

BEFORE THE PUBLIC UTILITIES COMMISSION OF
THE STATE OF CALIFORNIA



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Application of PACIFIC GAS AND ELECTRIC
COMPANY (U39E) for Review of the Disadvantaged
Communities – Green Tariff, Community Solar
Green Tariff and Green Tariff Shared Renewables
Programs.

Application 22-05-022
(Filed May 31, 2022)

And Related Matters

Application 22-05-023
Application 22-05-024

REPLY COMMENTS OF THE UTILITY REFORM NETWORK ON
ADMINISTRATIVE LAW JUDGE’S RULING SETTING ASIDE
SUBMISSION OF THE RECORD TO SEEK COMMENTS
ON COST-EFFECTIVENESS CONSIDERATIONS



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REPLY COMMENTS OF THE UTILITY REFORM NETWORK REGARDING COST-EFFECTIVENESS CONSIDERATIONS

Pursuant to ALJ Hymes Ruling dated June 23, 2023 seeking comments regarding cost effectiveness considerations, The Utility Reform Network (TURN) submits these reply comments. TURN responds to selected issues raised in the opening comments of Pacific Gas & Electric (PG&E), Southern California Edison (SCE) and San Diego Gas & Electric (SDG&E).

I. THE COMMISSION SHOULD CONSISTENTLY USE THE AVOIDED COST CALCULATOR TO VALUE BILL CREDITS FOR EXPORTS TO THE DISTRIBUTION SYSTEM

The IOUs uniformly oppose providing bill credits to NVBT subscribers based on the Avoided Cost Calculator (ACC) values for project exports to the distribution system. PG&E argues that the ACC “is designed to evaluate entire portfolios of customer-sited DERs for general unspecified system benefits over long time horizons”.¹ Both SDG&E and SCE offer similar arguments against using the ACC for the purpose of compensating NVBT subscribers.²

The Commission recently determined that the ACC is an appropriate tool to measure compensation for exports from customer-owned renewable energy systems. In D.22-12-056, the Commission authorized the ACC to be used for the purpose of determining reasonable export compensation under the Net Billing Tariff (NBT). On August 2, 2023, ALJ Hymes issued a Proposed Decision (August 2 PD) in R.20-08-020 that would authorize the use of ACC values to set export compensation under a reformed Virtual Net Energy Metering (VNEM) tariff.³ The PD notes that the Utilities endorsed the proposal for compensating

¹ PG&E opening comments, page 15.

² SCE opening comments, page 23; SDG&E opening comments, page 10.

³ ALJ Hymes Proposed Decision Addressing Remaining Proceeding Issues, R.20-08-020, Mailed August 2, 2023, page 39 (“The Commission should adopt use of the Avoided Cost Calculator to determine retail export compensation rates for the successor VNEM tariff”)

benefiting accounts based on ACC-valued exports to the distribution system from a generation facility served by a different meter on the same property.⁴ For projects commencing operations during the first five years of the new tariff, the PD would also apply a sizable ACC Plus adder to all residential VNEM exports over the first nine years of project operations.⁵

The August 2 PD further authorizes the use of ACC values to compensate customers for exports to the distribution grid under the Net Energy Metering Aggregation (NEMA) subtariff. Under a reformed NEMA, distribution system exports from solar generation located behind one meter would be valued using the ACC and credited to accounts located at different service delivery points on the same or adjacent property. As noted in the PD, if the NEMA subtariff “spans multiple delivery points, it becomes more likely that generation will be exported.”⁶ Under NEMA, a customer could export 100% of its generation to the distribution system, receive ACC-based compensation, and apply those credits to another account on an adjacent or contiguous property. A nine-year ACC Plus adder would also be provided to customers initially taking service during the first five years of the revised tariff.⁷ In support of this approach, the PD finds that “providing export compensation at avoided cost values (after a temporary ACC Plus glide path) will eliminate the export compensation portion of the cost shift” attributable to the NEMA subtariff.⁸

The Commission should apply similar logic to the NVBT proposal since it involves the same method of compensation (but without the ACC Plus Adder). By comparison with the proposed export compensation levels for VNEM/NEMA tariff subscribers, the compensation provided to NVBT project subscribers for identical exports would be considerably less. TURN developed a

⁴ ALJ Hymes PD, page 34.

⁵ ALJ Hymes PD, page 46, Table 9.

⁶ ALJ Hymes PD, page 69.

⁷ ALJ Hymes PD, page 72.

