PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

ENERGY DIVISION

Agenda ID# 24445
RESOLUTION G-3622
December 3, 2026

RESOLUTION

Resolution G-3622. California Energy Commission's (CEC's) Gas Research, Development, and Demonstration Plans for Fiscal Years 2024-2025 (CEC Advice Letter 12-G) and 2025-2026 (CEC Advice Letter 10-G-A).

PROPOSED OUTCOME:

- Approves, in part, the California Energy Commission's (CEC's) Gas Research, Development, and Demonstration (RD&D) Plans for Fiscal Years (FYs) 2024-2025 (CEC Advice Letter 12-G) and 2025-2026 (CEC Advice Letter 10-G-A) with budgets of $24M requested in each, totaling $48M, pursuant to Decision (D.) 04-08-010. Directs the CEC to submit revised Gas RD&D Plans via Tier 2 Advice Letters with modifications described in this Resolution.
- Modifies the CEC's Gas RD&D compliance filing requirements.

SAFETY CONSIDERATIONS:

- This Resolution approves safety-related RD&D funding.

ESTIMATED COST:

- Approves CEC utilization of $21.6M and $9,476,690 in previously collected unspent ratepayer funds to be used first for each Plan, respectively. Total additional Ratepayer Cost is expected to be $16,923,310 but may be modified as described herein.

By CEC Advice Letter 12-G for FY 2024-2025, Filed on August 8, 2025, and CEC Advice Letter 10-G, 10-G-A for FY 2025-2026, Filed on March 28, 2025, October 3, 2025.

SUMMARY

This Resolution approves in part and modifies in part the California Energy Commission's (CEC's) Advice Letters (ALs) 12-G and 10-G-A filed on August 8, 2025, and October 3, 2025, respectively. These ALs contain proposed Gas Research, Development, and Demonstration (RD&D) Investment Plans (Gas RD&D Plans or Plans) for Fiscal Years (FYs) 2024-2025 (the 2024 Plan) and 2025-2026 (the 2025 Plan).

This Resolution approves, in part, the CEC's Gas RD&D Plans with proposed budgets of $24 million each for its 2024 Plan and its 2025 Plan, totaling $48 million. This Resolution reviews the CEC's 2024 and 2025 Plans against a list of consolidated requirements from prior decisions and resolutions. This Resolution finds that CEC Plan omissions can be remedied with additional information and directs the CEC to submit its revised 2024 and 2025 Gas RD&D Plans via Tier 2 ALs within 60 days with modifications as described below.

This Resolution relies on staff review of the CEC's response to Energy Division's data request for detailed information on balances of previously authorized unencumbered and unspent funding. This Resolution establishes how the CEC shall use these funds to minimize new additional costs to ratepayers to fund the 2024 and 2025 Plans. This process ensures gas ratepayer funds already collected are spent to further evolving State energy policy pertaining to current climate and affordability goals. This Resolution explains why the CEC is directed to use a portion of its previously authorized funds on the Initiatives identified in the 2024 and 2025 Plans rather than continue administrative efforts to attempt to encumber and spend previously collected funds in support of Plan Initiatives from distant years in the past. This Resolution details how use of previously collected funds for the 2024 and 2025 Plans will reduce ratepayer collections since the CEC will only need to collect a portion of the total budgets required to execute on the 2024 and 2025 Plans from the gas ratepayer surcharge. The Resolution provides a mechanism for the CEC to update the CPUC on the exact approved fund balances updated since April 2026 and allows for ratepayer collections to be modified accordingly.

The CEC shall continue to encumber funds for grants from approved Gas RD&D Plans for which less than two years have passed since Commission Plan approval and spend funds for which less than four years have passed since encumbrance, amounting to $53,603,242 as reported by the CEC as of April 2026. However, based on reporting in April 2026, the CEC has identified and shall utilize the identified $31,076,690 balance of unspent and unencumbered funds from previously approved Gas RD&D Plans prior to accessing additional ratepayer funds. These funds are comprised of $7.7M in unspent encumbered funds from CEC's FY 2015-2016 Plan approved in June 2015 through its FY 2019-2020 Plan approved in August 2019. These funds are further comprised of an additional $16M in unencumbered funds that have not been allocated and do not currently have an anticipated solicitation release as of April 2026, including funds from the CEC's FY 2016-2017 Plan approved in April 2017 through its FY 2023-2024 Plan approved in May 2024. The CPUC will true-up the balance of unspent funds which may have been spent or encumbered since April 30, 2026, pursuant to updated information the CEC provides in its Tier 2 ALs, as described in this Resolution.

Upon Commission approval of the CEC's 2024 and 2025 Plans via Tier 2 AL, the CEC is authorized to request a total of approximately $16,923,310 in new ratepayer funds from the CPUC's Gas Consumption Surcharge Fund as follows:

Table 1: Calculations of CEC's 2024 & 2025 Gas RD&D Plan Budgets

	2024 Plan Budget	2025 Plan Budget
Utilized Unspent Funds for Initiatives	$ 21,600,000	$ 9,476,690
New Ratepayer Funds for Initiatives	$ 0	$ 12,123,310
New Ratepayer Funds for Program Administration	$ 2,400,000	$ 2,400,000
Total New Ratepayer Funds	$ 2,400,000	$ 14,523,310
Total Authorized Budget for Initiatives	$ 21,600,000	$ 21,600,000
Total Authorized Budget for Program Administration	$ 2,400,000	$ 2,400,000
Total Authorized Annual Budget	$ **24,000,000**	$ **24,000,000**
Total Utilized Unspent Funds	$ **31,076,690**	
Total New Ratepayer Funds	$ **16,923,310**	

This Resolution modifies the Annual Report deadline set in 2006 via Resolution G-3394 (annually by October 31)[1] to promote coordination and transparency in comparing

[1] Modifies Resolution G-3394 (2006): Approving CEC's CY 2007 Gas RD&D Plan at Ordering Paragraph (OP) 2. "The CEC shall submit its… Annual [Report] by October 31st."

outcomes across CPUC ratepayer-funded RD&D programs, namely the Electric Program Investment Charge (EPIC). Annual Reports shall be due June 1 of each year, pertaining to the previous CY. To accommodate the transition from FY to calendar year (CY) reporting, the CEC's next Gas RD&D Annual Report, currently due October 31, 2026, for FY 2025-2026, shall be due June 1, 2027, and cover a one-and-a-half-year period: July 2025 through December 2026.

This Resolution reiterates and refines existing program requirements from prior decisions and resolutions in a consolidated list, reflective of refinements to these requirements adopted in this Resolution. Table 2 below aggregates the compliance filing requirements as described in this Resolution:

Table 2: CEC Gas RD&D Program Compliance Filings

Cadence	CEC Submittal	Recipient
Semi-annually on January 15 (pertaining to July – December of the previous year) and July 15 (pertaining to January – June of that year) per Resolution G-3622.	**Regular program status reporting via Tier 1 Advice Letter**, including: • Approved fund balances, including identification of disencumbered funds; unencumbered funds for which over two years have passed since approval; and unspent encumbered funds for which over four years have passed since encumbrance.[2] • For unspent encumbered funds for which over four years have passed since encumbrance, the CEC shall request of Energy Division a limited extension of these timeframes, including justification for the additional time needed, in order to maintain the integrity of the timeframes as described herein. • Requests for fundshifting between Initiatives in the same Plan at or above 20% of Commission-approved budgets. • Accrued interest and commercial benefits.[3] • Requests for modifying research topics for Initiatives in Commission-approved Plans.	Energy Division Tariff Unit Energy Division Gas RD&D staff
Annually per D.04-08-010[4]	**Gas RD&D Annual Investment Plan** via Tier 3 AL according to the criteria and consultation processes described herein.	Energy Division Tariff Unit Energy Division Gas RD&D staff

[2] Reporting required per Resolution G-3584 (2021) at OP 4 & Resolution G-3592 (2023) at OP 7.
[3] D.04-08-010 at p. 42 & OP 21.
[4] D.04-08-010 at p. 44 requires Annual Plan submittal to the Energy Division for review and approval.

and Resolution G-3571.[5]		
By June 1 annually pertaining to the previous calendar year[6] per Resolution G-3622.	**Gas RD&D Annual Report** via letter pursuant to Energy Division guidance provided via a template.	Energy Division Director Energy Division Central Files Energy Division Gas RD&D staff
Annually per Resolution G-3622.	**Requests for fund transfers** via letter from CPUC's Fund to CEC's Fund, requiring demonstration that requested new ratepayer funds are offset by interest, commercial benefits, and unencumbered and unspent funds as defined herein.	Energy Division Director Energy Division Central Files Energy Division Gas RD&D staff
Ongoing per Resolution G-3622.	**Interagency coordination on draft Grant Funding Opportunities (GFOs)** via letter, including identification of the associated Plan year and Initiative, to facilitate consultation: • Early in solicitation scoping and concept development and • During later phases involving notices of proposed awards and agreement document development prior to CEC Business Meeting approval.	Energy Division Director Energy Division Central Files Energy Division Gas RD&D staff

BACKGROUND

The CPUC's Gas RD&D program is governed by statute, as well as CPUC decisions and resolutions related to the program.

Statutory Authority for Gas RD&D Program

The primary statute governing the Gas RD&D program was created via Assembly Bill (AB) 1002 (Wright, 2002)[7] which required the Commission to establish a natural gas surcharge to fund gas-related Public Purpose Programs (PPP).

[5] Resolution G-3571 (2020) at OP 6. "In developing the future Natural Gas R&D Plans, the CPUC requests that the CEC submit future Natural Gas R&D Plans via the Tier 3 Advice Letter/business letter process."
[6] Resolution G-3622 modifies the Resolution G-3394 (2006) deadline of October 31.
[7] AB 1002 (Wright, 2000). *Natural Gas: Consumption Surcharge* at Section 2 Article 10 added Sections 890-900 to Chapter 4 of Part 1 of Division 1 of the Public Utilities Code.

Gas RD&D Program 2004 Foundational Decision

In 2002, the CPUC instituted Rulemaking (R.) 02-10-001 to implement AB 1002 (Wright, 2002), resulting in D.04-08-010,[8] the Gas Research, Development, and Demonstration (RD&D) Program's foundational decision. In the decision, the Commission appointed the CEC as its administrator of the Gas RD&D Program.[9] The CEC is required to submit proposed Annual Gas RD&D Investment Plans (Plans) for consideration, subject to Commission approval via resolution.[10] For this, the decision designates Energy Division as the Commission's advisor in assisting with reviewing and adopting Plans.[11]

In adopting the Gas RD&D program, the CPUC referred to Public Utilities (PU) Code Section 740.1 as the adopted definition of public interest R&D,[12] which 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.
(b) Expenditures on projects which have a low probability for success should be minimized.[13]
(c) Projects should be consistent with the corporation's resource plan.[14]
(d) Projects should not unnecessarily duplicate research currently, previously, or imminently undertaken by other electrical or gas corporations or research organizations.
(e) Each project should also support one or more of the following objectives:

[8] D.04-08-010: Opinion Regarding Implementation of AB 1002, Establishing a Natural Gas Surcharge.
[9] D.04-08-010 at OP 18.
[10] D.04-08-010 at p. 37 & 42.
[11] D.04-08-010 at p. 32.
[12] D.04-08-010 at Finding of Fact (FOF) 31 & OP 17.
[13] The Commission's compliance assessments of Public Utilities Code 740.1 at (a) and (b) are captured in the compliance assessments of AL 12-G and 10-G-A with Resolution G-3603 (2024): Approving CEC's FY 2023-2024 Gas RD&D Plan at OP 6. "Once the Electric Program Investment Charge (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."
[14] The Commission's compliance assessment of Public Utilities Code 740.1 at (c) is captured in the compliance assessments of AL 12-G and 10-G-A with Resolution G-3592 (2023): Approving CEC's FY 2022-2023 Gas RD&D Plan at OP 5c & d. "Describe its process for seeking collaborative and co-funding opportunities, detailed proposals for such opportunities, or explain why it did not consider collaborative and co-funding opportunities [and] include information on coordination with the IOUs and other research stakeholders at both a high-level on coordination process and project level details of partnership, costs, and co-funding within the body of the research plan."

(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.[15]

In D.04-08-010, the CPUC set the following additional criteria for approved Gas R&D projects:

1) Focus on energy efficiency, renewable technologies, conservation and environmental issues,[16]
2) Support State Energy policy,
3) Offer a reasonable probability of providing benefits to the general public,[17] and
4) Consider opportunities for collaboration and co-funding opportunities[18] with other entities.[19]

Gas RD&D Program Budget

The Commission capped CEC's Gas RD&D Program budget at $24 million in annual funding, including all necessary administrative costs; the budget reached the maximum amount allowed in 2009 and has remained at this same level to the present.[20] The Commission adopted a zero-based budget,[21] for which the Commission may approve

[15] Consistent with Executive Order (EO) N-5-24 (October 30, 2024) On reducing rates.
[16] The Commission's compliance assessments of D.04-08-010 at 1) is captured in the compliance assessments of AL 12-G and 10-G-A with Public Utilities Code 740.1 at (e) "Each project should also support one or more of the following objectives…"
[17] The Commission's compliance assessments of D.04-08-010 at 3) is captured in the compliance assessments of AL 12-G and 10-G-A with Resolution G-3603 (2024) at OP 6.
[18] The Commission's compliance assessments of D.04-08-010 at 4) is captured in the compliance assessments of AL 12-G and 10-G-A with Resolution G-3592 (2023) at OP 5c. "[The CEC shall] describe its process for seeking collaborative and co-funding opportunities."
[19] D.04-08-010 at FOF 32.
[20] D.04-08-010 at p. 37-38.
[21] D.04-08-010 at fn. 48. "Under zero-based budgeting, projects that qualify would be identified, including cost and benefit analysis, and then summed. The Commission would determine the total appropriate funding, and include this amount in determining a surcharge. In the event a zero-based budget has not been set in time for January 1 surcharge rate updates, the surcharge will be set using the amount of the annual program spending cap. Over or under collections (including balances in excess of project costs) of R&D costs will be adjusted for in the following January 1 surcharge rates."

up to the $24 million budget cap upon determination of the eligibility of each individually proposed budget allocation or Plan element, referred to as Initiatives. The Commission adopted the zero-based method to approve Gas RD&D Annual Plans via resolution and inform utility surcharge rates and collections in the upcoming year.[22] The CEC may only request quarterly transfers from the CPUC's Gas Consumption Surcharge Fund (CPUC's Fund) consistent with the zero-based budget adopted via Commission resolution approving its Plans.[23] Disbursements from the CPUC's Fund to the Gas RD&D administrator, designated as the CEC's Public Interest RD&D Fund, shall not exceed the zero-based budget adopted via resolution.[24]

CPUC Gas RD&D Program Requirements from Prior Resolutions

After adopting the Gas RD&D program via decision in 2004, the Commission reiterated, clarified, or refined requirements for CEC's Gas RD&D Program via 21 resolutions that each considered and approved the CEC's Gas RD&D Plans and associated budgets, beginning in 2004.[25] All applicable Commission requirements set via resolution were adopted by the Commission in support of the program oversight process, and the 21 resolutions were reviewed in advance of this Resolution to identify key orders for the Commission's evaluation of CEC's proposed Plans, detailed in *Appendix A: Key CPUC Gas RD&D Resolution Requirements*.

CEC AL 12-G Requests for 2024 Plan Approval

The CEC submitted its proposed 2024 Plan via Tier 3 CEC AL 6-G on March 27, 2024. The CEC replaced AL 6-G with a supplement (AL 6-G-A) on November 7, 2024. The CEC withdrew CEC AL 6-G-A on February 13, 2025, after consultation with Energy Division staff. The CEC resubmitted its 2024 Plan (CEC AL 12-G) on August 8, 2025. In CEC AL 12-G, the CEC seeks approval of its proposed 2024 Gas RD&D Plan, authorized

[22] D.04-08-010 at p. 44.
[23] D.04-08-010 at p. 41-42 & OP 20.
[24] D.04-08-010 at p. 41-42.
[25] Resolution G-3371 (2004): Approving CEC's CY 2005 Gas RD&D Plan.

by D.04-08-010 at up to $24 million with the proposed budget allocations to three Initiatives as shown below:

Table 3: 2024 Gas RD&D Plan Proposed Budget[26]		
Investment Theme	**Initiative Title**	**2024 Plan Budget**
Gas Decommissioning	Support Equitable, Safe, and Cost-Effective Decarbonization of California's Gas System	$ 7,600,000
Gas System Safety	Innovations for Cost-Effective Operation and Maintenance of Critical Infrastructure During the Gas Transition	$ 7,815,489
Renewable Generation	Fuel-Flexible Distributed Power Generation	$ 6,000,000
Database Development		$ 184,511
Program Administration		$ 2,400,000
	ANNUAL TOTAL:	**$ 24,000,000**

Gas Decommissioning Theme Proposed Initiatives

The CEC states that it seeks to develop Initiatives within the Gas Decommissioning Theme to "highlight important elements of variability in transition opportunity and effects" to "foster greater energy equity and build a more systematic ground-level understanding of the technology needs, opportunities, and challenges in decarbonizing the gas system."[27]

Support Equitable, Safe, and Cost-Effective Decarbonization of California's Gas System

The CEC states that it seeks to develop projects within the Support Equitable, Safe, and Cost-Effective Decarbonization of California's Gas System Initiative to understand and influence the micro-conditions of societal gas use and the adoption of alternatives; leverage data and research insights on gas conversion activities; and guide decision-making by accelerating information transference.[28] The CEC proposes to allocate $7,600,000 in its 2024 Plan to this Initiative.[29]

[26] AL 12-G at p. 2 & 24.
[27] AL 12-G at p. 24-25.
[28] AL 12-G at p. 25-32.
[29] AL 12-G at p. 2 & 24.

Gas System Safety Theme Proposed Initiatives

The CEC states that it seeks to develop Initiatives within the Gas System Safety Theme to coordinate with Investor-Owned Utilities (IOUs) in "developing innovative tools and technologies to better assess system vulnerability and prevent damages from geohazards, excavation, corrosion, and other threats" to "reduce costs during [the gas] transition while ensuring safety and reliability."[30]

Innovations for Cost-Effective Operation and Maintenance of Critical Infrastructure During the Gas Transition

The CEC states that it seeks to develop projects within the Innovations for Cost-Effective Operation and Maintenance of Critical Infrastructure During the Gas Transition Initiative "to improve the costs, accuracy, and data quality in operations and maintenance of underground gas storage wells and transmission pipelines by developing strategies and resources, such as continuous monitoring technologies, less intrusive inspection methods, and data management and communication systems."[31] The CEC proposes to allocate $7,815,489 in its 2024 Plan to this Initiative.[32]

Renewable Generation Theme Proposed Initiatives

The CEC states that it seeks to develop Initiatives within the Renewable Generation Theme to develop decarbonized combustion and non-combustion generation technologies "that use different fuels based upon the availability and costs of the renewable fuel and the fuel blending infrastructure" in distributed generation applications.[33]

Fuel-Flexible Distributed Power Generation

The CEC states that it seeks to develop projects within the Fuel-Flexible Distributed Power Generation Initiative to adapt and demonstrate fuel-flexible "distributed generation technologies, such as reciprocating engines, gas turbines, linear generators,

[30] AL 12-G at p. 32-33.
[31] AL 12-G at p. 33-38.
[32] AL 12-G at p. 2 & 24.
[33] AL 12-G at p. 39-40.

and fuel cells," while ensuring "performance, operability, cost, low-emissions, and decarbonization goals and targets" are met.[34] The CEC proposes to allocate $6,000,000 in its 2024 Plan to this Initiative.[35]

Gas RD&D Database Development

The CEC proposes to allocate $184,511 in its 2024 Plan for its proportional share of developing a comprehensive Gas RD&D Database.[36]

Program Administration

The CEC proposes to allocate ten percent of its FY 2024-2025 budget to administrative costs, totaling $2.4 million in its 2024 Plan.[37]

CEC AL 10-G-A Requests for 2025 Plan Approval

The CEC submitted its proposed 2025 Plan via Tier 3 CEC AL 10-G on March 28, 2025. The CEC replaced CEC AL 10-G with a supplement (CEC AL 10-G-A) on October 3, 2025. In CEC AL 10-G-A, the CEC seeks approval of its proposed 2025 Gas RD&D Plan, authorized by D.04-08-010 at up to $24 million with the proposed budget allocations to three Initiatives shown below:

[34] AL 12-G at p. 40-49.
[35] AL 12-G at p. 2 & 24.
[36] AL 12-G at p. 2 & 24.
[37] AL 12-G at p. 2, p. 24, & Appendix F.

Table 4: 2025 Gas RD&D Plan Proposed Budget[38]		
Investment Theme	**Initiative Title**	**2025 Plan Budget**
Gas Decommissioning	Social Science Research for Gas Decommissioning in the Mid and Long Term	$ 3,000,000
	Pilot Projects to Advance Gas Decommissioning	$ 6,000,000
Building Decarbonization	Networked Geothermal Heat Pumps	$ 12,600,000
Program Administration		$ 2,400,000
	ANNUAL TOTAL:	**$ 24,000,000**

Gas Decommissioning Theme Proposed Initiatives

The CEC states that it seeks to develop Initiatives within the Gas Decommissioning Theme to address the "substantial social, technological, political, and economic challenges to achieving the transition to cleaner energy resources" and "away from aging and high-maintenance portions of gas infrastructure."[39]

Social Science Research for Gas Decommissioning in the Mid- and Long-Term

The CEC states that it seeks to develop projects within the Social Science Research for Gas Decommissioning in the Mid- and Long-Term Initiative to create "a portfolio of research that investigates societal elements" and "[provides] supply chain, communications, tools, and community development recommendations that could help enable the transition."[40] The CEC proposes to allocates $3,000,000 in its 2025 Plan to this Initiative.[41]

Pilot Projects to Advance Gas Decommissioning

The CEC states that it seeks to develop projects within the Pilot Projects to Advance Gas Decommissioning Initiative which will involve "gas decommissioning pilot demonstrations to gather empirical data on technical, economic, and environmental

[38] AL 10-G-A at p. 2 & 22.
[39] AL 10-G-A at p. 23-25.
[40] AL 10-G-A at p. 25-31.
[41] AL 10-G-A at p. 2 & 22.

feasibility and assess practical implications and challenges of midterm gas decommissioning."[42] The CEC proposes to allocate $6,000,000 in its 2025 Plan to this Initiative.[43]

Building Decarbonization Theme Proposed Initiatives

The CEC states that it seeks to develop Initiatives within the Building Decarbonization Theme to support "the shift to community-scale approaches that enable scaling, higher efficiencies, and greater impacts," including by harnessing networked geothermal heat pump (GHP) technology as a means of "decreasing overall energy consumption, replacing fossil gas use, and enabling high thermal efficiencies at a large scale."[44]

Networked Geothermal Heat Pumps

The CEC states that it seeks to develop projects within the Networked Geothermal Heat Pumps Initiative to "assess the potential cost-effectiveness and comparative environmental advantages of deploying networked geothermal technology as a zero-emission heating and cooling alternative for gas customers in California through a two-phase approach," including one or more pilot demonstrations.[45] The CEC proposes to allocate $12,600,000 in its 2025 Plan to this Initiative.[46]

Program Administration

CEC proposes to allocate ten percent of its FY 2024-2025 budget to administrative costs, totaling $2.4 million in its 2025 Plan.[47]

NOTICE

Notice of CEC 12-G was made by publication on the Commission's Daily Calendar on August 25, 2025. Notice of CEC AL 10-G-A was made by publication on the

[42] AL 10-G-A at p. 31-37.
[43] AL 10-G-A at p. 2 & 22.
[44] AL 10-G-A at p. 37-38.
[45] AL 10-G-A at p. 38-45.
[46] AL 10-G-A at p. 2 & 22.
[47] AL 10-G-A at p. 2, p. 22, & Appendix F.

Commission's Daily Calendar on October 8, 2025. CEC states that a copy of the Advice Letters were mailed and distributed in accordance with Section 4 of General Order 96-B.

PROTESTS

CEC AL 12-G was not protested.

CEC AL 10-G was protested by the Public Advocates Office at the CPUC (Cal Advocates) on April 17, 2025. CEC issued a reply to this protest on April 30, 2025. Cal Advocates asserted that, in AL 10-G, CEC does not sufficiently demonstrate compliance with Public Utilities Code Section 740.1;[48] D.04-08-010; [49] and CPUC Resolution G-3603,[50] which require that Gas RD&D investments be coordinated with and not duplicative of existing Gas RD&D efforts underway. Specifically, Cal Advocates stated that CEC should further demonstrate how the (1) Social Science Research for Gas Decommissioning in the Mid- and Long-Term and (2) Pilot Projects to Advance Gas Decommissioning Initiatives are coordinated with and distinct from efforts underway related to Senate Bill (SB) 1221;[51] CPUC's Long-Term Gas Planning Proceeding;[52] and those conducted by other research stakeholders. Cal Advocates also stated that the CEC does not demonstrate how the Social Science Research for Gas Decommissioning in the Mid- and Long-Term Initiative is complementary to and distinct from the University of California, Los Angeles (UCLA) Mindful Gas Decommissioning Research Project.[53] Cal Advocates also argued that CEC does not explain how the Pilot Projects to Advance Gas Decommissioning Initiative is coordinated with and distinct from investments proposed in Southern California Gas' (SoCalGas) 2023 Gas R&D Investment Plan[54] as approved and modified in CPUC Resolution G-3601.[55] Cal Advocates also highlighted where CEC discusses that "[w]hile network geothermal demonstrations are advancing

[48] California Public Utilities Code Section 740.1 at (d).
[49] D.04-08-010 at p. 47 & 50.
[50] Resolution G-3603 (2024) at OP 4.
[51] Senate Bill (SB) 1221 (2024). *Gas Corporations: Ceasing Service: Priority Neighborhood Decarbonization Zones.*
[52] R.24-09-012 (2024): Order Instituting Rulemaking (OIR) to Establish Policies, Processes, and Rules to Ensure Safe and Reliable Gas Systems in California and Perform Long-Term Gas System Planning.
[53] University of California, Los Angeles (UCLA), Institute of the Environment and Sustainability, *Mindful Gas Decommissioning Research Project* (2023).
[54] SoCalGas' 2023 Gas RD&D Plan Tier 3 Advice Letter (5991-G).
[55] Resolution G-3601 (2023): Approving SoCalGas' 2023 Gas RD&D Plan.

in other states, research that accounts for California's climate, population, and other unique features is critical to understanding the role this technology can play in helping California achieve its climate and clean energy goals"[56] and recommended that CEC be required to identify more specific gaps it seeks to address with the Network Geothermal Heat Pumps Initiative.

