Application: 22-08-003
Exhibit No. IS-2

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Application of Pacific Gas and Electric Company for Approval of Zonal Electrification Pilot Project (U39G).	**Application 22-08-003**

Rebuttal Testimony of

Brian C. Collins

On behalf of

Indicated Shippers

March 17, 2023

Project 11369

BRUBAKER & ASSOCIATES, INC.

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

Application of Pacific Gas and Electric Company for Approval of Zonal Electrification Pilot Project (U39G).	**Application 22-08-003**

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Rebuttal Testimony of Brian C. Collins

INTRODUCTION

Q PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A Brian C. Collins. My business address is 16690 Swingley Ridge Road, Suite 140, Chesterfield, MO 63017.

Q ARE YOU THE SAME BRIAN C. COLLINS WHO PREVIOUSLY FILED TESTIMONY IN THIS PROCEEDING?

A Yes. On February 17, 2023 I filed direct testimony on behalf of the Indicated Shippers.[1]

Q WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?

A The purpose of my testimony is to respond to the direct testimonies of The Utility Reform Network ("TURN"), the Public Advocates Office at the California Public Utilities Commission ("Cal Advocates"), Environmental Defense Fund ("EDF"), and Sierra Club and Natural Resources Defense Council ("Sierra Club-NRDC").

To the extent that I do not address a particular issue addressed by any witness, my silence is not a tacit endorsement of that witness's position on that issue.

[1] The Indicated Shippers represent the natural gas Noncore customer interests of the following companies in this proceeding: Aera Energy LLC, California Resources Corporation, Chevron U.S.A. Inc., PBF Holding Company, Phillips 66 Company, and Tesoro Refining & Marketing Company LLC.

Q PLEASE SUMMARIZE YOUR CONCLUSIONS AND RECOMMENDATIONS FROM YOUR TESTIMONY FILED ON FEBRUARY 17, 2023.

A My conclusions and recommendations in my February 17, 2023 prepared testimony are summarized as follows:

1. I recommend that the costs of the electrification pilot project not be recovered from Pacific Gas and Electric Company's ("PG&E" or "Company") gas ratepayers.

2. The costs of the California State University at Monterey Bay ("CSUMB") electric appliances included in the electrification project are not costs incurred to provide gas delivery service to PG&E's remaining gas delivery service ratepayers.

3. Furthermore, because the Company's Present Value of Revenue Requirements ("PVRR") analysis does not show that its proposed pilot project is cost-effective from the perspective of PG&E's gas ratepayers, I recommend that this pilot project not be used as a template for future electrification projects.

4. CSUMB's current delivery service gas revenues provide a contribution to PG&E's fixed costs. Once CSUMB would electrify and cease gas delivery service, its contribution to fixed costs would be lost and then borne by PG&E's remaining gas ratepayers, further impacting affordability for PG&E's remaining gas customers. This makes the proposed electrification project even more expensive for PG&E's gas ratepayers than the gas pipeline replacement option.

5. Correcting the PVRR analysis to include lost gas delivery service revenue as a result of CSUMB's electrification should result in the gas pipeline replacement project being even more cost-effective from the perspective of PG&E's gas ratepayers than that shown by PG&E's own analysis as filed in its testimony.

6. Though PG&E recognizes that non-ratepayer funding is critical for addressing non-pipeline alternatives in order to improve their cost-effectiveness, PG&E nonetheless proposes to proceed with its proposed project at gas ratepayer expense. This, despite PG&E's own PVRR analysis from the perspective of gas ratepayers that demonstrates the electrification project is not cost-effective as compared to repairing and replacing the gas main currently providing service to CSUMB. Gas ratepayers would receive a net cost, and no net benefit, from behind-the-meter electrification costs PG&E proposes to incur and socialize across gas ratepayers rather than electric ratepayers.

7. Not only do I disagree that the electrification project costs should be recovered from gas ratepayers, but I also believe the Company's request to record the electrification project costs in a regulatory asset—whose

revenue requirement would be recovered from gas ratepayers—should be rejected.

