

PUBLIC UTILITIES COMMISSION

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February 1, 2022

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SUBJECT: Proposal for Self-Generation Incentive Program (SGIP) Residential Price Cap in Accordance with Decision 19-09-027, Ordering Paragraphs 7(g) and 8(a).

Dear Mr. Jacobson, Mr. Ortiz, Dr. Stern, and Ms. Ninow:

Pursuant to California Public Utilities Commission (CPUC) Decision (D.) 19-09-027 Ordering Paragraphs (OPs) 7(g) and 8(a), on March 16, 2021, the Self-Generation Incentive Program (SGIP) Program Administrators (PAs) submitted Advice Letters Pacific Gas and Electric Company 4402-G/6118-E, Center for Sustainable Energy 122-E, Southern California Edison 4441-E, and Southern California Gas Company 5779-G.

The Public Advocate's Office (Cal Advocates) timely protested AL 4402-G/6118-E et al., on April 5, 2021. On April 12, 2021, Pacific Gas and Electric Company replied to Cal Advocates on behalf of SGIP PAs.

Energy Division Staff has determined that SGIP PAs have not adequately determined the feasibility of implementing a price cap on residential storage systems receiving SGIP Equity Budget incentives in Advice Letters 4402-G/6118-E et al., as required in Ordering Paragraphs (OPs) 7(g) and 8(a) of D.19-09-027. As such, Advice Letters 4402-G/6118-E et al. are rejected.

The SGIP Program Administrators should file a new Advice Letter that complies with the Commission's directive in D.19-09-027, namely, working with Commission staff to determine if it is feasible to implement a price cap on residential storage systems receiving SGIP equity budget incentives. Pursuant to D.19-09-027, the SGIP PAs should be sure to answer the question of the feasibility of a residential price cap, not the necessity of a residential price cap. Additionally, the SGIP PAs should be explicit about the questions and methodology guiding their information

gathering and analysis. Given the recent SGIP decision that reallocates unspent funds¹, the SGIP PAs' Tier 2 advice letter should be submitted within 60 days to assess the feasibility of a residential price cap.

Attachment 1 contains a detailed discussion of the procedural background, protest, reply and Energy Division Staff's determination to reject AL 4402-G/6118-E et al., and direct the SGIP PAs file a new and complete joint Tier 2 advice letter in compliance with D.19-09-27.

Please contact Jonathan L. Lakey of Energy Division at Jonathan.Lakey@cpuc.ca.gov if you have any questions.

Sincerely,



Simon Baker
Interim Deputy Executive Director for Energy and Climate Policy/
Interim Director, Energy Division

cc: Mike Campbell, Electricity Pricing & Customer Program Branch Program Manager,
Public Advocate's Office (Cal Advocates)

¹ D.21-12-031

Attachment 1

Staff Technical Review and Disposition

Background

On September 18, 2019, the CPUC issued Decision (D.) 19-09-027 establishing a SGIP Equity Resiliency Budget, modifying existing Equity Budget funds, and approving \$10 million to support the San Joaquin Valley Disadvantaged Community Pilot Projects. In this decision, the Commission ordered² the SGIP PAs to work with Commission staff to determine:

- If it is feasible to implement a price cap on residential storage systems receiving SGIP equity budget incentives,
- If there should be any exceptions to such an approach,
- How to address longer duration batteries, and
- Other issues about how to implement such a cap.

Additionally, the SGIP PAs were authorized³ to submit a proposal for a SGIP residential price cap as outlined above in a Tier 2 advice letter within one year of issuance of D.19-09-027.

On August 12, 2020, SoCalGas, on behalf of the SGIP PAs, requested an extension of time to submit a Tier 2 Advice Letter to comply with the direction in OP 8(a) of D.19-09-027. On September 2, 2020, the Executive Director of the CPUC granted a 180-day extension to comply with OP 8(a) of D.19-09-027.

On March 16, 2021, the SGIP PAs submitted Advice Letters Pacific Gas and Electric Company 4402-G/6118-E, Center for Sustainable Energy 122-E, Southern California Edison 4441-E, and Southern California Gas Company 5779-G with their research into the feasibility of a residential price cap. In their analysis, the SGIP PAs focused on electrochemical storage projects for projects submitted between 2018 and 2020 and examined the total eligible project costs submitted by developers. Comparing Equity Budget (EB) and Equity Resiliency Budget (ERB) projects against Residential General Market Budget (GM) projects, the SGIP PAs claim that there was not a significant difference in costs between developers.⁴ Additionally, the SGIP PAs note that there is not sufficient granularity available in the Project Cost Breakdown worksheet because developers often do not break out cost details.⁵ The SGIP PAs also provide a summary of analysis performed by the SGIP Third-Party Measurement and Evaluation (M&E) evaluation consultant, Verdant Associates, LLC (Verdant), examining the distribution of project costs normalized by system size (in kilowatt-hours). While Verdant notes that there are discrepancies between the different budget categories, an unusual amount of consistency in normalized cost distributions for the Residential ERB, and eligible project costs that are 7 to 9 percent higher in the ERB than the small residential GM budget⁶, they are unable to suggest or deny intentional, systematic price inflation in the Residential ERB.⁷

