
August 24, 2026

ADVICE 5881-E
(Southern California Edison Company U 338-E)

ADVICE 7970-E
(Pacific Gas and Electric Company – U 39-E)

ADVICE 4887-E
(San Diego Gas & Electric Company – U 902-E)

PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA
ENERGY DIVISION

SUBJECT: Request to Establish Approaches to the Calculation,
Application, and Redaction of Reverse Power Flow through the
Substation

I. PURPOSE

Pursuant to Ordering Paragraph (OP) 13 of Resolution E-5440, issued April 13, 2026, on Electric Remediation Plans for Integration Capacity Analysis (the Resolution), Southern California Edison Company (SCE), Pacific Gas and Electric Company (PG&E), and San Diego Gas & Electric Company (SDG&E), collectively the Joint IOUs, submit this advice letter to establish their approaches to the calculation, application, and redaction of reverse power flow through the substation.

II. BACKGROUND

On October 23, 2024, the California Public Utilities Commission (Commission or CPUC) issued Decision 24-10-030, *Decision Adopting Improvements to Distribution Planning and Project Execution Process, Distribution Resource Planning Data Portals, and Integration Capacity Analysis Maps* (the Decision). In OP 36, the Commission directed the IOUs to submit Tier 3 advice letters proposing adopted remediation plans for integration capacity analysis (ICA), with a proposed schedule of activities. Each of the IOUs individually submitted a Tier 3 advice letter on August 26, 2025. Review of these advice letters led to the adoption of the Resolution in April 2026, which raised a novel question on “safety bank” not identified in protests of the Tier 3 advice letters, but communicated to Energy Division by the Interstate Renewable Energy Council (IREC)

through other channels. IREC suggested that the IOUs may not have been utilizing the same methodology for safety bank, more commonly referred to as substation reverse flow, in the data reported out through ICA. The Resolution therefore set forth a requirement for the present advice letter in which the Joint IOUs would share their practices for substation reverse flow. OP 13 states:

PG&E, SCE, and SDG&E at the next ICA workshop following the issuance of this resolution shall each provide detailed information on 1) how it refers to reverse power flow through the substation in ICA; 2) how it calculates reverse power flow through the substation in ICA; 3) how the reverse power flow through the substation calculation result is applied in ICA and its limiting categories; and 4) how any redactions related to the resulting calculation are handled, including what specific fields are redacted when the reverse power flow through the substation is the most limiting criteria. 60 days following the workshop where these materials are presented, PG&E, SCE, and SDG&E shall file a joint tier 2 Advice Letter either establishing or modifying their approaches to the calculation, application, and redaction of reverse power flow through the substation.

This joint tier 2 Advice Letter is submitted in compliance with OP 13.

III. DISCUSSION

The Joint IOUs do not believe alignment on a single methodology is warranted at this time

The Joint IOUs understand the reverse flow discussion to involve two distinct potential points of alignment: (1) where reverse flow should be determined or checked, and (2) whether reverse flow should be separated into its own standalone ICA study criterion. The Joint IOUs do not believe alignment on either point is warranted.

First, with respect to where reverse flow should be determined or checked, the Joint IOUs do not support imposing a single statewide point of evaluation. Reverse-flow considerations may be appropriately evaluated at different points depending on each utility's system configuration, operating practices, planning tools, and ICA implementation framework. Requiring a common method of evaluation for each utility's established practices would produce ICA results that do not accurately reflect how each utility plans and operates its system. Each utility's current approach reflects the methodology it has determined to be most accurate and appropriate for its ICA implementation.

Second, with respect to whether reverse flow should be separated into its own standalone ICA study criterion, the Joint IOUs do not believe a standardized requirement is appropriate. Whether reverse flow is separated into its own category or addressed within an existing ICA study framework reflects a tradeoff between more granular information and the likelihood of additional redaction that could reduce the usefulness of the published ICA and LGP data. Pursuing alignment in either direction would require a long and costly implementation effort, including changes to ICA

calculations, publication processes, redaction logic, and Limited Generation Profile configuration templates. Given the uncertain benefits of either approach, potential for reduced data visibility, and implementation impacts, the Joint IOUs do not believe reverse flow should be required to be treated uniformly as a standalone study criterion or incorporated within an existing study framework.