8. The Company should not earn a return on costs for investments it does not own or control, or are not incurred to provide gas delivery service to gas ratepayers. Only the Company's shareholders stand to benefit from including a return on the electrification project costs under its proposal for a regulatory asset. This does nothing to address the burden of affordability for gas ratepayers.

9. In the event the proposed electrification project costs are recovered from gas ratepayers, the costs should be treated as an expense. The costs of the electric appliances should be expensed and amortized over an appropriate period, such as five years. Because the electric appliance costs are not a recurring annual cost, it would be appropriate to amortize the one-time expense over a five-year period in order to mitigate the near-term impact to gas ratepayers' delivery service rates.

Q HAVE YOU REVIEWED THE TESTIMONIES OF OTHER PARTIES SUBMITTED IN THIS PROCEEDING ON FEBRUARY 17, 2023?

A Yes.

Q BASED ON THAT REVIEW, DO YOU STILL MAINTAIN YOUR FEBRUARY 17, 2023 TESTIMONY RECOMMENDATIONS SUMMARIZED ABOVE?

A Yes.

Q DO YOU OPPOSE ZONAL ELECTRIFICATION PROJECTS IN GENERAL?

A No. However, the proposed electrification project proposed by PG&E in this case is an inappropriate template for both the current and any future electrification projects. Appropriate funding and cost recovery is a necessary requirement for electrification projects. The maximum amount PG&E should be permitted to recover is the ***avoided cost*** of a gas pipeline replacement project, provided that any excess costs are *not* gas ratepayer funded. Gas ratepayers should remain indifferent to electrification from a cost perspective. This is in keeping with the time-honored principle of cost causation.

Q THAT BEING SAID, DO OTHER PARTIES OPPOSE PG&E'S COST RECOVERY PROPOSAL FOR THE ELECTRIFICATION PROJECT TO SOME DEGREE?

A Yes. TURN, Cal Advocates, Sierra Club-NRDC, and EDF oppose PG&E's cost recovery proposal / regulatory asset treatment, and want PG&E to collect data and report findings consistent with a *pilot*.

No party supports PG&E's cost recovery proposal, although parties are mixed regarding the specifics:

- ***Every single party that addressed the issue of ratepayer cost agreed that PG&E should not be permitted to recover the requested amount of ratepayer funding.*** TURN, EDF, Sierra Club-NRDC, Cal Advocates, and Indicated Shippers all propose lowering the amount PG&E can recover from ratepayers.[2]

- TURN and EDF propose lowering the amount PG&E can recover from ratepayers because they find that PG&E's testimony contains errors, and PG&E's *own* cost-effectiveness analysis shows that electrification is the more expensive alternative. TURN and EDF both recommend aligning the ratepayer-funded cost with the avoided cost of the conventional gas pipeline replacement project.

- Sierra Club-NRDC argue that PG&E's proposed cost recovery is also overstated and unjustified on policy grounds, not merely because of the flaws in PG&E's empirical analysis.

- Cal Advocates recommends a reduction in PG&E's rate of return on Phase 2 of the project, because PG&E's analysis shows that Phase 2 is not cost-effective on a cash flow net present value ("NPV") basis.

I respond specifically to the other parties' testimonies below.

RESPONSE TO TURN

Q HAVE YOU REVIEWED THE PREPARED TESTIMONY OF MARCEL HAWIGER ON BEHALF OF TURN?

A Yes.

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[2] The only party that does not oppose PG&E's funding request is the Coalition of California Utility Employees (CUE), which does not address total cost at all, and does not contain a single mention of "revenue requirement," "cost recovery," "regulatory asset," or "net present value."

Q DOES TURN SUPPORT THE PROPOSED ELECTRIFICATION PROJECT?

A Yes. However, TURN recommends that the California Public Utilities Commission ("Commission" or "CPUC") cap the cost authorization at $15.82 million for the electrification project, an amount that TURN believes more fairly reflects the ***avoided costs*** of the gas pipeline replacement, and thus ensures ratepayers are not harmed financially.[3]

Q WHAT ARE TURN'S COST CONCERNS REGARDING THE ELECTRIFICATION PROJECT?