Citing the above analysis, the SGIP PAs “do not believe there is sufficient information to warrant the implementation of a price cap at this time, as more research is still needed. Additionally, the SGIP PAs have not explored longer duration batteries but have a plan for future analysis alongside residential storage systems costs.”⁸ In lieu of a proposal to assess the feasibility of a residential project price cap, the SGIP PAs provide two recommendations. First, the SGIP PAs suggest that they should develop specifically defined granular costs for energy storage projects required to be itemized as part of the statewide database application for SGIP PA reporting, evaluation, and

² Ordering Paragraph 7(g) of D.19-09-027.

³ Ordering Paragraph 8(a) of D.19-09-027.

⁴ AL 4402-G/6118-E, p. 4.

⁵ Ibid.

⁶ Ibid.

⁷ Ibid.

⁸ AL 4402-G/6118-E, p. 5.

analysis. Second, the SGIP PAs propose the inclusion of a project cost evaluation study and/or audit as part of the SGIP Measurement and Evaluation (M&E) plan for the 2021-2025 period.⁹

Protests and Replies

On April 5, 2021, the Public Advocate's Office (Cal Advocates) filed a protest to AL 4402-G/6118-E et al. in which they argue that the SGIP PAs:

- Did not provide a price cap recommendation, despite having adequate time to explore the feasibility and need for a price cap on residential systems receiving SGIP ERB and EB incentives and issue a recommendation.
- Have sufficient reason to develop a price cap proposal, as data indicates some developers are artificially inflating prices.

Consequently, Cal Advocates deem it “unjust and unreasonable”¹⁰ for the SGIP PAs to fail to recommend a price cap. They recommend that the SGIP PAs access more granular data and review the costs that developers include as eligible costs and that the Commission direct the SGIP PAs to file a supplemental advice letter with a concrete recommendation for a residential price cap.

On April 12, 2021, the SGIP PAs filed a reply to Cal Advocates' protest. The SGIP PAs argue that Cal Advocates is mistaken that the SGIP PAs had 18 months to develop a price cap recommendation. The SGIP PAs further argue that they disagree with Cal Advocates that they have sufficient reason to develop a price cap proposal given the data presented in AL 4402-G/6118-E et al. The SGIP PAs agree that they should access more granular data and review the costs that developers include as eligible costs but note that at present they do not have access to more granular data. Finally, the SGIP PAs do not believe it is prudent for them to file a supplemental advice letter with a concrete recommendation for a residential price cap without detailed evaluation data.

Disposition

An advice letter may be rejected by an Industry Division “where the advice letter or workpapers are clearly erroneous, including without limitation where there are clear inconsistencies with statute or Commission order.”¹¹ Energy Division is rejecting this Advice Letter for non-compliance with CPUC Decision D.19-09-027.

In D.19-09-027, the SGIP PAs were ordered to work with CPUC staff to determine:

- If it is feasible to implement a price cap on residential storage systems receiving SGIP equity budget incentives,
- If there should be any exceptions to such an approach,
- How to address longer duration batteries, and
- Other issues about how to implement such a cap.

Additionally, the SGIP PAs were authorized to file a proposal to implement such a cap via Tier 2 Advice Letter (AL).

Energy Division agrees with Cal Advocates that the SGIP PAs' AL did not provide a residential price cap recommendation or proposal and had ample time to do so. While Energy Division does not agree with Cal Advocates that the evidence the SGIP PAs provided in AL 4402-G/6118-E et al. provides sufficient reason to develop a price cap proposal, Energy Division believes that sufficient

⁹ AL 4402-G6118-E, p. 6 -7.

¹⁰ Cal Advocates' Protest, p. 2

¹¹ General Order 96-B, section 7.6.1.

evidence to assess the feasibility of a residential project price cap could have and should have been gathered by the SGIP PAs in the time provided.

In assessing the *feasibility* of a residential project price cap as ordered in D.19-09-027, the question guiding the analysis should be: is it possible to implement such a price cap and how might it be implemented? The SGIP PAs instead explored the *necessity* of a residential price cap: is there clear evidence of systematic malfeasance within the SGIP that warrants a residential project price cap? These are different questions and answering them requires different data and analysis. Among other things, the former might rely on market and labor data to understand how much it costs, on average, to install an energy storage system of a given size in a given region, information that could form the basis of a residential price cap. In attempting to answer the necessity question and ignoring the feasibility question, the SGIP PAs failed to comply with the requirements of D.19-09-027.