CEC submitted a supplement to CEC AL 10-G to demonstrate how proposed investments will avoid unnecessarily duplicating prior, current, or future research per Gas RD&D program requirements, including information provided in CEC's reply to Cal Advocates' protest. CEC provided the following additional information in its supplement CEC AL 10-G-A, related to:

- Social Science Research for Gas Decommissioning in the Mid- and Long-Term & Pilot Projects to Advance Gas Decommissioning Initiatives. Specifically, the CEC stated:

  In August 2024, CEC staff presented early initiative outlines to IOUs for feedback. CEC and SoCalGas staff discussed and agreed on the feasibility of developing pilot projects in Northern California and Southern California based on preliminary studies by E3 and RAND. CEC staff and IOUs collectively agreed that further assessment is needed on system integration and community outreach methods. CEC and IOUs agreed to continue coordination with one another throughout SB 1221 implementation.[57]

  SoCalGas proposed several research areas in its 2023 RD&D Program Research Plan on gas decarbonization that complement but differ from the CEC's proposed initiatives on gas decommissioning. The SoCalGas plan describes that its programs would aim to: 1) advance clean gas production technology for gas decarbonization (Low Carbon Resources Program), 2) enhance pipeline safety (Gas Operations Program), and 3) improve gas equipment efficiency (Customer End-Use Applications Program). While these efforts enhance strategies for reducing GHG emissions from the existing gas system, they differ in approach from zonal gas decommissioning, which involves retiring portions of California's fossil gas infrastructure.[58]

[56] AL 10-G at p. 29 & AL 10-G-A at p. 44.
[57] AL 10-G-A at p. 35.
[58] AL 10-G-A at p. 37.

- Network Geothermal Heat Pumps Initiative. Specifically, the CEC stated:

  While networked geothermal demonstrations are advancing in other states, research that accounts for California's climate, population, and other unique features is critical to understanding the role this technology can play in helping California achieve its climate and clean air goals… Nearly all current and planned studies and pilots are concentrated in cold climates where the heating load makes up the predominant share of space conditioning. California's cooling loads vary, and there will be a need to determine the applicability and feasibility of networked geothermal as a versatile technology for California's heavily populated coastal regions, which have experienced an increasing trend in annual cooling degree days, as well as for more inland and temperate regions. The initiative further seeks to study the benefits of Networked GHPs as an alternative to water-intense air-conditioning in large buildings, a particularly relevant R&D work stream for California, where water is often scarce.[59]

DISCUSSION

Concerns Raised in Cal Advocates' Protest to CEC AL 10-G-A

Based on Staff's assessment, the Commission finds that CEC has addressed Cal Advocates' concerns raised in its protest of CEC AL 10-G with the supplemental information subsequently provided in the AL supplement, CEC AL 10-G-A. See also CEC Response in AL 10-G-A to Resolution G-3603 (2024) at OP 4 in Appendix H, where similar concerns were raised and addressed. CEC AL 10-G-A was not protested anew by Cal Advocates.

Review of CEC Gas RD&D Plans

The CEC Gas RD&D program requirements span over two decades of statute, the Gas RD&D funding guidance in D.04-08-010, and 21 Commission resolutions approving the CEC's Gas RD&D Plans beginning in 2004. To review these Advice Letters, Energy

[59] AL 10-G-A at p. 45.

Division staff first prepared a list of all Key CPUC Gas RD&D Resolution Requirements, see Appendix A.

Assessment of 2024 Plan

Energy Division staff conducted an assessment of CEC's AL 12-G proposing its 2024 Gas RD&D Investment Plan.[60] Staff assessed CEC's 2024 Plan based on consistency with requirements and previous Commission guidance. The Commission finds that in some areas, CEC's AL 12-G is not fully compliant with the Commission's previously adopted requirements as described below. See also Appendix G for additional details:

1. The CEC does not disclose the following nor demonstrate that it:
    a. First utilized unspent fund balances, although the CPUC's requirement to do so was stated in both 2021 and 2023 CPUC Resolutions and the requirement is acknowledged in CEC AL 12-G,[61] and
    b. Addressed whether any commercial benefits have been identified that resulted from previous Gas RD&D investments or otherwise state that none have accrued as required in the CPUC's 2004 Decision establishing the CEC as the Gas RD&D program administrator.[62]
2. The CEC does not provide sufficient detail to demonstrate that each proposed Initiative is coordinated with the IOUs and other Gas RD&D entities,[63] including how outputs and impacts are targeted and utilized to promote complementary rather than duplicative research efforts as required by PU Code and prior CPUC Resolutions.[64]

[60] See Resolution G-3622 at Appendix G: Compliance Assessment of AL 12-G.
[61] See Resolution G-3622 at Appendix F: CEC Balances of Unspent Funds from Previously Approved Gas RD&D Plans. Per Resolution G-3584 (2021) at OP 4 & Resolution G-3592 (2023) at OP 7. "[U]nencumbered and unspent funds should be utilized prior to the utilization of new and/or additional ratepayer funds." In AL 12-G at p. 9, CEC states: "Per Resolutions G-3584 and G-3592, the CEC will ensure that for any unspent funds that the CEC has identified and seeks to use for new Gas R&D projects, the CEC will apply this unused funding before any new or additional ratepayer funds are used."
[62] Per D.04-08-010 at p. 42 & OP 21.
[63] The CEC should refer to its 2024 Plan submitted via AL 12-G at p. 42 on its *Fuel-Flexible Distributed Power Generation* Initiative as a model for differentiating each of its revised proposed Initiatives from similar Initiatives conducted or proposed by other administrators.
[64] Per Public Utilities Code 740.1 at (d) & Resolution G-3603 (2024) at OP 4.

3. The CEC does not demonstrate alignment with CPUC proceedings[65] and ratepayer benefit[66] in its *Support Equitable, Safe, and Cost-Effective Decarbonization of California's Gas System* and *Fuel-Flexible Distributed Power Generation*[67] Initiatives. The Commission has not provided guidance on the appropriate role of gas ratepayers in funding hydrogen RD&D, therefore it is not an appropriate use of funds. Funding hydrogen RD&D projects would have further implications for future ratepayer funding, including in future Gas RD&D Plans.

The omissions noted above can be rectified with supplemental information. The CEC shall submit a revised 2024 Plan via Tier 2 AL within 60 days that can address the items described above, and as detailed in Appendix G of this Resolution. Once the revised Plan is approved via Tier 2 AL, the CEC will have full approval of its 2024 Plan and can utilize authorized funding in accordance with the approved Plan.

Energy Division staff worked with CEC staff to review the balances of previously approved funds from its FY 2015-2016 Plan to present in relation to currently requested funds for the CEC's 2024 Plan. Utilization of unspent fund balances was required in both 2021 and 2023 CPUC Resolutions, and so the review of available balances was undertaken to ensure the 2024 and 2025 Plans are in compliance with that order. As of April 2026, the CEC reported to the CPUC that there were at least $31,076,690 in unencumbered and unspent funds for which many years have passed since encumbrance or since funds were authorized without being encumbered. Unspent funds are a normal occurrence and may occur during program administration for a variety of reasons, including project termination, project completion under budget, project timeline extensions, or insufficient project awards. Consistent with prior directives, the CEC shall first utilize this balance of unencumbered and unspent funds to fund its 2024 Plan given it exceeds the $21.6M requested budget for Initiatives.

In response to Resolution comments, this Resolution was modified to allow the CEC to collect $2.4M in new, additional ratepayer funds to support the administrative needs of implementing its 2024 and 2025 Gas RD&D Plans. The CEC may collect an additional

[65] Per Resolution G-3603 (2024) at OP 5.
[66] Per Public Utilities Code 740.1 at (a) and (b) & Resolution G-3603 (2024) at OP 6.
[67] In AL 12-G at p. 42, CEC states that "this proposed initiative is focused on technological advancements and demonstrations of fuel-flexible technologies not necessarily limited to hydrogen."

and limited $2.4M in new ratepayer funds for administrative costs for both the 2024 Plan Year and 2025 Plan Year, consistent with $2.4M allocated in previous years for administrative costs. This additional ratepayer funding represents an exception to the Commission's requirement for a 10% budget cap on administrative funding of a CEC annual total budget level adopted in Resolution G-3546 (2019) and reiterated in Resolution G-3592 (2023).[68] See further explanation in the Comments section of this Resolution.

Table 5: CEC's 2024 Gas RD&D Plan Budgets		
Total Identified Unspent Funds per April 30, 2026, Data Request[69]	$	31,076,690
Utilized Unspent Funds for Initiatives	$	21,600,000
New Ratepayer Funds for Initiatives	$	0
New Ratepayer Funds for Program Administration	$	2,400,000
Total New Ratepayer Funds	$	2,400,000
Total Budget for Initiatives	$	21,600,000
Total Budget for Program Administration	$	2,400,000
TOTAL ANNUAL BUDGET	$	**24,000,000**

Assessment of 2025 Plan

Energy Division staff conducted an assessment of CEC's AL 10-G-A proposing its 2025 Gas RD&D Investment Plan.[70] Staff assessed CEC's 2025 Plan based on consistency with requirements and previous Commission guidance. The Commission finds that in some areas, CEC's AL 10-G-A is not fully compliant with Commission requirements for the reasons described below. See also Appendix H for additional details:

1. The CEC does not disclose the following nor demonstrate that it:

[68] Two prior examples of the Commission's precedent for a 10% cap on the CEC's administrative costs are: 1) Resolution G-3546 (2019) at p. 7. "The CEC's request for administrative expenses ($2.4 million, or 10 percent of the total proposed budget) is appropriate and in line with historical program administration costs. We adopt this limit and require the CEC to adhere to it and encourage the CEC to continue to keep such expenses at 10 percent or less for future budget proposals;" 2) Resolution G-3592 (2023) at OP 2. "CEC's administrative budget is capped at 10 percent of the total budget of $24 million, or $2.4 million;" & p. 20. "We adopt a 10 percent administrative budget for the CEC's 2022-2023 Gas Plan as well as for future budget proposals."

[69] See Resolution G-3622 at Appendix F: CEC Balances of Unspent Funds from Previously Approved Gas RD&D Plans detailing balances provided by the CEC per an Energy Division data request on April 30, 2026.

[70] See Resolution G-3622 at Appendix H: Compliance Assessment of AL 10-G-A.

   a. First utilized unspent fund balances although the CPUC's requirement to do so was stated in both 2021 and 2023 CPUC Resolutions,[71] and
   b. Addressed whether any commercial benefits have been identified that resulted from previous Gas RD&D investments or otherwise state that none have accrued as required in the CPUC's 2004 Decision establishing the CEC as the Gas RD&D program administrator.[72]
2. The CEC does not provide sufficient detail to demonstrate that the *Networked Geothermal Heat Pumps* Initiative will involve activities that are complementary to rather than duplicative of ongoing and proposed CEC Gas RD&D and EPIC Initiatives, as required by PU Code and prior CPUC Resolutions.[73]

The omissions noted above can be rectified with supplemental information. The CEC shall submit a revised 2025 Plan via Tier 2 AL within 60 days that can address the items described above, and as detailed in Appendix H of this Resolution. Once the revised Plan is approved via Tier 2 AL, the CEC will have full approval of its 2025 Plan and can utilize authorized funding in accordance with the approved Plan.

Energy Division staff worked with CEC staff to review the balances of previously approved funds from its FY 2015-2016 Plan to present in relation to currently requested funds for the CEC's 2024 Plan. Utilization of unspent fund balances was required in both 2021 and 2023 CPUC Resolutions, and so the review of available balances was undertaken to ensure the 2024 and 2025 Plans are in compliance with that order. As previously noted, the CEC reported to the CPUC that as of April 2026, at least $31,076,690 in unencumbered and unspent funds for which up many years have passed since encumbrance or since funds were authorized without being encumbered. Unspent funds are a normal occurrence and may occur during program administration for a variety of reasons, including project termination, project completion under budget, project timeline extensions, or insufficient project awards. Some of these funds, $21.6M,

[71] See Resolution G-3622 at Appendix F: CEC Balances of Unspent Funds from Previously Approved Gas RD&D Plans. Per Resolution G-3584 (2021) at OP 4 & Resolution G-3592 (2023) at OP 7. "[U]nencumbered and unspent funds should be utilized prior to the utilization of new and/or additional ratepayer funds."
[72] D.04-08-010 at p. 42 & OP 21.
[73] California Public Utilities Code 740.1 at (d). The CEC should refer to its 2024 Plan submitted via AL 12-G at p. 42 on its *Fuel-Flexible Distributed Power Generation* Initiative as a model for differentiating each of its revised proposed Initiatives from similar Initiatives conducted or proposed by other administrators.

shall be used to cover CEC 2024 Plan costs as noted above. There will then be a remaining balance of $9,476,690 of these unencumbered and unspent funds.

Consistent with prior directives, to fund its 2025 Plan, the CEC shall first utilize its remaining $9,476,690 balance after funding its 2024 Plan.[74] The Commission's approval of a total budget of $24M for the CEC's 2025 Plan is comprised of $9,476,690 in unspent funds and $12,123,310 in authorized new ratepayer funds for Initiatives.[75]

In response to Resolution comments, this Resolution was modified to allow the CEC to collect $2.4M in new, additional ratepayer funds to support the administrative needs of implementing its 2024 and 2025 Gas RD&D Plans. The CEC may collect an additional and limited $2.4M in new ratepayer funds for administrative costs for both the 2024 Plan Year and 2025 Plan Year, consistent with $2.4M allocated in previous years for administrative costs. This additional ratepayer funding represents an exception to the Commission's requirement for a 10% budget cap on administrative funding of a CEC annual budget level adopted in Resolution G-3546 (2019) and reiterated in Resolution G-3592 (2023).[76] See further explanation in the Comments section of this Resolution.

If, at the time this Resolution is issued, the CEC has encumbered or spent a portion of the approximately $31M in identified unspent funds since reporting balances to the CPUC on April 30, 2026, the CEC shall provide updated balances to Energy Division in its Tier 2 ALs in the format provided in Appendix F. In its Tier 2 AL, the CEC shall also report commercial benefits from previous Gas RD&D investments or otherwise state that none have accrued. Energy Division is authorized to modify the calculations of the

[74] Resolution G-3592 (2023) at OP 2.

[75] Consistent with Resolution G-3495 (2014): Approving CEC's FY 2014-2015 Gas RD&D Plan at p. 9. "We find it appropriate that the CEC apply the cumulative unspent amount of $4.492 million from previous program cycles to CEC's funding request at the CPUC for the 2015-16 program cycle, which will result in reducing the amount the CEC will need to draw out of the program funds for the 2015-16 program cycle. As an example, if for Fiscal Year 2015-2016 CEC requests $24 million in its proposed budget, and the CPUC authorizes $24 million in spending, then the CEC shall draw $19.508 million from the CPUC instead of $24 million." See also: Resolution G-3495 (2014) at p. 6-9, FOF 6, & OP 5; Resolution G-3584 (2021) at OP 4; Resolution G-3592 (2023) at OP 7; & Resolution G-3622 at Appendix E: CEC Gas RD&D Funding Process for Budgets Less Than $24M detailing how if "the CPUC decides to authorize less than $24 million, the Energy Commission will proportionally reduce the requested transfers from the Gas Consumption Surcharge Fund by that amount."

[76] Two prior examples of the Commission's precedent for a 10% cap on the CEC's administrative costs are Resolution G-3546 (2019) at p. 7 & Resolution G-3592 (2023) at OP 2 & p. 20.

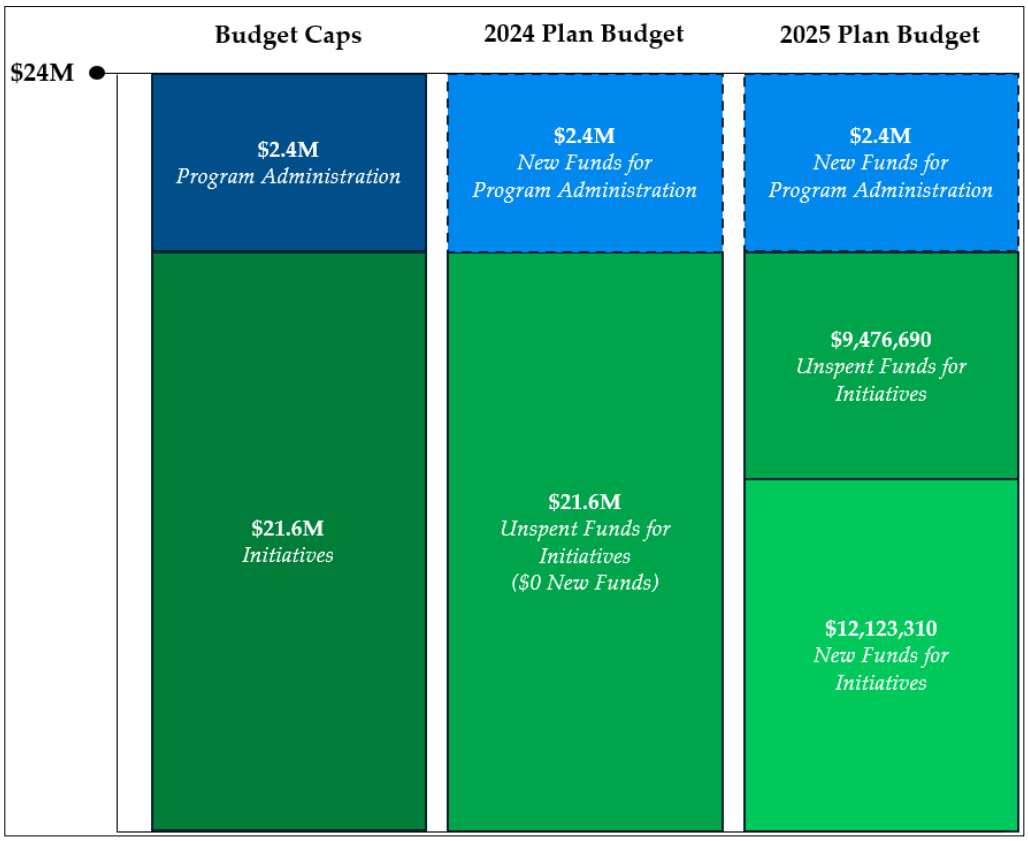
CEC's 2025 Plan budget commensurately based on the updated balances of unspent funds in addition to commercial benefits according to the methods described in this Resolution.

Table 6: CEC's 2025 Gas RD&D Plan Budgets		
Total Identified Unspent Funds per April 30, 2026, Data Request[77]	$	31,076,690
Funding Re-allocated from Unspent Funds to 2024 Plan	$	21,600,000
Utilized Unspent Funds for 2025 Initiatives	$	9,476,690
New Ratepayer Funds for Initiatives	$	12,123,310
New Ratepayer Funds for Program Administration	$	2,400,000
Total New Ratepayer Funds	$	14,523,310
Total Budget for Initiatives	$	21,600,000
Total Budget for Program Administration	$	2,400,000
Total Annual Budget	$	**24,000,000**

For clarity, we provide the graph below to illustrate how unencumbered and unspent funds and associated Program Administration funds may be supplemented by new ratepayer funds within the authorized zero-based budget cap:

[77] See Resolution G-3622 at Appendix F: CEC Balances of Unspent Funds from Previously Approved Gas RD&D Plans detailing balances provided by the CEC per an Energy Division data request on April 30, 2026.

Figure 1: Summary of Commission-Approved 2024 and 2025 Plan Budgets by Unspent and New Ratepayer Funds[78]



Consolidated Guidance for Future CEC Gas RD&D Compliance Filings

The Commission details the following consolidated requirements for the efficient development, streamlined review, and effective implementation of future proposed Gas RD&D Plans. The CEC Gas RD&D Program requirements span over two decades of statute, the Gas RD&D funding guidance in D.04-08-010, and 21 Commission resolutions approving the CEC's Gas RD&D Plans beginning in 2004,[79] all of which were rigorously reviewed by Energy Division staff. This Resolution provides this consolidated list of program requirements based on the reviewed prior decisions and resolutions as well as establishes new requirements for improved Commission oversight.

[78] This Resolution was modified to allow the CEC to collect new ratepayer funds to support the administrative needs of implementing its 2024 and 2025 Plans.
[79] See Resolution G-3622 at Appendix A: Key CPUC Gas RD&D Resolution Requirements.

Annual Investment Planning

Initiative Criteria

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

1. **Policy Priority:** Alignment with and prioritization of critical gaps and needs identified in specific CPUC policies and proceedings, which support State goals, informed by consultation with CPUC staff on targeted policy objectives.
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 California[80] 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.[81]
    b. Cost-effectiveness and protection of affordability to ratepayers.
    c. Promote equity and provide benefits to Environmental & Social Justice (ESJ) communities, informed by consultation with community-based

[80] Consistent with Commission guidance to SoCalGas provided via 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."
[81] Resolution G-3603 (2024) at OP 6. See Resolution G-3622 at Appendix D: EPIC Foundational Principles for the Development of a Uniform Impact Analysis Framework, adopted via D.23-04-042 at Appendix A.

organizations (CBOs) and the Commission's most current ESJ Action Plan.[82]

Pre-Submittal Consultation

The refined, comprehensive pre-submittal consultation process detailed below promotes coordinated strategic planning across administrators to facilitate a holistic investment planning approach:[83]

- Intra-Administrator Coordination

  The CEC shall be proactive in collaborating with the IOU Gas RD&D administrators, Pacific Gas & Electric (PG&E) and Southern California Gas (SoCalGas), to promote and demonstrate strategically coordinated and complementary rather than duplicative RD&D activities.[84] The CEC shall document this coordination in its 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 each participant's specific intended role for each proposed Initiative.[85]

- Pre-Submittal Consultation with CPUC Subject Matter Experts (SMEs)

  The CEC shall consult with Energy Division 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 at the start of the process with priority Gas RD&D-related

[82] Environmental & Social Justice (ESJ) Action Plan Version 2.0 (2022).
[83] Modifies Resolution G-3571 (2020) at OP 5e & Resolution G-3592 (2023) at OP 5b: The CEC is no longer required to provide the option to present to CPUC Commissioners in advance of Plan submittal.
[84] California Public Utilities Code Section 740.1 (d).
[85] Resolution G-3603 (2024) at OP 4. See Resolution G-3622 at Appendix C: Commission Guidance on Gas RD&D Initiative Criteria at 2.

technologies, market needs, and emerging opportunities as identified in CPUC proceedings and policies.[86]

The CEC should also explain consultation and coordination where relevant with the EPIC program. The EPIC Strategic Goal of "Achieving 100% Net-Zero Carbon and the Coordinated Role of Gas" highlights the intrinsic link between gas and electric investment policy and planning, particularly involving electrification and decarbonization efforts. Greater collaboration among California RD&D programs is necessary 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."[87] 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."[88] 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 & ESJ Consultation

  After receiving and integrating CPUC SME input to align with CPUC proceedings, the CEC shall collaborate with the IOUs to hold a Joint Annual Public Workshop to present coordinated investment proposals for the upcoming year and obtain stakeholder input prior to Plan submittal.[89] At the workshop, the CEC shall also present on outcomes from the previous year as reported in its Annual Report to promote transparency and accountability in demonstrating ratepayer benefit in addition to informing subsequent strategic investment planning. The CEC shall

[86] Resolution G-3571 (2020): Approving CEC's FY 2020-2021 Gas RD&D Plan at OP 5a & Resolution G-3603 (2024) at OP 5. See Resolution G-3622 at Appendix C: Commission Guidance on Gas RD&D Initiative Criteria at 1.
[87] D.24-03-007: Decision Adopting Strategic Goals for the EPIC Program at p. 19-20.
[88] D.24-09-012 at p. 6.
[89] Resolution G-3555 (2019): Approving CEC's FY 2019-2020 Gas RD&D Plan at OP 6a & 6b; & Resolution G-3571 (2020) at OP 8b. Consistent with: Resolution G-3573 (2021): Approving SoCalGas' 2021 Gas RD&D Plan at OP 3 & Resolution G-3586 (2022): Approving SoCalGas' 2022 Gas RD&D Plan at OP 5; & Resolution G-3592 (2023) at OP 5d.

consult Energy Division staff on its engagement of diverse relevant stakeholders, document specific feedback, detail the clear progression of proposal development and refinement through each stage of consultation, and demonstrate how input has been incorporated at the Initiative level in Plans. The CEC shall provide sufficient time for stakeholder questions and discussion, specifically via a robust, dedicated engagement component of the workshop with Environmental and Social Justice (ESJ) and Tribal communities. The CEC shall offer members of the Disadvantaged Communities Advisory Group (DACAG) the opportunity to provide input on its proposed Plan with sufficient lead-time prior to Plan submittal.[90]

Annual Plan Submittal & Approval

The CEC must submit proposed Gas RD&D Plans to the Commission via Tier 3 Advice Letter (AL) annually.[91] The CEC shall post proposed and approved Investment Plans publicly so that they are easily accessible on its website and notify the CPUC of the web address. The CEC shall also coordinate with other Gas RD&D administrators to develop service lists of relevant ongoing CPUC Proceedings on which to serve Plans and consult with Energy Division staff to ensure these lists are sufficient.[92]

The CEC's Gas RD&D Annual Plan shall only become effective when the Commission adopts a resolution approving the Plan and associated zero-based budget.[93] The CEC's annual budget cap for Gas RD&D Plans is $24 million,[94] including up to $21.6 million for Initiatives and $2.4 million for Program Administration. The Program Administration budget is capped at 10% of the total adopted budget and must be delineated by allowable cost categories so the CPUC may understand how these costs

[90] Resolution G-3571 (2020) at OP 8a & Resolution G-3592 (2023) at OP 5a.
[91] Resolution G-3571 (2020) at OP 6.
[92] Resolution G-3571 (2020) at OP 5c & 5d.
[93] General Order 96-B Rule 7.3.5 at PDF p. 19. D.04-08-010 at p. 37: "[W]e will adopt a zero-based budget subject to approval by the Commission."
[94] D.04-08-010 at p. 37-38.

are allocated and reasonable, consistent with Commission requirements for EPIC administrators.[95]

Prior to the CPUC issuing a draft resolution addressing Gas RD&D Plans, Energy Division must verify the CEC's balances of approved funds and whether interest and commercial benefits have accrued to offset new and/or additional ratepayer costs and assess a prudent Gas RD&D Program zero-based budget accordingly as required by D.04-08-010 and described below. In its review of the CEC's proposed Gas RD&D Plans, Energy Division will assess compliance with funding requirements, calculate any true-up, and notify the CEC, IOUs, and Accounting departments of the total true-up necessary for subsequent transfers. Annually, the CEC shall submit via a letter to the Energy Division Director, Energy Division Central Files,[96] and Staff its annual request to the State Controller's Office (SCO) for quarterly transfers from the CPUC's Gas Consumption Surcharge Fund to the CEC's Public Interest RD&D Fund. Once the Commission has calculated the true-up and approved a Gas RD&D Plan, the CEC shall reduce its next request for quarterly transfers by the amount of interest accrued on deposited amounts in the CEC's Public Interest RD&D Fund; commercial benefits which may have resulted from previous Gas RD&D investments;[97] and unencumbered and unspent funds required to be used prior to new/additional ratepayer funds as defined in this Resolution and verified by the Commission,[98] and document these reductions in the letter. Via this process, both the CEC's requests to access PPP funds and the disbursements from the CPUC's Fund must be consistent with the Gas RD&D zero-based budget adopted by the Commission per D.04-08-010.[99] Pursuant to D.04-08-010, Staff must ensure that utility PPP surcharge rates for the following year are

[95] Per Resolution G-3546 (2019) at p. 7 & Resolution G-3592 (2023) at OP 2 & 5e. See Resolution G-3622 at Appendix B: Administrative Budget Cost Categories.
[96] Email: EnergyDivisionCentralFiles@cpuc.ca.gov
[97] D.04-08-010 at p. 42 & OP 21.
[98] Resolution G-3495 (2014) at p. 6-9, FOF 6, & OP 5; Resolution G-3584 (2021) at OP 4; & Resolution G-3592 (2023) at OP 7. See Resolution G-3622 at Appendix E: CEC Gas RD&D Funding Process for Budgets Less Than $24M detailing how if "the CPUC decides to authorize less than $24 million, the Energy Commission will proportionally reduce the requested transfers from the Gas Consumption Surcharge Fund by that amount."
[99] D.04-08-010 at p. 41.

consistent with the Commission's adopted zero-based budget[100] and reflect the calculated true-up to address any over or under collections of ratepayer funds.