⁸ ALJ Hymes PD, page 73.

comparison based on a 20-year levelized cost for exports from an identical solar plus storage project under both the proposed VNEM successor tariff and the NVBT. This comparison incorporates the proposed 9-year ACC Plus Adder for residential VNEM customers enrolling during the first five years of the program.⁹ All other inputs are designed to provide a basis for fair comparison between these programs.¹⁰

IOU	Levelized 20-year NVBT in \$/kWh	Table of Levelized Proposed VNEM with ACC Plus Residential Adder in \$/kWh				
		Year 1	Year 2	Year 3	Year 4	Year 5
PG&E	\$0.1976	\$0.3059	\$0.2842	\$0.2626	\$0.2409	\$0.2193
SCE	\$0.1973	\$0.2808	\$0.2641	\$0.2474	\$0.2307	\$0.2140
SDG&E	\$0.2428	\$0.3324	\$0.3145	\$0.2965	\$0.2786	\$0.2607

Differential of Levelized VNEM Proxy over NVBT in \$/kWh					
	Year 1	Year 2	Year 3	Year 4	Year 5
PG&E	\$0.1083	\$0.0866	\$0.0650	\$0.0433	\$0.0217
SCE	\$0.0832	\$0.0665	\$0.0498	\$0.0331	\$0.0164
SDG&E	\$0.1347	\$0.1168	\$0.0989	\$0.0810	\$0.0631

This comparison highlights the significantly lower cost of the NVBT tariff compared to a reformed VNEM program. For projects commencing in year 1, the 20-year levelized compensation for NVBT exports is 27-35% lower than identical VNEM exports. For projects commencing in year 2, the 20-year levelized compensation for NVBT exports is 23-31% lower than identical VNEM exports. This comparison does not consider the extent to which VNEM projects would provide output consumed behind the generator meter and compensated at full retail rates. Considering self-consumption credits under VNEM would result in

⁹ Year 1 calculates a 20-year levelized price that includes the 9-year ACC Plus adder at the full value identified in the PD. Year 2 calculates a 20-year levelized price that includes the 9-year ACC Plus adder at 20% below the Year 1 value. Years 3-5 incorporate additional 20% reductions to the ACC Plus adder in each year. This treatment is described in the ALJ Hymes PD, page 46.

¹⁰ The analysis assumes solar with equivalent 4-hour storage capacity, full ACC values provided to all generation, 20-year levelized pricing, and levelization using the IOU Weighted Average Cost of Capital as the discount rate.

an even larger value differential provided to subscribers (and costs to non-participants) under VNEM versus the NVBT.

In light of the growing use of the ACC to value export compensation for distribution-connected resources, the Commission should affirm the reasonableness of the NVBT tariff which adopts the same basic treatment. Unlike the other programs that rely on the ACC (NEM, VNEM), the NVBT does not require any short-term or long-term ACC adders and can provide subscribers with meaningful bill credits over the life of the project. This difference means there is no explicit subsidy or cost-shift associated with the NVBT program.

II. RESPONSE TO IOU CALCULATIONS OF COST TEST RESULTS

The cost test results provided by the IOUs highlight the superior value of the NVBT tariff in comparison to other Green Access Program options. In opening comments, TURN presented the results of Standard Practice Manual cost tests for the Net Value Billing Tariff and the DAC-GT program calculated by the Coalition for Community Solar Access (CCSA). These results show far superior results for the NVBT tariff under the Total Resource Cost (TRC), Rate Impact Measure (RIM) and Program Administrator Cost (PAC) tests. The IOU modeling validates the CCSA results while also being fraught with problematic assumptions.

A. PG&E analysis

PG&E's opening comments provide calculations of Standard Practice Manual Cost-Test Scores for Existing Programs.¹¹ The results are shown in the following table:

¹¹ PG&E opening comments, page 6.

Summary of PG&E Existing Programs

Program	TRC	RIM	PAC
GTSR	0.57	--	--
DAC-GT	0.58	0.36	0.36
CS-GT	0.52	0.42	0.42

PG&E’s methodology relies on energy and capacity values from the ACC to calculate avoided cost benefits but does not consider avoided Transmission & Distribution (T&D) or other environmental attributes in the ACC stack. For the DAC-GT and CS-GT programs, PG&E also includes the 20% bill discount to participating customers as a cost in both the Ratepayer Impact Measure (RIM) and the Program Administrator Cost (PAC) tests over a 20-year time horizon.¹² Using this approach, PG&E calculates a cost shift from its consolidated DAC-GT and CS-GT program of roughly \$12 million per year¹³ over what appears to be a 22-year period (2024-2045) assuming 52.3 MW of subscribed generation.¹⁴ PG&E acknowledges that the cost shift would be increased if PG&E’s “top-off” proposal to increase the program is approved.¹⁵

