPUC of the web address; PG&E shall also coordinate with other administrators to develop service lists of relevant ongoing CPUC Proceedings on which to serve Plans and consult with ED staff to ensure these lists are sufficient.¹⁰² The Plan shall only become effective when the Commission adopts a Resolution approving the Plan,¹⁰³ and PG&E shall not record any Gas RD&D program expenses in a one-way balancing account until an annual Tier 3 Advice Letter outlining its Gas RD&D Budget Plan is approved.¹⁰⁴ PG&E shall continue to consult CPUC staff on proposed uses of approved Gas RD&D funds during Plan implementation to ensure ongoing policy alignment and relevance.

Required information on funds encumbered, spent, and unspent¹⁰⁵ should clearly identify the associated Initiative and approved Investment Plan and include Program Administrative funds. ED staff may provide additional guidance to facilitate effective reporting of this information.

Encumbrance Periods

PG&E must return unspent funds¹⁰⁶ in the Gas Research and Development (R&D) and Deployment Balancing Account (GRDDBA) to ratepayers at the close of the 2023 GRC

¹⁰¹ [D.23-11-069](#) at p. 218.

¹⁰² Consistent with [Resolution G-3571](#) (2020) at OP 5c & 5d.

¹⁰³ [General Order 96-B](#) Rule 7.3.5 at PDF p. 19.

¹⁰⁴ [D.23-11-069](#) at p. 217-218.

¹⁰⁵ [D.23-11-069](#) at p. 220.

¹⁰⁶ Funds which PG&E has committed, contracted out, or otherwise encumbered shall not be returned at the close of the GRC cycle to allow for the completion of work in progress. If contracts are terminated after the close of the GRC cycle, uncommitted or disencumbered funds shall be returned to ratepayers.

funding cycle, by December 31, 2026.¹⁰⁷ Proactive coordination on proposed Plans via pre-submittal Consultation with CPUC staff promotes alignment with CPUC Policies and Proceedings and efficiencies in Plan review and approval to best utilize the permitted encumbrance period. Limited encumbrance periods allow Gas RD&D investments to be responsive to evolving research, technology, and market conditions and needs and promote timely innovation as well as ratepayer benefit.

Additional Program Modifications

Oversight Funds

The Commission has directed each Gas RD&D administrator, including PG&E, to allocate funds towards its proportional share of a Gas RD&D Program Evaluation¹⁰⁸ to be implemented by ED. ED shall advise PG&E on any reimbursement process to support a consolidated, comprehensive Independent Program Evaluation across all Gas RD&D administrators to create efficiencies and improve transparency regarding the use of ratepayer funds.

The Commission has also directed PG&E to allocate funds towards its proportional share of developing a comprehensive Gas RD&D Database of projects,¹⁰⁹ for which PG&E shall allocate \$56,987. In consultation with ED staff and the Database administrator, PG&E shall allocate and reimburse additional funds in future Plans for

¹⁰⁷ [PG&E Gas Preliminary Statement Part GA \(AL 4835-G\)](#) at Section 3: “At the end of the GRC cycle, if the total balance in all three subaccounts (Distribution Subaccount plus Main Transmission Subaccount plus LT Subaccount) in the account is less than the 2023-2026 adopted amounts at the end of the rate case cycle, it will be returned to customers.” Consistent with:

[D.19-09-051](#) at Conclusions of Law (CoL) 66. “Approval of the funding for the RD&D program should be subject to a one-way balancing account treatment and unspent funds should be returned to ratepayers at the end of each GRC cycle.”

[D.24-12-074](#): SoCalGas 2024 GRC Decision at p. 330. “Unspent funds shall be returned to ratepayers at the end of each GRC cycle.”

¹⁰⁸ [D.23-11-069](#) at p. 221: “PG&E’s research plan should allocate approximately \$296,400 to an evaluation or audit.” Consistent with: [Resolution G-3601](#) (2023) at OP 4 & [Resolution G-3592](#) (2023): Approving the CEC FY 2022-2023 Gas RD&D Plan at OP 3.

¹⁰⁹ [D.23-11-069](#) at p. 221. Consistent with: [Resolution G-3601](#) (2023) at OP 3a.

its proportional share of the maintenance and operational needs of the Database once established.

Modeling EPIC's Strategic Goals & Objectives

The Commission guides Gas RD&D Program priorities via its gas-related policies and proceedings, which also align with State-level climate and safety goals.¹¹⁰ In the EPIC proceeding, the Commission established five Strategic Goals, including "Achieving 100% Net-Zero Carbon and the Coordinated Role of Gas."¹¹¹ To promote coordination, consistency, and best practices across ratepayer-funded RD&D investments, the Gas RD&D program may benefit from modeling EPIC in its strategic planning and identification of Strategic Goals.¹¹² Given the intrinsic link between gas and electric investment policy and planning in meeting State goals, ED staff may facilitate a similar process for the Gas RD&D Program to promote increased effectiveness across administrators and programs. ED staff may commence a stakeholder process and implement.

COMMENTS

Public Utilities Code section 311(g)(1) provides that this Resolution must be served on all parties and subject to at least 30 days public review. Any comments are due within 20 days of the date of its mailing and publication on the Commission's website and in accordance with any instructions accompanying the notice. Section 311(g)(2) provides that this 30-day review period and 20-day comment period may be reduced or waived upon the stipulation of all parties in the proceeding.

The 30-day review and 20-day comment period for the draft of this Resolution was neither waived nor reduced. Accordingly, this draft Resolution was mailed to parties for comments and will be placed on the Commission's agenda no earlier than 30 days from today.

¹¹⁰ Consistent with: [D.04-08-010](#): OIR on the Establishment of a PPP Surcharge Pursuant to AB 1002 at Findings of Fact (32); [Resolution G-3573](#) (2021): Approving the SoCalGas 2021 Gas R&D Plan at OP 3; and [Resolution G-3586](#) (2022): Approving the SoCalGas 2022 Gas RD&D Plan at OP 5.

¹¹¹ [D.24-03-007](#).

¹¹² [D.23-04-042](#) at OP 3.

FINDINGS AND CONCLUSIONS

1. The Pacific Gas & Electric Company (PG&E) filed its Calendar Years 2024 (AL 5077-G-A) and 2025 (AL 5069-G) Gas Research, Development, and Demonstration (RD&D) Investment Plans, pursuant to Decision (D.)23-11-069.
2. PG&E's request for cost recovery of \$7,207,712 from CYs 2023 and 2024 submitted via Tier 3 AL 5077-G-A is not compliant with D.23-11-069.
3. PG&E does not demonstrate compliance with the requirements set forth by D.23-11-069 and Public Utilities Code 740.1 in its proposed 2024 Gas RD&D Investment Plan submitted via Tier 3 AL 5077-G-A where noted in Appendix F.
4. PG&E does not demonstrate compliance with the requirements set forth by D.23-11-069 and Public Utilities Code 740.1 in its proposed 2025 Gas RD&D Investment Plan submitted via Tier 3 AL 5069-G where noted in Appendix G.
5. PG&E responded to an April 4, 2025, Data Request about PG&E's intended role and proposed funding mechanisms for Initiatives in its 2024 and 2025 Plans, including (1) solely funded by PG&E, (2) funded by several Gas RD&D administrators, or (3) consortia.
6. PG&E responded to a September 22, 2025, Data Request about the cost recovery request of \$7,207,712 for 2023 and 2024 compliance with D.23-11-069.
7. PG&E's Advanced Leak Detection and Repair and Emission Reduction Activities and Refined Reporting Initiatives are potentially duplicative of activities associated with the Natural Gas Leak Abatement (NGLA) Program.
8. The primary objective of PG&E's Emission Reduction Activities and Refined Reporting Initiative appears to be meeting regulatory goals as opposed to providing ratepayer benefit.
9. PG&E's Clean Fuels Integration Initiative is potentially duplicative of activities associated with the Alliance for Renewable Clean Hydrogen Energy Systems (ARCHES) Program and hydrogen blending pilots.

THEREFORE, IT IS ORDERED THAT:

1. PG&E's request to recover \$7,207,712 in expense revenue requirements in AL 5077-G-A is denied.

2. PG&E's Advice Letters 5077-G-A and 5069-G proposing for PG&E to record up to \$8,092,000 in Gas RD&D expenses to implement its Calendar Year 2024 Plan and \$8,267,000 for its Calendar Year 2025 Plan are denied.
3. For further consideration of its 2024 Gas RD&D Investment Plan, PG&E shall submit a revised Tier 3 AL addressing all compliance issues outlined in Appendix F within 60 days and attach to its Advice Letter: 1) a track-change version of its original Plan; 2) a clean version of its updated Plan; and 3) a table describing the modifications made per the compliance issues detailed in the appendix of this Resolution.¹¹³
4. For further consideration of its 2025 Gas RD&D Investment Plan, PG&E shall submit a revised Tier 3 AL addressing all compliance issues outlined in Appendix G within 60 days and attach to its Advice Letter: 1) a track-change version of its original Plan; 2) a clean version of its updated Plan; and 3) a table describing the modifications made per the compliance issues detailed in the appendix of this Resolution.¹¹⁴
5. PG&E shall allocate \$56,987 toward its proportional share of a comprehensive Gas RD&D Database.
6. The schedule described in this Resolution shall apply for PG&E's Calendar Year 2026 Gas RD&D Investment Plan and beyond, unless otherwise advised by Energy Division.
7. Consistent with existing Commission guidance, the requirements outlined in the 2026 Gas RD&D Investment Plan and Beyond section of this Resolution¹¹⁵ shall apply.
8. Unspent Gas RD&D funds shall be returned to ratepayers at the end of the GRC D.23-11-069 funding cycle, by December 31, 2026.¹¹⁶
9. Energy Division shall advise PG&E on any reimbursement process to support a consolidated, comprehensive Independent Program Evaluation across all Gas RD&D administrators to create efficiencies and improve transparency regarding the use of ratepayer funds.

¹¹³ See Resolution G-3618 at Appendix F: Compliance Assessment of AL 5077-G-A.

¹¹⁴ See Resolution G-3618 at Appendix G: Compliance Assessment of AL 5069-G.

¹¹⁵ Resolution G-3618 at p. 19-23.

¹¹⁶ [PG&E Gas Preliminary Statement Part GA \(AL 4835-G\)](#) at Section 3.