Annual Plan Implementation & Reporting

To support the Commission's oversight requirements, the CEC shall submit Tier 1 ALs semi-annually[101] to Energy Division beginning in 2027 with the following data:[102]

- Basic budget tracking information related to previously approved Gas RD&D Plans, including:
    - The balances of spent, unspent, encumbered, unencumbered, and disencumbered[103] Gas RD&D funds for each specific Initiative and for Program Administration,[104] specifically identifying:
        - Unencumbered funds for which over two years have passed since Commission authorization[105] and
        - Unspent encumbered funds for which over four years have passed since encumbrance,[106] particularly those associated with active projects. The CPUC recognizes that CEC practice has been to grant extensions for some projects beyond the four years past initial encumbrance, due to extenuating circumstances. In order to maintain the integrity of the timeframes, the CEC shall request of Energy Division a limited extension of these timeframes, including

[100] D.04-08-010 at p. 44.
[101] By January 15 pertaining to July – December of the previous year and July 15 pertaining to January – June of that year.
[102] This Resolution modifies Resolution G-3592 (2023) at OP 7: The CEC is no longer required to list all spent, encumbered, and uncommitted funds organized by Gas R&D initiative in its Annual Plans.
[103] Resolution G-3584 (2021) at p. 8. "'Disencumbered funds' refers to previously encumbered funds that become unencumbered because the project has been terminated or was completed under budget or due to other reasons."
[104] CEC shall delineate balances of Program Administration funds in reporting according to the required template. See Resolution G-3622 at Appendix B: Administrative Budget Cost Categories adopted in Resolution G-3592 (2023) at OP 5e.
[105] Resolution G-3584 (2021) at p. 8. "'Unspent funds' refers to contracted funds that have not yet been spent on a project or funds that have not been encumbered."
[106] Resolution G-3584 (2021) at p. 8. "'Encumbered funds' refers to funds that are committed to projects through an executed contract but have not yet been spent." "'Spent funds' refers to contracted funds that are spent on a project."

justification for the additional time needed and an attestation that spending on these projects is anticipated to be completed within a specific requested reasonable timeframe (e.g., within one additional year). Subsequently, extension of the spending deadline should be reflected in the CEC's reporting on approved Plan funds. If funds are not anticipated to be and/or ultimately are not spent within the defined extended timeframe, the Commission expects these funds will be used to offset ratepayer costs for subsequent Gas RD&D Plans.

- Commission-approved budget allocations and approval dates for each Plan and Initiative.[107]
- Requests to shift funds between Initiatives at or above 20% of the approved budget.[108]
- Modified budgets if fund shifting has occurred.
  - For funding reallocated from approved Initiatives, the Plan and specific Initiative the funding has been reallocated to; relatedly, for funding reallocated to new Initiatives, the Plan and specific Initiative funding has been reallocated from.[109]

- Interest accrued on Gas RD&D program funds.
- Commercial benefits which may have resulted from previous Gas RD&D investments, if known, or state unknown.[110]
- Requests to modify research topics for Initiatives in Commission-approved Plans.

This Resolution modifies requirements for the CEC to provide budget reporting in its Annual Plans[111] by instead requiring reporting via semi-annual Tier 1 AL and in Annual Reports. Moving forward, in this instance only, the CEC shall provide updated fund balance reporting in its revised 2024 and 2025 Plans to be submitted via Tier 2 AL.

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[107] Commission approval dates may vary by specific Initiative in the same Gas RD&D Plan as the Commission may approve some Initiatives via Tier 3 ALs in resolutions and others via subsequent Tier 2 ALs.

[108] Resolution G-3571 (2020) at OP 4. "If the CEC is unable to obtain data it deems necessary to complete any of the projects proposed in the Fiscal Year 2020-2021 plan, it must first consult with Energy Division staff overseeing this program before reallocating any funding."

[109] Resolution G-3584 (2021) at OP 3 & Resolution G-3592 (2023) at OP 7.

[110] D.04-08-010 at p. 42 & OP 21.

[111] This Resolution modifies Resolution G-3592 (2023) at OP 7: The CEC is no longer required to list all spent, encumbered, and uncommitted funds organized by Gas R&D initiative in its Annual Plans.

To further support the Commission's oversight requirements for the accountability of ratepayer dollars, the CEC shall provide advance notice to the Commission when seeking to implement projects. The CEC shall submit draft GFO materials via a letter directly to the Energy Division Director, Energy Division Central Files, and Staff including identification of the associated funding Plan year and Initiative. The letters should facilitate consultation early in solicitation scoping and concept development in addition to during later phases involving notices of proposed awards and agreement document development prior to CEC Business Meeting approval. Given this process has commonly lasted upwards of one year from Plan approval, upon CPUC request, the CEC should also explore memorandums of understanding (MOUs) to protect confidentiality as necessary while allowing for information sharing during intermediary steps, such as drafting solicitation packages and evaluating applicants. These should be discussed via direct consultation with CPUC staff during ongoing coordination meetings. This process promotes proactive and consistent information sharing as part of the CEC's strategic planning process, allowing the CPUC (as well as IOU administrators) the opportunity to identify any opportunities, conflicts, and duplicative research. This type of reporting establishes structure and common expectations as well as helps to ensure continued alignment with CPUC policies and proceedings, where ratepayer impacts are specifically considered. Overall, this practice will support accountability, transparency, coordination, and communication in making investments on behalf of ratepayers.

Annual Report

This Resolution modifies the Annual Report deadline set in Resolution G-3394 (2006) to promote coordination and transparency across administrators of CPUC ratepayer-funded RD&D programs. The IOUs' Gas RD&D programs and CPUC's electric RD&D program, EPIC, summarize cohesive calendar year (CY) outcomes rather than fiscal year outcomes. Annual Reports shall be due June 1 of each year,[112] covering the previous CY.

[112] Modifies Resolution G-3394 (2006) at OP 2. "The CEC shall submit its… Annual [Report] by October 31st."

To accommodate the transition from fiscal year (FY) to CY reporting, the CEC's next Gas RD&D Annual Report, currently due October 31, 2026, shall instead be due June 1, 2027, and cover a one-and-a-half-year period: July 2025 through December 2026. To ensure public transparency, demonstrate continuity across cycles, and inform CPUC oversight, the CEC shall utilize a standardized template provided by Energy Division staff to include at a minimum:

- Consolidated, comprehensive budget status reporting by incorporating the approved funding balance reporting required in the semi-annual Tier 1 ALs as described above.
- Synthesized major accomplishments and contributions to Gas RD&D.
- Information on all projects completed in the reporting period by Plan year and associated Initiative, including details on total spend, realized ratepayer benefits, and any project outcomes.
- Information on all active projects by Plan year and associated Initiative, including details on total encumbrance, total spend by the end of the reporting period, and key project outcomes or ratepayer benefits to date.[113]

Prudent Funding Timeframes for Ratepayer Funds

As described above, prior to the CPUC issuing a draft resolution addressing Gas RD&D Plans, Energy Division must verify the CEC's balances of approved funds to offset new and/or additional ratepayer costs accordingly.[114]

In this Resolution, the Commission clarifies prudent timeframes to be utilized as best practices essential for diligent oversight and accountability of ratepayer dollars.[115] These timeframes will serve to prevent the significant accumulation of unspent ratepayer funds and promote timely innovations to support evolving State energy policy pertaining to climate and affordability goals.

[113] Consistent with Public Resources Code 25620.8 at (a)(6).
[114] Resolution G-3495 (2014) at p. 6-9, FOF 6, & OP 5; Resolution G-3584 (2021) at OP 4; & Resolution G-3592 (2023) at OP 7. See Resolution G-3622 at Appendix E: CEC Gas RD&D Funding Process for Budgets Less Than $24M detailing how if "the CPUC decides to authorize less than $24 million, the Energy Commission will proportionally reduce the requested transfers from the Gas Consumption Surcharge Fund by that amount."
[115] Consistent with Public Utilities Code Section 384 at (a).

The CPUC expects the CEC to encumber Gas RD&D Plan funds within two years of approval and to spend the encumbered funds within four years of encumbrance. The CPUC also recognizes that CEC practice has been to grant extensions for some projects beyond the four years past initial encumbrance, due to extenuating circumstances. As described above, in order to maintain the integrity of the timeframes for unspent encumbered funds for which over four years have passed since encumbrance, the CEC shall request of Energy Division a limited extension of these timeframes, including justification for the additional time needed and an attestation that spending on these projects is anticipated to be completed within a specific requested reasonable timeframe (e.g., within one additional year). If funds are not anticipated to be and/or ultimately are not spent within the defined extended timeframe, the Commission expects these funds will be used to offset ratepayer costs for subsequent Gas RD&D Plans with more timely Initiatives, as opposed to continuing to spend and encumber these funds on previous Plans.

Proactive interagency coordination and information sharing on proposed Plans and implementation promotes the optimal and prudent use of ratepayer funds. For example, pre-submittal informal consultation with CPUC staff on upcoming GFOs is the first essential step in promoting alignment with ratepayer benefits including equity and affordability as well as creating efficiencies in CPUC Plan review to implement RD&D investments in a timely manner. Further, this coordination allows Gas RD&D investments to be responsive to evolving policies, research gaps, technologies, and market conditions to address timely innovations that can promote ratepayer benefits and support the State's broader climate and safety goals.

The CPUC's Utility Audits Branch (UAB) conducted an audit of CEC's Gas RD&D Program spending between July 1, 2022, and June 30, 2023, finding that program expenditures were generally used for allowable purposes.[116] However, the Audits process was prolonged due to insufficient initial available information provided by the CEC, necessitating several data requests to verify compliance. The Annual Report and regular Tier 1 AL reporting are expected to help address this moving forward. In addition, the CEC shall maintain supporting documentation for transparency in

[116] CPUC Utility Audits Branch California Energy Commission Gas Research and Development Program Performance Audit Report (August 28, 2025) at p. 2.

spending ratepayer funds that is easily auditable, including for grant recipients. In the use of ratepayer funds, the CEC shall comply with state requirements and procedures, including California Travel Reimbursements guidelines on lodging.[117]

Additional Program Modifications

Oversight Funds

The Commission has directed each Gas RD&D administrator, including the CEC, to allocate funds towards its proportional share of a Gas RD&D Program Evaluation[118] to be implemented by Energy Division. Energy Division shall advise the CEC on any reimbursement process to support a consolidated, comprehensive independent Program Evaluation across all Gas RD&D administrators to promote efficiencies, assess the Gas RD&D program at a holistic level, and improve transparency regarding the use of ratepayer funds. The CEC shall allocate funds towards its proportional share, $184,511, of developing a comprehensive Gas RD&D Database of projects.[119] In consultation with Energy Division staff and the Database administrator, the CEC shall allocate and reimburse additional funds in future Plans for its proportional share of the maintenance and operational needs of the Database once established. Energy Division shall advise the CEC on next steps.

Modeling EPIC's Strategic Goals & Objectives

In Resolution G-3618 (2026),[120] the Commission finds that Energy Division staff may commence a stakeholder process and facilitate strategic planning to model the EPIC program by identifying Strategic Goals[121] to promote coordination, consistency, and best practices across ratepayer-funded RD&D investments.

[117] Travel Reimbursements - CalHR Benefits Website.
[118] Resolution G-3592 (2023) at OP 3. "In its Fiscal Year 2023-2024 Gas R&D Plan, the CEC shall allocate 4% of its budget ($960,000) to fund a comprehensive evaluation of the CEC's Gas R&D program to be implemented Energy Division…"
[119] Consistent with Resolution G-3601 (2023) at OP 3a & D.23-11-069 at p. 221.
[120] Resolution G-3618 (2026) at p. 25 & OP 11.
[121] D.23-04-042 at OP 3 & D.24-03-007.

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. The Commission required that comments on the Draft Resolution be limited to 10 pages or less. On August 28, 2026, the CEC requested to waive the 10-page limit. On September 1, 2026, Energy Division granted the CEC a 20-page limit and directed the CEC to notify the service list that all parties were also granted a 20-page limit.

The CPUC received a comment letter from the CEC on Draft Resolution G-3622 on September 2nd, 2026. Energy Division analyzed the comment letter for potential factual errors made within Draft Resolution G-3622 and responds with the following modifications or clarifications.

1. **CEC Comment Regarding Upholding Legal, Statutory, and Jurisdictional Authority.**

In the CEC's comments, it states that "[t]he draft resolution appears to propose overhauling the operations of a twenty-two-year-old program and CPUC Decision (D.)04-08-010 in a wholesale manner outside of a formal proceeding."[122]

This Resolution was modified to consolidate Commission orders pertaining to compliance filings in this Resolution as well as previous Resolutions and Decisions, culminating in Table 2: CEC Gas RD&D Program Compliance Filings. It is important to note that while the Commission is authorized to refine requirements consistent with

[122] California Energy Commission Comments on G-3622 Draft Comment Resolution at p. 1.

existing orders, the Commission is unable to overhaul D.04-08-010 via Resolution. This Resolution was also modified in several places to note where process and procedure improvements are necessary and why, including organizational tools to provide standardization for improved interagency information sharing. These improvements are generally reiterations of existing statutory and Commission requirements and are necessary to track and enforce as well as support compliance with these requirements specifically cited throughout the Resolution (including aggregated in the Appendix A).

2. CEC Comment Regarding the Continuous Appropriation of Gas RD&D Funds.

In the CEC's comments, it disputes the encumbrance and spending timelines in the draft Resolution, stating that CPUC's cited authority, PU Code Section 384, does not apply to CEC's Gas R&D funds. CEC notes that "[i]n 2021, PU Code Section 895 was amended to continuously appropriate… all funds currently in the Natural Gas Subaccount, including funds appropriated both before and after 2021." Since the statute provides continuous appropriation of the funds, the CEC's comments indicated it would be erroneous to apply encumbrance and liquidation deadlines to any Gas R&D funds and further that these deadlines "would be unaffected by the date CPUC approved an annual Budget Plan."[123] The CEC also asserts that, because the Commission approved supplemental funding for the CEC's FY 2023-2024 Plan using unspent funds after the Commission introduced requirements for the CEC to offset new and/or additional ratepayer costs for Plans with unspent funds, the "CPUC did not intend for unencumbered and unspent funds to be *exclusively* used in place of new or additional funds."[124]

This Resolution makes clear that the CEC's Gas RD&D funds are authorized via Commission Resolution per D.04-08-010.[125] The Commission finds that the reference to

[123] California Energy Commission Comments on G-3622 Draft Comment Resolution at p. 1-2 & 7.
[124] California Energy Commission Comments on G-3622 Draft Comment Resolution at p. 3.
[125] This Resolution cites Resolution G-3584 (2022) at p. 8, fn. 6., which states: "'Encumbered funds' refers to funds that are committed to projects through an executed contract but have not yet been spent. The CEC has budget authority to encumber funds within two years of authorization. 'Spent funds' refers to contracted funds that are spent on a project. 'Unspent funds' refers to contracted funds that have not yet been spent on a project or funds that have not been encumbered. The CEC has budget authority to spend encumbered funds within four years of encumbering them through a contract."

continually appropriated funds is distinct from prudent timeframes identifying milestones for encumbrance and expenditure and/or Commission reauthorization. These milestones are a reasonable practice consistent with prior Resolutions. This Resolution was revised to provide additional justification for why it is appropriate and most prudent to utilize unencumbered or unspent funds prior to new ratepayer collections as required, particularly as they include funds approved as long ago as 2015.

This Resolution relies on and cites AB 1002 (Wright, 2002) which added Sections 890-900 to the PU Code, including Section 895 which provides that "funds in the [CPUC's] Gas Consumption Surcharge Fund are continuously appropriated."[126] However, in 2021, PU Code Section 895 was amended to include: "Notwithstanding Section 384 of this code and Section 13340 of the Government Code, moneys in [CEC's Public Interest Research, Development, and Demonstration] subaccount are continuously appropriated, without regard to fiscal year, to pay the Energy Commission for its costs in carrying out its duties and responsibilities under this article." PU Code Section 384 requires that "[a]ny appropriations that are made from the [CEC's Public Interest Research, Development, and Demonstration] fund shall have an encumbrance period of not longer than two years, and a liquidation period of not longer than four years." It appears this amendment may have been in response to temporary extenuating circumstances created by the COVID-19 pandemic, which created myriad obstacles to timely encumbrances and spending.

However, it is evident in CPUC's Resolution G-3484 (2013) through Resolution G-3592 (2023)[127] that PU Code Section 384 guidelines were historically in practice for the CEC's Gas RD&D Program/Initiative funding. In Resolution G-3546 (2019), the Commission states that the "CEC has two years to encumber Gas R&D funds with projects, and an additional four years before such funds expire. After those six years, remaining funds must be approved for re-investment by the Commission."[128] Accordingly, the Commission, on occasion, has approved supplemental Plans, as noted by the CEC,[129]

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[126] AB 1002 (Wright, 2000). *Natural Gas: Consumption Surcharge* at Section 895.
[127] Resolution G-3484 (2013) at p. 5-6; Resolution G-3495 (2014) at p. 8; Resolution G-3507 (2015) at p. 6; Resolution G-3519 (2016) at p. 7; Resolution G-3527 (2017) at p. 8; Resolution G-3546 (2019) at p. 5; Resolution G-3555 (2019) at p. 7; Resolution G-3584 (2021) at p. 8-9; & Resolution G-3592 (2023) at p. 14-15.
[128] Resolution G-3546 (2019) at p. 5.
[129] California Energy Commission Comments on G-3622 Draft Comment Resolution at p. 3.

for the CEC to repurpose unspent funds upon request. Alternatively, the Commission has directed the CEC to utilize unspent funds to offset new/additional ratepayer funds by reducing the amount the CEC has transferred from the CPUC's Gas Consumption Surcharge Fund.[130] In either case, the funding from old Plans is repurposed for more current Plan Initiatives.

Though, in the CEC's proposed FY 2023-2024 Plan submitted via AL 5-G, as referenced in CPUC's Resolution G-3603 (2024),[131] the CEC indicated that AB 148 resulted in Gas RD&D funds no longer being subject to encumbrance and liquidation deadlines in statute, it committed to endeavoring to abide by the timelines.[132]

However, the CEC's adherence to these timelines has not been consistently demonstrated, nor has compliance with Resolutions G-3584 (2021)[133] and G-3592 (2023),[134] which direct that "unencumbered and unspent funds should be utilized prior to the utilization of new and/or additional ratepayer funds." Furthermore, the CEC has not proposed an alternative mechanism to determine the portion of its approved unspent funds that will offset new/ratepayer funds to comply with Commission requirements to do so.

Timeframes identifying milestones for reauthorization utilized as best practices are reasonable to apply for the prudent oversight and accountability of ratepayer dollars, particularly as the CEC appears to have been relieved of deadlines in statute per temporary extenuating circumstances and associated delays created by the COVID-19 pandemic which have since largely been resolved. Therefore, the Commission provides the clear mechanism for determining the approved unspent funds which shall be used to offset new/additional ratepayer costs for the CEC's Plans approved herein, in order to both (1) utilize the significant accumulation of unspent ratepayer funds since FY

[130] Resolution G-3495 (2014) at p. 9. The Commission found "it appropriate that the CEC apply the cumulative unspent amount of $4.492 million from previous program cycles to CEC's funding request at the CPUC for the 2015-16 program cycle, which [resulted] in reducing the amount the CEC [drew] out of the program funds for the 2015-16 program cycle." See Resolution G-3622 at Appendix E: CEC Gas RD&D Funding Process for Budgets Less Than $24M from the CEC's FY 2012-2013 Annual Report.
[131] Resolution G-3603 (2024) at p. 8.
[132] CEC AL 5-G at p. 13.
[133] Resolution G-3584 (2021) at OP 4.
[134] Resolution G-3592 (2023) at OP 7.

2015-2016, and (2) ensure that the funding already collected from ratepayers is used to support contemporary State energy policy pertaining to climate and affordability goals.

3. CEC Comment Regarding the Use of Unencumbered and Unspent Funds.

In the CEC's comments, it states that it "may be legally liable to pay for any legally incurred costs prior to the terminations" [135] for contracts pertaining to $4M of the identified unspent encumbered funds. The CEC asserts that it has encumbered a portion of the identified unencumbered funds since reporting fund balances in April 2026 and that the funds identified in the Draft Resolution also include "more than $17 million that CEC has allocated for upcoming GFOs aligned with CPUC-approved Gas R&D Budget Plans."[136] The CEC claims that it "may continue to use funds from approved Budget Plans in accordance with those plans as long as CEC determines that it is in the best interests of the state and gas ratepayers"[137] and has not proposed an alternative mechanism to determine the portion of its approved unencumbered and unspent funds that will offset new and/or additional ratepayer funds to comply with Commission requirements to do so as stated above.

This Resolution was modified in response to comments to provide further detail on the Commission's mechanism for determining the approved unspent funds which shall be used to offset new/additional ratepayer costs for the CEC's Plans. According to the data provided by the CEC in April 2026, as reflected in the Draft Resolution, Staff identified $31,076,690 in unspent funds for which up to 11+ years have passed since encumbrance or up to 9+ years have passed since funds were authorized without being encumbered as follows:

- Unspent Encumbered Funds which the CEC indicated are "allocated to currently active projects or were left over from projects that completed underbudget. These funds have not been reallocated."

[135] California Energy Commission Comments on G-3622 Draft Comment Resolution at p. 3. "When a state agency enters into an agreement, it must encumber those funds for the agreement to ensure they are not spent on other costs. California law requires a state agency to pay on a reimbursable basis after the grant recipient has already incurred and paid the cost. Timing of invoices is outside the CEC's control and depends on the research project schedule and the grant recipient."
[136] California Energy Commission Comments on G-3622 Draft Comment Resolution at p. 3.
[137] California Energy Commission Comments on G-3622 Draft Comment Resolution at p. 3.

  - FY 2015-2016 Plan (Approved June 2015): $474,051
  - FY 2015-2016 Supplemental Plan (Approved December 2015): $188,333
  - FY 2016-2017 Plan (Approved September 2016): $671,581
  - FY 2016-2017 Supplemental Plan (Approved April 2017): $44,546
  - FY 2017-2018 Plan (Approved September 2017): $287,576
  - FY 2018-2019 Plan (Approved January 2019): $2,310,486
  - FY 2019-2020 Supplemental Plan (Approved August 2019): $2,282,735
  - FY 2019-2020 Supplemental (Approved August 2019): $1,473,857
  - **TOTAL: $7,733,165**
- Unencumbered Funds (including from terminated/cancelled projects) which the CEC indicated "have not been reallocated and do not currently have an anticipated solicitation release."
  - FY 2016-2017 Supplemental Plan (Approved April 2017): $22
  - FY 2016-2017 Plan (Approved September 2016): $543,673
  - FY 2017-2018 Plan (Approved September 2017): $865,947
  - FY 2018-2019 Plan (Approved January 2019): $880,430
  - FY 2019-2020 Plan (Approved August 2019): $6,477,711
  - FY 2019-2020 Supplemental Plan (Approved August 2019): $2,290,000
  - FY 2020-2021 Plan (Approved November 2020): $1,130
  - FY 2023-2024 Plan (Approved May 2024): $5,000,016
  - TOTAL: **$16,058,929**
- Unencumbered Funds which the CEC indicated "have not been reallocated, will be applied to an anticipated solicitation release TBD."
  - FY 2021-2022 Plan (Approved September 2021): $600,864
  - FY 2022-2023 Plan (Approved March – June 2023): $6,683,732
  - TOTAL: **$7,284,596**
- **TOTAL UNSPENT: $31,076,690**[138]

Upon consideration of the CEC's comments:

[138] This Resolution does not seek to divert any portion of the CEC's $53,603,242 balance of approved funding which are found to be within the PU Code Section 384 encumbrance and spending windows based on data provided in April 2026.