Furthermore, in the evidence cited in AL 4402-G/6118-E et al., the SGIP PAs provide either too little detail to make an informed assessment of the analysis or only cursory analyses of readily available data. An example of the former is the SGIP PAs' analysis of total eligible project cost data, in which the SGIP PAs compare project costs across the residential EB, residential ERB, and residential GM budgets¹² and conclude that “the costs did not show significant difference across developers”; No detail of the analysis performed is given and Energy Division is left to speculate as to what “significant” means. An example of the PA's cursory analysis is their reliance on an examination and comparison of the mean, median, and percentiles for total eligible project costs normalized¹³ by system size for completed projects in the various SGIP budgets that, by the SGIP PAs' own admission, warrants further investigation. As outlined above, this analysis showed discrepancies between the different budget categories, an unusual amount of consistency in normalized cost distributions for the Residential ERB, and eligible project costs that are 7 to 9 percent higher in the ERB than the small residential GM budget. However, these are only analytical first steps and no further investigation was undertaken to explain or synthesize these findings.

While Energy Division finds that the SGIP PAs erred in only seeking evidence of systematic malfeasance (i.e., the necessity question) and did not in fact assess the feasibility of implementing a residential project price cap, Energy Division also finds that the SGIP PAs were not systematic in deciding the information needed to make this determination, gathering that information, and appropriately analyzing it. Based on an analysis of SGIP public report data for the years 2018 – 2020¹⁴, Energy Division staff finds that there *is* ample evidence of *potential* gaming within SGIP. Some of Energy Division's findings from an examination of completed projects¹⁵ are that:

- Projects in the residential ERB trend larger than small residential GM projects and there are clear differences in the distribution of project sizes between budget categories (i.e., more larger projects in the ERB).
- In general, for comparably sized systems, ERB-funded projects have a higher price per watt-hour.
- For system sizes with a high frequency in both the ERB and small residential GM budget, there is less variability in the total eligible project costs of ERB projects.
 - For example, for 26.4 kWh systems, small residential GM budget-funded projects (N = 3,337) have twice the coefficient of variation in total eligible project costs compared to ERB-funded projects (N = 2,240).
 - Additionally, 26.4 kWh systems funded through the ERB, on average, are priced \$4,331 more than those in the small residential GM budget.

¹² AL 4402-G/6118-E et al., p. 4

¹³ AL 4402-G/6118-E et al., p. 4-5

¹⁴ Available at <https://www.selfgenca.com/report/public/>

¹⁵ The analysis focused on completed projects under the assumption that the kinds of projects that were successful for 2018 – 2020 would continue to be successful through 2025.

- There are many developers who systematically charge higher prices per watt-hour in the ERB than the small residential GM budget.
- An independent unequal variance *t* test shows a very significant¹⁶ difference in the mean price per watt-hour between the small residential GM budget and the ERB.

Any one of these findings may have an innocent explanation on its own but taken together are suggestive of incentive gaming. Even a small amount of incentive gaming across a large number of projects could be costly to ratepayers and negatively impact the program and potential participants.

In its Tier 2 advice letter filing, the SGIP PAs should be sure to answer the question of the feasibility of a residential price cap, not the necessity of a residential price cap. Additionally, the SGIP PAs should be explicit about the questions guiding their information gathering and analysis.

¹⁶ t-score of -10.6 with a p-value < 2.2 x 10⁻¹⁶



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March 16, 2021

Advice 4402-G/6118-E
(Pacific Gas and Electric Company U 39 M)

Advice No. 122-E
(Center for Sustainable Energy®)

Advice 4441-E
(Southern California Edison Company U 338-E)

Advice 5779-G
(Southern California Gas Company U 904-G)

Public Utilities Commission of the State of California Energy Division

Subject: Proposal for Self-Generation Incentive Program (SGIP) Residential Price Cap in Accordance with Decision 19-09-027, Ordering Paragraphs 7(g) and 8(a).

Purpose

In accordance with Ordering Paragraphs (OP) 7(g) and 8(a) of Decision (D.)19-09-027, Pacific Gas and Electric Company (PG&E), Southern California Gas Company (SoCalGas), Southern California Edison Company (SCE), and Center for Sustainable Energy® (CSE) (collectively SGIP Program Administrators or PAs) hereby submit to the California Public Utilities Commission (CPUC or Commission) this Joint Tier 2 Advice Letter (Joint AL) addressing the feasibility of implementing a price cap on residential storage systems receiving SGIP Equity Budget (EB) incentives.