10. In consultation with Energy Division staff and the Database administrator, PG&E shall allocate and reimburse additional funds in future Plans for its proportional share of the maintenance and operational needs of the Database once established.
11. To promote coordination, consistency, and best practices across ratepayer-funded RD&D investments, Energy Division staff may implement improved strategic planning, including modeling EPIC's Strategic Goals and Objectives to develop Gas RD&D Program equivalents. Energy Division staff may commence a stakeholder process and implement.

This Resolution is effective today.

[Commissioner Signature blocks to be added
upon adoption of the Resolution.]

The foregoing Resolution was duly introduced, passed and adopted at a conference of the Public Utilities Commission of the State of California held on January 15, 2026; the following Commissioners voting favorably thereon:

Dated _____, at San Francisco, California

APPENDIX A: PG&E's 2024 & 2025 Plans Proposed Budgets

Investment Theme	Initiative Title	2024 Plan Budget	2025 Plan Budget
Gas System Integrity	Proactive Geohazard Risk Management	\$594,126	\$639,127
	Innovative and Cost-Effective Integrity Management	\$1,398,644	\$1,493,196
	Advanced Leak Detection and Repair	\$1,819,428	\$1,923,080
	Emission Reduction Activities and Refined Reporting	\$982,542	\$1,035,943
Decarbonization	Clean Fuels Integration	\$2,191,660	\$1,703,363
	Sustainable Energy Solutions	\$0	\$588,602
Gas RD&D Database Development		\$0	\$56,987
Program Evaluation		\$294,400	\$0
Administrative		\$809,200	\$826,700
ANNUAL TOTAL:		*\$8,092,000	**\$8,267,000

**Actual sum of PG&E's proposed budget allocations is \$8,090,000; approved budget amount is \$8,092,000.*

***Actual sum of PG&E's proposed budget allocations is \$8,266,998; approved budget amount is \$8,267,000.*

APPENDIX B: Administrative Budget Cost Categories

Program Administrative Cost Budget Item	Calendar Year (\$)
Investment Plan Development	
Project Planning and Initiation	
Project Oversight and Governance	
Stakeholder Communication, Engagement, and Outreach	
Regulatory Support Compliance	
Internal Management Coordination	
Program and Process Coordination and Improvement	
Administrative Activities	
Supervision and Personnel	
Training and Development	
Total	

APPENDIX C: Guidance on Gas RD&D Plans Provided to PG&E During Pre-Submittal Consultation with CPUC Staff (March 2025)

CPUC staff provided the following guidance to PG&E in advance of pre-submittal consultation briefings conducted March 25 and May 8, 2025.

Please address the following Gas RD&D program requirements during proposed budget plan briefings to CPUC SMEs:

- (1) Explain how initiatives maintain and promote affordability for ratepayers.
 - Public Utilities Code 740.1 (e)(5) Commission guidelines for evaluating RD&D programs by gas corporations
 - [Executive Order \(EO\) N-5-24](#) (Newsom, 2024) On reducing rates
- (2) Demonstrate the explicit anticipated ratepayer benefit from each initiative.
 - Public Utilities Code 740.1 (a) Commission guidelines for evaluating RD&D programs by gas corporations
- (3) Justify the use of ratepayer funds for each initiative (e.g. why this R&D is not provided by competitive and regulated markets).
 - Public Resources Code 25620.15 (a) Public Interest Energy Research, Demonstration, and Development Program
 - CPUC Resolution approving CEC's FY 2023-2024 Gas R&D Budget Plan ([Resolution G-3603](#), OP 4)
- (4) List and align with specific CPUC policies and proceedings and fill identified research gaps.
 - CPUC Resolution approving CEC's FY 2023-2024 Gas R&D Budget Plan ([Resolution G-3603](#), OP 4)
- (5) Document outreach and engagement with diverse stakeholders, including research and academic institutions and disadvantaged communities, and demonstrate integration of feedback.
 - CPUC Resolution approving CEC's FY 2017-2018 Gas R&D Budget Plan ([Resolution G-3546](#), OP 6a)
 - CPUC Resolution approving CEC's FY 2018-2019 Gas R&D Budget Plan ([Resolution G-3555](#), OP 6a & b)
 - CPUC Resolution approving CEC's FY 2020-2021 Gas R&D Budget Plan ([Resolution G-3571](#), OP 8a & b)
 - PG&E TY2023 GRC Decision ([D.23-11-069](#), (5) & (9) at p. 220-221)
- (6) Detail outreach and engagement with other Gas R&D Administrators to ensure research complements but does not duplicate existing investments.
 - Public Utilities Code 740.1 (d) Commission guidelines for evaluating RD&D programs by gas corporations

- CPUC Resolution approving CEC's FY 2022-2023 Gas R&D Budget Plan ([Resolution G-3592](#), OP 5c & d)
 - CPUC Resolution approving CEC's FY 2023-2024 Gas R&D Budget Plan ([Resolution G-3603](#), OP 4)
 - PG&E TY2023 GRC Decision ([D.23-11-069](#), (5) at p. 220)
- (7) Utilize the EPIC Uniform Impact Analysis Foundational Principles and detail planned methodologies for tracking and evaluating the quantitative impacts of each initiative.
- CPUC Resolution approving CEC's FY 2022-2023 Gas R&D Budget Plan ([Resolution G-3592](#), OP 6)
 - CPUC Resolution approving CEC's FY 2023-2024 Gas R&D Budget Plan ([Resolution G-3603](#), OP 6)
 - Decision on Phase 2-C of EPIC Charge Rulemaking ([D.23-04-042](#), Appendix A)
- (8) Present budget broken down by proposed initiatives and delineate administrative costs (capped at 10%) using the EPIC Administrative Budget Template.
- CPUC Resolution approving CEC's FY 2022-2023 Gas R&D Budget Plan ([Resolution G-3592](#), OP 5e & Appendix A at p. 31)
 - PG&E TY2023 GRC Decision ([D.23-11-069](#), (1) & (3) at p. 218-219)

APPENDIX D: Commission Guidance on Gas RD&D Initiative Criteria

Commission Guidance <i>See Appendix C: Guidance on Gas RD&D Plans Provided to PG&E During Pre-Submittal Consultation with CPUC Staff (March 2025)</i>	Initiative Criteria
<p>D.19-09-051 at p. 379. Resolution G-3601 (2023) at OP 6a. Resolution G-3603 (2024) at OP 4.</p>	<p>1. Policy Priority: Alignment with and prioritization of critical gaps and needs identified in State goals and specific CPUC Policies and Proceedings to demonstrate ratepayer benefit, informed by consultation with CPUC Staff.</p>
<p>D.23-11-069 at p. 220. California Public Utilities Code Section 740.1 (d) Resolution G-3586 (2022) at OP 5. Resolution G-3592 (2023) at OP 5. Resolution G-3601 (2023) at OP 6a & 6i. Resolution G-3603 (2024) at OP 4. D.23-04-042 at Appendix A. D.24-12-074 at p. 327.</p>	<p>2. Identified Need: Innovation and differentiation from existing RD&D activities to support complementary rather than duplicative efforts, informed by specific consultation with other Gas RD&D Administrators. Demonstrate that the Initiative will leverage existing progress while providing distinct additional value.</p>
<p>Resolution G-3573 (2021) at OP 3. Resolution G-3601 (2023) at OP 6c. D.23-04-042 at Appendix A.</p>	<p>3. Proposed Solution: Describe Research Topics, anticipated near-term project outputs commensurate with the proposed funding level, and intended pathways to scale, commercialize, and otherwise utilize results from RD&D activities to promote technology transfer and market facilitation.</p>
<p>a. D.23-11-069 at p. 218 & 220. Public Utilities Code 740.1 at (a). D.04-08-010 at p. 28; FOF 32; & OP 17. Resolution G-3573 (2021) at OP 3. Resolution G-3586 (2022) at OP 4 & 5.</p>	<p>4. Anticipated Impacts:</p> <p>a. Reasonable probability of providing California ratepayer benefit by locating projects in</p>

<p>Resolution G-3592 (2023) at OP 6. Resolution G-3601 (2023) at OP 5 & 6b. Resolution G-3603 (2024) at OP 6. D.23-04-042 at Appendix A. See Appendix E: EPIC Foundational Principles for the Development of a Uniform Impact Analysis Framework.</p> <p>b. D.23-11-069 at p. 218. California Public Utilities Code Section 740.1 (e)(5) D.19-09-051 at p. 379. Executive Order (EO) N-5-24 (Newsom, 2024)</p> <p>c. D.23-11-069 at p. 218 & 220-221. Resolution G-3555 (2019) at OP 6. Resolution G-3571 (2020) at OP 8b. Resolution G-3573 (2021) at OP 3. Resolution G-3586 (2022) at OP 4 & 5. Environmental & Social Justice (ESJ) Action Plan Version 2.0 (2022). Resolution G-3592 (2023) at OP 5a. Resolution G-3601 (2023) at OP 3d & 6.</p>	<p>the State of California¹¹⁷ and detailed planned methodologies for tracking and evaluating quantitative impacts from investments through the use of the EPIC Program’s Uniform Impacts Analysis Foundational Principles.</p> <p>b. Cost-effectiveness and protection of affordability to ratepayers.</p> <p>c. Promote equity and provide benefits to Environmental & Social Justice (ESJ) communities, informed by consultation with community-based organizations (CBOs) and the ESJ Action Plan 2.0.</p>
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¹¹⁷ [Resolution G-3601](#) (2023) at:

OP 5. “All of [SoCalGas’] new and future [RD&D] projects shall occur in the State of California. The only exception may be made for projects with out of state federal labs. In this case, SoCalGas shall explicitly justify benefits to its gas ratepayers of an out-of-state project in its Tier 3 Advice Letter annual plan.”

OP 6. “[SoCalGas shall] b. Explicitly justify how all consortia dues benefit gas ratepayers.”

APPENDIX E: EPIC Foundational Principles for the Development of a Uniform Impact Analysis Framework¹¹⁸

This document outlines the Commission's expectations of Electric Program Investment Charge (EPIC) administrators in developing a uniform impact analysis framework and metrics, enabling the evaluation and tracking of the impacts of all EPIC projects, that complies with D.21-11-028, Ordering Paragraph 12. These foundational principles include:

Purpose

- The mandatory guiding principle of EPIC is to provide ratepayer benefits as related to California's electric system.¹¹⁹
- The EPIC impacts analysis framework should provide EPIC administrators with a uniform methodology to demonstrate with data the realized and potential impacts to ratepayers from EPIC research, development, and demonstration (RD&D) investment.