- This Resolution was modified to require the CEC in its revised Plans to provide updated fund balances to denote which of the identified Unspent Encumbered Funds (amounting to $7,733,165 as of April 2026) are either:
    - 1) Disencumbered funds, which shall be used in full to offset new/additional ratepayer costs for these Plans as expected per this Resolution.
    - 2) Encumbered funds associated with active projects. The CPUC recognizes that CEC practice has been to grant extensions for some projects beyond the four years past initial encumbrance, due to extenuating circumstances. In order to maintain the integrity of the timeframes, the CEC shall request of Energy Division a limited extension of these timeframes, including justification for the additional time needed and an attestation that spending on these projects is anticipated to be completed within a specific requested reasonable timeframe (e.g., within one additional year). If funds are not anticipated to be and/or ultimately are not spent within the defined extended timeframe, the Commission expects these funds will be used to offset ratepayer costs for subsequent Gas RD&D Plans.
- The proposed outcome in the Draft Resolution for the CEC to offset new/additional ratepayer costs for its 2024 and 2025 Plans using the identified $23,343,525 balance of Unencumbered Funds in full has not been changed. These funds have not been encumbered or reallocated since being approved by the Commission between 2017 and 2023 and the CEC indicated in April 2026 these funds either 1) do not currently have an anticipated solicitation release (amounting to $16,058,929 as of April 2026) or 2) will be applied to an anticipated solicitation release to be determined (amounting to $7,284,596 as of April 2026).

The Resolution maintains that Energy Division is authorized to modify the calculations of new ratepayer collections required to fund CEC's 2024 and 2025 Plan budgets based on the CEC's updated approved fund balances in its revised Plans to be submitted via Tier 2 ALs according to the modified methods described above.

4. CEC Comment Regarding the Need for New Administrative Funds.

In the CEC's comments, it states that "[p]rior to Resolution G-3592, there was no administrative cost cap identified in statute, D.04-08-010, or in CPUC resolutions." Further, it states that "[t]here are no unspent administrative funds from the FYs associated with [reported] unspent Initiative funds that CEC could apply to subsequent FYs. CEC spends its Gas R&D administrative budget each year." The CEC asserts that the Draft Resolution would leave the CEC without an alternative source to cover administrative costs and the "CEC would have to redirect Gas R&D staff to work on other programs and halt all administration of the Gas R&D Program, counter to CPUC and statutory direction."[139]

This Resolution has been modified, as described in *Assessment of 2024 Plan* and *Assessment of 2025 Plan* sections, to allow the CEC to collect $2.4M in new ratepayer funds to support the administrative needs of implementing each of its Gas RD&D Plans (both 2024 and 2025) on a one-time basis to respond to the CEC's immediate need for program continuity. However, this one-time provision does not serve as a precedent moving forward, nor does it alter requirements in place. The Commission's approval process for the CEC's Plans requires compliance with existing requirements and standard program practices, therefore, the 10% administrative budget cap, adopted in Resolution G-3546 (2019)[140] and underscored in Resolution G-3592 (2023), which is associated with the budget levels of both previously and newly approved funds, continues to be in force.

It is implicit in this requirement that administrative funds shall be spent commensurately with implemented Plan funds in order to prevent duplicative administrative funding when previously approved funds are reauthorized for reuse in a future program year. This requirement is consistent with the Commission's long-standing policy that program administration be capped at no more than 10% to promote the prudent use of ratepayer dollars.[141]

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[139] California Energy Commission Comments on G-3622 Draft Comment Resolution at p. 3-5.
[140] Resolution G-3546 (2019) at p. 7. "The CEC's request for administrative expenses ($2.4 million, or 10 percent of the total proposed budget) is appropriate and in line with historical program administration costs. We adopt this limit and require the CEC to adhere to it and encourage the CEC to continue to keep such expenses at 10 percent or less for future budget proposals."
[141] Resolution G-3546 (2019) at p. 7 & Resolution G-3592 (2023) at OP 2 & p. 20.

5. CEC Comment Regarding Statute Requiring Alignment with State Goals.

In the CEC's comments, it states that "[t]he draft resolution proposes narrowing the focus of the Gas R&D Program to CPUC policies and proceedings." The CEC requests that the CPUC "maintain the foundational standard in D.04-08-010[142] and Section 740.1 that Gas R&D projects support state energy policy, consistent with the statutory criteria already governing this program."[143]

This Resolution does not make substantive changes or seek to supersede statutory nor D.04-08-010 standards to align with State goals. Rather, alignment with CPUC proceedings is a mechanism by which the CPUC facilitates consistency with State goals. The intention is for CPUC proceedings to inform Gas R&D Program priorities by narrowing to targeted research areas to support the prudent use of limited ratepayer funds, promote ratepayer benefits, and avoid duplicative activities. Further, Energy Division staff is authorized to commence a stakeholder process and facilitate collaborative strategic planning to formally identify Strategic Goals[144] to broadly consider timely Gas RD&D Program priorities and provide clear guidance in alignment with evolving State climate and energy policy.[145]

6. CEC Comment Regarding Reporting Requirement Processes.

In the CEC's comments, it states that this Resolution "would require the CEC to prepare and submit quarterly Tier 1 ALs on Budget Plan funding data; a Tier 1 AL on State Controller's Office (SCO) correspondence to access Public Purpose Programs (PPP) funds; and a 60-day Tier 1 AL prior to three actions: shifting funds between Initiatives or Budget Plans, modifying research topics for Initiatives, and issuing Requests for Proposals (RFPs)." The CEC voices concerns that this reporting would require

[142] D.04-08-010 at p. 28. "[I]n addition to meeting the adopted definition of public interest R&D, we expect that approved gas R&D projects will meet the following criteria: 1) Focus on energy efficiency, renewable technologies, conservation and environmental issues 2) Support State Energy policy 3) Offer a reasonable probability of providing benefits to the general public, and 4) Consider opportunities for collaboration and co-funding opportunities with other entities."
[143] California Energy Commission Comments on G-3622 Draft Comment Resolution at p. 6-7.
[144] D.23-04-042 at OP 3 & D.24-03-007.
[145] Resolution G-3618 (2026) at p. 25 & OP 11.

administrative staff time and that the benefit of reporting on administrative matters is undemonstrated. [146]

The simple, ministerial Tier 1 AL mechanism is commonly utilized by the Commission to support Commission oversight by promoting complete, reliable accounting and records practices over time. The Commission uses ALs to aid in creating a standardized, transparent communication process for the accountability of ratepayer funds intended to align with the CEC's standard, existing administrative processes for tracking ratepayer funds. Because the Gas RD&D administrator is expected to track this information on an ongoing basis, such information-sharing to support the Commission in its oversight role should be readily available and, thus, not an administrative burden, but an inherent component of the administrative process. See further discussion below on Tier 1 AL requirements, including how this Resolution was modified to further justify these processes or revise requirements to address the CEC's comments.

7. CEC Comment Regarding Regular Reporting on Fund Balances.

In the CEC's comments, it recommends "[rejecting] quarterly funding data ALs; annual reporting already serves this function." The CEC argues that requiring this data to be submitted through both a quarterly process and in Annual Reports is unnecessary and inefficient and that the CPUC has not provided a clear rationale.[147]

The data currently provided by the CEC in its Annual Plans and Reports are several months out of date by the time they are submitted to the Commission due to various approval processes, which inhibits effective program tracking. In response to comments, this Resolution has been modified to require regular budget reporting only semi-annually (by January 15 and July 15) as opposed to quarterly per the draft Resolution. Further, this Resolution has been revised to modify Commission orders from previous Resolutions to no longer require the CEC to provide budget reporting in Annual Plans[148] given this information will now be reported in the semi-annual budget updates.

[146] California Energy Commission Comments on G-3622 Draft Comment Resolution at p. 7.
[147] California Energy Commission Comments on G-3622 Draft Comment Resolution at p. 8.
[148] This Resolution modifies Resolution G-3592 (2023) at OP 7: The CEC is no longer required to list all spent, encumbered, and uncommitted funds organized by Gas R&D initiative in its Annual Plans.

8. CEC Comment Regarding Consultation Procedures for Grant Funding Opportunities (GFOs) and Fund Shifting.

In the CEC's comments, it states that the CEC "rarely issues RFPs with Gas R&D Program funds; it primarily issues GFOs." The CEC's comments indicate that it publishes anticipated GFOs on its website, including status, expected release date, estimated funding, and focus. In addition to posting GFOs, the CEC also "publicly posts agreement summaries and a scope of work for any resulting awards before they are considered for approval at a CEC Business Meeting, during which there is a public comment period before Commissioner voting occurs." The CEC also requests that consultation on fundshifting only be required above a certain threshold, as is the practice for EPIC, and requests this threshold be set at 40% of the Commission-approved budget. [149]

This Resolution was modified to direct the CEC to include requests for fundshifting between Initiatives within the same Plan at or above a 20% threshold of the Commission-approved budget in its regular budget reporting required semi-annually via Tier 1 AL, as opposed to consulting on all fund shifting via separate Tier 1 ALs as discussed in the draft Resolution. The threshold is placed higher than the 15% threshold set for EPIC in recognition of the economies of scale the Gas RD&D Program may not experience as compared to the higher funding levels of EPIC. However, the CEC shall reflect in approved fund balance reporting everywhere fund shifting has occurred as described in the *Annual Plan Submittal & Approval* section of this Resolution.

This Resolution has also been modified to direct the CEC to submit draft GFO materials, via a letter directly to the Energy Division Director, Energy Division Central Files, and Staff including identification of the associated funding Plan year and Initiative. The letters should serve to facilitate coordination consultation early in solicitation scoping and concept development in addition to during later phases involving notices of proposed awards and agreement development prior to CEC Business Meeting approval. Given the CEC's process has commonly lasted upwards of one year from Plan approval, upon CPUC request, the CEC should also explore memorandums of understanding (MOUs) to both promote interagency coordination and protect confidentiality as necessary. These should be discussed via direct consultation with

[149] California Energy Commission Comments on G-3622 Draft Comment Resolution at p. 8-9.

CPUC staff during ongoing coordination meetings. While the CEC posting all GFOs on its website prior to approval at a CEC Business Meeting is useful in providing transparency for the public, there is often a multitude of GFOs related to various funding sources on the website. Moreover, advance notice to the CPUC via these letters promotes early coordination to ensure alignment with approved Plans and evolving policy and avoid duplicative research.

9. CEC Comment Regarding Commission Requirements to Align Fund Transfer Requests to the State Controller's Office (SCO) with Commission-Approved Budgets.

In the CEC's comments, it requests that the CPUC uphold the current process as the "CEC already includes the CPUC on correspondence to SCO requesting the quarterly transfer from the Gas Consumption Surcharge Fund." In Appendix C of the CEC's comments, they include a copy of CEC's most recent quarterly transfer request, which routinely occurs via an email that cc's the CPUC Administrative Services Division Director.[150]

This Resolution was modified to require the CEC to submit via a letter to the Energy Division Director, Energy Division Central Files, and Staff its requests to the SCO for quarterly transfers from the CPUC's Gas Consumption Surcharge Fund, as opposed to via Tier 1 AL as discussed in the draft Resolution. This Resolution was modified to direct the CEC to reduce its requested quarterly transfers by the amount of interest accrued on deposited amounts in the CEC's Public Interest RD&D Fund; commercial benefits which may have resulted from previous Gas RD&D investments; and unencumbered and unspent funds required to be used prior to new/additional ratepayer funds as defined in this Resolution and verified by the Commission. The CEC's requests to access PPP funds and disbursements from the CPUC's Fund must be consistent with the Gas RD&D zero-based budget adopted by the Commission.[151] Pursuant to D.04-08-010, Staff must ensure that utility PPP surcharge rates for the following year are consistent with the Commission's adopted zero-based budget.[152] This direction refines and clarifies rather than expands the CEC's existing administrative

[150] California Energy Commission Comments on G-3622 Draft Comment Resolution at p. 9-10.
[151] D.04-08-010 at p. 41.
[152] D.04-08-010 at p. 44.

responsibility, reflecting the Commission's intention as defined in D.04-08-010 for Energy Division to serve as its advisor in assisting with reviewing and adopting Plans.[153]

10. CEC Comment Regarding Existing Impact Analysis Requirements.

In the CEC's comments, it states that "integrating the highly complex EPIC Uniform Impacts Analysis framework, which CPUC has not yet adopted, into pre-commercial, public-interest gas research projects would present substantive methodology and data challenges."[154]

This Resolution maintains that that the Commission finds the information provided in the CEC's 2024 and 2025 Plans to be sufficient in meeting related requirements[155] and does not require the CEC to provide further detail, nor does this Resolution establish new requirements. The Commission's RD&D Foundational Principles for a Uniform Impact Analysis Framework constitute the Commission's most robust guidance for the CEC to demonstrate ratepayer benefit from Gas RD&D projects, as adopted in D.23-04-042.[156]

11. CEC Comment Regarding Reporting Requirements on Commercial Benefits and Interest Accrued on Gas RD&D Funds.

In the CEC's comments, it states that it "is unable to accurately forecast commercial benefits that may result in the future from CEC's Gas R&D investments" and that it "can report on interest on deposited amounts in state funds for which CEC is the fund manager." The CEC also states that, for the EPIC Program, "CEC tracks and totals accrued interest and reduces its invoices to the IOUs for EPIC funds by those totals."[157]

This Resolution was modified to clarify that the CEC shall report commercial benefits which *may have resulted* from Gas RD&D investments, as opposed to forecasting

[153] D.04-08-010 at p. 32.
[154] California Energy Commission Comments on G-3622 Draft Comment Resolution at p. 10.
[155] Resolution G-3603 (2024) at OP 6. Requires the CEC to "use this framework to demonstrate outcomes of achieving its proposed benefits for all current and future research projects including through quantitative methodologies."
[156] Adopted in D.23-04-042 at Appendix A.
[157] California Energy Commission Comments on G-3622 Draft Comment Resolution at p. 11.

commercial benefits that may result in the future. This Resolution was also modified to reflect that the CEC shall reduce its requests to the SCO for quarterly transfers from the CPUC's Gas Consumption Surcharge Fund by commercial benefits which may have resulted from Gas RD&D investments *and* the amount of interest accrued on deposited amounts in the CEC's Public Interest Research, Development, and Demonstration Fund. The process by which the CPUC authorizes the CEC's EPIC Investment Plans, including the treatment of unspent funds, is distinct from the process for the Gas RD&D Program established via D.04-08-010, related statute, and subsequent resolutions, and therefore is not appropriate to apply to the Gas RD&D Program.

12. CEC Comment Regarding Gas RD&D Annual Reporting Requirements to Both Energy Division and the Legislature.

In the CEC's comments, it states that its "Annual Report is currently due to the Legislature and CPUC on October 31, and this legislatively mandated date will not change as a result of CPUC's proposed date modification." The CEC requests that the CPUC and CEC collaborate to "develop a standardized template for both the Annual Report and annual Budget Plan, finalized no later than eight months before the applicable due date. These templates should account for the data CEC currently collects on its projects."[158]

This Resolution maintains that the CEC's Annual Report to Energy Division shall now be due by June 1 annually. The CPUC's requirements for the CEC's Annual Report are derived from CPUC orders[159] and related to prudent program management and tracking investment outcomes for accountability of ratepayer funds. Though the CPUC has considered the Legislature's requirements for its legislative report in developing its

[158] California Energy Commission Comments on G-3622 Draft Comment Resolution at p. 11.
[159] D.04-08-010 at p. 42 & 44. The refinement of reporting guidance to meet in-place requirements is consistent with Resolution G-3555 (2019) at p. 7-8: The Commission required the CEC to provide a report to Energy Division for the period FY 2014-2015 to FY 2018-2019 because "a review of Gas R&D Plans from FY 2014-2015 to FY 2019-2020 [showed] that a full accounting of then-current unspent funds [had] never been given. That is, CEC [had] not provided the Commission with the expiration date, encumbrances, or respective research area of unspent funds for any year in which this requirement has been in force. Instead, CEC has provided only the total amount of then-current unspent funds for each fiscal year's plan."

template to promote efficiency, the two reports fulfill distinct purposes and the CPUC recognizes that the CEC has distinct obligations to the Legislature.

FINDINGS AND CONCLUSIONS

1. The California Energy Commission (CEC) filed its 2024 (AL 12-G) and 2025 (AL 10-G-A) Gas Research, Development, and Demonstration (RD&D) Investment Plans per decision (D.)04-08-010.
2. The CEC's proposed Gas RD&D Plan and associated zero-based budget only become effective upon Commission approval via resolution.
3. Energy Division staff must ensure that utility surcharge rates for the following year are consistent with the adopted zero-based budget and reflective of the funds used to offset new and/or additional ratepayer funds.
4. Disbursements from the CPUC's Gas Consumption Surcharge Fund to the CEC's Public Interest RD&D Fund must not exceed the zero-based budget adopted by the Commission.
5. The CPUC expects the CEC to encumber Gas RD&D Plan funds within two years of approval and to spend the encumbered funds within four years of encumbrance.
6. The CEC's AL 12-G is not fully compliant with Commission requirements for the following reasons (See Appendix G for details):
    a. The CEC does not disclose the following nor demonstrate that it:
        i. First utilized unspent fund balances, or
        ii. Addressed whether any commercial benefits have resulted from previous Gas RD&D investment or otherwise state that none have accrued.
    b. The CEC does not provide sufficient detail to demonstrate that each proposed Initiative is coordinated with the IOUs and other Gas RD&D entities, including how outputs and impacts are targeted and utilized to promote complementary rather than duplicative research efforts.
    c. The CEC does not demonstrated alignment with CPUC proceedings and ratepayer benefit in its *Support Equitable, Safe, and Cost-Effective Decarbonization of California's Gas System* and *Fuel-Flexible Distributed Power Generation* Initiatives. The Commission has not provided guidance on

the appropriate role of gas ratepayers in funding hydrogen RD&D as these projects would have further implications for future ratepayer funding, including in future Gas RD&D Plans.

7. The CEC's AL 10-G-A is not fully compliant with Commission requirements for the following reasons (See Appendix H for details):
    a. The CEC does not disclose the following nor demonstrate that it:
        i. First utilized unspent fund balances, or
        ii. Addressed whether any commercial benefits have resulted from previous Gas RD&D investment or otherwise state that none have accrued.
    b. The CEC does not provide sufficient detail to demonstrate that the *Networked Geothermal Heat Pumps* Initiative will involve activities that are complementary to rather than duplicative of ongoing and proposed CEC Gas RD&D and EPIC Initiatives.
8. The CEC's *Social Science Research for Gas Decommissioning in the Mid and Long Term* and *Pilot Projects to Advance Gas Decommissioning* Initiatives in its proposed 2025 Plan submitted via Tier 3 AL 10-G-A are compliant with all applicable Commission requirements.
9. The CEC appropriately responded to and addressed concerns in Cal Advocates' protest on AL 10-G-A submitted April 30, 2025.
10. The CEC responded to a CPUC data request on April 30, 2026, with updated balances of spent and unspent encumbered funds and unencumbered funds from previously approved Gas RD&D Plans from FY 2015-2016 to present to supplement information provided in its Annual Report and Annual Plan.
11. The Consolidated Guidance for Future CEC Gas RD&D Compliance Filings section of this Resolution is provided to support the efficient development, streamlined review, and effective implementation of future proposed Gas RD&D Plans.

THEREFORE, IT IS ORDERED THAT:

1. The California Energy Commission's (CEC's) Gas Research, Development, and Demonstration (RD&D) Program funding level for its 2024 Plan (AL 12-G) is $24 million, comprised of $21.6 million from unencumbered

and unspent funds for Initiatives and $2.4 million in new ratepayer funds for Program Administration.

2. The CEC's Gas RD&D Program funding level for its 2025 Plan (AL 10-G-A) is $24 million, comprised of:
    a. $9,476,690 from unencumbered and unspent funds for Initiatives and
    b. $14,523,310 in new ratepayer funds, including:
        i. $12,123,310 for Initiatives, and
        ii. $2,400,000 for Program Administration.
3. CEC shall submit Tier 2 Advice Letters with revised 2024 and 2025 Plans addressing all compliance issues outlined in Appendices G and H and requirements outlined in this Resolution within 60 days. CEC shall commensurately modify its 2024 and 2025 Gas RD&D Plans with this information and attach to its Advice Letter: 1) a track-change version of its original Plan; 2) a clean version of its updated Plan; 3) a table describing the changes it has made aligned with the ordering paragraph and page number.
4. If, at the time this Resolution is issued, the CEC has encumbered or spent a portion of the approximately $31M in identified unencumbered and unspent funds since reporting balances to the CPUC on April 30, 2026, the CEC shall provide updated balances to Energy Division in its Tier 2 ALs in the format of Appendix F. Energy Division is authorized to modify the calculations of CEC's 2025 Plan budget commensurately based on the balances of unspent funds in addition to commercial benefits according to the methods described in this Resolution. In its reporting on updated balances, the CEC shall:
    a. Report commercial benefits from previous Gas RD&D investments or otherwise state that none have accrued.
    b. Denote which of the identified Unspent Encumbered Funds (amounting to $7,733,165 as of April 2026) are either:
        i. Disencumbered, which shall be used in full to offset new/additional ratepayer costs for these Plans.
        ii. Associated with currently active projects, for which the CEC shall request of Energy Division a limited extension of these timeframes, including justification for the additional time needed and an attestation that spending on these projects is anticipated to be

completed within a specific requested reasonable timeframe (e.g., within one additional year). If funds are not anticipated to be and/or ultimately are not spent within the defined extended timeframe, the Commission expects these funds will be used to offset ratepayer costs for subsequent Gas RD&D Plans.

5. If the CEC has recently spent or newly encumbered more than $9,476,690 of the $31,076,690 in previously identified unencumbered and unspent funds, resulting in a balance of less than $21.6 million to offset Initiative funds for the CEC's 2024 Plan in full, Energy Division is also authorized to modify the calculations of CEC's 2024 Plan budget commensurately to supplement repurposed funds with new ratepayer funds to fulfill the CEC's total $24 million 2024 Plan budget.
6. Upon Commission approval, CEC shall not fund hydrogen-related RD&D under its proposed 2024 Plan *Fuel-Flexible Distributed Power Generation* Initiative as 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.
7. In alignment with the requirements outlined in the Consolidated Guidance for Future CEC Gas RD&D Compliance Filings section of this Resolution, the CEC shall:
    a. Propose investments at the Initiative level and demonstrate fulfillment of the Initiative Criteria for each proposed Initiative.
    b. Conduct the detailed pre-submittal consultation process to promote coordinated strategic planning across administrators to facilitate a holistic investment planning approach.
    c. Submit via a letter to the Energy Division Director, Energy Division Central Files,[96] and Staff its annual request to the SCO for quarterly transfers from the CPUC's Gas Consumption Surcharge Fund to the CEC's Public Interest RD&D Fund, reduced by the amount of interest accrued on deposited amounts in the CEC's Public Interest RD&D Fund; commercial benefits which may have resulted from previous Gas RD&D investments; and unencumbered and unspent funds required to be used prior to new/additional ratepayer funds as defined in this Resolution and verified by the Commission, and document these reductions in the letter.

d. Submit Tier 1 ALs semi-annually (by January 15 and July 15) with the following data to support Energy Division staff's oversight requirements:
    i. Basic budget tracking information related to previously approved Gas RD&D Plans, including:[160]
        1. The balances of spent, unspent, encumbered, unencumbered, and disencumbered Gas RD&D funds for each specific Initiative and Program Administration, specifically identifying:
            a. Unencumbered funds for which over two years have passed since Commission authorization, and
            b. Unspent encumbered funds for which over four years have passed since encumbrance: In order to maintain the integrity of the timeframes, the CEC shall request of Energy Division a limited extension of these timeframes, including justification for the additional time needed and an attestation that spending on these projects is anticipated to be completed within a specific requested reasonable timeframe (e.g., within one additional year). If funds are not anticipated to be and/or ultimately are not spent within the defined extended timeframe, the Commission expects these funds will be used to offset ratepayer costs for subsequent Gas RD&D Plans.
        2. Commission-approved budget allocations and approval dates for each Plan and Initiative.
        3. Requests to shift funds between Initiatives at or above 20% of the approved budget.
        4. Modified budgets per potential fund shifting.
            a. For funding reallocated from approved Initiatives, the Plan and specific Initiative the funding has been reallocated to; relatedly, for funding

[160] Also required in the CEC's Gas RD&D Annual Reports.

reallocated to new Initiatives, the Plan and specific Initiative funding has been reallocated from.

ii. Interest accrued on Gas RD&D program funds.

iii. Commercial benefits which may have resulted from previous Gas RD&D investments.

iv. Requests to modify research topics for Initiatives in Commission-approved Plans.

e. The CEC shall submit draft GFO materials via a letter directly to the Energy Division Director, Energy Division Central Files, and Staff including identification of the associated funding Plan year and Initiative. The letters should facilitate consultation early in solicitation scoping and concept development in addition to during later phases involving notices of proposed awards and agreement document development prior to CEC Business Meeting approval. Given this process has commonly lasted upwards of one year from Plan approval, upon CPUC request, the CEC should also explore memorandums of understanding (MOUs) to protect confidentiality as necessary while allowing for information sharing during intermediary steps, such as drafting solicitation packages and evaluating applicants.

f. Submit Gas RD&D Annual Reports to Energy Division by June 1 annually for the previous calendar year, utilizing a standardized template provided by Energy Division.[161]

g. In the use of ratepayer funds, maintain supporting documentation for transparency that is easily auditable, including for grant recipients, and comply with state requirements and procedures.