D.19-09-027 was issued on September 18, 2019. On August 12, 2020, SoCalGas, on behalf of the SGIP PAs, requested an extension of time to submit a Tier 2 Advice Letter to comply with the direction in OP 8(a) of D.19-09-027. On September 2, 2020, a 180-day extension of time to comply with OP 8(a) of D.19-09-027 was granted by the Executive Director of the CPUC. The extended submittal date is March 17, 2021; this Joint AL fulfills the requirement in OP 8(a) of D.19-09-027, including the extension granted by the CPUC.

Background

D.19-09-027 reflects that in the California Solar Initiative (CSI) program for solar photovoltaic (PV) projects, the Commission adopted a “soft cap” on the price of a solar PV system to protect the interests of consumers. The cap was based on publicly available CSI cost data and offered some allowances for costs that exceeded the cap if necessary.¹ The Commission expressed interest in exploring the same concept in SGIP for energy storage projects applying for EB incentives. The Commission directed the SGIP PAs to work with Commission staff to determine if a price cap in the program was feasible. Specifically, OPs 7 and 8 of the Decision ordered the following:

7. Pacific Gas and Electric Company, Southern California Edison Company, Southern California Gas Company and the Center for Sustainable Energy (collectively program administrators) shall:

g. Work with Commission staff to determine if it is feasible to implement a price cap on residential storage systems receiving SGIP equity budget incentives, if there should be any exceptions to such an approach, how to address longer duration batteries, and other issues about how to implement such a cap; and,²

8. Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), Southern California Gas Company (SoCalGas) and the Center for Sustainable Energy (CSE) are authorized to:

a. Submit a proposal for a Self-Generation Incentive Program residential price cap as outlined in Ordering Paragraph 7(g) in a Tier 2 advice letter within one year of issuance of this decision;³

In the Decision, the Commission added that it was “persuaded by parties in comments on the proposed decision that an \$0.85/Wh incentive is necessary to drive rapid growth in participation in the equity budget by addressing the primary barrier of lack of access to financing or capital. The risk of setting equity budget incentives too low for eligible customers to afford outweighs the risk that developers will inflate costs, a risk that we nonetheless take steps to control.”

At the time of the Decision in 2019, the EB had seen very low adoption, likely due to the incentive being set relatively low. As the Decision identified,⁴ D.17-10-004 approved initial EB incentives of \$0.35/Wh and a mechanism to increase the incentive level to a maximum

¹ D.19-09-027, pg. 39.

² D.19-09-027, pg. 128.

³ D.19-09-027, pg. 128.

⁴ D.19-09-027, pg. 39.

of \$0.50/Wh if adoption remained extremely low.⁵ Compelling data to help the Commission determine a higher and more effective incentive rate for the EB or Equity Resiliency Budget (ERB) did not yet exist. The Commission established a new EB incentive rate of \$0.85/Wh and ultimately an ERB incentive rate of \$1.00/Wh.

These and other SGIP revisions directed by the Commission as the result of Senate Bill (SB) 700, were adopted as part of the program opening in the Spring of 2020, which included the EB rate of \$0.85/Wh and the ERB rate of \$1.00/Wh. Since that time, participation has been extremely high across the state – a very different pattern than when the incentive rate was set at \$0.35/Wh. As of the submittal of this Joint AL, PG&E's EB and ERB have become fully exhausted, and PG&E has been working off waitlists since September 2020. CSE has similarly seen its EB and ERB budgets expire completely and is working off waitlists. SCE and SoCalGas have no more available funds in their respective Non-Residential EBs and have significantly depleted ERB funds. The aforementioned budgets were envisioned in SB 700 to endure to 2024.

Research into Cost Cap Feasibility

D.19-09-027 expressed a desire to address the main drivers that led to the lack of participation in the storage equity budget,⁶ subsequently resulting in the higher incentive rate (\$0.85/Wh). However, the Commission was cognizant of the potential for developers or vendors to inflate project costs due to the increased incentive rates. The Commission stated:

However, as much as possible, we would like to guard against the possibility that, with the more generous incentives approved here, developers or vendors may absorb an additional profit margin and not pass on all of the cost savings enabled by SGIP equity budget incentives to residential customers. If this were to occur, it would undermine our intent, which is not to increase revenue for developers, but rather to reduce costs to customers of installing storage systems that provide customer and grid benefits, lead to increased customer demand, and, in turn, lower energy storage manufacturing, installation, and operation costs. Accordingly, SGIP developers should not increase the price of a system because incentives are available.⁷

The CPUC highlights that the goal is to “lower energy storage manufacturing, installation and operation costs” rather than give “additional profit margin” to developers.⁸

⁵ The incentive could increase \$0.05/Wh after any rolling three-month period in which the EB confirmed zero incentive reservations and the general market budget received at least five confirmations. The cap was set at \$0.50/Wh. This is explained in D.19-09-027, pg. 5.