Stakeholder interest in this issue appears limited given that no stakeholder has expressed a position on the appropriate use of reverse flow, as reflected in the June 2026 workshop. Without a clear stakeholder or regulatory driver for change, there is no compelling reason to arbitrarily pursue alignment. In short, standardizing either the point of evaluation or the treatment of reverse flow as a standalone criterion may not fit all utilities' planning practices and could introduce technical, customer, and transparency concerns without a clear offsetting benefit.

SCE's current practice for definition, calculation, application, and redaction of reverse power flow through the substation

SCE's practice is to evaluate substation/bank reverse power flow as a limitation applied at the entire substation level, consistent with planning assessments and operational practices.

The reverse-flow limit is currently included within ICA calculations to reflect whether additional generation could cause reverse power flow concerns at the substation, rather than limiting only at an individual bus or bank. However, reverse power flow is not separated into its own standalone ICA study criterion. Instead, it is evaluated within the existing ICA study framework, Thermal Generation Study criteria. This avoids creating a new published criterion that could require additional redaction treatment or reduce the usability of Limited Generation Profiles (LGP).

SCE believes this approach is appropriate because it balances technical accuracy, customer transparency, and customer data confidentiality. Separating reverse power flow into its own published criterion could require additional redaction treatment, which may reduce the usability and visibility of published ICA values and LGP. By evaluating reverse flow within the existing ICA framework, SCE avoids additional redaction beyond the existing redaction of ICA operational flexibility (OpFlex) results and loading profiles. As a result, customers are provided ICA results and LGP profiles with lower redaction levels while reverse-flow constraints are still accounted for where relevant.

If SCE were ordered to align with a different methodology, implementation would require changes to ICA calculations, publication processes, redaction logic, and downstream LGP implementation. SCE estimates such modifications would require approximately 18 months to implement and would necessitate incremental funding. These implementation impacts would need to be weighed against the uncertain customer benefit, potential for increased redaction, and lack of stakeholder feedback identifying a need for the change.

PG&E's current practice for definition, calculation, application, and redaction of reverse power flow through the substation

PG&E refers to the substation bank reverse power flow constraint as the "Safety Bank" criterion. In PG&E's published ICA downloadable data, it appears as the field `IC_Safety_Bank_kW`. Together with feeder-level operational reverse flow (`IC_Safety_OpFlex_kW`), it forms PG&E's published Safety criterion, where `ICA_Safety` is the minimum of the two.

PG&E evaluates the Safety Bank criterion as part of its 576-hour ICA simulation (two representative days per month, at the P90 and P10 demand percentiles, across 12 months). For each evaluated hour, the criterion limits the DER capacity at each line section such that aggregate generation does not cause net reverse power flow through the substation transformer bank source serving that line section, based on the demand available to absorb generation at that hour. The constraint is evaluated hourly because the absorbing demand varies by hour, season, and demand percentile.

PG&E applies the Safety Bank criterion as one of the limiting criteria in its ICA Static Grid (ICA-SG) result, alongside thermal, voltage, and protection. The ICA-SG value for each hour is the minimum across these criteria, and the published headline ICA-SG value is the minimum across all 576 evaluated hours.

The Safety Bank criterion is necessary in ICA-SG because ICA-SG, by design, does not assume operational flexibility and therefore permits reverse power flow at the feeder level. Absent the Safety Bank criterion, ICA-SG could publish hosting capacity values that exceed the demand available to absorb generation, implying uncontrolled reverse flow from the distribution system into the transmission system, contrary to the no-backflow scenario ordered in R.14-08-013. The criterion is also carried into the hourly ICA-SG profile that supports the Limited Generation Profile (LGP) option under Electric Rule 21.