8. The CEC is no longer required to provide reporting on approved funding balances in its Annual Plans.
9. The CEC shall allocate funds towards its proportional share, $184,511, of developing a comprehensive Gas RD&D Database of projects.
10. Energy Division shall advise the CEC on any reimbursement process to support a consolidated, comprehensive independent Program Evaluation across all Gas

[161] To accommodate the transition from FY to CY reporting, CEC's next Annual Report, currently due October 31, 2026, shall be due June 1, 2027, for a one-and-a-half-year period: July 2025 through December 2026.

RD&D administrators to create efficiencies and improve transparency regarding the use of ratepayer funds.

11. In consultation with Energy Division staff and the Database administrator, CEC shall allocate and reimburse additional funds in future Plans for its proportional share of the maintenance and operational needs of the Database once established.
12. CEC's Advice Letters 12-G and 10-G-A proposing for CEC to record up to $24 million for each FY 2024-2025 and FY 2025-2026 in Gas RD&D expenses are partially approved.

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 December 3, 2026; the following Commissioners voting favorably thereon:

Dated December 3, 2026, at San Francisco, California

APPENDIX A

APPENDIX A: Key CPUC Gas RD&D Resolution Requirements

The Commission set requirements for CEC's Gas RD&D Program via resolutions approving CEC's Gas RD&D Plans, beginning in 2004.[162] *All applicable Commission requirements set via resolution were rigorously reviewed to identify the following key orders for the Commission's evaluation of CEC's proposed Plans:*

Resolution	Commission Order/Requirement
Resolution G-3394 (2006): Approving CEC's FY 2007-2008 Gas RD&D Plan	**OP 2**. The CEC shall submit its Annual [Plan] by March 31st, and its Annual [Report] by October 31st, [163] beginning in 2008.
Resolution G-3484 (2013): Approving CEC's FY 2013-2014 Gas RD&D Plan	In the interest of transparency, the CEC shall give an accounting of unspent PIER Natural Gas R&D funds in each future year proposed budget, beginning with the proposed budget for Fiscal Year 2014-2015. The CPUC understands that the CEC has two years to encumber PIER Natural Gas R&D funds with projects and an additional four years before such funds expire.[164] Beginning with the Fiscal Year 2014-2015 proposed budget, the CEC shall include in its proposed budget an account, by research area, of then-current unspent funds in the PIER Natural Gas R&D program, including encumbrances and expiration dates.[165] The intent of this requirement is to show that the CEC has spent its cumulative authorized budgets in the areas in which the money was authorized and to provide an accounting of the status of cumulative unspent funds. This requirement shall remain in place for each fiscal year's proposed budget, until otherwise directed by the CPUC (**p. 5-6**).
Resolution G-3571 (2020): Approving CEC's FY 2021-2021 Gas	**OP 5**. In developing all future Natural Gas R&D Plans, the CPUC requests that the CEC:

[162] Resolution G-3371 (2004): Approving CEC's CY 2005 Gas RD&D Plan.
[163] This Resolution modifies this requirement: CEC's Annual Reports will be due June 1, pertaining to the calendar year beginning in 2027.
[164] Public Utilities Code Section 384 at (a) "Any appropriations that are made from the fund shall have an encumbrance period of not longer than two years, and a liquidation period of not longer than four years." Consistent with Resolution G-3495 (2014) at p. 8; Resolution G-3507 (2015) at p. 6; Resolution G-3519 (2016) at p. 7; Resolution G-3527 (2017) at p. 8; Resolution G-3546 (2019) at p. 5; Resolution G-3555 (2019) at p. 7; Resolution G-3584 (2021) at p. 8-9; & Resolution G-3592 (2023) at p. 14-15.
[165] See Resolution G-3622 at Appendix F: CEC Balances of Unspent Funds from Previously Approved Gas RD&D Plans. Consistent with:
Resolution G-3484 (2013) at OP 5.
Resolution G-3495 (2014) at OP 3.
Resolution G-3507 (2015): Approving CEC's FY 2015-2016 Gas RD&D Plan at OP 3.
Resolution G-3519 (2016) at OP 3.
Resolution G-3527 (2017) at OP 3.
Resolution G-3555 (2019) at OP 4 & 8.
Resolution G-3584 (2021) at OP 3.

RD&D Plan.	a) 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.[166] b) Post the Natural Gas Research and Development Program: Proposed Budget Plan publicly on their website and notify CPUC of the web address when requesting approval of the plan. c) Distribute the Natural Gas Research and Development Program: Proposed Budget Plan through the CEC's research/R&D community listservs and include the names of the distribution lists served when requesting CPUC's approval of the plan. d) Consult with Energy Division staff on which CPUC listservs from ongoing CPUC proceedings the CEC should notice their proposed plan to. e) Consult with CPUC staff to allow for the option of presenting the Natural Gas Research and Development Program: Proposed Budget Plan to the CPUC Commissioners during a CPUC Commissioner Committee Meeting.[167]
	OP 6. In developing the future Natural Gas R&D Plans, the CPUC requests that the CEC submit future Natural Gas R&D Plans via the Tier 3 Advice Letter/business letter process.
Resolution G-3584 (2021): Approving CEC's FY 2021-2022 Gas RD&D Plan	**OP 5**. In developing the Fiscal Year 2022-2023 Gas R&D Plan, the CEC shall: a) Consider the Assembly Bill 3232 (Friedman, 2018) report.[168]
	OP 6. In developing future Gas R&D plans, the CEC shall: a) Consider the Long-Term Technological Development Strategy to Meet Aggressive Statewide Decarbonization Goals as it becomes available.[169]
Resolution G-3592 (2023): Approving CEC's FY 2022-2023 Gas	**OP 2.** The CEC's administrative budget is capped at 10 percent of the total budget of $24 million, or $2.4 million.[170]

[166] The Commission's compliance assessments of Resolution G-3571 (2020) at OP 5a is captured in the compliance assessments of AL 12-G and 10-G-A with Resolution G-3603 (2024) at OP 5. The CEC "shall coordinate with Energy Division and CPUC Staff in advance of commencing its plan."
[167] Consistent with Resolution G-3592 (2023) at OP 5b. The CEC shall "[c]onsult Energy Division staff at least sixty days in advance for the opportunity to present the CEC's Gas R&D plans to CPUC Commissioners, which may include the Commission's business meeting or the Commission's Emerging Technology Committee."
[168] Kenney, Michael, Nicholas Janusch, Ingrid Neumann, and Mike Jaske. California Energy Commission. 2021. "California Building Decarbonization Assessment." Publication Number: CEC-400-2021-006-CMF. https://www.energy.ca.gov/publications/2021/california-building-decarbonization-assessment.
[169] Consistent with Resolution G-3592 (2023) at OP 5f.
[170] See also p. 20. "We adopt a 10 percent administrative budget for the CEC's 2022-2023 Gas Plan as well as for future budget proposals." Consistent with Resolution G-3546 (2019) at p. 7. "The CEC's request for administrative expenses ($2.4 million, or 10 percent of the total proposed budget) is appropriate and in

RD&D Plan	**OP 5a**. Identify and engage appropriate disadvantaged community stakeholders to provide increased input on how to administer the program equitably. The CEC shall include details on how disadvantaged community stakeholders and DACAG input was incorporated into each Gas R&D theme, as relevant to their input.[171]
	OP 5c & d. Describe its process for seeking collaborative and co-funding opportunities, detailed proposals for such opportunities, or explain why it did not consider collaborative and co-funding opportunities [and] include information on coordination with the IOUs and other research stakeholders at both a high-level on coordination process and project level details of partnership, costs, and co-funding within the body of the research plan.[172]
	OP 5e. Use the EPIC administrative budget template.[173]
	OP 7. In Fiscal Year 2023-2024 and all future plans, the CEC shall identify unspent funds proposed in previous plans in the Public Interest Research Development and Demonstration Natural Gas Subaccount. The CEC shall ensure that requests to use encumbered and unspent funds for any new projects will identify the respective research areas for which the CPUC originally authorized the funding. The CEC shall also list all spent, encumbered, and uncommitted funds organized by Gas R&D initiative. Unencumbered and unspent funds shall be utilized prior to the utilization of new and/or additional ratepayer funds.[174]
Resolution G-3603 (2024): Approving CEC's FY 2023-2024 Gas RD&D Plans	**OP 4**. [The CEC] shall be proactive and specific in articulating its coordination and collaboration with the Investor-Owned Utilities (IOUs), and other Gas Research and Development (R&D) entities, in advance of commencing its plan. The CEC shall meet with the administrators of other Gas R&D programs and describe in its annual plan how its research complements other Gas R&D research occurring in California, consistent with CPUC policies and proceedings.[175]

line with historical program administration costs. We adopt this limit and require the CEC to adhere to it and encourage the CEC to continue to keep such expenses at 10 percent or less for future budget proposals."

[171] Consistent with:
Resolution G-3546 (2018): Approving CEC's FY 2018-2019 Gas RD&D Plan at OP 3a.
Resolution G-3555 (2019) at OP 6a & b.
Resolution G-3571 (2020) at OP 8a & b.

[172] Consistent with D.04-08-010 at p. 28 & Resolution G-3603 (2024) at OP 4.

[173] See Resolution G-3622 at Appendix B: Administrative Budget Cost Categories.

[174] Consistent with Resolution G-3584 (2021) at OP 4.

[175] Consistent with D.04-08-010 at p. 28 & Resolution G-3592 (2023) at OP 5c & d.

	OP 5. To ensure that research plans are coordinated, consistent, and aligned with CPUC policies and proceedings, the California Energy Commission shall coordinate with Energy Division and CPUC Staff in advance of commencing its plan.
	OP 6. Once the Electric Program Investment Charge (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.[176]

[176] Consistent with: Resolution G-3592 (2023) at OP 6.

APPENDIX B

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

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

Commission orders in bold pertain to the CEC.

Commission Guidance	Initiative Criteria
D.19-09-051 at p. 379. **Resolution G-3571 (2020) at OP 5a.** Resolution G-3601 (2023) at OP 6a. **Resolution G-3603 (2024) at OP 5.**	1. **Policy Priority:** Alignment with and prioritization of critical gaps and needs identified in specific CPUC policies and proceedings, which support State goals, informed by consultation with CPUC staff on targeted policy objectives.
Public Utilities Code Section 740.1 (d) Resolution G-3586 (2022) at OP 5. **Resolution G-3592 (2023) at OP 5d.** Resolution G-3601 (2023) at OP 6a & 6i. **Resolution G-3603 (2024) at OP 4.** D.24-12-074 at p. 327. Consistent with: D.23-04-042 at Appendix A. See Resolution G-3622 at Appendix D: EPIC Foundational Principles for the Development of a Uniform Impact Analysis Framework.	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.
Resolution G-3573 (2021) at OP 3. Resolution G-3601 (2023) at OP 6c. Consistent with: D.23-04-042 at Appendix A.	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.
a. Public Utilities Code 740.1 at (a). D.04-08-010 at p. 28; FOF 32; & OP 17. Resolution G-3586 (2022) at OP 4 & 5. **Resolution G-3592 (2023) at OP 6.** Resolution G-3601 (2023) at OP 5 & 6b.	4. **Anticipated Impacts**: a. Reasonable probability of providing California ratepayer benefit by locating projects in the State of California[177] and

[177] Resolution G-3601 (2023) at:

Resolution G-3603 (2024) at OP 6. D.23-11-069 at p. 218 & 220. Consistent with: D.23-04-042 at Appendix A. b. Public Utilities Code Section 740.1 (e)(5) Resolution G-3586 (2022) at OP 4. D.23-11-069 at p. 218. Consistent with: Executive Order (EO) N-5-24 (Newsom, 2024) c. **Resolution G-3555 (2019) at OP 6a.** **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. D.23-11-069 at p. 218 & 220-221.	detailed planned methodologies for tracking and evaluating quantitative impacts from investments through the use of the EPIC Program's Uniform Impacts Analysis Foundational Principles. b. Cost-effectiveness and protection of affordability to ratepayers. 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.

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 D

APPENDIX D: EPIC Foundational Principles for the Development of a Uniform Impact Analysis Framework[178]

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.[179]
- 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,[180] 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.

[178] D.23-04-042 at Appendix A.
[179] 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.
[180] 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.
- 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.

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 E

APPENDIX E: CEC Gas RD&D Funding Process for Budgets Less Than $24M

CEC's FY 2012-2013 Annual Report (October 2013) (p. 6-7)

[Resolution G-3484] requires the Energy Commission to explain its process for funding the PIER Natural Gas R&D program in cases where the CPUC authorizes less than what the Energy Commission proposed in its budgets.

The Energy Commission acknowledges that the CPUC retains the authority to approve the full amount of funds requested in the annual Natural Gas R&D Budget Plan or to reduce that amount if the CPUC believes that a lesser amount is in the ratepayers' interest. If in future years the CPUC decides to authorize less than $24 million, the Energy Commission will proportionally reduce the requested transfers from the Gas Consumption Surcharge Fund by that amount. Below is the detailed process the Energy Commission would follow:

- The Energy Commission submits a proposed budget as part of the annual State Budget process in the fall of each year for consideration in the next year's Governor's budget. Included in the budget request is up to $24 million in proposed PIER Natural Gas funding.
- The Energy Commission submits a proposed PIER Natural Gas Budget plan to the CPUC by the following March 31st of each year for the CPUC's consideration. Typically the CPUC decides on the request by June 30th.
- The state budget is approved by the Legislature and signed by the Governor.
- Depending on the outcome of the steps above, the Energy Commission requests that the CPUC transfer the funds in four equal payments on October 1, January 1, April 1, and July 1 of the appropriate year.

If the annual natural gas budget plan submitted to the CPUC in March of each year is approved for the requested $24M, then the Energy Commission will request the transfer of $6M from the *CPUC Gas Consumption Surcharge Fund* in quarterly payments on the dates identified above. Once transferred those funds are placed in the Energy Commission's *Public Interest Research Development & Demonstration, Natural Gas Subaccount*.

If during its review of the proposed natural gas budget plan, the CPUC determines that it does not want to fund an element of the proposed budget (for example, only approve

$22M of the $24M requested in the budget plan), then the CEC would request from the CPUC four equal payments of $5.5M that fiscal year instead of the maximum possible of $6M. Therefore, the CEC will only request one fourth of the amount approved by the CPUC and adopted in their resolution for any given year be transferred into the *Public Interest Research Development & Demonstration, Natural Gas Subaccount*.

APPENDIX F

APPENDIX F: CEC Balances of Unspent Funds from Previously Approved Gas RD&D Plans

*Gas RD&D Plan	*Initiative	*Approval Date	End of Encumbrance Period *Two Years After Approval*	End of Spending Period *Four Years After Encumbrance*	*Unencumbered Funds[181]	*Unspent Encumbered Funds[182]
FY 2015-2016	Energy Efficiency: Buildings End-Use Energy Efficiency	06/25/2015	06/25/2017	06/25/2021	$ 0	$ 123,052
	Renewable Energy and Advanced Generation	06/25/2015	06/25/2017	06/25/2021	$ 0	$ 17,757
	Natural Gas-Related Transportation	06/25/2015	06/25/2017	06/25/2021	$ 0	$ 16,411
	Energy-Related Environmental Research	06/25/2015	06/25/2017	06/25/2021	$ 0	$ 11,482
	Natural Gas Pipeline Integrity	06/25/2015	06/25/2017	06/25/2021	$ 0	$ 305,349
FY 2015-2016 Supplemental	Energy-Related Environmental Research	12/03/2015	12/03/2017	12/03/2021	$ 0	$ 188,333
FY 2016-2017	Energy Efficiency: Industrial, Agriculture, and Water Efficiency	09/30/2016	09/30/2018	09/30/2022	$ 543,673	$ 279,667
	Renewable Energy and Advanced Generation	09/30/2016	09/30/2018	09/30/2022	$ 0	$ 390,680
	Natural Gas-Related Transportation	09/30/2016	09/30/2018	09/30/2022	$ 0	$ 1,235
FY 2016-2017 Supplemental	Energy-Related Environmental Research	04/27/2017	04/27/2019	04/27/2023	$ 22	$ 44,546
FY 2017-2018	Energy Efficiency	09/28/2017	09/28/2019	09/28/2023	$ 0	$ 55,846
	Renewable Energy and Advanced Generation	09/28/2017	09/28/2019	09/28/2023	$ 305	$ 1
	Natural Gas-Related Transportation	09/28/2017	09/28/2019	09/28/2023	$ 865,642	$ 17,821
	Energy-Related Environmental Research	09/28/2017	09/28/2019	09/28/2023	$ 0	$ 36,143
	Natural Gas Infrastructure Safety and Integrity	09/28/2017	09/28/2019	09/28/2023	$ 0	$ 177,764
FY 2018-2019	Energy Efficiency	01/31/2019	01/31/2021	01/31/2025	$ 880,430	$ 1,283,863

[181] Remaining funds not encumbered to projects, excluding unencumbered funds which CEC was approved to reallocate in subsequent Gas RD&D Plans.
[182] Remaining unspent funds of those encumbered, excluding unspent funds which CEC was approved to reallocate in subsequent Gas RD&D Plans.

	Energy-Related Environmental Research	01/31/2019	01/31/2021	01/31/2025	$ 0	$ 996,269
	Natural Gas Infrastructure Safety and Integrity	01/31/2019	01/31/2021	01/31/2025	$ 0	$ 30,353
FY 2019-2020	Energy Efficiency	08/01/2019	08/01/2021	08/01/2025	$ 5,992,293	$ 708,478
	Renewable Energy and Advanced Generation	08/01/2019	08/01/2021	08/01/2025	$ 485,418	$ 0
	Natural Gas-Related Transportation	08/01/2019	08/01/2021	08/01/2025	$ 0	$ 1,476,466
	Natural Gas Infrastructure Safety and Integrity	08/01/2019	08/01/2021	08/01/2025	$ 0	$ 94,149
	Natural Gas Strategic Planning Research (Crosscutting)	08/01/2019	08/01/2021	08/01/2025	$ 0	$ 3,642
FY 2019-2020 Supplemental	Energy Efficiency	08/01/2019	08/01/2021	08/01/2025	$ 0	$ 495,355
	Energy-Related Environmental Research	08/01/2019	08/01/2021	08/01/2025	$ 0	$ 437,949
	Natural Gas Infrastructure Safety and Integrity	08/01/2019	08/01/2021	08/01/2025	$ 0	$ 540,553
	Natural Gas Strategic Planning Research (Crosscutting)	08/01/2019	08/01/2021	08/01/2025	$ 2,290,000	$ 0
FY 2020-2021	Transportation	11/05/2020	11/05/2022	11/05/2026	$ 333	$ 0**
	Energy-Related Environmental Research	11/05/2020	11/05/2022	11/05/2026	$ 725	$ 0**
	Natural Gas Infrastructure Safety and Integrity	11/05/2020	11/05/2022	11/05/2026	$ 72	$ 0**
FY 2021-2022	Energy-Related Environmental Research	09/23/2021	09/23/2023	09/23/2027	$ 600,864	$ 0**
FY 2022-2023	Decarbonization of Gas End Uses	03/16/2023	03/16/2025	03/16/2029	$ 3,175,645	$ 0**
	Energy Efficiency	03/16/2023	03/16/2025	03/16/2029	$ 1,500,000	$ 0**
	Gas Pipeline Safety and Integrity	06/06/2023	06/06/2025	06/06/2029	$ 7,772	$ 0**
	Targeted Gas System Decommissioning	06/06/2023	06/06/2025	06/06/2029	$ 2,000,315	$ 0**
FY 2023-2024	Air Pollutant Exposure Assessment in California Residences	05/09/2024	05/09/2026	05/09/2030	$ 5,000,016	$ 0**
				TOTAL:	$ 23,343,525	$ 7,733,165
				TOTAL IDENTIFIED UNSPENT FUNDS:	**$**	**$31,076,690**

**Information in indicated columns are pulled from CEC's data request response provided April 30, 2026.*

***Unspent Encumbered Funds balance is not $0, but less than four years have passed since encumbrance. Note: CEC's reported balance of approved funds within encumbrance and spending windows is $53,603,242.*

APPENDIX G

APPENDIX G: Compliance Assessment of Advice Letter 12-G – 2024 Plan

CPUC Requirement	CEC Response in AL 12-G	Compliance Assessment
Public Utilities Code 740.1 at (d) *Projects should not unnecessarily duplicate research currently, previously, or imminently undertaken by other electrical or gas corporations or research organizations.*	**1.** Support Equitable, Safe, and Cost-Effective Decarbonization of California's Gas System: The CEC states that "[p]rojects funded by earlier Gas R&D decommissioning initiatives are continuing to make progress in compiling infrastructure and other geospatial data in guiding planning, assessing air quality impacts of reducing fossil gas use, and analyzing location-specific data to identify promising candidate pilot sites for infrastructure decommissioning."[183] Under Expected Initiative Outcomes, the CEC lists "[s]ynthesizing and communicating evidence of air quality impacts, health implications, and other costs and benefits from converting from fossil gas, including attention to the distribution of these impacts. This work could draw data from a variety of existing resources, e.g., measured data on air exchange rates in homes along with house square footage as collected during home energy upgrade programs, and pollutant concentration data from indoor air quality research. It could then use a combination of data to model impacts."[184] In Appendix D: List of 2023 Gas R&D Events, CEC lists (1) a Pre-Application Workshop: Quantifying Exposures to Indoor Air Pollutants in Multifamily Homes that Cook with Gas or Alternatives (GFO-23-501) in November 2023 and (2) Meeting of the California Energy Commission's Healthy, Equitable Energy Transition (HEET) Working Group, covering the theme "Understanding Air Quality and Equity Impacts of Clean Energy Interventions Using Models and Measurements" in December 2023. **2.** Innovations for Cost-Effective Operation and Maintenance of Critical Infrastructure During the Gas Transition: See: The CEC Response in AL 12-G to Resolution G-3603 (2024) at OP 4. **3.** Fuel-Flexible Distributed Power Generation: The CEC states it has "collaborated on and co-funded several Gas R&D projects in the past and further collaboration is expected in the future" and that this Initiative "could also leverage other state programs such as those funded through CPUC including the SoCalGas FY 2022-2023	**1**. The CEC must provide greater detail to demonstrate that outputs and impacts will be targeted and utilized to promote complementary rather than duplicative efforts. In the CEC's FY 2023-2024 Plan, it describes how this Initiative "advances the [CEC's] Gas R&D Program's decommissioning portfolio by filling a key gap between prior work and future planned efforts" and proceeds to list Initiatives and projects funded via previous CEC Gas RD&D Plans as well as this proposed FY 2024-2025 Initiative under "Gas decommissioning planning tools and frameworks."[187] The CEC must model the thorough accounting of previous investments included in its FY 2023-2024 and FY 2025-2026 Plans, including correlating this Initiative with direct activities related to "Quantifying Exposures to Indoor Air

[183] AL 12-G at p. 31.
[184] AL 12-G at p. 27.
[187] CEC's Approved FY2023-2024 Gas RD&D Plan at p. 37-38.

CPUC Requirement	CEC Response in AL 12-G	Compliance Assessment
	R&D Budget Plan,"[185] listing several of SoCalGas' "synergistic and non-duplicative R&D initiatives."[186]	Pollutants in Multifamily Homes that Cook with Gas or Alternatives." **The CEC is *not* compliant with this requirement.** **2.** See: Compliance Assessment of Resolution G-3603 (2024) at OP 4. **The CEC is *not* compliant with this requirement.** **3**. The CEC sufficiently details and contrasts similar RD&D Initiatives and activities conducted by SoCalGas. **The CEC is compliant with this requirement.**
Public Utilities Code 740.1 at (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.*	The CEC proposes budget allocations broken down by Initiatives within Investment Themes as follows: Gas System Safety: **1**. Innovations for Cost-Effective Operation and Maintenance of Critical Infrastructure During the Gas Transition.[188] Gas Decommissioning: **2**. Support Equitable, Safe, and Cost-Effective Decarbonization of California's Gas System.[189] Renewable Generation: **3.** Fuel-Flexible Distributed Power Generation.[190]	Each of the CEC's proposed Initiatives supports one or more of the required objectives. **The CEC is compliant with this requirement.**

[185] AL 12-G at p. 42.
[186] AL 12-G at p. 40.
[188] AL 12-G at p. 32-38.
[189] AL 12-G at p. 24-32.
[190] AL 12-G at p. 38-49.

CPUC Requirement	CEC Response in AL 12-G	Compliance Assessment
(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.*		
D.04-08-010 at p. 28. *Support State Energy policy.*	The CEC states that "the Gas R&D Program supports state energy policies and goals, such as achieving economywide carbon neutrality by 2045 (Executive Order B-55-18 and AB 1279, Muratsuchi, Chapter 337, Statutes of 2022) and doubling energy efficiency by 2030 (SB 350, De León, Chapter 547, Statutes of 2015)" among "several other ley energy and climate policies and goals."[191] The CEC provides additional information on policies relevant to each Initiative in Appendix A.	The CEC discusses several State Energy policies which its program supports. **The CEC is compliant with this requirement.**
D.04-08-010: *[The Gas RD&D program shall have] a maximum cap of $24 million after four years; these amounts shall include all necessary R&D administrative costs* (p. 38). *Disbursements from the Fund to the R&D administrator shall not exceed the adopted zero-based R&D budget* (p. 41-42).	The CEC proposes a total FY2024-2025 Plan budget of $24 million, including Program Administration costs.[192]	The CEC's proposed budget, including all necessary RD&D administrative costs, complies with the $24M annual cap. **The CEC is compliant with this requirement.**
D.04-08-010 at p. 42. *[W]e expect the administrator to inform the Energy Division if and when any*	The CEC does not discuss commercial benefits that may have resulted from Gas RD&D investment.	**The CEC does *not* demonstrate compliance with this requirement.** In Annual Plans,

[191] AL 12-G at p. 7.
[192] AL 12-G at p. 2 & 24.