Overarching Principles

- In general, each EPIC project should offer a reasonable probability of providing benefits to ratepayers and expenditures on projects which have a low probability for success should be minimized,¹²⁰ and the EPIC portfolio as a whole should demonstrably benefit ratepayers.
- While in some cases, a targeted group of ratepayers may benefit from an individual project's output, EPIC investments should result in scalable and replicable innovations that prioritize solutions to address California's energy and climate goals.
- Accurate and precise EPIC project and program impacts reporting is paramount to inform policy, decision making, and formulating EPIC strategic goals. Therefore, impacts resulting from the analytical framework must be defensible and not overstated.

¹¹⁸ [D.23-04-042](#) at Appendix A.

¹¹⁹ [D.12-05-037](#): OIR on the Commission's Own Motion to Determine the Impact on Public Benefits Associated with the Expiration of Ratepayer Charges Pursuant to Public Utilities Code Section 399.8.

¹²⁰ [California Public Utilities Code Section 740.1](#) at (a) and (b).

- Clear methods are necessary to calculate past, current, and future EPIC impacts based on published data and reasonable assumptions, such that any party can take the data and assumptions and apply the methodology to recreate the results. Without such foundation, it will be difficult to calculate quantitative impacts of EPIC innovations that lack the market or deployment history to have readily available sufficient data for impacts analysis or project future impacts of pre-commercial innovations.

Net Impacts

- Realized ratepayer benefits must be demonstrated by the incremental, value-added impact of EPIC innovation.
 - For example, if a ratepayer spends \$20 to save \$30, the ratepayer benefit realized is the net \$10 savings, not the gross \$30 impact. Thus, the metric by which EPIC investments should be evaluated is *net*, not gross, impacts.
- Net impacts are required to calculate project or program benefit-cost ratios and rates of return on investment.

Attribution

- To understand the impact of EPIC accurately and precisely, and therefore, inform continuance or improvements in EPIC strategic goals and strategic objectives, administrators should demonstrate to the CPUC what impacts have or are forecasted to occur that would not have otherwise occurred without EPIC investment (i.e., only these impacts should be attributed to EPIC.)
- The portion of the observed change that is only due to EPIC investment must be documented with data, and a set of reasonable and acceptable rules for determining the share of credit attributed to EPIC developed, including attribution for the value of cost-shared, matching, or leveraged funding.
- Comparable scenarios should be used to estimate when the market would have produced an innovation had EPIC funding not been available. Where innovation would have eventually occurred without EPIC, impacts should be based on the acceleration in the time to market readiness of the innovation, rather than the lifetime of the technology itself.
 - For example, if a deployed EPIC innovation provides impacts for 20 years between 2025 and 2045, and it is determined the innovation would have

occurred and been deployed without EPIC in 2030, then the period of market acceleration due to EPIC is five years and EPIC impacts are calculated only for that 5-year period.

Methods

- Administrators should use or adapt existing accepted methodologies where possible for efficiencies of resources, time, cost, and effort.¹²¹
- The methodology used to calculate benefits should be grounded in theory (i.e., if funding certain small businesses is seen as beneficial, data documentation and impact demonstration of this strategy should be provided).
- Impacts evaluation may involve expert elicitation. Clearly and succinctly framing questions is required to guide experts in obtaining pertinent data.

Metrics

- [D.13-11-025](#), Attachment 4 provides a list of impacts (*Metrics and Potential Areas of Measurement*) proposed by the EPIC administrators and approved by the CPUC, which can serve as the basis for discussion of metrics. The list includes 10 impact metric categories and 59 potential areas of measurement. The decision allows creation of new project-specific impact metrics to consider for revisions.
- Because units of measure have not been defined for many of these metrics, additional definitions are required for uniform impact reporting. This impacts metrics list may be modified and updated based on new information and must be used consistently across all administrators.

¹²¹ Including for example, but not limited to, the following works and other works by their respective authors: An Investigation of Innovative Energy Technologies Entering the Market between 2009-2015, Enabled by EERE-funded R&D. PNNL-31895. Pacific Northwest National Laboratories. August 2021; Metrics for an Equitable and Just Energy System. Pacific Northwest National Laboratories. June 2021; Evaluating Realized Impacts of DOE/EERE R&D Programs Standard Impact Evaluation Method. DOE/EE-1117. August 2014; A Framework for Evaluating R&D Impacts and Supply Chain Dynamics Early in a Product Life Cycle. DOE/EE-1096. June 2014; A Proposed Methodology to Determine the Leverage Impacts of Technology Deployment Programs. James L. Wolf. Prepared for US DOE/EERE. June 2008; Impact Evaluation Framework for Technology Deployment Programs. Sandia National Laboratories. Prepared for US DOE/EERE. July 2007; and Prospective Evaluation of Applied Energy Research and Development at DOE (Phase Two). National Research Council. The National Academies Press. 2007.

Assumptions

- To the extent possible, administrators should use the same core data set for basic assumptions, such as the emissions profile of peak power in each service area. If administrators do not use the same data set, they should provide rationale for why not.
- While market penetration assumptions may vary by innovation, the method by which these assumptions are arrived should be consistent.

Impact Reporting

- For clarity of impacts on different economic sectors, direct, indirect, and induced impacts should be disaggregated in reporting.

Iterative Process

- Guidelines may be revised and clarified as the EPIC Impacts Analysis Framework is developed to achieve the goals and principles outlined above.

Appendix F: Compliance Assessment of Advice Letter 5077-G-A

See Appendix C: Guidance on Gas RD&D Plans Provided to PG&E During Pre-Submittal Consultation with CPUC Staff in March 2025

CPUC Requirement D.23-11-069	PG&E Response in AL 5077-G-A	Compliance Assessment
<p><i>PG&E shall not record any Gas [RD&D] program expenses in a one-way balancing account until an annual Tier 3 Advice Letter [AL] outlining its Gas RD&D budget plan is approved.</i>¹²²</p> <p>D.23-11-069 approved a Test Year 2023 Gas RD&D budget of \$7.414 million and escalation factor authorizing a \$8.09 million annual budget for PG&E's 2024 Plan, pending Commission approval.¹²³</p>	<p>PG&E first submitted a Tier 3 Advice Letter (AL) with its originally proposed 2024 Gas RD&D Plan ("Plan") on July 1st, 2024. PG&E later withdrew this AL on May 12th, 2025, after consultation with CPUC staff. PG&E resubmitted its 2024 Plan (AL 5077-G) on June 25th, 2025, and a supplement to this Plan (AL 5077-G-A) on August 18th, 2025, with a proposed annual budget of \$8.092 million.¹²⁴</p> <p>PG&E requests to recover \$7,207,712 in expense revenue requirements in its 2024 Plan, including total actual Gas RD&D (MAT GZA) expenses recorded in Calendar Years (CYs) 2023 (\$3,532,835) and 2024 (\$3,674,877).¹²⁵ In response to a CPUC Data Request issued in September 2025, PG&E states that its proposed 2024 Plan was the first opportunity for PG&E to submit a request for cost recovery for recorded expenses.</p>	<p>PG&E's request for approval of its 2024 Plan via Tier 3 AL with an annual budget of \$8.092 million is compliant with this requirement. However, the sum of PG&E's budget allocations does not equal the total proposed budget.</p> <p>PG&E did not submit a Tier 3 AL with a Gas RD&D Plan associated with these costs for Commission approval. Therefore PG&E is not authorized to record Gas RD&D expenses in a one-way balancing account. PG&E's cost recovery request for \$7,207,712 is not compliant with this requirement.</p>
<p><i>(1) The annual research plan should detail budgets broken down by research sub-</i></p>	<p>PG&E proposes budget allocations broken down by Initiatives within each Investment Theme.¹²⁷</p>	<p>PG&E did not sufficiently provide detail on benefits from all projects or incorporate</p>

¹²² [D.23-11-069](#) at p. 217-218. Consistent with [D.19-09-051](#) at p. 379.

¹²³ [D.23-11-069](#) at p. 217 & 740.

¹²⁴ AL 5077-G-A Table 3 at p. 47.

¹²⁵ AL 5077-G-A at p. 61.

¹²⁷ AL 5077-G-A Table 3 at p. 47.

CPUC Requirement <u>D.23-11-069</u>	PG&E Response in AL 5077-G-A	Compliance Assessment
<p><i>program area and explain how the projects improve reliability, safety, equity, affordability, and environmental benefits, and incorporates input from key stakeholders, such as the Disadvantaged Communities Advisory Group.¹²⁶</i></p>	<p>Gas System Integrity¹²⁸ and Decarbonization.¹²⁹ The purpose and content of the provided Gas RD&D Project List as it relates to the proposed 2024 Plan is unclear. PG&E discusses a Sustainable Energy Solutions Initiative and lists 18 associated projects,¹³⁰ however, does not allocate funding to this Initiative. PG&E proposes to allocate \$594,126 to the Proactive Geohazard Risk Management Initiative¹³¹ but only lists one associated project, which is marked as “Completed” and has \$0 proposed for 2024.¹³² PG&E describes how it seeks to provide reliability, safety, equity, affordability, and environmental benefits through projects within each Investment Theme.¹³³ PG&E states that, though not able to secure a meeting with the DACAG in calendar year 2024,¹³⁴ representatives</p>	<p>input from key stakeholders, including CPUC staff.¹⁴⁰ On the one hand, PG&E provides sufficient detail on technoeconomic analysis and comparison of alternatives as part of the Proactive Geohazard Risk Management Initiative¹⁴¹ as well as on the priority technologies under the Innovative and Cost-Effective Integrity Management Initiative.¹⁴² On the other hand, PG&E does not justify investment in hydrogen-related RD&D by demonstrating alignment with CPUC proceedings. The Commission has not provided guidance on the appropriate role of gas ratepayers in funding hydrogen RD&D, particularly as these projects would have further</p>

¹²⁶ [D.23-11-069](#) at p. 218-219. Consistent with [D.19-09-051](#) at p. 379.

¹²⁸ AL 5077-G-A Table 4 at p. 47.

¹²⁹ AL 5077-G-A Table 9 at p. 55.