A TURN indicates that PG&E forecasts that the gas pipeline project is somewhat less expensive on a nominal basis than the electrification project. However, TURN also indicates that it is quite possible that the cost difference is even larger than forecasted by PG&E.[4]

Furthermore, TURN believes that the NPV analyses is biased to favor electrification, opining that PG&E's NPV analyses appear likely to be understating the costs of electrification and/or overstating the costs of gas pipeline replacements due to PG&E's timing of spending in the four phases. TURN questions whether the project actually provides economic benefits to ratepayers.[5]

Q DOES TURN RECOMMEND A COST CONTRIBUTION FROM EITHER CSUMB OR A THIRD PARTY FOR THE ELECTRIFICATION PROJECT?

A Yes. TURN recommends that any cost above its recommended project cap be covered either by a contribution from CSUMB, or a third-party funding source, to

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[3] TURN Testimony at 8 ("TURN thus recommends that the Commission authorize PG&E to recover a maximum of $15.82 million (nominal) from ratepayers, based on the gas pipeline replacement project cost").
[4] *Id*. at 3.
[5] *Id*. at 5.

offset the net gas ratepayer costs.[6] This would essentially make gas ratepayers indifferent to the electrification project from a cost perspective.

Q DO YOU AGREE THAT GAS RATEPAYERS SHOULD BE INDIFFERENT TO THE ELECTRIFICATION PROJECT FROM A COST PERSPECTIVE IN THE EVENT IT IS APPROVED BY THE COMMISSION?

A Yes. PG&E gas customers should not pay higher costs as a result of the electrification project as compared with the pipeline replacement alternative. Indifference is necessary to ensure just and reasonable rates under § 451 of the Public Utilities Code. Cost increases resulting from this project for gas ratepayers would socialize expenses that benefit a single customer that has the financial resources to pay for electrification, and planned to do so anyway. Accordingly, the maximum amount PG&E should be permitted to recover is the ***avoided cost*** of a gas pipeline replacement project.

Q ARE THERE RATE DESIGN OPTIONS AVAILABLE THAT COULD BE APPLIED TO THIS PROJECT TO BETTER ENSURE GAS RATEPAYER INDIFFERENCE FROM A COST PERSPECTIVE?

A Yes. One option would be to establish cost and revenue-tracking mechanisms to ensure that gas ratepayers do not bear any excessive cost or cost overrun risk from decommissioning/electrification projects. This would be appropriate because CPUC policy is to ensure that recovery of costs is consistent with cost-causation principles and avoids cost-shifts.[7] Cost causation requires that costs should be borne by those customers who cause the utility to incur the expense.

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[6] *Id*. at 8.

[7] CPUC, *Advanced Strategies for Demand Flexibility Management and Customer DER Compensation* at 6 (June 22, 2022) ("The 10 CPUC Rate Design Principles: . . . 3. Rates should be based on cost-causation principles."); CPUC, *CPUC Rate Design & Demand Flexibility Principles Staff Proposal* at 3 ("Rates should be based on cost-causation principles and avoid cost shifts."), *attached to* R.22-07-005, Assigned Commissioner's Phase 1 Scoping

Q DOES TURN HAVE OTHER COST CONCERNS RELATED TO THE ELECTRIFICATION PROJECT?

A Yes. In its testimony, TURN points out that this is not a mere fuel substitution project.[8] Rather, PG&E will be completely renovating housing units owned by CSUMB, for the sole benefit of CSUMB and its tenants. TURN further indicates at page 8 of its testimony that "the installed appliances will be owned and operated by the property owner, CSUMB. Utility spending on such behind-the-meter ("BTM") installations would thus not qualify as "used and useful" utility-owned assets under normal ratemaking policies." PG&E agrees that these types of expenditures are typically expensed.[9] TURN notes that "the key aspect of long-lived assets is that they provide useful value to a large number of ratepayers over time;"[10] appliances do not. In addition, when a utility invests in a capital asset, it must ensure that the asset remains used and useful throughout its remaining life.

Q IN RECOVERING THE COST OF THE ELECTRIFICATION PROJECT, DO YOU HAVE CONCERNS AS TO WHETHER THE PROPOSED ELECTRIFICATION PROJECT IS USED AND USEFUL FOR GAS RATEPAYERS?