PG&E applies customer confidentiality redaction to published Safety Bank values consistent with the 15/15 rule as clarified in D.24-10-030. Redaction of an hourly ICA-SG value occurs only when two conditions are both met:

1. The substation serving the line section fails the 15/15 customer confidentiality test, and
2. The Safety Bank criterion is the most limiting criterion for that hour.

Where either condition is not met, the hourly value publishes normally. This two-condition design redacts the minimum necessary to prevent reverse-calculation of large-customer presence at the substation from published reverse flow values, consistent with the customer confidentiality basis of the 15/15 rule.

The customer impact of PG&E's redaction is small and documented in the ICA Biannual Report from July 2026. The headline (most limiting hour) ICA-SG value displayed on PG&E's public map is never redacted. Zero percent of headline ICA-SG values are affected. The affected population is approximately 12.9 percent of line sections having

at least one redacted hour in the hourly ICA-SG profile. Statewide LGP adoption to date is one active PG&E application and zero applications at SCE and SDG&E.

The cost of mandated restructuring would be substantial. Were PG&E directed to restructure how substation reverse flow is calculated or presented (for example, embedding it within thermal and eliminating the discrete field), PG&E would be required to reengineer its ICA computation configuration, the GRIP publication pipeline, and downstream reporting, and to re-run and republish system-wide ICA results. PG&E preliminarily estimates this at \$500K and 12-18 months of implementation plus full system refresh. PG&E submits that this additional ratepayer cost is not justified by current LGP adoption or by the bounded scope of the affected values.

SDG&E current practice for definition, calculation, application, and redaction of reverse power flow through the substation

Definition & Calculation

SDG&E recognizes that there has been significant work toward developing ICA. Past ICA working group discussions have included operational flexibility with various considerations accounting for safety and reliability while considering reverse power flow and abnormal conditions. As Rule 21 developed, clear definitions for ICA-Static Grid (ICA-SG) and ICA-Operational Flexibility (ICA-OF) were developed.¹ SDG&E's current practices and methodology align with these definitions.

SDG&E's ICA software tool, Synergi, uses an iterative method to evaluate power flow limitations on the substation bus transformer due to thermal, voltage, power quality, and protection. For each of the 576 hours, Synergi runs an iterative analysis increasing generation at a node until it establishes the maximum that can be added before the constraint from each of the limiting criteria is violated.

Application & Redaction

Per the Rule 21 Tariff, ICA-SG 576 Values represent the minimum value at a given point of interconnection from the set of thermal, voltage, power quality, and protection ICA values, and does not include ICA values for operational flexibility which represents the reverse power flow test. Therefore, SDG&E ICA-SG analysis does not evaluate reverse power flow at the substation level. Instead, reverse power flow is evaluated at the feeder level for circuits and SCADA switches as part of ICA-OF methodology. This approach reflects localized operational constraints without applying a substation-wide reverse power flow limitation within ICA calculations. This approach is consistent with Rule 21 requirements and aligns with SDG&E's planning process.

¹ Rule 21, Generating Facility Interconnections. <https://tariffsprd.sdge.com/113800d5-548d-4221-b57c-9df7cafca5e2>

This methodology enables customers to identify the maximum amount of generation that can be interconnected without upgrades on the distribution system and preserves the usefulness of ICA data for project siting and interconnection planning.

Additionally, SDG&E evaluates substation reverse power flow impacts for Rule 21 interconnection and Limited Generation Profile (LGP) applications during Initial Review. SDG&E assesses the impacts of the proposed generator to the transmission system to identify if there are any grid reliability concerns or interdependencies with other queued interconnection requests. This step ensures that any reverse power flow concerns are assessed.

Moreover, the Rule 21 Initial Review process requires evaluation of both ICA-SG and ICA-OF values. ICA-SG values do not currently require redaction because they do not contain operationally sensitive information. Consistent with existing practice, redaction is currently limited to ICA-OF results where necessary and would be consistent with standard redaction procedures under the 15/15 rule.