CPUC Requirement	CEC Response in AL 12-G	Compliance Assessment
commercial benefits result from the gas R&D projects funded through the gas surcharge. Commercial benefits may be used to offset future R&D costs, reduce the gas surcharge, or be returned to ratepayers, upon determination of the Commission.		the CEC shall disclose all potential commercial benefits that may have resulted from Gas RD&D investments and demonstrate they are used to offset ratepayer costs for new Plans or otherwise state that none have accrued.
Resolution G-3394 (2006) at OP 2. *The CEC shall submit… its Annual [Report] by October 31st, beginning in 2008.*	The CEC provided a draft FY 2023-2024 Annual Report to Energy Division on October 25, 2024, and received an extension to submit its final FY 2023-2024 Annual Report in March 2025.	**The CEC is compliant with this requirement.** However, the CEC shall strive to provide its final Annual Report by the deadline.
Resolution G-3484 (2013) at p. 5-6: *In the interest of transparency, the CEC shall give an accounting of unspent PIER Natural Gas R&D funds in each future year proposed budget, beginning with the proposed budget for Fiscal Year 2014-2015. The CPUC understands that the CEC has two years to encumber PIER Natural Gas R&D funds with projects and an additional four years before such funds expire. Beginning with the Fiscal Year 2014-2015 proposed budget, the CEC shall include in its proposed budget an account, by research area, of then-current unspent funds in the PIER Natural*	The CEC provides balances of encumbered and unspent funds from CEC's Plans from FY 2014-2015 through FY 2023-2024 as of January 2025 in Appendix B. The CEC states that "Funds Unspent refers to funds that have not been encumbered to an executed agreement (contract or grant), or previously encumbered funds that become unencumbered because the agreement has been canceled or due to other reasons."[193] The CEC reports $26.14M in unspent funds from its FY 2023-2024 Plan and details that, for this Plan, the CPUC approved reallocations amounting to $1.23M from its FY 2020-2021 Plan; $3.81 from its FY 2016-2017 Plan; and $1.5M from its FY 2015-2016 Plan in previously unspent funds. The CEC does not request to use unspent funds for any new projects in its FY 2024-2025 Plan, but states that it "will ensure that for any use of encumbered and unspent funds that the CEC requests for new projects, the request will identify the respective research areas for which the CPUC originally authorized the funding."[194] The CEC also responded to a Spring 2026 CPUC data request with updated balances of spent and unspent encumbered funds and unencumbered funds from previously approved Gas RD&D Plans from FY 2015-2016 to present to supplement information provided in its Plan appendices. The CEC reports a total of $31,076,690 in Unspent	Though the CEC provides some reporting on unspent and encumbered Initiative funds, the CEC does not provide information on the spending of program administrative costs. The information provided does not demonstrate that the CEC has spent its cumulative authorized budgets in the areas in which the money was authorized nor provide sufficient accounting on the status of cumulative unspent funds. **The CEC is *not* compliant with this requirement.** To clearly demonstrate compliance with reporting

[193] AL 12-G at B-1.
[194] AL 12-G at B-1.

CPUC Requirement	CEC Response in AL 12-G	Compliance Assessment
Gas R&D program, including encumbrances and expiration dates. The intent of this requirement is to show that the CEC has spent its cumulative authorized budgets in the areas in which the money was authorized and to provide an accounting of the status of cumulative unspent funds. This requirement shall remain in place for each fiscal year's proposed budget, until otherwise directed by the CPUC.	Encumbered Funds and Unencumbered Funds for which up to 11+ years have passed since encumbrance or up to 9+ years have passed since funds were authorized without being encumbered. See Resolution G-3622 at Appendix F: CEC Balances of Unspent Funds from Previously Approved Gas RD&D Plans.	requirements, the CEC shall utilize the standardized template provided by Energy Division for its Annual Report.
Resolution G-3571 (2020) at OP 5. *In developing all future Natural Gas R&D Plans, the CPUC requests that the CEC:*[195] *b) Post the Natural Gas Research and Development Program: Proposed Budget Plan publicly on their website and notify CPUC of the web address when requesting approval of the plan.* *c) Distribute the Natural Gas Research and Development Program: Proposed Budget*	b) The CEC states that it posts proposed Plans on "CEC's website on the page for CEC Energy Research and Development investment plans and annual reports",[196] citing California Energy Commission. "Annual Report," https://www.energy.ca.gov/data-reports/reports/energy-research-and-development-investment-plans-and-annual-reports. c) & d) The CEC details the noticed CEC lists and CPUC listservs.[197] e) The CEC states that its "offer to present the proposed budget plan was sent to Energy Division staff on January 25, 2024".[198]	The CEC posted its Plan publicly and accessibly; distributed on listservs; and offered to present to CPUC Commissioners. **The CEC is compliant with this requirement.**

[195] The Commission's compliance assessments of Resolution G-3571 at OP 5a is captured in the compliance assessment of AL 12-G with Resolution G-3603 at OP 5.
[196] AL 12-G at p. 10.
[197] *Ibid.*
[198] AL 12-G at p. 8.

CPUC Requirement	CEC Response in AL 12-G	Compliance Assessment
Plan through the CEC's research/R&D community listservs and include the names of the distribution lists served when requesting CPUC's approval of the plan. *d) Consult with Energy Division staff on which CPUC listservs from ongoing CPUC proceedings the CEC should notice their proposed plan to.* *e) Consult with CPUC staff to allow for the option of presenting the Natural Gas Research and Development Program: Proposed Budget Plan to the CPUC Commissioners during a CPUC Commissioner Committee Meeting.*		
Resolution G-3571 (2020) at OP 6. *In developing the future Natural Gas R&D Plans, the CPUC requests that the CEC submit future Natural Gas R&D Plans via the Tier 3 Advice Letter/business letter process.*	The CEC submitted its FY 2024-2025 Gas RD&D Investment Plan Tier 3 Advice Letter (AL) (6-G) on March 27, 2024; submitted a supplemental Tier 3 AL (6-G-A) on November 11, 2024; withdrew the supplement on February 13, 2025; and resubmitted a Tier 3 AL (12-G) on August 8, 2025.	The CEC submitted its proposed FY 2024-2025 Gas RD&D Plan via Tier 3 AL. **The CEC is compliant with this requirement.**
Resolution G-3584 (2021) at OP 5. *In developing the Fiscal Year 2022-2023 Gas R&D Plan, the*	The CEC states that it "considered the AB 3232 (Friedman, Chapter 373, Statutes of 2018) report in developing the Gas R&D Budget Plan, specifically the seven key strategies to decarbonize residential and commercial buildings outlined in the 2021	The CEC demonstrates that it considered the Assembly Bill 3232 report in developing its

CPUC Requirement	CEC Response in AL 12-G	Compliance Assessment
CEC shall: a) Consider the Assembly Bill 3232 (Friedman, 2018) report.[199]	report California Building Decarbonization Assessment. The initiatives in this FY 2024–2025 Gas R&D Budget Plan support several of the recommended strategies[:] • The 'Fuel-Flexible Distributed Power Generation' research initiative supports the second strategy detailed in the report for 'Decarbonizing the Electricity Generation System.' The initiative proposes using different types and qualities of renewable fuels, such as hydrogen, biomethane, or ammonia, in distributed generation technologies to enable them to be fuel-flexible. The initiative will take a technology-neutral approach that encompasses a range of strategies, from cutting combustion system emissions to expanding the operability of non-combustion systems. This approach seeks to modify or develop energy conversion systems like generators to operate on one or more renewable fuels, thereby expanding the suite of strategies to achieve a cleaner generation system. • The report also includes a strategy referred to as 'Decarbonizing the Gas System.' While the CEC originally considered a Clean Renewable Hydrogen Distribution research initiative to study the role of hydrogen separation technologies to understand whether and how hydrogen should be used to displace fossil gas in the existing gas system, the CEC ultimately decided not to include this initiative in the FY 2024–2025 Proposed Budget Plan. This decision was based largely on CPUC and public feedback, as summarized in Appendix C."[200]	proposed FY 2024-2025 Plan Initiatives. **The CEC is compliant with this requirement.**
Resolution G-3584 (2021) at OP 6. *In developing future Gas R&D plans, the CEC shall: a) Consider the Long-Term Technological Development Strategy to Meet Aggressive Statewide*	The CEC that it considered the Long-Term Gas Research Roadmap, titled Recommendations for the Long-Term Gas Research Strategy to Achieve Aggressive Statewide Carbon Neutrality Goals: "The roadmap includes recommendations, which are organized around 11 initiatives pertaining to communities, equity, and environment; gas end use; and gas supply chain, including production, transport, and storage. These recommendations have helped guide the CEC's Gas R&D planning and inform the investments identified in this budget plan".[201]	The CEC demonstrates that it considered the Long-Term Technological Development Strategy to Meet Aggressive Statewide Decarbonization Goals in developing its proposed FY 2024-2025 Plan Initiatives. **The**

[199] Kenney, Michael, Nicholas Janusch, Ingrid Neumann, and Mike Jaske. California Energy Commission. 2021. "California Building Decarbonization Assessment." Publication Number: CEC-400-2021-006-CMF. https://www.energy.ca.gov/publications/2021/california-building-decarbonization-assessment.
[200] AL 12-G at p. 9.
[201] AL 12-G at p. 9.

CPUC Requirement	CEC Response in AL 12-G	Compliance Assessment
Decarbonization Goals as it becomes available.		**CEC is compliant with this requirement.**
Resolution G-3592 (2023) at OP 2. *The CEC's administrative budget is capped at 10 percent of the total budget of $24 million, or $2.4 million.*	The CEC proposes a total FY2024-2025 Plan budget of $24 million, including 10% for Program Administration costs.[202]	The CEC proposes a $2.4 million budget for Program Administration. **The CEC is compliant with this requirement.** However, given the CEC is repurposing unencumbered and unspent funds associated with previously approved administrative budgets, the CPUC's approval of $2.4M for administrative expenses represents a one-time exception to respond to the CEC's immediate need for program continuity.
Resolution G-3592 (2023) at OP 5a. *Identify and engage appropriate disadvantaged community stakeholders to provide increased input on how to administer the program equitably. The CEC shall include details on how disadvantaged community stakeholders and DACAG input was incorporated into each Gas*	In an Equity Framework Matrix, the CEC identifies the direct and indirect Health & Safety; Access & Education; Financial; and Economic Development benefits across RD&D Topics.[203] The CEC provides a Summary of Key Input Activities for the CEC Gas R&D Program Grant Solicitation and Agreement Management Process at Figure 1,[204] including coordination with the DACAG. The CEC describes its Equitable Program Administration, including "CEC DACAG liaisons [supporting] technical staff in informing funding and focal areas and identifying engagement opportunities with the DACAG."[205] CEC states it "[provided] targeted outreach to the DACAG, California Environmental Justice Alliance, Asian Pacific Environmental Network, and the California Energy Research Center (focused on expanding education, training, and demonstration projects in the Central Valley) about the CEC's December 15, 2023, Gas	**1**. Though the CEC records consultation with the DACAG and other stakeholders on its proposed FY 2024-2025 Plan, no feedback on this specific Initiative is reported. **2**. & **3**. The CEC appears to have engaged and considered the concerns of the public and the DACAG related to this Initiative.

[202] AL 12-G at p. 2 & 24.
[203] AL 12-G at p. 50.
[204] AL 12-G at p. 6.
[205] AL 12-G at p. 13.

CPUC Requirement	CEC Response in AL 12-G	Compliance Assessment
R&D theme, as relevant to their input.	R&D Plan Stakeholders Workshop and offering the opportunity for public comment."[206] The CEC includes written public comments and a DACAG Meeting Comment Summary from January 19, 2024, with the CEC Responses in Appendix C:[207] **1**. Support Equitable, Safe, and Cost-Effective Decarbonization of California's Gas System: CEC reports no comments from the DACAG. **2**. Innovations for Cost-Effective Operation and Maintenance of Critical Infrastructure During the Gas Transition: The CEC clarifies that RD&D activities aimed at evaluating the risks associated with hydrogen-blending as well as hydrogen and fugitive methane emissions are included in previously proposed and approved CEC Gas RD&D Plans as opposed to this proposed Initiative; the CEC provided that "the initiative would center on improving safety and affordability of existing gas infrastructure" in response to the DACAG's concerns regarding potential embrittlement issues related to inspections for hydrogen and storage.[208] **3**. Fuel-Flexible Distributed Power Generation: The CEC states that "[w]hile renewable fuel blends will impact the performance and associated emissions of a technology, which is a specific concern raised by the DACAG, this initiative aims to introduce new installations that use electrochemical, thermochemical, or other proven pathways, with very low emissions even without being dependent on emissions control technologies or modifying existing combustion systems, potentially helping to improve local air quality and public health."[209] The CEC details several written comments from Mainspring on this Initiative, including that staff "concur with siting the [non-combustion] clean renewable fuel-flexible generation projects in frontline communities and at critical infrastructure facilities that offer crucial services and cannot sustain any long duration outages."[210]	**The CEC is compliant with this requirement.**
Resolution G-3592 (2023) at OP 5c & d. *Describe its process for seeking collaborative and co-*	The CEC describes its public engagement: "The CEC holds an annual public workshop to solicit feedback on the draft budget plan for that year. The Proposed FY 2024–2025 Gas R&D Budget Plan was presented at a public workshop December 15, 2023.	The CEC describes the multiple avenues in which it seeks and utilizes co-funding. See also:

[206] AL 12-G at p. 14.
[207] AL 12-G at C-5 to C-7.
[208] AL 12-G at C-6.
[209] AL 12-G at p. 47.
[210] AL 12-G at p. 41 & C-11.

CPUC Requirement	CEC Response in AL 12-G	Compliance Assessment
funding opportunities, detailed proposals for such opportunities, or explain why it did not consider collaborative and co-funding opportunities [and] include information on coordination with the IOUs and other research stakeholders at both a high-level on coordination process and project level details of partnership, costs, and co-funding within the body of the research plan.	Around 60 people attended the workshop, not including CEC staff, and the CEC received attendee questions and comments during the workshop discussion. The CEC considered and responded to public comments, using them to inform continued initiative and future solicitation development. (See Appendices C and G for a summary of public comments with CEC staff responses and the staff workshop presentation, respectively)."[211] Under the Cofunding Opportunities Section, the CEC states that it "leverages cofunding opportunities by either requiring applicants for competitive solicitations to secure match funding (usually 10–20 percent), providing additional scoring preferences for applications that exceed the minimum match funding requirement, or both. The cumulative match investments and project successes of the program are summarized in the Gas R&D Program Annual Report. As an example, the FY 2021–2022 Budget Plan resulted in competitively awarded projects that catalyzed nearly $8 million in match funds to expand the impact of these projects, effectively increasing the program funding level by 33 percent. A total of $1.5 million of these match funds came from IOUs (such as SoCalGas), $1.23 million from community- or publicly funded entities (for example, the South Coast Air Quality Management District), and $5.1 million from private entities."[212] See also: CEC Response in AL 12-G to Resolution G-3603 (2024) at OP 4.	Compliance Assessment of Resolution G-3603 (2024) at OP 4. **The CEC is compliant with this requirement.** However, to clearly demonstrate compliance with co-funding requirements, the CEC must utilize Energy Division guidance, including the Annual Report Template, to detail project level details of partnership, costs, and co-funding.
Resolution G-3592 (2023) at OP 5e. *Use the EPIC administrative budget template.*[213]	The CEC presents its proposed Estimated Administrative Costs delineated by Program Administrative Cost Budget Items in Appendix F.	The CEC's proposed administrative budget utilizes the required EPIC template. **The CEC is compliant with this requirement.**

Resolution G-3592 (2023) at OP 7. *In Fiscal Year 2023-2024 and all future plans, the CEC shall identify unspent funds proposed in previous plans in the Public Interest Research Development and*	The CEC provides balances of encumbered and unspent funds from the CEC's Plans from FY 2014-2015 through FY 2023-2024 as of January 2025 in Appendix B, including:
	• $26.14M unspent from its FY 2023-2024 Plan, including approved supplemental funds:
	  ○ $1.23M from its FY 2020-2021 Plan.
	  ○ $3.81 from its FY 2016-2017 Plan.
		Though the CEC reports unspent and encumbered funds, the CEC does not provide balances of spent and unencumbered funds for these years. The CEC does not demonstrate that unspent funds

[211] AL 12-G at p. 18.
[212] AL 12-G at p. 18-19.
[213] See Resolution G-3622 at Appendix B: Administrative Budget Cost Categories.

CPUC Requirement	CEC Response in AL 12-G	Compliance Assessment
Demonstration Natural Gas Subaccount. The CEC shall ensure that requests to use encumbered and unspent funds for any new projects will identify the respective research areas for which the CPUC originally authorized the funding. The CEC shall also list all spent, encumbered, and uncommitted funds organized by Gas R&D initiative. Unencumbered and unspent funds shall be utilized prior to the utilization of new and/or additional ratepayer funds. See also: Resolution G-3484 (2013) at p. 5-6.	○ $1.5M from its FY 2015-2016 Plan. • $5.30M unspent from its FY 2022-2023 Plan, including $3.4M and $1.9M for which solicitations are anticipated in FY 2025 and $7,772 anticipated for a supplemental Plan. • $865,642 unspent from its FY 2017-2018 Plan anticipated for a supplemental Plan. • $0 unspent, meaning all funds encumbered, from its FYs 2014-2015, 2018-2019, 2019-2020, and 2021-2022 Plans. However, the CEC also responded to a Spring 2026 CPUC data request with updated balances of spent and unspent encumbered funds and unencumbered funds from previously approved Gas RD&D Plans from FY 2015-2016 to present to supplement information provided in its Plan appendices. The CEC reports a total of $31,076,691 in Unspent Encumbered Funds and Unencumbered Funds outside encumbrance and spending windows per this requirement: See Resolution G-3622 at Appendix F: CEC Balances of Unspent Funds from Previously Approved Gas RD&D Plans. The CEC does not request to use unspent funds for any new projects in its FY 2024-2025 Plan, but states that it "will ensure that for any use of encumbered and unspent funds that the CEC requests for new projects, the request will identify the respective research areas for which the CPUC originally authorized the funding."[214] The CEC also states that, "[p]er Resolutions G-3584 and G-3592, the CEC will ensure that for any unspent funds that the CEC has identified and seeks to use for new Gas R&D projects, the CEC will apply this unused funding before any new or additional ratepayer funds are used".[215] The CEC also lists $3.6M under "CPUC FY 2022-23 *Approved* Budget Plan" versus $0 under "FY 2022-23 *Current* Budget Plan" for an Entrepreneur Development Initiative, noting "CPUC modified the $3.6 million budget for Entrepreneur Development (CalSEED Initiative) and directed the CEC to submit a new proposal for reallocating the $3.6 million via a Tier 2 Advice Letter. CPUC approved the CEC's request to	have been or are being used to offset new or additional ratepayer costs. The CEC shall apply unspent funds from previous cycles to future funding requests according to the methods described in this Resolution, which will result in reducing the amount the CEC will need to draw out of the program funds for that cycle.[217] The CEC also does not appear to accurately report CPUC-approved budget allocations for each Plan in Appendix B. **The CEC is *not* compliant with this requirement.** The CEC must ensure fund balances are listed by specific Gas RD&D Initiative rather than broader "Initiative Themes." To clearly demonstrate compliance with reporting requirements, the CEC must also utilize Energy Division guidance, including the Annual Report Template.

[214] AL 12-G at B-1.
[215] AL 12-G at p. 9.
[217] Consistent with Resolution G-3495 (2014) at p. 6-9; FOF 6; & OP 5.

CPUC Requirement	CEC Response in AL 12-G	Compliance Assessment
	reallocate $600,000 to Targeted Gas System Decommissioning and $3,000,000 to Gas Pipeline Safety and Integrity."[216]	
Resolution G-3603 (2024) at OP 4. *[The CEC] shall be proactive and specific in articulating its coordination and collaboration with the Investor-Owned Utilities (IOUs), and other Gas Research and Development (R&D) entities, in advance of commencing its plan. The CEC shall meet with the administrators of other Gas R&D programs and describe in its annual plan how its research complements other Gas R&D research occurring in California, consistent with CPUC policies and proceedings.*	The CEC provides a Summary of Key Input Activities for the CEC Gas R&D Program Grant Solicitation and Agreement Management Process at Figure 1,[218] including coordination with IOUs and a public workshop. The CEC describes Coordination and Strategic Partnerships primarily at the program and Plan levels, including regular outreach meetings and general initiative coordination with the IOUs.[219] The CEC also includes a Public Workshop and Written Public Comment Summary and CEC Responses, including IOU comments.[220] **1**. Support Equitable, Safe, and Cost-Effective Decarbonization of California's Gas System: CEC states that this "initiative responds to key needs identified in state processes and studies, including: SB 1221 (2024) - Gas Corporations: Ceasing Service: Priority Neighborhood Decarbonization Zones, which requires CPUC to designate priority neighborhood decarbonization zones on the gas distribution system and to facilitate decarbonization of priority neighborhood decarbonization zones. This initiative would support the implementation of SB 1221 in several dimensions, including by informing efficient execution of priority neighborhood decarbonization, contributing to energy resilience for these areas, and assessing and communicating air quality and other local benefits of decarbonization." However, the CEC also notes that it "was originally developed before SB 1221 passed. It was designed to support gas decommissioning pilots, like those subsequently envisioned under SB 1221, as well as longer-term decommissioning and other elements of gas system decarbonization."[221] The CEC also states that this Initiative "responds to key research gaps and needs identified in coordination with CPUC, IOUs, and other stakeholders, including: Coordination with gas utility staff and research organization staff on decommissioning and decarbonization research, including exchanges related to the PG&E Innovation program, and in a CEC scoping workshop and a CEC pre-application workshop on	**1.** The CEC must provide greater detail on specific coordination involved in the development and planned execution of this Initiative to demonstrate that outputs and impacts will be targeted and utilized to promote complementary rather than duplicative efforts. This must include efforts planned and underway as part of SB 1221 and work directly and indirectly involving IOU infrastructure. **2.** The CEC must supplement the information provided on coordination with the IOUs to identify pertinent research gaps by specifying how administrators' efforts are targeting related but distinct activities or applications. CEC must also clarify how events listed in Appendix D relate to and/or informed Initiatives. **3.** Though the CEC provides detail on coordination with

[216] AL 12-G at B-4.
[218] AL 12-G at p. 6.
[219] AL 12-G at p. 14-16.
[220] AL 12-G at C-1 to C-23.
[221] AL 12-G at p. 30.

CPUC Requirement	CEC Response in AL 12-G	Compliance Assessment
	decommissioning and decarbonization research for previously-approved initiatives within CEC's Gas Research program."[222] The CEC reports only one specific comment on this Initiative from SoCalGas: "Suggested consideration of pipeline blending of renewable gas as an alternative decarbonization pathway", to which the CEC responded that "[p]ipeline blending of renewable gas is anticipated to be a possible gas system decarbonization pathway that could be considered under this initiative."[223] **2.** Innovations for Cost-Effective Operation and Maintenance of Critical Infrastructure During the Gas Transition: The CEC-funded projects have been coordinated with PG&E "to demonstrate real-time monitoring of underground gas storage wells with the use of fiber optics and less-intrusive inspections with electromagnetic technologies" and describes a meeting held February 7, 2024, to coordinate with SoCalGas and PG&E and identify specific research gaps related to this Initiative.[224] The CEC reports only one specific comment on this Initiative from SoCalGas: "Important initiative; suggest coordination with SoCalGas; noted SoCalGas' existing pipeline inspection technology and related research", to which CEC responded that "CEC staff recognize the value of leveraging work done by SoCalGas and others in this space. Research developed and conducted under this initiative will incorporate input from IOUs relative to current practices and technologies, research needs, and challenges with pipeline inspection and material verification."[225] In Appendix D: List of 2023 Gas R&D Events, the CEC lists two events related to the quantification of methane emissions and gas pipeline geohazard risk mitigation but it is unclear if and how these events informed or are related to this Initiative. **3**. Fuel-Flexible Distributed Power Generation: The CEC reports and responds to several comments from SoCalGas regarding the need for CEC-led coordination on this topic, recommending that CEC consult with UC Irvine and requests that the CEC "share learnings, best practices, and requirements from the CPUC, the U.S. Department of Energy, and other funding agencies to demonstrate improved equity	SoCalGas and describes meeting with PG&E, it must explain how it will coordinate with UC Irvine per SoCalGas' clear recommendation to ensure efforts are complementary. See also: Compliance Assessment of Public Utilities Code 740.1 at (d). **The CEC is *not* compliant with this requirement.**

[222] AL 12-G at p. 31.
[223] AL 12-G at C-8.
[224] AL 12-G p. 37.
[225] AL 12-G at p. 37 & C-8.

CPUC Requirement	CEC Response in AL 12-G	Compliance Assessment
	engagement."[226] The CEC also affirms a shared prioritization of NOx emissions control.[227] The CEC reports "an interview in April 2024 with PG&E R&D staff to exchange information and provide input on the most relevant research focus areas, critical knowledge gaps and potentials, regulations on the horizon, emerging technology and trends to explore, and strategies to increase equity components of projects."[228] See also: CEC Response in AL 12-G to Public Utilities Code 740.1 at (d).	
Resolution G-3603 (2024) at OP 5. *To ensure that research plans are coordinated, consistent, and aligned with CPUC policies and proceedings, the California Energy Commission shall coordinate with Energy Division and CPUC Staff in advance of commencing its plan.*	The CEC provides a Summary of Key Input Activities for the CEC Gas R&D Program Grant Solicitation and Agreement Management Process at Figure 1,[229] including coordination with CPUC on Proposed and Final Research Initiatives. The CEC details Coordination and Strategic Partnerships with CPUC, including via monthly interagency calls and coordination on initiatives.[230] The CEC specifies meeting with CPUC on its FY2024-2025 Plan on the following dates: • November 15, 2023: Presentation to representatives from CPUC's Energy Division and Safety & Enforcement Division. • December 7, 2023: "CEC staff presented the proposed budget plan to CPUC Commissioner Douglas. Comments were not directed to the initiatives and therefore are not summarized below."[231] • December 15, 2023: Public workshop including CPUC staff. • January 10, 2025: "CEC met with CPUC subject matter experts to respond to feedback about the Gas System Safety research initiative."[232] • January 16, 2025: "CEC met with subject matter experts from CPUC to discuss the proposed Support Equitable, Safe, and Cost Effective Decarbonization initiative.	**1**. The CEC incorporated a portion of CPUC staff's feedback as detailed, however, the CEC must refine the scope of this Initiative as recommended by CPUC staff to align with gas proceedings by including the following additional research areas and questions to illuminate existing hurdles, complexities, and pathways forward for decarbonization activities: • What influences the choice of electric appliances or appliances other than gas in any particular location or situation.[248]

[226] AL 12-G at p. 46 & C-9 to C-10.
[227] AL 12-G at p. 46 & C-12.
[228] AL 12-G at p. 46.
[229] AL 12-G at p. 6.
[230] AL 12-G at p. 16-17.
[231] AL 12-G at C-1.
[232] AL 12-G at C-18.
[248] AL 12-G at p. 25.