A Yes. Used and useful is a principle that is intended to prevent deliberate **over-investment** by a utility; or in other words, it is intended to prevent gold-plating. To be used and useful, assets must be (1) physically used by the utility to serve current

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Memo and Ruling (Nov. 2, 2022); D.20-02-043 at 21, 33 (Feb. 28, 2020) ("Indicated Shippers argue that recovering [gas] program costs through the PPP surcharge violates long held cost causation principles . . . [W]e find that Cal Advocates, Indicated Shippers, and SBUA arguments are persuasive"); Order Instituting Rulemaking 12-06-013 at 13 n.19 ("Developing equitable rates based on the principle of cost causation is one of the underlying goals of the Commission's rate making process. . . . [A]voiding cross-subsidies and supporting cost-causation principles 'achieves equity in rates by relating the costs imposed on the utility system to the customer responsible for those costs.'").

[8] TURN Testimony at 7.

[9] *Id*. at 8.

[10] *Id*. at 9.

ratepayers, and (2) prudently purchased or constructed.[11] They must be subject to CPUC's continuing oversight to ensure the assets are used for the convenience of the public for the duration of their useful lives.

With respect to the electrification expense that is in excess of the avoided cost of the gas project, PG&E has not demonstrated that the BTM equipment would satisfy the used and useful standard.

In addition, the lack of utility ownership means CSUMB could simply discard or resell the assets at any time. The CPUC has not addressed the problem of lack of utility-ownership/continuing use to the public with respect to electrification projects.

Furthermore, the high per unit cost of avoided emissions for this project raises the question as to whether this project is actually prudent.[12]

Q SHOULD DECARBONIZATION BE TECHNOLOGY-AGNOSTIC?

A Yes. Decarbonization should be technology-agnostic. The proposed CSUMB project is very expensive on a per unit of avoided greenhouse gas ("GHG") emissions basis. Authorizing recovery of costs for a project with limited GHG benefits will deny those resources to alternative methods of decarbonization that are more cost-effective.

Q DOES TURN RECOMMEND REJECTION OF THE USE OF A REGULATORY ASSET FOR COST RECOVERY RELATED TO THE ELECTRIFICATION PROJECT?

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[11] CPUC, *Utility General Rate Case – A Manual for Regulatory Analysts*, at 26 (Nov. 13, 2017).

[12] PG&E forecasts "an annual emissions reduction of 2,511,000 lbs (1,139 metric tons) of CO2 emissions." PG&E Testimony at 1-8. PG&E's useful life assumption is 15 years and PG&E's PVRR is $17,694,697. PG&E Testimony at 3-6. Using these values, the CSUMB cost of avoided emissions is approximately $1,036/metric ton ($17,694,697÷15 years÷1,139 metric tons). The Commission's 2022 Avoided Cost Calculator (ACC) uses an avoided cost of greenhouse gas emissions of $19/metric ton. E3, *2022 Distributed Energy Resources Avoided Cost Calculator Documentation*, Version 1a, at 30-32 (June 22, 2022) ("ACC updated the valuation of GHG emissions to align with the IRP and California's GHG reduction goals."). The 2022 ACC also reports a "$114/ton GHG abatement cost for residential building electrification." *Id*. at 19 (citing California Energy Commission *California Building Decarbonization Assessment*).

A Yes. TURN recommends rejection of the use of a regulatory asset for cost recovery. This is consistent with my direct testimony. As indicated in my direct testimony, PG&E should not be afforded regulatory asset treatment for this electrification project.

In its testimony, TURN "…strongly recommends that the Commission reject PG&E's proposal to create a regulatory asset and allow the utility to earn profits on the installation of customer appliances and equipment that will not be owned or operated by PG&E."[13]

To the extent PG&E seeks to have this application serve "as a template for future zonal electrification efforts," TURN strongly encourages the Commission to reject the proposed "regulatory asset" ratemaking treatment.[14]

I agree with TURN that there are important regulatory policy rationales for rejecting utility profitmaking off the cost of installing in-home appliances BTM and then concentrating those costs on utility gas ratepayers. TURN states that "PG&E has presented no rationale that would warrant departing from traditional ratemaking in this case."[15] In addition, TURN indicates that PG&E has not proven "that authorizing behind-the-meter spending as a regulatory asset is relevant to the utility's ability to scale-up and expedite projects."[16]

Q DOES TURN RECOMMEND THE ELECTRIFICATION PROJECT BE A PILOT?