¹³⁰ AL 5077-G-A at p. 8; 29-30; 34; 55-56; 58-60; & Appendix B.

¹³¹ AL 5077-G-A Table 4 at p. 47.

¹³² AL 5077-G-A at Appendix B.

¹³³ AL 5077-G-A at p. 35-37.

¹³⁴ AL 5077-G-A at p. 13.

¹⁴⁰ Resolution G-3618 at Appendix C: Guidance on Gas RD&D Plans Provided to PG&E During Pre-Submittal Consultation with CPUC Staff (March 2025) details guidance ED staff provided to PG&E in advance of pre-submittal consultation briefings conducted March 25 and May 8, 2025, with CPUC subject matter experts (SMEs). ED staff provided additional guidance throughout Plan development regarding program requirements, including during meetings held March 11, April 8, and May 5, 2025.

¹⁴¹ AL 5077-G-A at p. 49.

¹⁴² AL 5077-G-A at p. 50-51.

CPUC Requirement <u>D.23-11-069</u>	PG&E Response in AL 5077-G-A	Compliance Assessment
	<p>presented and solicited input on the proposed 2024 Plan on April 18, 2025, and describes two questions posed by the DACAG which the representatives answered verbally.¹³⁵ PG&E includes information on Workshop Stakeholder Q&A,¹³⁶ high-level summaries from interviews, and incorporation strategies.¹³⁷ PG&E also discusses input sought and integrated from CPUC staff prior to Plan submittal.¹³⁸</p> <p>PG&E discusses the Initiatives within the Decarbonization theme in relation to renewable natural gas, renewable hydrogen, and synthetic methane, but also proposes hydrogen-specific activities.¹³⁹</p>	<p>implications for ratepayer funding, including in future Gas RD&D Plans. Instead, the Commission has provided guidance that making renewable natural gas (RNG)¹⁴³ more affordable for ratepayers is a priority. PG&E is not compliant with this requirement.</p> <p>PG&E should also clarify the purpose and content of the Gas RD&D Project list.</p>
(2) <i>The annual research plan should include a proposed benefits analysis framework, created in consultation with Energy Division [ED] staff. This framework should provide sufficient quantitative estimates of potential safety, reliability, operational efficiency, improved affordability, environmental-</i>	PG&E proposes a framework with suggested metrics related to reliability; safety; equity; operational efficiency and improved affordability; reduced greenhouse gas (GHG) emissions; improved air quality; effectiveness of information sharing; adoption of Gas RD&D technology; technology development progress; and informed	PG&E did not propose an adequate benefits analysis framework created in consultation with ED staff. The Commission’s Uniform Impact Analysis Foundational Principles, which were provided to PG&E by CPUC staff, ¹⁵² outline criteria for demonstrating impacts attributable to each distinct RD&D

¹³⁵ AL 5069-G at p. 14.

¹³⁶ AL 5077-G-A at Appendix A.

¹³⁷ AL 5077-G-A at p. 10-21.

¹³⁸ AL 5077-G-A at p. 5; 8; & 33.

¹³⁹ AL 5077-G-A at p. 56-58.

¹⁴³ [R.13-02-008](#): OIR to Adopt Biomethane Standards and Requirements, Pipeline Open Access Rules, and Related Enforcement Provisions.

¹⁵² See Appendix C: Guidance on Gas RD&D Plans Provided to PG&E During Pre-Submittal Consultation with CPUC Staff in March 2025.

CPUC Requirement <u>D.23-11-069</u>	PG&E Response in AL 5077-G-A	Compliance Assessment
<i>related benefits, benefits to underserved communities, and numeric targets or a specified numeric range of potential benefits for projects.</i> ¹⁴⁴	<p>industry and/or company standards.¹⁴⁵ PG&E describes intended benefits from the Gas System Integrity¹⁴⁶ and Decarbonization Themes,¹⁴⁷ as well as specific metrics for assessing ratepayer benefits at the Initiative level.¹⁴⁸</p> <p>Regarding the Emission Reduction Activities and Refined Reporting Initiative, PG&E states that “[m]uch of PG&E’s current reporting still relies on generalized, population based emission factors, which can obscure the company’s actual performance and hinder its ability to demonstrate the impact of its emissions reduction programs... [and meet] internal and regulatory emission reduction goals.”¹⁴⁹</p>	<p>investment,¹⁵³ which must otherwise not be expected to occur.¹⁵⁴</p> <p>Specifically, several of the safety and environmental benefits associated with the Innovative and Cost-Effective Integrity Management Initiative may be more appropriately attributed to impacts from the referenced Pipeline and Hazardous Materials Safety Administration (PHMSA) Mega Rule and mandates from the California Geological Energy Management Division (CalGEM).¹⁵⁵ The primary objective of PG&E’s proposed Emission Reduction Activities and Refined Reporting Initiative appears to be meeting regulatory goals¹⁵⁶ rather than providing ratepayer</p>

¹⁴⁴ [D.23-11-069](#) at p. 218-219. Consistent with [Resolution G-3586](#) (2022) at OP 5.

¹⁴⁵ AL 5077-G-A at p. 39-40.

¹⁴⁶ AL 5077-G-A at p. 35-36.

¹⁴⁷ AL 5077-G-A at p. 36-37.

¹⁴⁸ AL 5077-G-A at p. 49-59.

¹⁴⁹ AL 5077-G-A at p. 54.

¹⁵³ Required by California Public Utilities Code Section 740.1 at (a).

¹⁵⁴ [D.23-04-042](#) at Appendix A. See Resolution G-3618 at Appendix E: EPIC Foundational Principles for the Development of a Uniform Impact Analysis Framework. Consistent with [Resolution G-3603](#) (2024) at OP 6: “Once the [EPIC] program’s Uniform Impact Analysis framework is approved by the Commission, the California Energy Commission shall use this framework to demonstrate outcomes of achieving its proposed benefits for all current and future research projects including through quantitative methodologies.”

¹⁵⁵ AL 5077-G-A at p. 50-52.

¹⁵⁶ AL 5077-G-A at p. 54-55.

CPUC Requirement D.23-11-069	PG&E Response in AL 5077-G-A	Compliance Assessment
	PG&E describes plans to select metrics appropriate for specific project scopes and stated objectives and intermittently assessing progress towards the intended goals by measuring the selected metrics if appropriate. ¹⁵⁰ PG&E states in its assumptions that “[n]ot all projects should be required to conduct an impacts analysis [as] smaller projects may be more exploratory in nature, and the effort associated with the analysis may be unduly burdensome.” ¹⁵¹	benefit. PG&E is also not compliant with these requirements in assuming that “[n]ot all projects should be required to conduct an impacts analysis.” ¹⁵⁷ PG&E is not compliant with this requirement.
<i>(3) PG&E should cap its administrative costs for Gas RD&D at 10%... PG&E’s annual research plan should provide detail about administrative costs and require PG&E to allocate these cost categories to its administrative budget as outlined below.</i> ¹⁵⁸	PG&E proposes to allocate ten percent of its annual total budget to Program Administrative costs, translating to \$809,200 in its 2024 Plan. ¹⁵⁹	PG&E’s request for a Program Administrative budget of 10 percent of its annual Gas RD&D budget is compliant with the Commission’s requirement of a 10 percent cap. PG&E is compliant with this requirement. However, PG&E does not allocate proposed Program Administrative costs to specific categories using the required Administrative Budget template. ¹⁶⁰ PG&E is not compliant with this requirement.

¹⁵⁰ AL 5077-G-A at p. 38.

¹⁵¹ AL 5077-G-A at p. 39.

¹⁵⁷ AL 5077-G-A at p. 39.

¹⁵⁸ [D.23-11-069](#) at p. 219. See Resolution G-3618 at Appendix B: Administrative Budget Cost Categories. Consistent with [Resolution G-3586](#) (2022) at OP 4.

¹⁵⁹ AL 5077-G-A at p. 47 & 60.

¹⁶⁰ See Resolution G-3618 at Appendix B: Administrative Budget Cost Categories.

CPUC Requirement D.23-11-069	PG&E Response in AL 5077-G-A	Compliance Assessment
4) <i>In its annual research plan, PG&E should explain how its proposals for low carbon research projects (rather than zero/no carbon projects) support the State’s aggressive zero-carbon goals.</i> ¹⁶¹	<p>PG&E states that “low-carbon RD&D projects can play a crucial role in supporting California’s aggressive zero carbon goals by acting as a transitional bridge between the current energy landscape and a zero- or -low carbon future. These projects can address immediate emission reductions while laying the groundwork for more comprehensive, long-term decarbonization strategies.”¹⁶² PG&E argues that:</p> <ol style="list-style-type: none">1. Low-carbon projects which provide incremental methane emissions reductions from existing gas infrastructure and operations “still represent a substantial improvement over current emission levels.”2. “Low-carbon fuels can be integrated into the existing gas infrastructure, providing an immediate reduction in emissions while maintaining energy reliability and affordability.”3. “By developing low-carbon solutions that can be implemented within the existing energy framework, utilities can attempt to avoid economic disruption that might accompany a rapid shift to zero-carbon technologies.”	<p>PG&E sufficiently articulates how it seeks to develop low-carbon projects to support California’s zero-carbon goals while providing ratepayer benefit such as reliability and affordability. PG&E is compliant with this requirement.</p> <p>PG&E, however, should strive to focus and prioritize its RD&D budget on developing zero-carbon projects to accelerate progress towards meeting California’s zero-carbon goals, align with Commission policies and proceedings, and optimally benefit ratepayers. Going forward, PG&E should strive to propose zero carbon projects or otherwise justify why zero carbon RD&D projects are not possible and how these projects will promote the transition to zero-carbon research and outcomes.</p>

¹⁶¹ [D.23-11-069](#) at p. 219-220. Reference to [Resolution G-3586](#) (2022) at p. 20-21. “In future Plans, SoCalGas should align its RD&D investments with evolving state energy policies.”

¹⁶² AL 5077-G-A at p. 41.