In opening comments, PG&E calculates the cost shift for its own programs based on the ACC. In surrebuttal testimony, PG&E analyzes the cost shift from the NVBT tariff differently by measuring avoided costs using PURPA pricing. Using this different approach, PG&E estimated the NVBT would result in a \$37.4 million cost shift for 200 MW of generation based on a 25-year period.¹⁶ PG&E’s calculations assume that NVBT projects would receive credits for avoided T&D through the ACC but would not provide any actual T&D benefits.¹⁷ PG&E’s analysis is unhelpful for drawing any meaningful conclusions because it uses

¹² PG&E opening comments, page 6

¹³ PG&E opening comments, page 10

¹⁴ PG&E Workpapers to Opening Comments (WP DAC-GT/CS-GT-Programs_Test_PGE_20230731_761544, 2022 ACC Detailed Output)

¹⁵ PG&E opening comments, p. 10.

¹⁶ PG&E surrebuttal testimony, page 6; By contrast, PG&E’s cost shift calculation under the SPM tests for DAC-GT/CS-GT appears to be based on a shorter duration of 22 years.

¹⁷ PG&E opening comments, pages 10-11.

different methodologies and data sources. The comparison of the cost shift between NVBT and existing GAP programs is mismatched with respect to the amount of participating generation, the period of analysis, and the underlying approach to determining value.

Finally, PG&E observes that “the only way this compensation structure does not result in upward pressure on bills is if the resources reduced an LSE’s need for RA capacity or defer T&D investments.”¹⁸ TURN agrees and, in both testimony and opening comments, offered suggestions to align export compensation with real-world value. Specifically, TURN recommended linking the availability of generation capacity value under the ACC to a demonstration that NVBT projects are treated as IOU retail load modifiers. TURN further urged the Commission to review ACC values for avoided T&D to ensure that the hourly values (especially in the peak hours during the months of July, August and September) do not overstate non-participant benefits. If the ACC is overcompensating exports for these value elements, as PG&E asserts, the correct course of action is to reform the ACC especially given its central role in compensating exports under the Net Billing Tariff (NBT) and the reformed VNEM and NEMA tariffs. The Commission cannot find the ACC does not fairly measure these values for NVBT projects but does fairly measure the same value for identical exports from NBT, VNEM and NEMA projects.

B. SCE Analysis

SCE’s calculation of SPM Scores for Existing Programs is shown below:¹⁹

Summary of SCE Existing Program SPM

Program	TRC	RIM	PAC
GTSR-CR	0.77	--	--
GTSR-GR	0.78	--	--
DAC-GT	0.29	0.20	0.20
DAC CS-GT	0.26	0.18	0.18

¹⁸ PG&E opening comments, page 12.

¹⁹ SCE opening comments, page 12.

SCE’s modeling calculates results over a 20-year period using energy supply and avoided GHG values from the ACC to determine avoided cost benefits. SCE’s approach gives zero value to avoided generation capacity, avoided transmission or avoided distribution.²⁰ Modifying SCE’s approach to provide full ACC values yields the following results:

SCE Existing Program SPM w/Full ACC values²¹

Program	TRC	RIM	PAC
GTSR-CR	1.82	--	--
GTSR-GR	1.84	--	--
DAC-GT	0.68	0.48	0.48
DAC CS-GT	0.62	0.42	0.42

Even at full ACC values, the TRC and RIM scores for the DAC-GT and DAC CS-GT programs are unimpressive. These programs have poor RIM scores compared to the 0.81 RIM test result for the NVBT in SCE’s service territory calculated by CCSA and cited in TURN’s opening comments. The TRC values also compare unfavorably to the 1.2-1.49 results for the NVBT (SCE territory). The high TRC values for the GTSR-CR and GTSR-GR tariffs are based on both the low cost of wholesale-contracted resources and the assignment of avoided T&D values to these projects. If these transmission-connected utility-scale projects are not credited with avoided T&D values, but receive all other elements of the ACC stack, the TRC score declines to 0.87 for GTSR-CR and to 0.88 for GTSR-GR.²²

Although SCE has not calculated TRC, RIM or PAC scores for the proposed Green Share program, it claims that the GTSR-GR will be “more representative of the cost-benefit ratio for resources that will be used for SCE’s

²⁰ SCE workpapers, summary and inputs tab.

²¹ TURN used SCE’s model to calculate these values by setting ACC Transmission, Distribution and Generation Capacity to 100%.

²² TURN used SCE’s model to calculate these values by setting ACC Transmission and Distribution to 0% and ACC energy, Generation Capacity and GHG Emissions to 100%.

proposed Green Share program,” because the program resources will be utility-scale projects.²³ TURN previously urged the Commission to reject SCE’s Green Share program on the basis that it will yield no incremental renewable capacity or production (and therefore fails the additionality test), does not incorporate high value storage, offers no value to participants, and would simply constitute a voluntary contribution by participants towards the costs of legacy contracts.