A TURN recommends "that the program be adopted as a "pilot," and that actual guidelines and criteria for future zonal electrification projects be established in the Long-term Gas Planning Rulemaking 20-01-007."[17]

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[13] TURN Testimony at 2.
[14] *Id.* at 11-12.
[15] *Id.* at 12.
[16] *Id.* at 11.
[17] *Id.* at 2.

Q HOW DO YOU RESPOND?

A In the event the Commission approves the project, I agree with TURN's pilot and guidelines recommendations. This project lacks guidelines and criteria for future electrification projects, and should only be pilot if ultimately approved. As a result, it is a poor test case and is both inadequate and inappropriate to be used as a prudent project template. With an electrification cost of approximately $25,000 per dwelling unit, if this project were used as a template for future electrification projects and applied at scale, it would be ruinously expensive to gas ratepayers who are already struggling to pay their utility bills.

Q DOES TURN RECOMMEND OTHER REQUIREMENTS FOR PG&E RELATED TO THE ELECTRIFICATION PROJECT?

A. Yes. In its testimony, TURN recommends that the CPUC should impose the following requirements on PG&E:

- A requirement to use competitive bulk procurement of appliances in order to minimize project costs.
- A requirement to obtain data on pre- and post-project customer energy use and energy bill data so as to compare the impacts of electrification on customer energy bills.[18]

Q ARE THESE APPROPRIATE RECOMMENDATIONS IN THE EVENT THE COMMISSION APPROVES THE PILOT PROJECT?

A Yes.

[18] *Id.*

RESPONSE TO CAL ADVOCATES

Q HAVE YOU REVIEWED THE PREPARED TESTIMONY OF SCOTT J. LOGAN ON BEHALF OF CAL ADVOCATES?

A Yes.

Q DOES CAL ADVOCATES SUPPORT PG&E'S ELECTRIFICATION PROJECT?

A Yes. Cal Advocates supports PG&E's request for the CSU Zonal Electrification Project, subject to certain modifications. These modifications include:

- Allocation to gas and electric customers:
    - 90% of actual expenditures should form the basis of the revenue requirement allocated to gas distribution rates.
    - 10% of actual expenditures should form the basis of a separate revenue requirement and allocated to electric distribution rates rather than gas distribution rates.[19]

Cal Advocates' rationale is that this allocation is equitable given that the project will result in an increase of electric load and sales.

Q DOES CAL ADVOCATES RECOMMEND OTHER CHANGES TO PG&E'S PROPOSED ELECTRIFICATION PROJECT?

A Yes. Cal Advocates indicates that the non-cost-effective Phase 2 project expenditures, estimated at $7.13 million, should receive a debt rate of return on the regulatory asset rather than the weighted cost of debt and equity. Cal Advocates states that "shareholders are not taking any risk with this project – the utility spending is primarily on behind-the-meter appliance purchases, and the utility will not need to fund the project with shareholder or bondholder capital."[20] As a result, "Cal Advocates supports a fully weighted return, but only if cost-effective."[21] It concludes that "Phase

[19] Cal Advocates' Testimony at 2-3.
[20] *Id.* at 4.
[21] *Id*.

2 is not cost-effective, and therefore the return should be adjusted down to the cost of debt only."[22]

Q WHAT IS THE IMPACT OF A RATE OF RETURN SET AT THE COST OF PG&E's DEBT?

A According to Cal Advocates' testimony, "this will reduce the rate of return on the Phase 2 project from 7.81% to 4.31%."[23]

Q HOW DO YOU RESPOND TO CAL ADVOCATES' RECOMMENDATIONS?