⁶ D.19-09-027, pg. 7.

⁷ D.19-09-027, pg. 38.

⁸ D.19-09-027, pg. 38.

In order to determine if a project cost cap is feasible, the SGIP PAs began by first researching available reported cost data in statewide PA project applications. The primary data source has been the “Total Eligible Project Cost” (TEPC) information submitted by the applicant during the SGIP application process. The SGIP PAs focused on electrochemical storage projects with applications submitted between 2018 and 2020. The SGIP PAs assessed the TEPC during those three years using data submitted by various developers and compared residential EB and ERB project costs against residential General Market (GM) costs. Notably, however, the TEPCs evaluated are self-reported by developers. Based on this analysis, the costs did not show significant differences across developers. The SGIP PAs note, however, that evaluation data lacks significant granularity as the programmatic Project Cost Breakdown Worksheet and energy storage contracts often do not break out the details of system costs in a way that the SGIP PAs can use to confidently track costs across reasonable cost categories. As an example, with a lack of project cost breakdown granularity, it becomes difficult to identify if ineligible costs (i.e., those associated with co-installed solar PV) are included as eligible SGIP project costs.

As part of the evaluation, the SGIP PAs incorporated an analysis on project costs from the SGIP Third-party Measurement and Evaluation (M&E) evaluator, Verdant. Verdant focused its analysis on the ERB and EB incentive rates and reported similar median costs in the residential ERB (\$1.00/Wh), the residential EB (\$1.02/Wh), and the residential GM budget (\$1.00/Wh), as highlighted in both Tables 1 and 2, below.

Verdant found varied evidence leaving them unable to suggest or deny intentional, systematic price inflation in the Residential ERB based on eligible project cost data. Looking at only completed (paid) applications, projects in the Residential ERB have eligible costs 7 to 9 percent higher than applications completed in the small Residential GM budget during the same period. While these types of irregularities warrant further exploration, Verdant generally did not find evidence compelling enough to conclude systematic malfeasance on the developers' part. This finding, however, does not rule out the possibility of significant overstatement of costs in individual cases, which is beyond the current scope of this analysis.

Additionally, as seen in the table below, Verdant observed a very consistent distribution of costs between the 25th and 50th percentiles of the Residential ERB approximately equal to \$1.00/Wh, which could indicate that developers are artificially setting costs around \$1.00/Wh to maximize the incentive, or that costs are legitimately higher (above \$1.00/Wh) for many of those projects.

Lastly, Verdant finds no evidence of inconsistent pricing across the SGIP PAs' various program territories. While eligible costs vary slightly, these differences could be driven by other factors, such as differences in labor market costs in different geographic regions. Verdant finds no reason to suspect that one PA is subject to increased cost reporting relative to the statewide average at this analysis stage.

Please see Table 1 below for a detailed summary of eligible project costs for ***all projects, paid and unpaid***, provided by Verdant.

TABLE 1: ELIGIBLE COST SUMMARY STATISTICS BY BUDGET CATEGORY, ALL PROJECTS, 2019 - 2020

Budget Category	Customer Class	Count	Eligible \$/Wh								
			Mean	Median	Min	P10	P25	P50	P75	P90	Max
Equity Resilience	Multi-Family	17	1.36	1.14	0.56	0.88	1.11	1.14	1.37	1.63	4.61
	Non-Residential	361	1.04	0.98	0.23	0.83	0.95	0.98	1.06	1.21	6.82
	Residential	8,712	1.08	1.00	0.11	0.96	1.00	1.00	1.06	1.18	9.85
Large-Scale Storage	Non-Residential	432	1.05	0.73	0.18	0.42	0.52	0.73	1.12	1.79	9.76
	Residential	1,260	1.00	0.95	0.11	0.79	0.88	0.95	1.05	1.16	4.82
Non-Residential Storage Equity	Non-Residential	351	1.30	0.99	0.15	0.75	0.86	0.99	1.31	2.20	8.36
Residential Storage Equity	Multi-Family	263	1.30	1.15	0.43	0.95	1.11	1.15	1.37	1.39	7.78
	Residential	15	1.58	1.02	0.91	0.99	1.00	1.02	1.10	3.01	6.08
San Joaquin Valley	Residential	7	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.04	1.06
Small Residential	Residential	15,016	1.10	1.00	0.11	0.82	0.84	1.00	1.16	1.43	9.97

(Note: For Table 1 and 2, “P” signifies percentile. Thus P10 and P25 signify 10th and 25th percentile, respectively)

Table 2, below shows project cost data for ***paid*** projects.