Methodology Considerations

If SDG&E were required to implement ICA-SG with a substation reverse flow limitation, preliminary expectations are that such a process change would take approximately 12 months. Potential outcomes include an increase in the number of hours when no capacity is available, a reduction in capacity during certain hours,[WG5.1] as well as an increase in redacted values.

TIER DESIGNATION

Pursuant to OP 13 of Resolution E-5440, this advice letter is submitted with a Tier 2 designation.

EFFECTIVE DATE

This advice letter will become effective September 23, 2026, the 30th calendar day after the date of the submittal.

NOTICE

Anyone wishing to protest this advice letter may do so only electronically. Protests must be received no later than 20 days after the date of this advice letter. Protests should be submitted to the CPUC Energy Division at:

E-mail: EDTariffUnit@cpuc.ca.gov

In addition, protests and all other correspondence regarding this advice letter should be sent electronically to the attention of:

For SCE:

Rebecca Furman
Managing Director, State Regulatory Operations
Southern California Edison Company
E-mail: AdviceTariffManager@sce.com

Adam Smith
Director, Regulatory Relations
Southern California Edison Company
c/o Karyn Gansecki
E-mail: Karyn.Gansecki@sce.com

For PG&E:

Nika Kjensli
Chief, Regulatory Relations
Pacific Gas and Electric Company
E-mail: PGETariffs@pge.com

For SDG&E:

Attn: Greg Anderson
Regulatory Tariff Manager
E-mail: Ganderson@sdge.com and SDGETariffs@sdge.com

There are no restrictions on who may submit a protest, but the protest shall set forth specifically the grounds upon which it is based and must be received by the deadline shown above.

In accordance with General Rule 4 of GO 96-B, SCE is serving copies of this advice letter to its GO 96-B and R.21-06-017 service lists. Address change requests to the GO 96-B service list should be directed by electronic mail to AdviceTariffManager@sce.com or at (626) 302-6838. For changes to all other service lists, please contact the Commission's Process Office at (415) 703-2021 or by electronic mail at Process_Office@cpuc.ca.gov.

To view other SCE advice letters submitted with the Commission, log on to SCE's web site at <https://www.sce.com/wps/portal/home/regulatory/advice-letters>.

For questions, please contact Ari Altman at (626) 302-4946 or by electronic mail at ari.altman@sce.com.

Southern California Edison Company

/s/ Rebecca Furman
Rebecca Furman

RF:aa:lp



ADVICE LETTER SUMMARY

ENERGY UTILITY



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

Company name/CPUC Utility No.: Southern California Edison Company (U 338-E)

Utility type:

☒ ELC ☐ GAS ☐ WATER
☐ PLC ☐ HEAT

Contact Person: Darrah Morgan

Phone #: (626) 302-2086

E-mail: AdviceTariffManager@sce.com

E-mail Disposition Notice to: AdviceTariffManager@sce.com

EXPLANATION OF UTILITY TYPE

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

(Date Submitted / Received Stamp by CPUC)

Advice Letter (AL) #: 5881-E et al

Tier Designation: 2

Subject of AL: Joint IOU Request to Establish Approaches to the Calculation, Application, and Redaction of Reverse Power Flow through the Substation

Keywords (choose from CPUC listing): Compliance

AL Type: ☐ Monthly ☐ Quarterly ☐ Annual ☒ One-Time ☐ Other:

If AL submitted in compliance with a Commission order, indicate relevant Decision/Resolution #: Resolution E-5440

Does AL replace a withdrawn or rejected AL? If so, identify the prior AL:

Summarize differences between the AL and the prior withdrawn or rejected AL:

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: 9/23/26

No. of tariff sheets: -0-

Estimated system annual revenue effect (%):

Estimated system average rate effect (%):

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: None

Service affected and changes proposed¹:

Pending advice letters that revise the same tariff sheets: None

¹Discuss in AL if more space is needed.