CPUC Requirement D.23-11-069	PG&E Response in AL 5077-G-A	Compliance Assessment
	<ol style="list-style-type: none"> 4. Low-carbon projects can “allow for the gradual adaptation of infrastructure, market mechanisms, and consumer behavior.” 5. “Low-carbon R&D projects align with state policies that mandate gradual emission reductions and support for renewable energy sources.”¹⁶³ 	
<p><i>(5) The annual research plan should include information on funds encumbered, spent, and unspent. The plan should also outline co-funding and collaborative partners and explain how P&GE engages with diverse academic populations. Further, PG&E should describe how its research plan will benefit underserved communities.¹⁶⁴</i></p>	<p>PG&E conducted targeted interviews with 18 different organizations in 2024, including University of California Riverside, Irvine, Berkeley, and Los Angeles; Stanford; and Colorado State University.¹⁶⁵ PG&E describes its collaborative partners, including public agencies, research consortia, national laboratories, and universities.¹⁶⁶ PG&E provides minimal detail and largely defines its expected role in each initiative as “[leading] research for the development, evaluation, and field testing of new industry technologies,”¹⁶⁷ citing additional though incomplete information in a Gas RD&D Project List.¹⁶⁸ This list includes information on funds encumbered, spent, and unspent for</p>	<p>PG&E did not provide the necessary detail at the Initiative level. Additional information is particularly needed for the Clean Fuels Integration¹⁷¹ Initiative proposed in collaboration with CEC to demonstrate activities are complementary and not duplicative as required.¹⁷²</p> <p>For clarity in reporting, PG&E shall indicate which projects have been funded via previous GRC cycles or other funding mechanisms as these are not affiliated with Investment Plans approved within this Gas RD&D Program. This is necessary in</p>

¹⁶³ AL 5077-G-A at p. 41-42.

¹⁶⁴ [D.23-11-069](#) at p. 220.

¹⁶⁵ AL 5077-G-A at p. 10.

¹⁶⁶ AL 5077-G-A at p. 43-46.

¹⁶⁷ AL 5077-G-A at p. 50; 52; 53; 55; 58; & 60.

¹⁶⁸ AL 5077-G-A at Appendix B.

¹⁷¹ AL 5077-G-A at p. 57-58.

¹⁷² California Public Utilities Code Section 740.1 at (d).

CPUC Requirement D.23-11-069	PG&E Response in AL 5077-G-A	Compliance Assessment
	<p>projects that commenced between 2017 and 2024 and those for which the anticipated end date has already passed (“Completed”).¹⁶⁹ PG&E states that the leveraged co-funding opportunities amounted to every dollar of Gas RD&D funding expended on projects being matched by \$21.50 of funding from other sources in calendar year 2023.¹⁷⁰</p>	<p>understanding progress, coordination, and attribution. In future Annual Plans and Reports, PG&E shall clearly delineate projects that may be funded within this Gas RD&D Program, including the specific Initiative and approved Investment Plan associated with each project. PG&E is not compliant with this requirement.</p>
<p><i>(6) PG&E shall hold an annual workshop prior to submitting its Tier 3 Advice Letter Annual Gas RD&D Investment Plan and shall consult with Energy Division to develop the workshop agenda. The annual workshop shall be held at least 90 days before submitting its annual Gas RD&D research plan to the CPUC to allow sufficient time to incorporate stakeholder feedback. At these workshops, PG&E shall present the results of the previous year’s RD&D program and obtain input regarding its proposed spending for the following calendar year. The workshop shall follow the guidance of D.19-09-051 Ordering Paragraph 30.¹⁷³</i></p>	<p>PG&E held an annual workshop prior to submitting its 2024 Plan on April 29, 2024, presenting the results of the previous year’s program and obtaining input regarding its proposed funding allocations for the following year. PG&E includes information on Workshop Stakeholder Q&A,¹⁷⁴ high-level summaries from interviews, and incorporation strategies.¹⁷⁵</p>	<p>CPUC granted PG&E an extension to hold the workshop less than 90 days in advance of Plan submittal. PG&E is compliant with this requirement.</p>
<p><i>(7) Prior to the workshop, PG&E should submit its RD&D annual report to Energy</i></p>	<p>PG&E submitted its 2023 Gas RD&D Annual Report on March 28, 2024, prior to holding its</p>	<p>PG&E submitted its 2023 Gas RD&D Annual Report on March 28, 2024, prior to</p>

¹⁶⁹ AL 5077-G-A at Appendix B.

¹⁷⁰ AL 5077-G-A at p. 60.

¹⁷³ [D.23-11-069](#) at p. 220. Consistent with [D.19-09-051](#).

¹⁷⁴ AL 5077-G-A at Appendix A.

¹⁷⁵ AL 5077-G-A at p. 10-21.

CPUC Requirement <u>D.23-11-069</u>	PG&E Response in AL 5077-G-A	Compliance Assessment
<i>Division staff describing prior years' RD&D program including a summary of ongoing and completed projects; funds expended, funding recipients, and leveraged funding; and an explanation of the process used for selecting RD&D project areas as well as the structure of PG&E's RD&D portfolio.¹⁷⁶</i>	<p>Annual Workshop on April 29, 2024. PG&E provided a summary of ongoing and completed projects,¹⁷⁷ detailed \$1,159,675 in funds expended,¹⁷⁸ listed 2023 funding recipients,¹⁷⁹ and described the process used for selecting projects¹⁸⁰ and structure of PG&E's Gas RD&D portfolio.¹⁸¹ PG&E stated that "on average, every dollar of Gas R&D funding expended on projects was matched by \$20.50 of funding from other sources in 2023."¹⁸²</p>	<p>holding its Annual Workshop on April 29, 2024. In its Annual Report, PG&E summarizes ongoing and completed projects, leveraged funding, and its project selection process as required. PG&E is compliant with this requirement.</p>
<p>(8) PG&E shall provide Energy Division staff with the workshop presentation materials as well as documentation on stakeholders consulted in the development of RD&D projects, both at least one week before the workshop.</p> <p>(9) PG&E shall engage relevant stakeholders to encourage their attendance at the workshop, such as the California Energy Commission, the Disadvantaged Communities Advisory Group, the U.S.</p>	<p>PG&E states that it leveraged its Gas RD&D website, CPUC proceeding service lists, and its Diversity Equity Inclusion & Belonging (DEIB) team to notice the workshop, ultimately engaging attendees from 100 different organizations in 2024.¹⁸⁴ PG&E includes information on Workshop Stakeholder Q&A¹⁸⁵ and an Annual Stakeholder Workshop Attendee Organization List, which includes national laboratories, public agencies, industry organizations, universities, minority-serving organizations (MSIs), community-based</p>	<p>PG&E engaged relevant, diverse stakeholders in its Annual Workshop held on April 29, 2024. PG&E is compliant with these requirements.</p>

¹⁷⁶ [D.23-11-069](#) at p. 220.

¹⁷⁷ [2023 Gas RD&D Annual Report](#) at p. 43-124.

¹⁷⁸ [2023 Gas RD&D Annual Report](#) at p. 9.

¹⁷⁹ [2023 Gas RD&D Annual Report](#) at p. 13.

¹⁸⁰ [2023 Gas RD&D Annual Report](#) at p. 22-26.

¹⁸¹ [2023 Gas RD&D Annual Report](#) at p. 27-38.

¹⁸² [2023 Gas RD&D Annual Report](#) at p. 10.

¹⁸⁴ AL 5077-G-A at p. 12.

¹⁸⁵ AL 5077-G-A at Appendix A.

CPUC Requirement D.23-11-069	PG&E Response in AL 5077-G-A	Compliance Assessment
<i>Department of Energy, and other organizations engaged in gas research and development.</i> ¹⁸³	organizations (CBOs), Tribal Nations, and private companies. ¹⁸⁶	
<i>(10) PG&E's research plan should allocate approximately \$296,400 to an evaluation or audit.</i> ¹⁸⁷	PG&E proposes to allocate \$294,400 towards its proportional share of a comprehensive Gas RD&D Program Evaluation. ¹⁸⁸	PG&E allocated \$296,400 to a comprehensive Gas RD&D Program Evaluation. PG&E is compliant with this requirement.

CPUC Requirement <i>Public Utilities Code 740.1</i> ¹⁸⁹	PG&E Response in AL 5077-G-A	Compliance Assessment
<i>(a) Projects should offer a reasonable probability of providing benefits to ratepayers.</i> ¹⁹⁰	In calendar 2025, PG&E states that it “plans on renewing its membership in six research consortia to wrap-up research efforts outside of California to comply with CPUC Resolution G-3601.” ¹⁹² The proposed dues amount to \$1,447,287 in calendar	PG&E does not provide sufficient detail or propose demonstrably compliant investments. The Commission has provided guidance that Gas RD&D projects shall occur in the State of California with the

¹⁸³ [D.23-11-069](#) at p. 220-221.

¹⁸⁶ AL 5077-G-A at p. 10-13.

¹⁸⁷ [D.23-11-069](#) at p. 221.

¹⁸⁸ AL 5077-G-A at p. 47 & 60.

¹⁸⁹ The Commission’s compliance assessment of California Public Utilities Code 740.1 at (c) is captured in the compliance assessment of AL 5077-G-A with [D.23-11-069](#) at (2) and (4) above.

¹⁹⁰ California Public Utilities Code Section 740.1 at (a).

¹⁹² AL 5077-G-A at p. 61. [Resolution G-3601](#) (2023) at:

OP 5. “All of SoCalGas’ new and future RD&D projects shall occur in the State of California. The only exception may be made for projects with out of state federal labs. In this case, SoCalGas shall explicitly justify benefits to its gas ratepayers of an out-of-state project in its Tier 3 Advice Letter (AL) annual plan.”

OP 6. “In its 2024 Gas [RD&D] Research Plan and beyond, Southern California Gas Company (SoCalGas) shall: b. Explicitly justify how all consortia dues benefit gas ratepayers.”