TABLE 2: ELIGIBLE COST SUMMARY STATISTICS BY BUDGET CATEGORY, PAID PROJECTS, 2019 - 2020

Budget Category	Customer Class	Count	Eligible \$/Wh								
			Mean	Median	Min	P10	P25	P50	P75	P90	Max
Equity Resilience	Residential	164	1.06	1.01	0.61	0.92	1.00	1.01	1.06	1.18	3.22
Large-Scale Storage	Non-Residential	25	1.01	0.91	0.52	0.73	0.82	0.91	1.15	1.31	2.43
	Residential	174	0.91	0.89	0.38	0.73	0.84	0.89	1.01	1.08	2.56
Non-Residential Storage Equity	Non-Residential	8	0.85	0.86	0.50	0.50	0.50	0.86	1.02	1.33	1.33
Small Residential	Residential	5,658	0.99	0.93	0.30	0.77	0.83	0.93	1.06	1.36	9.70

As stated, it is important to note that both the SGIP PA analysis and the Verdant analysis have relied on *developer self-reported project costs* in the project application and *not* on audited costs.

SGIP PA Recommendations

Based on the summarized research and analysis discussed above, the SGIP PAs do not believe there is sufficient information to warrant the implementation of a price cap at this time, as more research is still needed. Additionally, the SGIP PAs have not explored longer duration batteries but have a plan for future analysis alongside residential storage systems costs.

A key reason to impose a price cap would be to address suspected over-estimating and/or over-reporting of project costs relative to the incentive, which would likely be indicated by different reported costs in the residential ERB relative to other budget categories, such as the Small Residential GM category. Yet, Table 1 above shows that the mean project cost in the residential ERB is two cents less (\$1.08/Wh) than the mean project cost in the small residential GM budget (\$1.10/Wh). Table 2 shows that the mean residential ERB project cost is \$0.07/Wh higher than the small residential general market. While this represents a larger difference than the mean in Table 1, it is based on a smaller sample size of actually paid projects. The SGIP PAs generally agree with Verdant's evaluation that it does not provide conclusive evidence of cost inflation in the ERB.

However, one topic of potential concern highlighted in both Tables 1 and 2 is the consistent distribution of costs between the 25th and 50th percentiles of the residential ERB approximately equal to \$1.00/Wh. This could indicate that developers are artificially setting costs to approximately \$1.00/Wh (the incentive rate for the ERB) to maximize the incentive. This issue is underscored further by the less uniform distribution of costs in the Small Residential GM budget. These concerns merit additional research and evaluation, including collecting additional and more granular costs to make a more thorough determination and developing a better understanding between the differences of residential ERB projects and small residential general market projects. As such, a new approach to project cost data collection and a better understanding of installation nuances may be warranted.

To address potential concerns as well as data collection facilitating a more useful analysis, the SGIP PAs, supported by the analysis of Verdant, offer two additional recommendations:

1. The PAs should develop, in conjunction with industry, specifically defined granular costs for energy storage projects required to be itemized as part of the statewide database application for PA reporting, evaluation, and analysis. As an example, the project cost breakdown worksheet contains important fields necessary to understand the evolution of the energy storage market. Elements such as permitting costs and installation costs are indicators of market transformation – as the market matures, we expect permitting and installation costs to decrease. Additionally, the PAs are incorporating the Project Cost Affidavit and Breakdown worksheet into the statewide database, however, identifying those cost categories necessary for more granular reporting will be critical.
2. Include project cost evaluation study and/or audit as part of the SGIP M&E plan for the 2021-2025 period. This information would provide the SGIP PAs with more comprehensive data to address the feasibility of imposing a project cap in the future and whether specific issues need to be addressed with longer duration batteries. Performing an audit may or may not reveal additional information (providers can claim wide discretion in justifying margins) beyond the currently

available reported eligible costs. Still, it would likely send a signal to project developers that the SGIP PAs are paying close attention to eligible costs and are on the lookout for gaming of the incentive. It could also uncover instances of developers providing a different price to customers than on the Application, which would be evidence of violating program rules.

As an alternative to the audit, or perhaps as a parallel or hybrid effort, a cost study would go beyond the analysis presented here, which relied exclusively on program application data, to include other sources of cost data such as third-party implementer price lists, web-based price observations, manufacturer catalogs, market actor interviews (e.g., to ascertain pricing factors and equipment markups), and point of sale data. A cost study could also take a national perspective and compare costs in California to those paid in other states with moderate penetration of energy storage, such as Hawaii, Massachusetts, New York, and New Jersey.