CPUC Requirement	CEC Response in AL 12-G	Compliance Assessment
	The discussion strengthened interagency alignment on the initiative goals and clarified the research initiative language".[233] • January 23, 2025: "CEC met with subject matter experts from CPUC to clarify the proposed Fuel-Flexible Distributed Power Generation initiative and ensure the goals of the initiative are clearly distinguished from those of IOU research plans."[234] The CEC states that "[b]ased on feedback received through this process and current funding priorities, CEC staff did not include the proposed initiative on Clean Renewable Hydrogen Distribution: Hydrogen Separation in the FY 2024-2025 Gas R&D Program Budget Plan and redirected the associated funds".[235] The CEC also includes a list of Policies Supported by FY 2024-25 Gas R&D Program Initiative Themes at Appendix A and information on Roadmaps and Long-Term Strategies, representing "types of planning mechanisms and prioritization tools that help establish a clear link between research and energy policy goals".[236] In Appendix C, CEC includes a CPUC Staff Coordination Meeting Comment Summary and CEC Responses: **1**. Support Equitable, Safe, and Cost-Effective Decarbonization of California's Gas System: The CEC affirms it is attuned to and committed to exploring mechanisms to accommodate transition research needs and secure interest from appropriate bidders;[237] will target "both communication efforts and the identification and development of technological advances that improve the marketability and	• An example of how interval meter data may help provide targeted information on alternatives and associated benefits to gas appliance users.[249] • Abilities and opportunities for equipment vendors and manufacturers to support the installation of electric heat pumps.[250] • In addition to reinforcing the electricity system, targeting the identification and scaling of alternatives to gas heating to mitigate gas peaks.[251] **The CEC is *not* compliant with this requirement.** **2.** The CEC appropriately responded to CPUC staff feedback and provides related information in its Initiative

[233] AL 12-G at p. 17.
[234] *Ibid.*
[235] AL 12-G at C-1.
[236] AL 12-G at p. 19-20.
[237] AL 12-G at C-19.
[249] AL 12-G at p. 26.
[250] *Ibid.*
[251] AL 12-G at p. 31.

CPUC Requirement	CEC Response in AL 12-G	Compliance Assessment
	functionality of conversion from gas";[238] and intends to coordinate with CPUC gas proceedings.[239] **2.** Innovations for Cost-Effective Operation and Maintenance of Critical Infrastructure During the Gas Transition: The CEC provided additional detail in response to CPUC feedback: a. This Initiative supports CPUC staff's interest "in well inspection practices that don't hamper operations of the wells to serve their purpose in mitigating price fluctuations in gas markets."[240] b. CEC's coordination with the utilities will promote RD&D that is "impartial, transparent, and aligned with the interest of ratepayers and the public", particularly in requiring results be made publicly available and recipients detailing a technology transfer plan.[241] c. In relation to "exploring specific factors that may contribute to extending well testing intervals", CEC coordinated with CalGEM to establish shared interest in "understanding the effectiveness of emerging technologies in identifying anomalies."[242] d. In pre-submittal consultation, the CEC stated it expects the proposed Initiative funding level could yield 3-4 projects. **3**. Fuel-Flexible Distributed Power Generation: The CEC notes that "the proposed $6M funding could support about 3 to 4 projects for component and full system innovations to ensure fuel-flexible technologies meet expected performance, operability, cost, low-emission, and decarbonization goals and targets."[243] The CEC removed and modified language at several points in its Initiative description per CPUC staff feedback provided during pre-submittal consultation to better align with CPUC proceedings:	description, however, the CEC must strive to provide greater clarity on the scale and composition of Initiative outputs, such as 3-4 projects. **The CEC is compliant with this requirement.** **3**. The CEC is partially responsive to CPUC staff feedback, however, CEC must demonstrate it will not invest in hydrogen-related RD&D, including that aimed at "[attempting] to build out comprehensive renewable generation and distribution capacity"[252] as 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. The CEC must also strive to provide greater clarity on the scale and

[238] AL 12-G at p. 27 & C-20.
[239] AL 12-G at C-19 to C-20.
[240] AL 12-G at C-8.
[241] AL 12-G at C-18 to C-19.
[242] AL 12-G at C-19.
[243] AL 12-G at C-21.
[252] AL 12-G at C-20.

CPUC Requirement	CEC Response in AL 12-G	Compliance Assessment
	a. "This initiative will require projects and technology/fuel systems to be thoroughly evaluated on the basis of key metrics such as affordability, air quality, GHG and life-cycle emissions, and system performance including flexibility, operability and viability."[244] b. The CEC will "avoid investing in new combustion demonstration", limiting RD&D to potentially modifying existing combustion systems prioritizing replacing diesel backup generators for critical infrastructure.[245] c. "Given the potential scarcity of renewable fuels, potential projects must secure a reliable fuel source."[246] However, The CEC states that "this proposed initiative is focused on technological advancements and demonstrations of fuel-flexible technologies not necessarily limited to hydrogen."[247]	composition of Initiative outputs. **The CEC is *not* compliant with this requirement.**
Resolution G-3603 (2024) at OP 6. *Once the Electric Program Investment Charge (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.*	The CEC describes how its "current processes align with these principles in several ways, and impact assessment occurs throughout the Gas R&D Program administration process" in its Foundational Principles for Uniform Impact Analysis section.[253] The CEC lists the following anticipated Benefits to Californians and associated metrics under each Initiative.[254] **1**. Support Equitable, Safe, and Cost-Effective Decarbonization of California's Gas System:[255] • Affordability: Assessed via the "[i]ntegration of improved information into decommissioning planning and into rate-related policies." • Safety and reliability: Assessed via "[i]mprovements in estimating gas and electric demand patterns, including changes to winter peak and its weather sensitivity due to electrification of gas end uses" and the "[u]se of research results in energy	The CEC demonstrates attention to the Uniform Impacts Analysis Foundational Principles by selecting metrics to quantify ratepayer benefit that appear to be directly attributable to each of the proposed Initiatives. **The CEC is compliant with this requirement.**

[244] AL 12-G at p. 41.
[245] AL 12-G at p. 41-42; C-21; & C-22.
[246] *Ibid.*
[247] AL 12-G at p. 42.
[253] AL 12-G at p. 20-22.
[254] AL 12-G at p. 28-29, 34-35, & 42-44.
[255] AL 12-G at p. 28-29.

CPUC Requirement	CEC Response in AL 12-G	Compliance Assessment
	forecasts, which could lead to forecast accuracy improvements that support better reliability." • Adaptation: Assessed via the "[i]dentification of barriers to conversion and improved strategies for increasing the appeal of electrification of gas end uses and for managing energy resilience vulnerabilities throughout the transition." • Environmental sustainability: Assessed via "[e]stimation of the indoor air quality improvements, criteria air pollutant reductions, and GHG emissions reductions attributable to the application of improved knowledge." • Equity: Assessed via "[i]dentification of sub-populations at risk of increased inequities in energy costs or energy reliability in a 'business-as-usual' transition away from gas." **2.** Innovations for Cost-Effective Operation and Maintenance of Critical Infrastructure During the Gas Transition:[256] • Affordability: Assessed via "[o]perational cost savings, such as avoided costs of manual inspections, reduction of associated infrastructure down time, the reduced need for redundancy to maintain reliability during inspections, or the number of alternative inspection technologies developed or demonstrated." • Safety and reliability: Assessed via the "[n]umber of integrity issues or leaks identified with alternative monitoring and inspection methods" and "[r]esponse time to address and/or repair identified threats." • Adaptation: Assessed via "[a]doption of research results through risk mitigation measures, practices, or policies that are informed by additional monitoring and data-driven insights." • Environmental sustainability: Assessed via "[a]voided or reduced GHG emissions as a result of 1) early detection of infrastructure anomalies or weaknesses that could result in leaks, or 2) reduced footprint of the gas system resulting from reductions in system redundancies." • Equity: Assessed via the "[n]umber of demonstrations that occur within low-income or disadvantaged communities." **3**. Fuel-Flexible Distributed Power Generation:[257]	

[256] AL 12-G at p. 34-35.
[257] AL 12-G at p. 42-44.

CPUC Requirement	CEC Response in AL 12-G	Compliance Assessment
	• Affordability: Assessed via "[c]ost savings measured by comparing all associated costs, such as capital, operations, and maintenance costs, with the baseline cost." • Reliability and integrity & Adaptation: Assessed via "[s]ystem performance, such as time to ramp up, seamless integration, power quality, generating capacity, availability, and capacity factor." • Safety: Assessed via the "[n]ature and frequency of critical equipment failures, fuel leakage, and all other emissions, gaseous and otherwise, that are environmental hazards." • Equity and environmental sustainability: Assessed via "[r]eduction in emissions of criteria air pollution (e.g., NOx and particulate matter), GHG emissions, and lifecycle emissions."	

APPENDIX H

APPENDIX H: Compliance Assessment of Advice Letter 10-G-A – 2025 Plan

CPUC Requirement	CEC Response in AL 10-G-A	Compliance Assessment
Public Utilities Code 740.1 at (d) *Projects should not unnecessarily duplicate research currently, previously, or imminently undertaken by other electrical or gas corporations or research organizations.*	**1.** Social Science Research for Gas Decommissioning in the Mid and Long Term: See CEC Response in AL 10-G-A to Resolution G-3603 (2024) at OP 4. **2.** Pilot Projects to Advance Gas Decommissioning: See CEC Response in AL 10-G-A to Resolution G-3603 (2024) at OP 4. **3.** Networked Geothermal Heat Pumps: CEC notes that "[p]revious CEC-funded research has assessed the potential for ground-source heat pump systems in California buildings and found promising energy and emissions benefits (*Assessment of California's Low Temperature Geothermal Resources: Geothermal Heat Pump Efficiencies by Region*). However, the networked GHP concept is a recently developed model that has not yet been studied for the associated potential in the context of California's climate, geology, population, and policy landscape, nor brought to the pilot phase, and it may yield significant additional benefits."	**1**. The CEC sufficiently details and contrasts similar RD&D activities conducted (previously) by CEC, E3, SoCalGas, and PG&E. See: Compliance Assessment of Resolution G-3603 (2024) at OP 4. **The CEC is compliant with this requirement.** **2.** The CEC sufficiently details and contrasts activities associated with SB 1221 and similar RD&D activities conducted by CEC, E3, SoCalGas, and PG&E. See: Compliance Assessment of Resolution G-3603 (2024) at OP 4. **The CEC is compliant with this requirement.** **3**. Though the CEC discusses one previously funded CEC research study, the CEC does not discuss and differentiate other geothermal-related CEC RD&D Initiatives proposed and underway in this program and EPIC. **The CEC is *not* compliant with this requirement.**
Public Utilities Code 740.1 at (e) *Each project should also support one or more of the following objectives:*	The CEC proposes budget allocations broken down by Initiatives within Investment Themes as follows: Gas Decommissioning:	Each of CEC's proposed Initiatives supports one or more of the required objectives. **The**

CPUC Requirement	CEC Response in AL 10-G-A	Compliance Assessment
(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.*	**1.** Social Science Research for Gas Decommissioning in the Mid and Long Term.[258] **2.** Pilot Projects to Advance Gas Decommissioning.[259] Building Decarbonization: **3.** Networked Geothermal Heat Pumps.[260]	**CEC is compliant with this requirement.**
D.04-08-010 at p. 28. *Support State Energy policy.*	The CEC states that "the Gas R&D Program supports state energy policies and goals, such as achieving economywide carbon neutrality by 2045 (Executive Order B-55-18 and AB 1279, Muratsuchi, Chapter 337, Statutes of 2022) and doubling energy efficiency by 2030 (SB 350, De León, Chapter 547, Statutes of 2015)" among "several other ley energy and climate policies and goals."[261] The CEC provides additional information on policies relevant to each Initiative in Appendix A.	The CEC discusses several State Energy policies which its program supports. **The CEC is compliant with this requirement.**
D.04-08-010. *[The Gas RD&D program shall have] a maximum cap of $24*	The CEC proposes a total FY2025-2026 Plan budget of $24 million, including Program Administration costs.[262]	The CEC's proposed budget, including all necessary RD&D administrative costs, complies

[258] AL 7
[259] AL
[260] AL
[261] AL 10-G-A at p. 6-7.
[262] AL 10-G-A at p. 2 & 22.

CPUC Requirement	CEC Response in AL 10-G-A	Compliance Assessment
million after four years; these amounts shall include all necessary R&D administrative costs (p. 38). *Disbursements from the Fund to the R&D administrator shall not exceed the zero-based R&D budget [adopted via resolution]* (p. 41-42).		with the $24M annual cap. **The CEC is compliant with this requirement.** However, the CEC shall first utilize unspent funds prior to any new ratepayer funds for its 2025 Plan as described in this Resolution.
D.04-08-010 at p. 42. *[W]e expect the administrator to inform the Energy Division if and when any commercial benefits result from the gas R&D projects funded through the gas surcharge. Commercial benefits may be used to offset future R&D costs, reduce the gas surcharge, or be returned to ratepayers, upon determination of the Commission.*	The CEC does not discuss commercial benefits that may have resulted from Gas RD&D investment.	**The CEC does *not* demonstrate compliance with this requirement.** CEC shall disclose all potential commercial benefits that may result from Gas RD&D investment and demonstrate they are used to offset ratepayer costs for new Plans or otherwise state that none have accrued.
Resolution G-3394 (2006) at OP 2. *The CEC shall submit… its Annual [Report] by October 31st, beginning in 2008.*	The CEC provided a draft FY 2024-2025 Annual Report to Energy Division on October 15, 2025, and received an extension to submit its final FY2024-2025 Annual Report in January 2026.	**The CEC is compliant with this requirement.** However, the CEC shall strive to provide its final Annual Report by the deadline.
Resolution G-3484 (2013) at p. 5-6: *In the interest of transparency, the CEC shall give an accounting of unspent PIER Natural Gas R&D funds in each future year proposed budget, beginning with the proposed budget for Fiscal Year 2014-2015. The CPUC understands*	The CEC provides balances of encumbered and unspent funds from CEC's Plans from FY 2014-2015 through FY 2023-2024 as of January 2025 in Appendix B. The CEC states that "Funds Unspent refers to funds that have not been encumbered to an executed agreement (contract or grant), or previously encumbered funds that become unencumbered because the agreement has been canceled or due to other reasons."[263] The CEC reports $26.14M in unspent funds from its FY 2023-2024 Plan and details that, for this Plan, the CPUC approved reallocations amounting to $1.23M from its FY 2020-2021 Plan; $3.81 from its FY 2016-2017 Plan; and $1.5M from its FY 2015-2016 Plan in	Though the CEC provides some reporting on unspent and encumbered funds, the CEC does not provide information on the spending of program administrative costs. The information provided does not demonstrate that the CEC has

[263] AL 10-G-A at B-1.

CPUC Requirement	CEC Response in AL 10-G-A	Compliance Assessment
that the CEC has two years to encumber PIER Natural Gas R&D funds with projects and an additional four years before such funds expire. Beginning with the Fiscal Year 2014-2015 proposed budget, the CEC shall include in its proposed budget an account, by research area, of then-current unspent funds in the PIER Natural Gas R&D program, including encumbrances and expiration dates. The intent of this requirement is to show that the CEC has spent its cumulative authorized budgets in the areas in which the money was authorized and to provide an accounting of the status of cumulative unspent funds. This requirement shall remain in place for each fiscal year's proposed budget, until otherwise directed by the CPUC.	previously unspent funds. CEC does not request to use unspent funds for any new projects in its FY 2025-2026 Plan, but states that it "will ensure that for any use of encumbered and unspent funds that the CEC requests for new projects, the request will identify the respective research areas for which the CPUC originally authorized the funding."[264] The CEC also responded to a Spring 2026 CPUC data request with updated balances of spent and unspent encumbered funds and unencumbered funds from previously approved Gas RD&D Plans from FY 2015-2016 to present to supplement information provided in its Plan appendices. CEC reports a total of $31,076,690 in Unspent Encumbered Funds and Unencumbered Funds for which up to 11+ years have passed since encumbrance or up to 9+ years have passed since funds were authorized without being encumbered. See Resolution G-3622 at Appendix F: CEC Balances of Unspent Funds from Previously Approved Gas RD&D Plans.	spent its cumulative authorized budgets in the areas in which the money was authorized nor provide sufficient accounting on the status of cumulative unspent funds. **The CEC is *not* compliant with this requirement.** To clearly demonstrate compliance with reporting requirements, the CEC shall utilize the standardized template provided by Energy Division for its Annual Report.
Resolution G-3571 (2020) at OP 5. *In developing all future Natural Gas R&D Plans, the CPUC requests that the CEC:*[265]	b) The CEC states that it posts proposed Plans on "CEC's website on the page for CEC Energy Research and Development investment plans and annual reports",[266] citing California Energy Commission. "Annual Report," https://www.energy.ca.gov/data-reports/reports/energy-research-and-development-investment-plans-and-annual-reports.	The CEC posted its Plan publicly and accessibly, distributed on listservs, and offered to present to CPUC Commissioners. **The CEC**

[264] AL 10-G-A at B-1.
[265] The Commission's compliance assessments of Resolution G-3571 at OP 5a is captured in the compliance assessment of AL 10-G-A with Resolution G-3603 at OP 5.
[266] AL 10-G-A at p. 10.

CPUC Requirement	CEC Response in AL 10-G-A	Compliance Assessment
b) Post the Natural Gas Research and Development Program: Proposed Budget Plan publicly on their website and notify CPUC of the web address when requesting approval of the plan. *c) Distribute the Natural Gas Research and Development Program: Proposed Budget Plan through the CEC's research/R&D community listservs and include the names of the distribution lists served when requesting CPUC's approval of the plan.* *d) Consult with Energy Division staff on which CPUC listservs from ongoing CPUC proceedings the CEC should notice their proposed plan to.* *e) Consult with CPUC staff to allow for the option of presenting the Natural Gas Research and Development Program: Proposed Budget*	c) & d) The CEC details the noticed CEC lists and CPUC listservs.[267] e) The CEC states that its "offer to present the proposed budget plan was sent to Energy Division staff on January 22, 2025".[268] The CEC presented its proposed FY 2025-2026 Plan to CPUC Commissioners on June 26, 2025.	**is compliant with this requirement.**

[267] *Ibid.*

[268] AL 10-G-A at p. 10.

CPUC Requirement	CEC Response in AL 10-G-A	Compliance Assessment
Plan to the CPUC Commissioners during a CPUC Commissioner Committee Meeting.		
Resolution G-3571 (2020) at OP 6. *In developing the future Natural Gas R&D Plans, the CPUC requests that the CEC submit future Natural Gas R&D Plans via the Tier 3 Advice Letter/business letter process.*	The CEC submitted its FY2025-2026 Gas RD&D Investment Plan Tier 3 AL (10-G) on March 28, 2025, and submitted a supplement Tier 3 AL (10-G-A) on October 8, 2025.	The CEC submitted its proposed FY 2025-2026 Gas RD&D Plan via Tier 3 AL. **The CEC is compliant with this requirement.**
Resolution G-3584 (2021) at OP 5. *In developing the Fiscal Year 2022-2023 Gas R&D Plan, the CEC shall: a) Consider the Assembly Bill 3232 (Friedman, 2018) report.*[269]	The CEC states that it "considered the Assembly Bill 3232 (Friedman, Chapter 373, Statutes of 2018) report in developing the FY 2025-2026 Gas R&D Budget Plan, specifically the seven key strategies to decarbonize residential and commercial buildings outlined in the 2021 report *California Building Decarbonization Assessment*. The initiatives in this FY 2025–2026 Gas R&D Budget Plan support several of the recommended strategies[:] • The Social Science Research for Gas Decommissioning in the Mid and Long Term initiative supports multiple strategies detailed in the report, including "Building End Use Electrification," "Decarbonizing the Gas System," and "Decarbonizing the Electricity Generation System." The initiative will provide analysis, resources, and insights into real-world dynamics of gas use and factors encouraging or dissuading conversion, including to electricity end uses. This initiative would also identify and suggest improvements to coordination gaps between the electricity and gas systems. • The Pilot Projects to Advance Gas Decommissioning research initiative promotes the goals of "Decarbonizing the Gas System" by supporting the transition away from fossil gas. By strategically decommissioning sections of California's gas infrastructure and redirecting investment toward renewable energy alternatives,	The CEC demonstrates that it considered the Assembly Bill 3232 report in developing its proposed FY 2025-2026 Plan Initiatives. **The CEC is compliant with this requirement.**

[269] Kenney, Michael, Nicholas Janusch, Ingrid Neumann, and Mike Jaske. California Energy Commission. 2021. "California Building Decarbonization Assessment." Publication Number: CEC-400-2021-006-CMF. https://www.energy.ca.gov/publications/2021/california-building-decarbonization-assessment.

CPUC Requirement	CEC Response in AL 10-G-A	Compliance Assessment
	electrification, or both, this effort aims to lower the overall energy costs and GHG emissions in energy supply and end uses. • The Networked Geothermal Heat Pumps (GHPs) initiative supports the strategy of "Distributed Energy Resources" by assessing the feasibility of networked GHPs to provide neighborhood-scale, clean, efficient, distributed energy for heating and cooling as well as the goal of "Decarbonizing the Gas System" by supporting the transition away from fossil gas. Networked geothermal technology is a form of thermal energy network that implements the roughly constant temperature of the bedrock as a source and sink of energy for heat pumps, while balancing the load among a variety of end users in the network, thereby increasing overall thermal efficiency. This initiative aims to investigate the benefits of networked GHPs in the context of California's climate, geology, population, and policy landscape."[270]	
Resolution G-3584 (2021) at OP 6. *In developing future Gas R&D plans, the CEC shall: a) Consider the Long-Term Technological Development Strategy to Meet Aggressive Statewide Decarbonization Goals as it becomes available.*	The CEC that it considered the Long-Term Gas Research Roadmap, titled Recommendations for the Long-Term Gas Research Strategy to Achieve Aggressive Statewide Carbon Neutrality Goals: "The roadmap includes recommendations, which are organized around 11 initiatives pertaining to communities, equity, and environment; gas end use; and gas supply chain, including production, transport, and storage. These recommendations have helped guide Gas R&D planning".[271]	The CEC demonstrates that it considered the Long-Term Technological Development Strategy to Meet Aggressive Statewide Decarbonization Goals in developing its proposed FY 2025-2026 Plan Initiatives**. The CEC is compliant with this requirement.**
Resolution G-3592 (2023) at OP 2. *The CEC's administrative budget is capped at 10 percent of the total budget of $24 million, or $2.4 million.*	The CEC proposes a total FY 2025-2026 Plan budget of $24 million, including 10% for Program Administration costs.[272]	The CEC proposes a $2.4M budget for Program Administration. **The CEC is compliant with this requirement.** However, given the CEC is repurposing unencumbered and unspent funds associated with previously approved

[270] AL 10-G-A at p. 8-9.
[271] AL 10-G-A at p. 9.
[272] AL 10-G-A at p. 2 & 22.

CPUC Requirement	CEC Response in AL 10-G-A	Compliance Assessment
		administrative budgets, the CPUC's approval of $2.4M for administrative expenses represents a one-time exception to respond to the CEC's immediate need for program continuity.
Resolution G-3592 (2023) at OP 5a. *Identify and engage appropriate disadvantaged community stakeholders to provide increased input on how to administer the program equitably. The CEC shall include details on how disadvantaged community stakeholders and DACAG input was incorporated into each Gas R&D theme, as relevant to their input.*	In an Equity Framework Matrix, the CEC identifies the direct and indirect Health & Safety; Access & Education; Financial; and Economic Development benefits across RD&D Topics.[273] The CEC provides a Summary of Key Input Activities for the CEC Gas R&D Program Grant Solicitation and Agreement Management Process at Figure 1,[274] including coordination with the DACAG. CEC describes its Equitable Program Administration, including "CEC DACAG liaisons [supporting] technical staff in informing funding and focal areas and identifying engagement opportunities with the DACAG."[275] The CEC lists the following equity-centered outreach efforts: • "Requesting comments to elicit public input on how to center equity in the proposed initiatives in the 2025–2026 Gas R&D Program following the February 7, 2025, public workshop." • "Briefing DACAG SMEs on the initial list of proposed initiatives August 19, 2024" • "Presenting and soliciting feedback on the proposed initiatives of the Gas R&D Program and the proposed equity engagement approach at the DACAG meeting January 17, 2025." CEC details and responds to feedback from the DACAG in Appendix D.[276] • "Presenting and soliciting feedback on the proposed initiatives of the Gas R&D Program at an environmental justice roundtable October 11, 2024, with	**1**. The CEC describes how this Initiative relates to the DACAG's interests, but must continue to consider how to more directly support the DACAG's specific requests for discrete data. **2**. The CEC generally commits to addressing the EJ Representatives concerns with this Initiative, but must continue to consider how to more directly support the specific request for assistance to overcome unique barriers by demographic. **3**. The CEC appears to have engaged and considered the concerns of EJ representatives and the DACAG related to this Initiative.

[273] AL 10-G-A at p. 45.
[274] AL 10-G-A at p. 6.
[275] AL 10-G-A at p. 13.
[276] AL 10-G-A at D-10 to D-11.