CPUC Requirement <i>Public Utilities Code 740.1¹⁸⁹</i>	PG&E Response in AL 5077-G-A	Compliance Assessment
<i>(b) Expenditures on projects which have a low probability for success should be minimized.¹⁹¹</i>	<p>year 2025,¹⁹³ though it is unclear if PG&E is requesting funding for this purpose as no associated funds are proposed in its 2024 Plan annual budget allocations.¹⁹⁴ PG&E's Gas RD&D Project List also includes projects which are neither located in the State of California nor affiliated with a federal lab.¹⁹⁵</p> <p>In its 2023 Gas RD&D Annual Report, PG&E states that for "projects supported by OTD and UTD, PG&E did not provide direct funding. Instead, PG&E paid annual dues and then determined how these dues were allocated across projects. For projects led by the other consortia and R&D groups, PG&E paid annual dues and/or paid additional funding in support of specific projects."¹⁹⁶</p>	<p>exception of those affiliated with a federal lab, and that consortia membership dues are Administrative Activities under Program Administrative costs,¹⁹⁷ both of which rely on demonstration of ratepayer benefit. Further, projects costs related to each research consortium should be detailed.¹⁹⁸ PG&E is not compliant with this requirement.</p>
<i>(d) Projects should not unnecessarily duplicate research currently, previously, or</i>	PG&E discusses high-level coordination with other Gas RD&D administrators ²⁰⁰ and states broadly for	PG&E does not demonstrate that proposed investments do not unnecessarily duplicate

¹⁹¹ California Public Utilities Code Section 740.1 at (b).

¹⁹³ AL 5077-G-A at p. 61.

¹⁹⁴ AL 5077-G-A Table 3 at p. 47.

¹⁹⁵ AL 5077-G-A at Appendix B.

¹⁹⁶ [2023 Gas RD&D Annual Report](#) at p. 12.

¹⁹⁷ [D.15-04-020](#): Decision Addressing Applications of CEC, PG&E, SDG&E, and SCE for Approval of their Triennial Investment Plans for the EPIC Program for the Years 2015 Through 2017 at OP 16. "Project management and oversight, research consortia membership fees, reporting, and internal coordination are all administrative activities and shall count towards the administrative caps..."

¹⁹⁸ [Resolution G-3586](#) (2022) at OP 5. "Provide detail quantifying research funding allocations by research consortium, as well as project costs related to each consortium."

²⁰⁰ AL 5077-G-A at p. 13.

CPUC Requirement <i>Public Utilities Code 740.1¹⁹⁹</i>	PG&E Response in AL 5077-G-A	Compliance Assessment
<i>imminently undertaken by other electrical or gas corporations or research organizations.¹⁹⁹</i>	each initiative that it plans to “convene regularly with the other Gas R&D Administrators to proactively identify potential areas of overlap and explore opportunities for collaboration and synergy across their respective portfolios.” ²⁰¹ As compared to existing Gas RD&D activities conducted by other administrators, PG&E states that there is no duplication as it is prioritizing the specific needs of PG&E. ²⁰²	research currently, previously, or imminently undertaken at the Initiative level, including activities associated with the Natural Gas Leak Abatement (NGLA) Program; Alliance for Renewable Clean Hydrogen Energy Systems (ARCHES); and hydrogen blending pilots. ²⁰³ PG&E is not compliant with this requirement.
<p><i>(e) Each project should also support one or more of the following objectives:</i></p> <p><i>(1) Environmental improvement.</i></p> <p><i>(2) Public and employee safety.</i></p> <p><i>(3) Conservation by efficient resource use or by reducing or shifting system load.</i></p> <p><i>(4) Development of new resources and processes, particularly renewable resources and processes which further supply technologies.</i></p> <p><i>(5) Improve operating efficiency and reliability or otherwise reduce operating costs.²⁰⁴</i></p>	PG&E proposes budget allocations broken down by Initiatives within each Investment Theme: ²⁰⁵ Gas System Integrity ²⁰⁶ and Decarbonization. ²⁰⁷ Initiatives within the Gas System Integrity Theme include Proactive Geohazard Risk Management; Innovative and Cost-Effective Integrity Management; Advanced Leak Detection and Repair; and Emission Reduction Activities and Refined Reporting. PG&E also proposes a Clean Fuels Integration Initiative within the Decarbonization Theme.	Each of PG&E’s proposed Initiatives supports one or more of the required objectives. PG&E is compliant with this requirement.

¹⁹⁹ California Public Utilities Code Section 740.1 at (d). Consistent with: [Resolution G-3603](#) (2024) at OP 4 & [D.24-12-074](#) at p. 327.

²⁰¹ AL 5077-G-A at p. 50; 52; 54; 55; 58; & 60.

²⁰² AL 5077-G-A at p. 50; 52; 53; 55; 58; & 60.

²⁰³ [D.22-12-057](#).

²⁰⁴ California Public Utilities Code Section 740.1 at (e).

²⁰⁵ AL 5077-G-A Table 3 at p. 47.

²⁰⁶ AL 5077-G-A Table 4 at p. 47.

²⁰⁷ AL 5077-G-A Table 9 at p. 55.

Appendix G: Compliance Assessment of Advice Letter 5069-G

See Appendix C: Guidance on Gas RD&D Plans Provided to PG&E During Pre-Submittal Consultation with CPUC Staff in March 2025

CPUC Requirement D.23-11-069	PG&E Response in AL 5069-G	Compliance Assessment
<i>PG&E shall not record any Gas [RD&D] program expenses in a one-way balancing account until an annual Tier 3 Advice Letter [AL] outlining its Gas RD&D budget plan is approved.</i> ²⁰⁸ D.23-11-069 approved a Test Year 2023 Gas RD&D budget of \$7.414 million and escalation factor authorizing a \$8.267 million annual budget for PG&E's 2025 Plan, pending Commission approval. ²⁰⁹	PG&E submitted a Tier 3 Advice Letter (AL) with its proposed 2025 Plan on May 30 th , 2025, with a proposed annual budget of \$8.267 million. ²¹⁰	PG&E is compliant with this requirement. However, the sum of PG&E's budget allocations does not equal the total proposed budget.
<i>(1) The annual research plan should detail budgets broken down by research sub-program area and explain how the projects improve reliability, safety, equity, affordability, and environmental benefits, and incorporates input from key</i>	PG&E proposes budget allocations broken down by Initiatives within each Investment Theme: ²¹² Gas System Integrity ²¹³ and Decarbonization. ²¹⁴ The purpose and content of the provided Gas RD&D Project List as it relates to the proposed 2025 Plan is unclear: PG&E proposes to allocate	PG&E did not sufficiently provide detail on benefits from all projects or incorporate input from key stakeholders, including CPUC staff. ²²³ On the one hand, PG&E provides sufficient detail on technoeconomic analysis and comparison of alternatives as part of the

²⁰⁸ [D.23-11-069](#) p. 217-218. Consistent with [D.19-09-051](#) at p. 379.

²⁰⁹ [D.23-11-069](#) at p. 217 & 740.

²¹⁰ AL 5069-G Table 5 at p. 54.

²¹² AL 5069-G Table 5 at p. 54.

²¹³ AL 5069-G Table 6 at p. 54.

²¹⁴ AL 5069-G Table 11 at p. 62.

²²³ Resolution G-3618 at Appendix C: Guidance on Gas RD&D Plans Provided to PG&E During Pre-Submittal Consultation with CPUC Staff (March 2025) details guidance ED staff provided to PG&E in advance of pre-submittal consultation briefings conducted March 25 and May 8, 2025, with CPUC subject matter experts (SMEs). ED staff provided additional guidance throughout Plan development regarding program requirements, including during meetings held March 11, April 8, and May 5, 2025.

CPUC Requirement D.23-11-069	PG&E Response in AL 5069-G	Compliance Assessment
<i>stakeholders, such as the Disadvantaged Communities Advisory Group.</i> ²¹¹	<p>\$639,127 to the Proactive Geohazard Risk Management Initiative²¹⁵ but lists no associated projects.²¹⁶ PG&E describes how it seeks to provide reliability, safety, equity, affordability, and environmental benefits through projects within each Investment Theme.²¹⁷ PG&E states that representatives presented and solicited input on the proposed 2025 Plan on April 18, 2025, and describes two questions posed by the DACAG which the representatives answered verbally.²¹⁸ PG&E includes information on Workshop Stakeholder Q&A,²¹⁹ high-level summaries from interviews, and incorporation strategies.²²⁰ PG&E also discusses input sought and integrated from CPUC Staff prior to Plan submittal.²²¹</p> <p>PG&E discusses the Initiatives within the Decarbonization theme in relation to renewable natural gas, renewable hydrogen, and synthetic</p>	<p>Proactive Geohazard Risk Management Initiative²²⁴ as well as on the priority technologies under the Innovative and Cost-Effective Integrity Management Initiative.²²⁵</p> <p>On the other hand, PG&E does not justify investment in hydrogen-related RD&D by demonstrating alignment with CPUC proceedings. The Commission has not provided guidance on the appropriate role of gas ratepayers in funding hydrogen RD&D, particularly as these projects would have further implications for ratepayer funding, including in future Gas RD&D Plans. Instead, the Commission has provided guidance that making renewable natural gas (RNG)²²⁶ more affordable for ratepayers is a priority. PG&E is not compliant with this requirement.</p>

²¹¹ [D.23-11-069](#) at p. 218. Consistent with [D.19-09-051](#) at p. 379.

²¹⁵ AL 5069-G Table 6 at p. 54.

²¹⁶ AL 5069-G at Appendix C.

²¹⁷ AL 5069-G at p. 42-44.

²¹⁸ AL 5069-G at p. 14.

²¹⁹ AL 5069-G at Appendix A.

²²⁰ AL 5069-G at p. 10-28.

²²¹ AL 5069-G at p. 6; 9; 14-15; & 40.

²²⁴ AL 5069-G at p. 56-57.

²²⁵ AL 5069-G at p. 57-59.

²²⁶ [R.13-02-008](#).

CPUC Requirement D.23-11-069	PG&E Response in AL 5069-G	Compliance Assessment
	methane, but also proposes hydrogen-specific activities. ²²²	
<i>(2) The annual research plan should include a proposed benefits analysis framework, created in consultation with Energy Division staff. This framework should provide sufficient quantitative estimates of potential safety, reliability, operational efficiency, improved affordability, environmental-related benefits, benefits to underserved communities, and numeric targets or a specified numeric range of potential benefits for projects.</i> ²²⁷	PG&E proposes a framework with suggested metrics related to reliability; safety; equity; operational efficiency and improved affordability; reduced GHG emissions; improved air quality; effectiveness of information sharing; adoption of Gas RD&D technology; technology development progress; and informed industry and/or company standards. ²²⁸ PG&E describes intended benefits from the Gas System Integrity ²²⁹ and Decarbonization Themes, ²³⁰ as well as specific metrics for assessing ratepayer benefits at the Initiative level. ²³¹ PG&E describes plans to select metrics appropriate for specific project scopes and stated objectives and intermittently assessing	PG&E did not propose an adequate benefits analysis framework created in consultation with ED staff. The Commission’s Uniform Impact Analysis Foundational Principles, which were provided to PG&E by CPUC staff, ²³⁶ outline criteria for demonstrating impacts attributable to each distinct RD&D investment, ²³⁷ which must otherwise not be expected to occur. ²³⁸ Ratepayer benefit must be demonstrated by incremental, value-added impacts ²³⁹ and may not be duplicative of existing RD&D activities, ²⁴⁰ including those conducted by the same administrator.