Conclusion

The SGIP PAs hereby submit this Joint Tier 2 Advice Letter regarding the feasibility of implementing a price cap in SGIP, per OP 7(g) and 8(a) of D.19-09-027. The SGIP PAs do not believe it is feasible to implement a price cap until more conclusive research can be performed. To evaluate for the appropriate cost, the SGIP PAs recommend revising the required cost data in the SGIP Application process to collect more granular and accurate project costs. The SGIP PAs further recommend the SGIP Third Party evaluator be utilized to complete this analysis as part of upcoming M&E reports, which will also address long duration batteries per the Decision.

Protests

Anyone wishing to protest this submittal may do so by letter sent via U.S. mail, facsimile or E-mail, no later than **April 5, 2021**, which is 20 days after the date of this submittal. Protests must be submitted to:

CPUC Energy Division
ED Tariff Unit
505 Van Ness Avenue, 4th Floor
San Francisco, California 94102

Facsimile: (415) 703-2200
E-mail: EDTariffUnit@cpuc.ca.gov

Copies of protests also should be mailed to the attention of the Director, Energy Division, Room 4004, at the address shown above.

The protest shall also be sent to the SGIP PAs either via E-mail or U.S. mail (and by facsimile, if possible) at the addresses shown below on the same date it is mailed or delivered to the Commission:

For PG&E:
Erik Jacobson
Director, Regulatory Relations
c/o Megan Lawson
Pacific Gas and Electric Company
77 Beale Street, Mail Code B13U
P.O. Box 770000
San Francisco, California 94177
Facsimile: (415) 973-3582
E-mail: PGETariffs@pge.com

For CSE:
Sephra Ninow
Director, Regulatory Affairs
Center for Sustainable Energy®
3980 Sherman St., Suite 170
San Diego, CA 92110
E-mail: sephra.ninow@energycenter.org

For SCE:
Gary A. Stern, Ph.D.
Managing Director, State Regulatory Operations
Southern California Edison Company
8631 Rush Street
Rosemead, CA 91770
Telephone (626) 302-9645
Facsimile: (626) 302-6396
E-mail: AdviceTariffManager@sce.com

Tara S. Kaushik,
Managing Director, Regulatory Relations
c/o Karyn Gansecki
Southern California Edison Company
601 Van Ness Avenue, Suite 2030
San Francisco, CA 94102
Facsimile: (415) 929-5544
E-mail: Karyn.Gansecki@sce.com

For SoCalGas:
Ray Ortiz
Tariff Manager - GT14D6
555 West Fifth Street
Los Angeles, CA 90013-1011
Facsimile: (213) 244-4957
E-mail: rortiz@socalgas.com

Any person (including individuals, groups, or organizations) may protest or respond to an advice letter (General Order (GO) 96-B, Section 7.4). The protest shall contain the following information: specification of the advice letter protested; grounds for the protest; supporting factual information or legal argument; name, telephone number, postal address, and (where appropriate) e-mail address of the protestant; and statement that the protest was sent to the utility no later than the day on which the protest was submitted to the reviewing Industry Division (General Order 96-B, Section 3.11).

Effective Date

PG&E requests that this **Tier 2** advice submittal become effective on regular notice, **April 15, 2021**, which is 30 calendar days after the date of submittal.

Notice

In accordance with General Order 96-B, Section IV, a copy of this advice letter is being sent electronically and via U.S. mail to parties shown on the attached list **and the parties on the service list for R.12-11-005 and R.20-05-012**. Address changes to the General Order 96-B service list should be directed to PG&E at email address PGETariffs@pge.com. For changes to any other service list, please contact the Commission's Process Office at (415) 703-2021 or at Process_Office@cpuc.ca.gov. Send all electronic approvals to PGETariffs@pge.com. Advice letter submittals can also be accessed electronically at: <http://www.pge.com/tariffs/>.

/S/

Erik Jacobson
Director, Regulatory Relations

Attachments

cc: Service Lists R.12-11-005 and R.20-05-012



ADVICE LETTER SUMMARY

ENERGY UTILITY



MUST BE COMPLETED BY UTILITY (Attach additional pages as needed)

Company name/CPUC Utility No.: Pacific Gas and Electric Company (U 39 M)

Utility type:

- ELC GAS WATER
 PLC HEAT

Contact Person: Stuart Rubio

Phone #: (415) 973-4587

E-mail: PGETariffs@pge.com

E-mail Disposition Notice to: SHR8@pge.com

EXPLANATION OF UTILITY TYPE

ELC = Electric GAS = Gas WATER = Water
 PLC = Pipeline HEAT = Heat

(Date Submitted / Received Stamp by CPUC)

Advice Letter (AL) #: 4402-G/6118-E

Tier Designation: 2

Subject of AL: Proposal for Self-Generation Incentive Program (SGIP) Residential Price Cap in Accordance with Decision 19-09-027, Ordering Paragraphs 7(g) and 8(a).