CPUC Requirement	CEC Response in AL 10-G-A	Compliance Assessment
	representatives from seven organizations."[277] CEC details and responds to feedback from this roundtable in Appendix D.[278] **1.** Social Science Research for Gas Decommissioning in the Mid and Long Term: The CEC affirms a shared interest with the DACAG in supporting equitable neighborhood-scale decommissioning while addressing the obligation to serve as this Initiative includes "research that estimates the degree and societal distribution of potential energy cost effects associated with gas decommissioning."[279] The DACAG also expressed interest in the CEC gathering "data on actual savings to updated modeled/projected bill impacts"[280] and the CEC states that this Initiative would promote affordability by "[providing] information to planners on costs and risks of different decommissioning pathways, supporting decisions on transition pathway management and on setting gas and electricity rates."[281] **2.** Pilot Projects to Advance Gas Decommissioning: The CEC reports that an Environmental Justice (EJ) Representative emphasized the need to provide equitable opportunities and resources to Spanish-speaking renters to overcome additional barriers to electrification; the CEC responded that "effective community engagement must be tailored to meet the unique needs of each community."[282] **3.** Networked Geothermal Heat Pumps: In response to concerns from an EJ Representative over water usage, the CEC stated that "[w]ater use and potential savings will be studied in the suitability and benefits of this technology in California" and that the Building Decarbonization Coalition reported a 18 to 46 percent reduction in water consumption by geothermal energy networks as opposed to cooling towers. [D-8 to D-9]. In response to concerns from the DACAG on the cost-effectiveness of networked geothermal heat pumps, the CEC responded that "the efficiency and economic favorability of thermal energy networks in general directly correlate with population density" and "a California-specific study of networked GHPs and their	**The CEC is compliant with this requirement.**

[277] AL 10-G-A at p. 14.
[278] AL 10-G-A at D-8 to D-9.
[279] *Ibid.*
[280] AL 10-G-A at D-10.
[281] AL 10-G-A at p. 27.
[282] AL 10-G-A at D-8.

CPUC Requirement	CEC Response in AL 10-G-A	Compliance Assessment
	performance comparison with established technologies (both economically and in terms of non-economic metrics) will be further explored as part of this initiative."[283]	
Resolution G-3592 (2023) at OP 5c & d. *Describe its process for seeking collaborative and co-funding opportunities, detailed proposals for such opportunities, or explain why it did not consider collaborative and co-funding opportunities [and] include information on coordination with the IOUs and other research stakeholders at both a high-level on coordination process and project level details of partnership, costs, and co-funding within the body of the research plan.*	The CEC describes its public engagement: "The CEC holds an annual public workshop to solicit feedback on the draft budget plan for that year. The Proposed FY 2025–2026 Gas R&D Budget Plan was presented at a public workshop February 27, 2025. Approximately 70 people attended the workshop, not including CEC staff, and the CEC received around 30 attendee questions and comments during the workshop discussion. The CEC considered and responded to public comments associated with budget plan development. (See Appendices C and D for the workshop presentation and a summary of public comments and CEC staff responses, respectively)."[284] Under the Cofunding Opportunities Section, the CEC states that it "leverages cofunding opportunities by either requiring applicants for competitive solicitations to secure match funding (usually 10–20 percent), providing additional scoring preferences for applications that exceed the minimum match funding requirement, or both. The cumulative match investments and project successes of the program are summarized in the Gas R&D Program Annual Report. As an example, the FY 2021–2022 Budget Plan resulted in competitively awarded projects that catalyzed nearly $8 million in match funds to expand the impact of these projects, effectively increasing the program funding level by 33 percent. A total of $1.5 million of these match funds came from IOUs (such as SoCalGas), $1.23 million from community- or publicly funded entities (for example, the South Coast Air Quality Management District), and $5.1 million from private entities."[285] See also: CEC Response in AL 10-G-A to Resolution G-3603 (2024) at OP 4.	The CEC describes the multiple avenues in which it seeks and utilizes co-funding. See also: Compliance Assessment of Resolution G-3603 (2024) at OP 4. **The CEC is compliant with this requirement.** However, to clearly demonstrate compliance with co-funding requirements, the CEC must utilize Energy Division guidance, including the Annual Report Template, to detail project level details of partnership, costs, and co-funding.
Resolution G-3592 (2023) at OP 5e. *Use the EPIC administrative budget template.*[286]	The CEC presents its proposed Estimated Administrative Costs delineated by Program Administrative Cost Budget Items in Appendix F.	The CEC's proposed administrative budget utilizes the required EPIC template. **The CEC is compliant with this requirement.**

[283] AL 10-G-A at D-10 to D-11.
[284] AL 10-G-A at p. 17.
[285] AL 10-G-A at p. 18.
[286] See Resolution G-3622 at Appendix B: Administrative Budget Cost Categories.

CPUC Requirement	CEC Response in AL 10-G-A	Compliance Assessment

Resolution G-3592 (2023) at OP 7. *In Fiscal Year 2023-2024 and all future plans, the CEC shall identify unspent funds proposed in previous plans in the Public Interest Research Development and Demonstration Natural Gas Subaccount. The CEC shall ensure that requests to use encumbered and unspent funds for any new projects will identify the respective research areas for which the CPUC originally authorized the funding. The CEC shall also list all spent, encumbered, and uncommitted funds organized by Gas R&D initiative. Unencumbered and unspent funds shall be utilized prior to the utilization of new and/or additional ratepayer funds.*
 	
See also: Resolution G-3484 (2013) at p. 5-6.
	The CEC provides balances of encumbered and unspent funds from CEC's Plans from FY 2014-2015 through FY 2023-2024 as of January 2025 in Appendix B, including:
	• $26.14M unspent from its FY 2023-2024 Plan, including approved supplemental funds:
	  ○ $1.23M from its FY 2020-2021 Plan.
	  ○ $3.81 from its FY 2016-2017 Plan.
	  ○ $1.5M from its FY 2015-2016 Plan.
	• $5.30M unspent from its FY 2022-2023 Plan, including $3.4M and $1.9M for which solicitations are anticipated in FY 2025 and $7,772 anticipated for a supplemental Plan.
	• $865,642 unspent from its FY 2017-2018 Plan anticipated for a supplemental Plan.
	• $0 unspent, meaning all funds encumbered, from its FYs 2014-2015, 2018-2019, 2019-2020, and 2021-2022 Plans.
	
	However, the CEC also responded to a Spring 2026 CPUC data request with updated balances of spent and unspent encumbered funds and unencumbered funds from previously approved Gas RD&D Plans from FY 2015-2016 to present to supplement information provided in its Plan appendices. The CEC reports a total of $31,076,691 in Unspent Encumbered Funds and Unencumbered Funds outside encumbrance and spending windows per this requirement: See Resolution G-3622 at Appendix F: CEC Balances of Unspent Funds from Previously Approved Gas RD&D Plans.
	
	The CEC does not request to use unspent funds for any new projects in its FY 2025-2026 Plan, but states that it "will ensure that for any use of encumbered and unspent funds that the CEC requests for new projects, the request will identify the respective research areas for which the CPUC originally authorized the funding."[287] The CEC also states that, "[p]er Resolutions G-3584 and G-3592, the CEC will ensure that for any unspent funds that the CEC has identified and seeks to use for new Gas R&D projects, the CEC will apply this unused funding before any new or additional ratepayer funds are used."[288]
		Though the CEC reports unspent and encumbered funds, the CEC does not provide balances of spent and unencumbered funds for these years. The CEC does not demonstrate that unspent funds have been or are being used to offset new or additional ratepayer costs. The CEC shall apply unspent funds from previous cycles to future funding requests according to the methods described in this Resolution, which will result in reducing the amount the CEC will need to draw out of the program funds for that cycle.[290] The CEC also does not appear to accurately report CPUC-approved budget allocations for each Plan in Appendix B. **The CEC is *not* compliant with this requirement.**
		
		The CEC must ensure fund balances are listed by specific Gas RD&D Initiative rather than broader "Initiative Themes." To clearly demonstrate compliance with reporting requirements, the

[287] AL 10-G-A at B-1.
[288] AL 10-G-A at p. 9.
[290] Consistent with Resolution G-3495 (2014) at p. 6-9; FOF 6; & OP 5.

CPUC Requirement	CEC Response in AL 10-G-A	Compliance Assessment
	The CEC also lists $3.6M under "CPUC FY 2022-23 *Approved* Budget Plan" versus $0 under "FY 2022-23 *Current* Budget Plan" for an Entrepreneur Development Initiative, noting "CPUC modified the $3.6 million budget for Entrepreneur Development (CalSEED Initiative) and directed the CEC to submit a new proposal for reallocating the $3.6 million via a Tier 2 Advice Letter. CPUC approved CEC's request to reallocate $600,000 to Targeted Gas System Decommissioning and $3,000,000 to Gas Pipeline Safety and Integrity."[289]	CEC must also utilize Energy Division guidance, including the Annual Report Template.
Resolution G-3603 (2024) at OP 4. *[The CEC] shall be proactive and specific in articulating its coordination and collaboration with the Investor-Owned Utilities (IOUs), and other Gas Research and Development (R&D) entities, in advance of commencing its plan. The CEC shall meet with the administrators of other Gas R&D programs and describe in its annual plan how its research complements other Gas R&D research occurring in California, consistent with CPUC policies and proceedings.*	The CEC includes a Public Workshop and Written Public Comment Summary and CEC Responses, including IOU comments,[291] and lists the following stakeholder events:[292] • "On August 12, 2024, CEC staff met with representatives from Southern California Gas Company (SoCalGas), Pacific Gas & Electric (PG&E), and Southwest Gas to gather feedback on the initial broad set of potential initiatives." • "On October 9, 2024, CEC staff met with representatives from SoCalGas, Sempra, and PG&E to gather further feedback on the selected proposed initiatives included in the Budget Plan." • "On February 7, 2025, CEC staff held a public workshop and invited additional written public comments on the proposed research initiatives." The CEC provides a Summary of Key Input Activities for the CEC Gas R&D Program Grant Solicitation and Agreement Management Process at Figure 1,[293] including coordination with IOUs and a public workshop. The CEC describes Coordination and Strategic Partnerships primarily at the program and Plan levels, including regular outreach meetings and general initiative coordination with the IOUs on August 12 and October 9, 2024.[294] **1.** Social Science Research for Gas Decommissioning in the Mid and Long Term: Earthjustice commented that CEC should explore barriers and solution related to:	**1.** The CEC thoroughly details coordination on and results from related efforts previously conducted by the CEC and the IOUs in this space. The CEC demonstrates that this Initiative appropriately considers and leverages these efforts. **2.** The CEC demonstrates that this Initiative is coordinated with previous and ongoing efforts conducted by the CEC and the IOUs as well as activities associated with SB 1221. The CEC must continue to be proactive and specific in articulating these coordination efforts and consider Biovind's recommendations in the

[289] AL 10-G-A at B-3.
[291] AL 10-G-A at D-1 to D-7 & D-11 to D-19.
[292] AL 10-G-A at D-1.
[293] AL 10-G-A at p. 6.
[294] AL 10-G-A at p. 14-17.

CPUC Requirement	CEC Response in AL 10-G-A	Compliance Assessment
	Structural or infrastructure constraints; Multifamily residential and renter barriers; Up-front costs and bill impacts; Resilience concerns and potential resilience benefits; and Customer attitudes and unfamiliarity with technologies – the CEC responded that the "topics and considerations mentioned are well aligned with the types of investigation covered in the initiative."[295] SoCalGas recommended that the CEC consider technologies and solutions to address "where there may be challenges to meeting increasing electric demand through the grid" when targeting gas decommissioning, and the CEC responded that projects will be "designed to accommodate consideration of varied technological possibilities and recognition of favorable opportunities for developing their potential as aligned with state goals."[296] The CEC details recommendations from SoCalGas and PG&E for the CEC to lead and document coordination on similar RD&D activities, including: • "[P]revious CEC projects that assessed gas decommissioning in Environmental and Social Justice (ESJ) communities in Northern and Southern California. The ongoing Southern California-focused gas decommissioning study was co-funded by SoCalGas and overseen by the RAND Corporation. The results of this recent Southern California study, which have not yet been published by CEC, should help guide any follow-on research regarding gas decommissioning. The CEC also previously worked with PG&E on a targeted gas decommissioning study focused on Northern California", which identified that the "obligation to serve (Public Utilities Code Section 4515) makes gas decommissioning projects very challenging to develop at any significant scale." CEC responded that this "initiative is intended to contribute to a more comprehensive understanding of the planned transition from fossil gas, generating results that help bridge energy system planning, policy and programs, decommissioning efforts, and fair, empirically-centered assessments of associated environmental, economic, and social impacts."[297] • PG&E efforts to approach electrification by considering 1) cost-effectiveness 2) capacity 3) and customer willingness to convert in targeting upcoming distribution pipeline replacement projects as recommended by E3 via the CEC-funded project,	solicitation phase of this Initiative. **3.** The CEC appears to have demonstrated engagement and consideration of public concerns related to this Initiative. The CEC demonstrates coordination with the IOUs, including by considering findings from related RD&D conducted in California and other states. **The CEC is compliant with this requirement.**

[295] AL 10-G-A at D-11 to D-13.
[296] AL 10-G-A at D-3 to D-4.
[297] AL 10-G-A at D-2 to D-3.

CPUC Requirement	CEC Response in AL 10-G-A	Compliance Assessment
	"Analytical Framework Results for Strategic Gas Infrastructure Decommissioning in Northern CA." PG&E states that there may be "learnings there that can be applied to future projects, especially with the community outreach findings." CEC responded that "[s]taff are familiar with the E3 study and the approach of targeting properties based on distribution pipeline conditions as well as other infrastructural and community conditions (e.g., partly laid out in CPUC's Staff Proposal on Gas Distribution Infrastructure Decommissioning Framework) and agree that E3's study will be very useful for informing research resulting from these initiatives."[298] The CEC includes "a summary of the progression of the portfolio of gas decommissioning research projects and initiatives to date", reflective of the efforts mentioned by SoCalGas and PG&E.[299] In Appendix C: List of Gas R&D Events, the CEC lists the following gas decommissioning-related events: • February 2024: Workshop on Analytical Framework Results for Strategic Gas Infrastructure Decommissioning in Northern California, coordinated by the CEC; E3 presented final results (PIR-20-009). • March 2024: Scoping Workshop: Location-Specific Gas System Decommissioning. • October 2024: Community Workshop: Mindful Gas Decommissioning Study Workshop hosted by recipient, DNV-GL, to provide project updates and a beta tool demonstration and receive additional community input (PIR-22-002) • November 2024: CEC Healthy, Equitable Energy Transition (HEET) Working Group Meeting, covering asocial science approach to the residential transition from gas to electric and the role of energy sufficiency. **2.** Pilot Projects to Advance Gas Decommissioning: The CEC states that "staff are tracking current efforts across other states as well as internationally and will explore opportunities for exchanging information, such as data, best practices, and lessons learned."[300] The CEC includes a "a summary of the progression of the portfolio of gas decommissioning research projects and initiatives to date", reflective of the efforts mentioned by Earthjustice, SoCalGas, and PG&E.[301] In contrast to the previous	

[298] AL 10-G-A at D-4 to D-6.
[299] AL 10-G-A at p. 24-25.
[300] AL 10-G-A at D-14.
[301] AL 10-G-A at p. 24-25.

CPUC Requirement	CEC Response in AL 10-G-A	Compliance Assessment
	Initiative, the CEC states this Initiative "aims to demonstrate decommissioning at street segment or neighborhood scales. These pilots will consider and leverage previous and ongoing efforts, such as existing site-selection framework tools, census or pre-evaluated sites, and SB 1221 implementation for gas conversion. The pilots will provide real world data on performance, costs, and challenges. Additionally, information resulting from these pilots can inform models, templates, and best practices for future decommissioning efforts. Successful demonstrations can also help to build customer confidence, fostering higher levels of consent within neighborhoods, counties, and cities and encouraging them to pursue similar decommissioning efforts."[302] In response to concern expressed by the public on data availability to ensure project success, the CEC states that it "will utilize data from previous and ongoing studies as well as resources resulting from SB 1221, such as zonal maps. The zonal maps developed are anticipated to include information on potential gas distribution pipeline replacement projects to inform pilot project site selection. "In alignment with Earthjustice's recommendation, the CEC states that "[p]rojects funded under this initiative will consider existing research and emerging experience in a range of low-carbon technologies and leverage work under SB 1221 where feasible." In response to Biovind's recommendation that decommissioning efforts should utilize "a standardized, risk-based framework that integrates corrosion detection, predictive modeling, and equity considerations in determining pilot site selection", the CEC responded that it "will consider them as this initiative is further refined during the solicitation scoping process" and that "staff will be working with the CPUC to position the gas decommissioning research to inform and support efforts related to SB 1221."[303] **3.** Networked Geothermal Heat Pumps: The CEC states that "[t]o ensure CEC is tracking and learning from these various efforts, CEC along with CPUC staff participate in the Geothermal Network Regulator Forum."[304] The CEC affirms it will employ "SB 1221 maps to identify potential sites for near- and medium-term	

[302] AL 10-G-A at D-6.
[303] AL 10-G-A at D-13 to D-15.
[304] AL 10-G-A at p. 45.

CPUC Requirement	CEC Response in AL 10-G-A	Compliance Assessment
	networked GHP pilots" (per Earthjustice's recommendation)[305] and consider a "cost performance study by the National Renewable Energy Laboratory on single-owner networked GHPs [which] reported coefficients of performance for ground loops between three and 10, indicating extreme efficiency."[306] Though PG&E conducted an "initiative in San Jose connecting datacenters to nearby housing to provide energy and heat", the CEC states that "PG&E subject matter experts indicated they are not actively pursuing networked GHP research and would be interested in following the progress of this initiative."[307] In response to SoCalGas flagging issues with decreasing capacity of geothermal power generation over time, the CEC responded that "CEC staff will consider evaluations of the estimated life span of the well and anticipated performance degradation, so stakeholders can understand the long-term impacts of the project."[308] In response to SoCalGas flagging issues with brine production and seismic concerns, the CEC stated that "[s]ince the drilling is relatively less deep, the potential impact may be minimal. However, as part of the study, this concern will be investigated to ensure a comprehensive understanding of any potential effects."[309] In alignment with SoCalGas' and PG&E's recommendation, the CEC states it will consider how networked geothermal technology being studied and deployed in other states, including the first utility-scale networked geothermal system pilot being commissioned in Massachusetts in June 2024.[310] The CEC states that given networked geothermal technology "could also offer a new potential business model for utilities to provide gas customers with a suitable zero-emission substitute", the CEC would conduct a "comparison of ratepayer monthly bills among networked GHPs, other decarbonized solutions, and existing gas systems, modeled using existing utility business models (e.g., for fossil gas) and allowable rates	

[305] AL 10-G-A at D-17.
[306] AL 10-G-A at p. 43; D-15; & D-16.
[307] *Ibid.*
[308] AL 12-G at C-17.
[309] AL 12-G at C-17 to C-18.
[310] AL 10-G-A at p. 43-44.

CPUC Requirement	CEC Response in AL 10-G-A	Compliance Assessment
	of return."[311] The CEC also states that adaptation benefits could be assessed via the "[u]se of study results in utility long-term planning and development of business models to incorporate the technology and support the clean energy transition."[312] In alignment with comments from the Lawrence Berkeley National Laboratory (LBNL), the CEC states that reductions in GHG emissions will be evaluated and that "by decreasing electricity demand during both cooling and heating seasons and gas demand during heating season, networked GHPs will decrease the strain on power generation and transmission infrastructure, thereby reducing the risk of overload and equipment failure and increasing reliability."[313]	
Resolution G-3603 (2024) at OP 5. *To ensure that research plans are coordinated, consistent, and aligned with CPUC policies and proceedings, the California Energy Commission shall coordinate with Energy Division and CPUC Staff in advance of commencing its plan.*	The CEC provides a Summary of Key Input Activities for the CEC Gas R&D Program Grant Solicitation and Agreement Management Process at Figure 1,[314] including coordination with CPUC on Proposed and Final Research Initiatives. The CEC details Coordination and Strategic Partnerships with CPUC, including specific meetings on its FY 2025-2026 Plan on the following dates:[315] • July 24, 2024: First briefing soliciting early and ongoing feedback. • August 27 and October 29, 2024: Subsequent updates provided during monthly CEC-CPUC Gas R&D Working Group meetings. • September 9 and November 22, 2024: Additional coordination via Initiative-specific meetings. The CEC states that "[b]ased on feedback received throughout this process, CEC staff elected to exclude a previously proposed initiative on Scaling Technology to Decarbonize California's Gas Sector in the FY 2025-2026 Budget Plan and redirected the associated funds."[316] The CEC also includes a list of Policies Supported by FY 2025-2026 Gas R&D Program Initiative Themes at Appendix A and information on Roadmaps and Long-Term Strategies, representing "types of planning mechanisms	**1**. The CEC demonstrates that it has reflected CPUC staff feedback in this Initiative and aligned with CPUC proceedings. **2.** The CEC demonstrates that it has reflected CPUC staff feedback in this Initiative and aligned with CPUC proceedings, however, the CEC must strive to provide greater clarity on the scale and composition of Initiative outputs, such as the number of projects anticipated to be delivered with a given amount of funding. **3**. The CEC includes consideration of findings from related RD&D conducted in

[311] AL 10-G-A at p. 40 & D-15.
[312] AL 10-G-A at p. 41.
[313] AL 10-G-A at p. 40; p. 42; & D-16 to D-17.
[314] AL 10-G-A at p. 6.
[315] AL 10-G-A at p. 16.
[316] AL 10-G-A at D-1.

CPUC Requirement	CEC Response in AL 10-G-A	Compliance Assessment
	and prioritization tools that help establish a clear link between research and energy policy goals".[317] In Appendix D, the CEC includes CPUC Subject Matter Expert Feedback provided December 23, 2025, and CEC Responses:[318] **1.** Social Science Research for Gas Decommissioning in the Mid and Long Term:[319] The CEC also states that this "initiative responds to key needs identified in state processes and studies", including "CPUC's Long-Term Gas Planning Rulemaking (R.20-01-007 and R.24-09-012) documents, which point to the need to align gas planning and electric system planning, as well as to manage impacts on 'transition-vulnerable' customers." The CEC states that this Initiative targets needs discussed in conversations with CPUC staff, who "identified information gaps such as understanding gas customer attitudes toward electrification of cooking and other end uses, supply chain limitations for heat pumps and other barriers to electrification faced by these customers, and the impacts of gas use electrification on peak loads." **2.** Pilot Projects to Advance Gas Decommissioning: The CEC reports that CPUC staff recommended increasing funding allocated to this Initiative to meet objectives;[320] the CEC increased funding allocated to this Initiative when removing the Scaling Technology Alternatives to Gas (STAG) Initiative. **3.** Networked Geothermal Heat Pumps: The CEC will consider how networked geothermal technology being studied and deployed in other states, including the first utility-scale networked geothermal system pilot being commissioned in Massachusetts in June 2024.[321]	California and other states, aligning with CPUC staff feedback. **The CEC is compliant with this requirement.**
Resolution G-3603 (2024) at OP 6. *Once the Electric Program Investment Charge (EPIC)*	The CEC describes how its "current processes align with these principles in several ways, and impact assessment occurs throughout the Gas R&D Program administration process" in its Foundational Principles for Uniform Impact Analysis section.[322] The	The CEC demonstrates attention to the Uniform Impacts Analysis Foundational Principles by

[317] AL 10-G-A at p. 18-19.
[318] AL 10-G-A at D-9 to D-11.
[319] AL 10-G-A at p. 29-30.
[320] AL 10-G-A at D-9.
[321] AL 10-G-A at p. 43-44.
[322] AL 10-G-A at p. 19-21.

CPUC Requirement	CEC Response in AL 10-G-A	Compliance Assessment
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.	CEC lists the following anticipated Benefits to Californians and associated metrics under each Initiative:[323] **1.** Social Science Research for Gas Decommissioning in the Mid and Long Term: • Affordability: Assessed via the "[i]dentification of barriers to adoption of equipment that could reduce individual consumer costs"; Adaptation: Assessed via the "actualization of strategies and pathways that overcome or mitigate these barriers (e.g., through workforce training or improved technologies)." • Safety and reliability: Assessed via the "[i]dentification of prospective energy reliability and/or safety challenges based on modeling the impacts of gas end use conversion." • Environmental sustainability: Assessed via "[e]stimates of air quality impacts of any *acceleration* of transition away from gas." • Equity: Assessed via the "[i]dentification and/or dissemination of resilience strategies tailored for lower-income households and businesses." **2.** Pilot Projects to Advance Gas Decommissioning: • Affordability: Assessed via "[c]ost comparisons to existing systems per household." • Safety and reliability: Assessed via the "[i]dentification and reduction of environmental harms (e.g., soil and water contamination from corroded metal and pipeline coating substances) from abandoned pipe segments." • Adaptation: Assessed via the "[n]umber and criticality of potential points of failure identified and addressed." • Environmental sustainability: Assessed via "[c]alculated reductions in local air pollutants and GHG emissions." • Equity: Assessed via "[n]umber of communities engaged or involved in pilots and proportion of which are considered ESJ communities." **3.** Networked Geothermal Heat Pumps: • Affordability: Assessed via "[c]omparison of ratepayer monthly bills among networked GHPs, other decarbonized solutions, and existing gas systems, modeled using existing utility business models (e.g., for fossil gas) and allowable rates of return."	selecting metrics to quantify ratepayer benefit that appear to be directly attributable to each of the proposed Initiatives. **The CEC is compliant with this requirement.**

[323] AL 10-G-A at p. 27-29, 32-34, & 40-42.

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	• Safety and reliability: Assessed via (decreased) risk of power and gas system failures. • Adaptation: Assessed via "[c]omparison of resilience metrics, such as performance loss ratios, probabilities of recovery, and adaptive capacity, between the existing and proposed technologies." • Environmental sustainability: Assessed via "[r]eduction in GHG emissions, criteria air pollutant emissions, and water use." • Equity: Assessed via "[s]avings on monthly overall energy bill cost for ESJ communities based on historical data of gas and electric price spikes."	

Attachment 1:

G-3622 Draft Agenda Resolution (CEC AL 10-G & AL 12-G)(redline)