²²² AL 5069-G at p. 62-64.

²²⁷ [D.23-11-069](#) at p. 218-219. Consistent with [Resolution G-3586](#) (2022) at OP 5.

²²⁸ AL 5069-G at p. 47-48.

²²⁹ AL 5069-G at p. 42-43.

²³⁰ AL 5069-G at p. 43-44.

²³¹ AL 5069-G at p. 56-66.

²³⁶ See Appendix C: Guidance on Gas RD&D Plans Provided to PG&E During Pre-Submittal Consultation with CPUC Staff in March 2025.

²³⁷ Required by California Public Utilities Code Section 740.1 at (a).

²³⁸ [D.23-04-042](#) at Appendix A. See Resolution G-3618 at Appendix E: EPIC Foundational Principles for the Development of a Uniform Impact Analysis Framework. Consistent with [Resolution G-3603](#) (2024) at OP 6: “Once the [EPIC] program’s Uniform Impact Analysis framework is approved by the Commission, the California Energy Commission shall use this framework to demonstrate outcomes of achieving its proposed benefits for all current and future research projects including through quantitative methodologies.”

²³⁹ [D.23-04-042](#) at A-2.

²⁴⁰ California Public Utilities Code Section 740.1 (d). Consistent with [D.24-12-074](#) at p. 327.

CPUC Requirement <u>D.23-11-069</u>	PG&E Response in AL 5069-G	Compliance Assessment
	<p>progress towards the intended goals by measuring the selected metrics if appropriate.²³² PG&E also describes savings estimate methodology regarding the savings obtainable through RD&D projects, including Total Addressable Market (TAM); Serviceable Addressable Market (SAM); and Serviceable Obtainable Market (SOM) metrics, for use in the interim and to be adjusted upon the uniform impacts assessment framework being finalized.²³³ The Initiatives proposed in PG&E's 2025 Plan are not differentiated from those proposed in PG&E's 2024 Plan.</p> <p>Regarding the Emission Reduction Activities and Refined Reporting Initiative, PG&E states that "[m]uch of PG&E's current reporting still relies on generalized, population based emission factors, which can obscure the company's actual performance and hinder its ability to demonstrate the impact of its emissions reduction programs... [and meet] internal and regulatory emission reduction goals."²³⁴</p>	<p>Specifically, several of the safety and environmental benefits associated with the Innovative and Cost-Effective Integrity Management Initiative may be more appropriately attributed to impacts from the referenced Pipeline and Hazardous Materials Safety Administration (PHMSA) Mega Rule and mandates from the California Geological Energy Management Division (CalGEM).²⁴¹ The primary objective of PG&E's proposed Emission Reduction Activities and Refined Reporting Initiative appears to be meeting regulatory goals²⁴² rather than providing ratepayer benefit. PG&E is also not compliant with these requirements in assuming that "[n]ot all projects should be required to conduct an impacts analysis."²⁴³ PG&E is not compliant with this requirement.</p>

²³² AL 5069-G at p. 46.

²³³ AL 5069-G at p. 44-45.

²³⁴ AL 5069-G at p. 61.

²⁴¹ AL 5069-G at p. 57-59.

²⁴² AL 5069-G at p. 61-62.

²⁴³ AL 5069-G at p. 47.

CPUC Requirement D.23-11-069	PG&E Response in AL 5069-G	Compliance Assessment
	PG&E states in its assumptions that “[n]ot all projects should be required to conduct an impacts analysis [as] smaller projects may be more exploratory in nature, and the effort associated with the analysis may be unduly burdensome.” ²³⁵	
<i>(3) PG&E should cap its administrative costs for Gas RD&D at 10%... PG&E’s annual research plan should provide detail about administrative costs and require PG&E to allocate these cost categories to its administrative budget as outlined below.</i> ²⁴⁴	PG&E proposes to allocate ten percent of its annual total budget to Program Administrative costs, translating to \$826,700 in its 2025 Plan. ²⁴⁵	PG&E’s request for a Program Administrative budget of 10 percent of its annual Gas RD&D budget is compliant with the Commission’s requirement of a 10 percent cap. PG&E is compliant with this requirement. However, PG&E does not allocate proposed Program Administrative costs to specific categories using the required Administrative Budget template. ²⁴⁶ PG&E is not compliant with this requirement.
<i>4) In its annual research plan, PG&E should explain how its proposals for low carbon research projects (rather than zero/no carbon projects) support the State’s aggressive zero-carbon goals.</i> ²⁴⁷	PG&E states that “low-carbon RD&D projects can play a crucial role in supporting California’s aggressive zero carbon goals by acting as a transitional bridge between the current energy landscape and a zero- or -low carbon future.	PG&E sufficiently articulates how it seeks to develop low-carbon projects to support California’s zero-carbon goals while providing ratepayer benefit such as reliability and affordability. PG&E is compliant with this requirement.

²³⁵ AL 5069-G at p. 47.

²⁴⁴ [D.23-11-069](#) at p. 219. See Resolution G-3618 at Appendix B: Administrative Budget Cost Categories. Consistent with [Resolution G-3586](#) (2022) at OP 4.

²⁴⁵ AL 5069-G at p. 54 & 67.

²⁴⁶ See Resolution G-3618 at Appendix B: Administrative Budget Cost Categories.

²⁴⁷ [D.23-11-069](#) at p. 219-220. Reference to [Resolution G-3586](#) (2022) at p. 20-21. “In future Plans, SoCalGas should align its RD&D investments with evolving state energy policies.”

CPUC Requirement <u>D.23-11-069</u>	PG&E Response in AL 5069-G	Compliance Assessment
	<p>These projects can address immediate emission reductions while laying the groundwork for more comprehensive, long-term decarbonization strategies.”²⁴⁸ PG&E argues that:</p> <ol style="list-style-type: none">1. Low-carbon projects which provide incremental methane emissions reductions from existing gas infrastructure and operations “still represent a substantial improvement over current emission levels.”2. “Low-carbon fuels can be integrated into the existing gas infrastructure, providing an immediate reduction in emissions while maintaining energy reliability and affordability.”3. “By developing low-carbon solutions that can be implemented within the existing energy framework, utilities can attempt to avoid economic disruption that might accompany a rapid shift to zero-carbon technologies.”4. Low-carbon projects can “allow for the gradual adaptation of infrastructure, market mechanisms, and consumer behavior.”5. “Low-carbon R&D projects align with state policies that mandate gradual emission	<p>PG&E, however, should strive to focus and prioritize its RD&D budget on developing zero-carbon projects to accelerate progress towards meeting California’s zero-carbon goals, align with Commission policies and proceedings, and optimally benefit ratepayers. Going forward, PG&E should strive to propose zero carbon projects or otherwise justify why zero carbon RD&D projects are not possible and how these projects will promote the transition to zero-carbon research and outcomes.</p>

²⁴⁸ AL 5069-G at p. 49.

CPUC Requirement D.23-11-069	PG&E Response in AL 5069-G	Compliance Assessment
	reductions and support for renewable energy sources.” ²⁴⁹	
<i>(5) The annual research plan should include information on funds encumbered, spent, and unspent. The plan should also outline co-funding and collaborative partners and explain how P&GE engages with diverse academic populations. Further, PG&E should describe how its research plan will benefit underserved communities.</i> ²⁵⁰	PG&E conducted targeted interviews with six different organizations in 2025, including University of California Riverside and Irvine. ²⁵¹ PG&E describes its collaborative partners, including public agencies, research consortia, national laboratories, and universities. ²⁵² PG&E provides minimal detail and largely defines its expected role in each initiative as “[leading] research for the development, evaluation, and field testing of new industry technologies,” ²⁵³ citing additional though incomplete information in a Gas RD&D Project List. ²⁵⁴ This list includes information on funds encumbered, spent, and unspent for projects that commenced or are anticipated to commence between 2021 and 2025. ²⁵⁵ PG&E states that the leveraged co-funding opportunities amounted to every dollar of Gas RD&D funding expended on projects being matched by \$22 of	PG&E did not provide the necessary detail at the Initiative level. Additional information is particularly needed for the Clean Fuels Integration ²⁵⁷ and Sustainable Energy Solutions ²⁵⁸ Initiatives proposed in collaboration with CEC to demonstrate activities are complementary and not duplicative as required. ²⁵⁹ For clarity in reporting, PG&E shall indicate which projects have been funded via previous GRC cycles or other funding mechanisms as these are not affiliated with Investment Plans approved within this Gas RD&D Program. This is necessary in understanding progress, coordination, and attribution. In future Annual Plans and Reports, PG&E shall clearly delineate projects that may be funded within

²⁴⁹ AL 5069-G at p. 49-50.

²⁵⁰ [D.23-11-069](#) at p. 220.

²⁵¹ AL 5069-G at p. 11.

²⁵² AL 5069-G at p. 51-53.

²⁵³ AL 5069-G at p. 57; 59; 60; 62; 65; & 67.

²⁵⁴ AL 5069-G at Appendix C.

²⁵⁵ AL 5069-G at Appendix C.

²⁵⁷ AL 5069-G at p. 63-65.

²⁵⁸ AL 5069-G at p. 65-67.

²⁵⁹ California Public Utilities Code Section 740.1 at (d).