Keywords (choose from CPUC listing): Compliance, Self Generation

AL Type: Monthly Quarterly Annual One-Time Other:

If AL submitted in compliance with a Commission order, indicate relevant Decision/Resolution #: D.19-09-027

Does AL replace a withdrawn or rejected AL? If so, identify the prior AL: No

Summarize differences between the AL and the prior withdrawn or rejected AL: N/A

Confidential treatment requested? Yes No

If yes, specification of confidential information:

Confidential information will be made available to appropriate parties who execute a nondisclosure agreement. Name and contact information to request nondisclosure agreement/ access to confidential information:

Resolution required? Yes No

Requested effective date: 4/15/21

No. of tariff sheets: 0

Estimated system annual revenue effect (%): N/A

Estimated system average rate effect (%): N/A

When rates are affected by AL, include attachment in AL showing average rate effects on customer classes (residential, small commercial, large C/I, agricultural, lighting).

Tariff schedules affected: N/A

Service affected and changes proposed¹: N/A

Pending advice letters that revise the same tariff sheets: N/A

¹Discuss in AL if more space is needed.

Protests and all other correspondence regarding this AL are due no later than 20 days after the date of this submittal, unless otherwise authorized by the Commission, and shall be sent to:

CPUC, Energy Division
Attention: Tariff Unit
505 Van Ness Avenue
San Francisco, CA 94102
Email: EDTariffUnit@cpuc.ca.gov

Name: Erik Jacobson, c/o Megan Lawson
Title: Director, Regulatory Relations
Utility Name: Pacific Gas and Electric Company
Address: 77 Beale Street, Mail Code B13U
City: San Francisco, CA 94177
State: California Zip: 94177
Telephone (xxx) xxx-xxxx: (415)973-2093
Facsimile (xxx) xxx-xxxx: (415)973-3582
Email: PGETariffs@pge.com

Name:
Title:
Utility Name:
Address:
City:
State: District of Columbia Zip:
Telephone (xxx) xxx-xxxx:
Facsimile (xxx) xxx-xxxx:
Email:

**PG&E Gas and Electric
Advice Submittal List
General Order 96-B, Section IV**

AT&T
Albion Power Company

Alta Power Group, LLC
Anderson & Poole

Atlas ReFuel
BART

Barkovich & Yap, Inc.
California Cotton Ginners & Growers Assn
California Energy Commission

California Hub for Energy Efficiency
Financing

California Alternative Energy and
Advanced Transportation Financing
Authority
California Public Utilities Commission
Calpine

Cameron-Daniel, P.C.
Casner, Steve
Cenergy Power
Center for Biological Diversity

Chevron Pipeline and Power
City of Palo Alto

City of San Jose
Clean Power Research
Coast Economic Consulting
Commercial Energy
Crossborder Energy
Crown Road Energy, LLC
Davis Wright Tremaine LLP
Day Carter Murphy

Dept of General Services
Don Pickett & Associates, Inc.
Douglass & Liddell

East Bay Community Energy Ellison
Schneider & Harris LLP Energy
Management Service
Engineers and Scientists of California

GenOn Energy, Inc.
Goodin, MacBride, Squeri, Schlotz &
Ritchie

Green Power Institute
Hanna & Morton
ICF

IGS Energy
International Power Technology
Intestate Gas Services, Inc.
Kelly Group
Ken Bohn Consulting
Keyes & Fox LLP
Leviton Manufacturing Co., Inc.

Los Angeles County Integrated
Waste Management Task Force
MRW & Associates
Manatt Phelps Phillips
Marin Energy Authority
McKenzie & Associates

Modesto Irrigation District
NLine Energy, Inc.
NRG Solar

Office of Ratepayer Advocates
OnGrid Solar
Pacific Gas and Electric Company
Peninsula Clean Energy

Pioneer Community Energy

Redwood Coast Energy Authority
Regulatory & Cogeneration Service, Inc.
SCD Energy Solutions
San Diego Gas & Electric Company

SPURR
San Francisco Water Power and Sewer
Sempra Utilities

Sierra Telephone Company, Inc.
Southern California Edison Company
Southern California Gas Company
Spark Energy
Sun Light & Power
Sunshine Design
Tecogen, Inc.
TerraVerde Renewable Partners
Tiger Natural Gas, Inc.

TransCanada
Utility Cost Management
Utility Power Solutions
Water and Energy Consulting Wellhead
Electric Company
Western Manufactured Housing
Communities Association (WMA)
Yep Energy