SCE argues that NVBT resources should not have exports valued using the ACC and suggests that a more appropriate method would be compensation using the Renewable Market Adjusted Tariff (ReMAT).²⁴ TURN disagrees. The ReMAT uses average recent RPS contract pricing for projects ≤ 3 MW to calculate cash compensation to participating generators (rather than limiting the compensation to bill credits available only to subscribing customers). Since ReMAT was reopened in 2020, no contracts have been executed.²⁵ Reliance on ReMAT as a substitute for the ACC in a Green Access Program would likely yield zero new MWs of renewable capacity and energy storage. Moreover, it is not clear how ReMAT would be integrated into a program that relies on voluntary customer subscriptions and SCE does not offer any specific guidance in this respect.

C. SDG&E Analysis

SDG&E declined to provide any analysis of existing or proposed GAP tariffs using the Standard Practice Manual Cost tests.²⁶ Instead, SDG&E offers a “cost shift” analysis that compares ACC export compensation for a stand-alone solar project with the assumption that the PURPA “wholesale rate” of 2.5

²³ SCE Comments, p. 13

²⁴ SCE Comments p. 3.

²⁵ 2023 Padilla Report: Cost and Cost Savings for the RPS Program, May 2023, page 17 (<https://www.cpuc.ca.gov/-/media/cpuc-website/industries-and-topics/documents/energy/rps/2023/2023-padilla-report---final.pdf>)

²⁶ SDG&E opening comments, page 1.

cents/kWh represents the avoided cost value.²⁷ SDG&E's analysis is fundamentally flawed for several reasons.

First, the selection of 2.5 cents/kWh to reflect PURPA avoided costs is inconsistent with SDG&E's current QF Standard Offer Contract pricing. On August 7, 2023, SDG&E submitted an Advice Letter seeking approval of revised energy prices for Qualifying Facilities no larger than 20 MW.²⁸ The revised energy prices are calculated based on a three-year average of the CAISO locational marginal prices for the pricing node specific to the Qualifying Facility for each time of delivery period limited by a 10 percent collar.²⁹ Off-peak prices for SP-15 range from a low of \$33.87/MWh in May to a high of \$111.76/MWh in December.³⁰ On-peak prices for SP-15 range from a low of \$54.35/MWh in May to \$150.23/MWh in August.³¹ These prices bear no resemblance to the \$25/MWh (or 2.5 cents/kWh) average value SDG&E uses for its "cost shift" analysis in its opening comments. SDG&E's PURPA contracts also include a separate capacity price that provides additional compensation heavily weighted towards on-peak summer deliveries. During on-peak summer periods, the most recently approved capacity price (in 2020) is approximately \$37.90/MWh.³²

Second, SDG&E ignored the fact that NVBT projects would include both solar capacity and an equivalent amount of 4-hour energy storage capacity. By modeling a stand-alone solar project, SDG&E's analysis fails to evaluate the actual type of projects that would be eligible under the NVBT. Solar generation paired with storage provides much higher system value than a stand-alone solar facility and can be reliably dispatched during peak periods in both wholesale markets and on the local distribution circuit.

²⁷ SDG&E opening comments, pages 4-5.

²⁸ SDG&E Advice Letter 4270-E, August 7, 2023
(https://tariff.sdge.com/tm2/pdf/submittals/ELEC_4270-E.pdf)

²⁹ SDG&E Advice Letter 4270-E, August 7, 2023, Attachment A, Table 2.

³⁰ Off-peak hours are defined as 6am through 4pm and 9pm through 12am.

³¹ On-peak hours are defined as 4pm through 9pm

³² SDG&E Advice Letter 3554-E, filed June 15, 2020, Attachment B
(https://tariff.sdge.com/tm2/pdf/submittals/ELEC_3554-E.pdf)

Due to these fundamental flaws, TURN urges the Commission to ignore the SDG&E analysis and instead rely on the cost-test results that are calculated consistent with the Standard Practice Manual.

III. CONCLUSION

The Commission should apply the ACC to determine compensation for exported electricity from distribution-connected projects participating in the Net Billing Tariff, the Virtual Net Energy Metering Tariff, the Net Energy Metering Aggregation tariff, and the proposed Net Value Billing Tariff. In each of these programs, export compensation can only be provided as a bill credit to the subscribing customer and is ineligible for cash out treatment. Consistent application of the ACC to these programs is reasonable and satisfies the statutory requirements under AB 2316.

TURN appreciates the opportunity to submit these comments.

Respectfully submitted,

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