A I believe Cal Advocates' recommendations do not go far enough to alleviate concerns identified by Indicated Shippers and TURN on the impacts to gas ratepayers in the event the project is approved by the Commission. The maximum amount PG&E should be permitted to recover is the ***avoided cost*** of a gas project.

Q DOES CAL ADVOCATES HAVE OTHER RECOMMENDATIONS RELATED TO THE PROPOSED ELECTRIFICATION PROJECT?

A Yes. Cal Advocates recommends that a process should be established for stakeholder input to "program design, implementation, monitoring, and measurement."[24] Regulatory reporting requirements should be considered.

Q IS THIS A REASONABLE RECOMMENDATION BY CAL ADVOCATES?

A Yes.

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[22] *Id*.
[23] *Id.*
[24] *Id.*

RESPONSE TO EDF

Q HAVE YOU REVIEWED THE PREPARED TESTIMONY OF JOON HUN SEONG ON BEHALF OF EDF?

A Yes.

Q DOES EDF SUPPORT PG&E'S ELECTRIFICATION PROJECT?

A Yes. EDF supports PG&E's request for the CSU Zonal Electrification Project, subject to certain modifications, including leveraging funding sources outside gas rates. EDF indicates that approval for this application should be tied to PG&E applying for all available non-ratepayer funding sources.[25]

Q IS TYING THE PROJECT TO THE CONDITION THAT PG&E MUST APPLY FOR ALL AVAILABLE NON-RATEPAYER FUNDING A REASONABLE RECOMMENDATION BY EDF?

A Yes. I believe this is indeed a reasonable modification to the proposed electrification project recommended by EDF.

Q DOES EDF FIND PG&E's OVERALL REVENUE REQUIREMENT FOR THE PROJECT TO BE APPROPRIATE?

A No. It is worth noting that EDF opines that revenue requirement—not the cost "cash flow"—is the appropriate measure to evaluate the electrification project, because overall rate impacts will be determined by the revenue requirement.[26] Based on PG&E's analysis, overall costs to ratepayers will be higher for the electrification project as compared to the gas replacement project.

As a result, EDF argues the project's revenue requirement should be lowered so that its overall net present value would be closer in line with the gas system

[25] EDF Testimony at 9.
[26] *Id.* at 10-11.

replacement revenue requirement NPV calculation ($16.7 million).[27] Essentially, EDF has found that the electrification project is not cost-effective from a gas ratepayer perspective.

As indicated in my direct testimony, the Company's Present Value of Revenue Requirements analysis ("PVRR") does not show that its proposed pilot project is cost-effective from the perspective of PG&E's gas ratepayers. As a result, I recommend that the proposed electrification pilot project not be used as a template for future electrification projects.

RESPONSE TO SIERRA CLUB AND NRDC

Q HAVE YOU REVIEWED THE PREPARED TESTIMONY OF MATTHEW VESPA AND KIKI VELEZ ON BEHALF OF SIERRA CLUB AND NRDC?

A Yes.

Q DOES SIERRA CLUB AND NRDC SUPPORT PG&E'S ELECTRIFICATION PROJECT?

A Yes. However, they do recommend the proposed electrification project "…be modified to reduce project costs, avoid impacts to a shrinking gas customer base in outer years, and require post-project reporting to gain insights into costs, benefits, and impacts that can help inform future projects."[28]

Q DO THE SIERRA CLUB AND NRDC SUPPORT SOME RATE OF RETURN FOR THE ELECTRIFICATION PROJECT?

A They opine that the cost of electric appliances "should not be treated as fully capitalized assets. However, given that PG&E's proposed electrification alternative avoids a gas pipeline replacement that would be fully capitalized, they opine that

[27] *Id.* at 11.
[28] Sierra Club and NRDC testimony at 2.

some rate of return is appropriate."[29] As a result, they believe the "Commission should therefore approve an alternative regulatory treatment that reduces the return on investment."[30] According to Sierra Club and NRDC, alternative regulatory treatment could include only allowing return of the cost of debt; and/or designating some percentage of the cost of BTM investments as operational expenses, with the remainder designated as capital expenses.[31]

Q HOW DO YOU RESPOND TO SIERRA CLUB AND NRDC'S RECOMMENDATION REGARDING RATE OF RETURN?