CPUC Requirement D.23-11-069	PG&E Response in AL 5069-G	Compliance Assessment
	funding from other sources in calendar year 2024. ²⁵⁶	this Gas RD&D Program, including the specific Initiative and approved Investment Plan associated with each project. PG&E is not compliant with this requirement.
<i>(6) PG&E shall hold an annual workshop prior to submitting its Tier 3 Advice Letter Annual Gas RD&D Investment Plan and shall consult with Energy Division to develop the workshop agenda. The annual workshop shall be held at least 90 days before submitting its annual Gas RD&D research plan to the CPUC to allow sufficient time to incorporate stakeholder feedback. At these workshops, PG&E shall present the results of the previous year’s RD&D program and obtain input regarding its proposed spending for the following calendar year. The workshop shall follow the guidance of D.19-09-051 Ordering Paragraph 30.²⁶⁰</i>	PG&E held an annual workshop prior to submitting its 2025 Plan on April 15, 2025, presenting the results of the previous year’s program and obtaining input regarding its proposed funding allocations for the following year. PG&E includes information on Workshop Stakeholder Q&A, ²⁶¹ high-level summaries from interviews, and incorporation strategies. ²⁶²	CPUC granted PG&E an extension to hold the workshop less than 90 days in advance of Plan submittal. PG&E engaged relevant, diverse stakeholders in its Annual Workshop held on March 31, 2025. PG&E is compliant with this requirement.
<i>(7) Prior to the workshop, PG&E should submit its RD&D annual report to Energy Division staff describing prior years’ RD&D program including a summary of ongoing and completed projects; funds expended,</i>	PG&E submitted its 2024 Gas RD&D Annual Report on March 31, 2025, prior to holding its Annual Workshop on April 15, 2025. PG&E provided a summary of ongoing and completed projects, ²⁶⁴ detailed \$1,863,639 in funds	PG&E submitted its 2024 Gas RD&D Annual Report on March 31, 2025, prior to holding its Annual Workshop on April 15, 2025. In its Annual Report, PG&E summarizes ongoing and completed projects, leveraged funding,

²⁵⁶ AL 5069-G at p. 67.

²⁶⁰ [D.23-11-069](#) at p. 220. Consistent with [D.19-09-051](#).

²⁶¹ AL 5069-G at Appendix A.

²⁶² AL 5069-G at p. 10-28.

²⁶⁴ [2024 Gas RD&D Annual Report](#) at Appendix 7.5 Project Summaries: Gas System Integrity & Appendix 7.6 Project Summaries: Decarbonization.

CPUC Requirement D.23-11-069	PG&E Response in AL 5069-G	Compliance Assessment
<i>funding recipients, and leveraged funding; and an explanation of the process used for selecting RD&D project areas as well as the structure of PG&E's RD&D portfolio.²⁶³</i>	expended, ²⁶⁵ listed 2024 funding recipients, ²⁶⁶ and described the process used for selecting projects ²⁶⁷ and structure of PG&E's Gas RD&D portfolio. ²⁶⁸ PG&E stated that "on average, every dollar of Gas RD&D funding expended on projects is matched by \$22 of funding from other sources." ²⁶⁹	and its project selection process as required. PG&E is compliant with this requirement.
<p>(8) PG&E shall provide Energy Division staff with the workshop presentation materials as well as documentation on stakeholders consulted in the development of RD&D projects, both at least one week before the workshop.</p> <p>(9) PG&E shall engage relevant stakeholders to encourage their attendance at the workshop, such as the California Energy Commission, the Disadvantaged Communities Advisory Group, the U.S. Department of Energy, and other</p>	PG&E states that it leveraged its Gas RD&D website, CPUC proceeding service lists, and its Diversity Equity Inclusion & Belonging (DEIB) team to notice the workshop, ultimately engaging attendees from 39 different organizations in 2025. ²⁷¹ PG&E includes information on Workshop Stakeholder Q&A ²⁷² and an Annual Stakeholder Workshop Attendee Organization List, which includes national laboratories, public agencies, industry organizations, universities, minority-serving organizations (MSIs), community-based organizations (CBOs), Tribal Nations, and private companies. ²⁷³	PG&E engaged relevant, diverse stakeholders in its Annual Workshop held on April 15, 2025. PG&E is compliant with these requirements.

²⁶³ [D.23-11-069](#) at p. 220.

²⁶⁵ [2024 Gas RD&D Annual Report](#) at p. 10.

²⁶⁶ [2024 Gas RD&D Annual Report](#) at p. 15.

²⁶⁷ [2024 Gas RD&D Annual Report](#) at p. 22-24.

²⁶⁸ [2024 Gas RD&D Annual Report](#) at p. 25-33.

²⁶⁹ [2024 Gas RD&D Annual Report](#) at p.10-11.

²⁷¹ AL 5069-G at p. 12.

²⁷² AL 5069-G at Appendix A.

²⁷³ AL 5069-G at p. 10-13.

CPUC Requirement D.23-11-069	PG&E Response in AL 5069-G	Compliance Assessment
<i>organizations engaged in gas research and development.</i> ²⁷⁰		
<i>(11) PG&E's research plan may separately allocate and track funds for gas research development and deployment in one database that tracks all ratepayer-funded R&D and Development projects across these industries.</i> ²⁷⁴	PG&E proposes to allocate \$56,987 towards its proportional share of developing a comprehensive Gas RD&D Database. ²⁷⁵	PG&E allocated funds for a Gas RD&D Database. PG&E is compliant with this requirement.

CPUC Requirement <i>Public Utilities Code 740.1</i> ²⁷⁶	PG&E Response in AL 5069-G	Compliance Assessment
<i>(a) Projects should offer a reasonable probability of providing benefits to ratepayers.</i> ²⁷⁷	PG&E states that it plans to renew its membership in three research consortia, with estimated dues amounting to \$364,868 in calendar year 2026, ²⁷⁹ though it is unclear if PG&E is requesting funding for this purpose as no associated funds are proposed in its 2025 Plan annual budget allocations. ²⁸⁰ PG&E includes two projects under the Innovative and Cost-Effective Integrity	PG&E does not provide sufficient detail or propose demonstrably compliant investments. The Commission has provided guidance dictates that Gas RD&D projects shall occur in the State of California with the exception of those affiliated with a federal lab, ²⁸² and that consortia membership dues are Administrative Activities under Program
<i>(b) Expenditures on projects which have a low probability for success should be minimized.</i> ²⁷⁸		

²⁷⁰ [D.23-11-069](#) at p. 220-221.

²⁷⁴ [D.23-11-069](#) at p. 221.

²⁷⁵ AL 5069-G at p. 54 & 67.

²⁷⁶ The Commission's compliance assessment of California Public Utilities Code 740.1 at (c) is captured in the compliance assessment of AL 5069-G with [D.23-11-069](#) at (2) and (4) above.

²⁷⁷ California Public Utilities Code Section 740.1 at (a).

²⁷⁸ California Public Utilities Code Section 740.1 at (b).

²⁷⁹ AL 5069-G at p. 68.

²⁸⁰ AL 5069-G Table 5 at p. 54.

²⁸² [Resolution G-3601](#) (2023) at OP 5.

	<p>Management Initiative on its Gas RD&D Project List classified as “Funded by Membership Fee.”</p> <p>In its 2024 Gas RD&D Annual Report, PG&E states that for “projects supported by OTD and UTD, PG&E did not provide direct funding. Instead, PG&E paid annual dues and then determined how these dues were allocated across projects. For projects led by the other consortia and R&D groups, PG&E paid annual dues and/or paid additional funding in support of specific projects.”²⁸¹</p>	<p>Administrative costs,²⁸³ both of which rely on demonstration of ratepayer benefit.²⁸⁴ Further, projects costs related to each research consortium should be detailed.²⁸⁵ PG&E is not compliant with this requirement.</p>
<p><i>(d) Projects should not unnecessarily duplicate research currently, previously, or imminently undertaken by other electrical or gas corporations or research organizations.</i>²⁸⁶</p>	<p>PG&E discusses high-level coordination with other Gas RD&D administrators²⁸⁷ and states broadly for each initiative that it plans to “convene regularly with the other Gas R&D Administrators to proactively identify potential areas of overlap and explore opportunities for collaboration and synergy across their respective portfolios.”²⁸⁸ As compared to existing Gas RD&D activities conducted by other administrators, PG&E states that there is no duplication as it is prioritizing the specific needs of PG&E.²⁸⁹ The Initiatives proposed</p>	<p>PG&E does not demonstrate that proposed investments do not unnecessarily duplicate research currently, previously, or imminently undertaken at the Initiative level, including activities associated with the Natural Gas Leak Abatement (NGLA) Program; Alliance for Renewable Clean Hydrogen Energy Systems (ARCHES); and hydrogen blending pilots.²⁹⁰ PG&E is not compliant with this requirement.</p>

²⁸¹ [2024 Gas RD&D Annual Report](#) at p. 19.

²⁸³ [D.15-04-020](#) at OP 16.

²⁸⁴ [Resolution G-3601](#) (2023) at OP 6b.

²⁸⁵ [Resolution G-3586](#) (2022) at OP 5.

²⁸⁶ California Public Utilities Code Section 740.1 at (d). Consistent with: [Resolution G-3603](#) (2024) at OP 4 & [D.24-12-074](#) at p. 327.

²⁸⁷ AL 5069-G at p. 13-14.

²⁸⁸ AL 5069-G at p. 57; 59; 60; 62; 65; & 67.

²⁸⁹ AL 5069-G at p. 57; 59; 60; 62; 65; & 67.

²⁹⁰ [D.22-12-057](#).

	in PG&E's 2025 Plan are not differentiated from those proposed in PG&E's 2024 Plan.	
<i>(e) Each project should also support one or more of the following objectives: (1) Environmental improvement. (2) Public and employee safety. (3) Conservation by efficient resource use or by reducing or shifting system load. (4) Development of new resources and processes, particularly renewable resources and processes which further supply technologies. (5) Improve operating efficiency and reliability or otherwise reduce operating costs.²⁹¹</i>	PG&E proposes budget allocations broken down by Initiatives within each Investment Theme: ²⁹² Gas System Integrity ²⁹³ and Decarbonization. ²⁹⁴ Initiatives within the Gas System Integrity Theme include Proactive Geohazard Risk Management; Innovative and Cost-Effective Integrity Management; Advanced Leak Detection and Repair; and Emission Reduction Activities and Refined Reporting. Initiatives within the Decarbonization Theme include Clean Fuels Integration and Sustainable Energy Solutions.	Each of PG&E's proposed Initiatives supports one or more of the required objectives. PG&E is compliant with this requirement.

²⁹¹ California Public Utilities Code Section 740.1 at (e).

²⁹² AL 5069-G Table 5 at p. 54.

²⁹³ AL 5069-G Table 6 at p. 54.

²⁹⁴ AL 5069-G Table 11 at p. 62.