A As with Cal Advocates' recommendation, I believe that the Sierra Club and NRDC's recommendation regarding rate of return does not go far enough to alleviate concerns identified by Indicated Shippers and TURN on the impacts to gas ratepayers in the event the electrification project is approved by the Commission. The maximum amount PG&E should be permitted to recover is the ***avoided cost*** of a gas project.

Q DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?

A Yes, it does.

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[29] *Id.*
[30] *Id*.
[31] *Id*.

SCHEDULE BCC-R-1

Attached Data Responses:

- PG&E Response to Indicated Shippers Data Request 2, Question 1
- PG&E Response to TURN Data Request 3, Question 1

PACIFIC GAS AND ELECTRIC COMPANY
CSU Monterey Zonal Electrification
Application 22-08-003
Data Response

PG&E Data Request No.:	IndicatedShippers_002-Q001		
PG&E File Name:	CSU-MontereyZonalElectrification_DR_IndicatedShippers_002-Q001		
Request Date:	January 26, 2023	Requester DR No.:	Set 2
Date Sent:	February 9, 2023	Requesting Party:	Indicated Shippers
PG&E Witness:	Rachel Kuykendall	Requester:	Chris Parker

Citations are to PG&E's Amended Direct Testimony.

QUESTION 001

Has PG&E asked California State University Monterey Bay (CSUMB) to pay for any costs related to electrification?

a. If yes:
   i. Please explain which costs, their approximate amounts, and provide copies of all correspondence and related documents.
   ii. Please provide copies of any communications with CSUMB regarding project or electrification costs not responsive to 2-1.a.i.

b. If no:
   i. Why has PG&E not asked CSUMB to contribute to the cost of the project?

ANSWER 001

a. N/A
b. PG&E has not asked CSU Monterey Bay to contribute to the cost of the project. It is our understanding that, while the university supports the project, it does not currently have funding to contribute to discretionary projects such as the electrification of east campus.

PACIFIC GAS AND ELECTRIC COMPANY
CSU Monterey Zonal Electrification
Application 22-08-003
Data Response

PG&E Data Request No.:	TURN_003-Q001		
PG&E File Name:	CSU-MontereyZonalElectrification_DR_TURN_003-Q001		
Request Date:	October 4, 2022	Requester DR No.:	TURN-PG&E-003
Date Sent:	October 18, 2022	Requesting Party:	The Utility Reform Network
PG&E Witness:	Rachel Kuykendall	Requester:	Marcel Hawiger

QUESTION 001

Re. Table 2-3 on p. 2-4 of the Testimony:

a. Please provide all workpapers, analyses or documentation relevant to Table 23 on p. 2-4.

b. Please provide a Table showing only the appliance purchase prices, without any installation or upgrade costs, assumed in developing the unit cost.

ANSWER 001

a. The cost of line item 1 (“Replace existing furnace with ducted heat pump”) was estimated based upon a heat pump space heating measure (“Residential SEER-rated split Heat Pumps, SEER = 18 (EER = 14), HSPF = 9.7 (COP = 3.86), EIR = 0.209, Fan W/CFM = 0.27, two-speed fan”) included in the CPUC maintained DEER (Database for Energy Efficiency Resources) database. The cost of line item 5 (“Install heat pump water heater”) was estimated based upon realized costs for Silicon Valley Clean Energy’s heat pump water heater energy efficiency program located here: https://www.svcleanenergy.org/wp-content/uploads/Reservation-Tracker-Public-Update-2021.09.30_digital.pdf. All other costs were estimated based upon professional judgement. All costs were verified to be in line with costs seen in the San Joaquin Valley electrification pilot program.

b. PG&E does not have estimated appliance purchase prices without installation or upgrade costs. As stated in Chapter 1, estimates provided in Table 2-3 were refined by PG&E based on estimates by Synergy Companies. The estimates do not include economies of scale, escalation factors, or increase in material costs. Installation costs and contractor markup values are highly variable based on measure type, location, and selected contractor. Thus, PG&E has not provided a breakdown of material and labor costs at this time.