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

California Public Utilities Commission
Energy Division Tariff Unit Email:
EDTariffUnit@cpuc.ca.gov

Contact Name: Rebecca Furman
Title: Managing Director, State Regulatory Operations
Utility/Entity Name: Southern California Edison Company

Telephone (xxx) xxx-xxxx:
Facsimile (xxx) xxx-xxxx:
Email: AdviceTariffManager@sce.com

Contact Name: Adam Smith c/o Karyn Gansecki
Title: Director, Regulatory Relations
Utility/Entity Name: Southern California Edison Company

Telephone (xxx) xxx-xxxx:
Facsimile (xxx) xxx-xxxx:
Email: karyn.gansecki@sce.com

CPUC
Energy Division Tariff Unit
505 Van Ness Avenue
San Francisco, CA 94102

Clear Form

ENERGY Advice Letter Keywords

Affiliate	Direct Access	Preliminary Statement
Agreements	Disconnect Service	Procurement
Agriculture	ECAC / Energy Cost Adjustment	Qualifying Facility
Avoided Cost	EOR / Enhanced Oil Recovery	Rebates
Balancing Account	Energy Charge	Refunds
Baseline	Energy Efficiency	Reliability
Bilingual	Establish Service	Re-MAT/Bio-MAT
Billings	Expand Service Area	Revenue Allocation
Bioenergy	Forms	Rule 21
Brokerage Fees	Franchise Fee / User Tax	Rules
CARE	G.O. 131-D	Section 851
CPUC Reimbursement Fee	GRC / General Rate Case	Self Generation
Capacity	Hazardous Waste	Service Area Map
Cogeneration	Increase Rates	Service Outage
Compliance	Interruptible Service	Solar
Conditions of Service	Interutility Transportation	Standby Service
Connection	LIEE / Low-Income Energy Efficiency	Storage
Conservation	LIRA / Low-Income Ratepayer Assistance	Street Lights
Consolidate Tariffs	Late Payment Charge	Surcharges
Contracts	Line Extensions	Tariffs
Core	Memorandum Account	Taxes
Credit	Metered Energy Efficiency	Text Changes
Curtailable Service	Metering	Transformer
Customer Charge	Mobile Home Parks	Transition Cost
Customer Owned Generation	Name Change	Transmission Lines
Decrease Rates	Non-Core	Transportation Electrification
Demand Charge	Non-firm Service Contracts	Transportation Rates
Demand Side Fund	Nuclear	Undergrounding
Demand Side Management	Oil Pipelines	Voltage Discount
Demand Side Response	PBR / Performance Based Ratemaking	Wind Power
Deposits	Portfolio	Withdrawal of Service
Depreciation	Power Lines	

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

AT&T	Duncan Weinberg Genzer Pembroke	Pacific Gas and Electric Company
Albion Power Company	Ellison Schneider & Harris LLP	Peninsula Clean Energy
Alta Power Group, LLC	Electrical Power Systems, Inc. Fresno	Pioneer Community Energy
Anderson & Poole	Engie North America	Public Advocates Office
BART	Engineers and Scientists of California	Redwood Coast Energy Authority
Ava Community Energy		Regulatory & Cogeneration Service, Inc.
BART		Resource Innovations
Buchalter	GenOn Energy, Inc.	Rockpoint Gas Storage
Barkovich & Yap, Inc.	Green Power Institute	
Biering & Brown LLP		
Braun Blasing Smith Wynne, P.C.	Hanna & Morton LLP	San Diego Gas & Electric Company
		San Jose Clean Energy
		SPURR
California Community Choice Association	ICF consulting	
California Cotton Ginners & Growers Association	iCommLaw	Sempra Utilities
California Energy Commission	International Power Technology	Sentinel Utilities
California Hub for Energy Efficiency	Intertie	Sierra Telephone Company, Inc.
California Alternative Energy and Advanced Transportation	Intestate Gas Services, Inc.	Southern California Edison Company
Financing Authority		
California Strategies		Southern California Gas Company
California Public Utilities Commission	Kaplan Kirsch LLP	Spark Energy
Calpine	Kelly Group	
Cameron-Daniel, P.C.	Ken Bohn Consulting	Sun Light & Power
Casner, Steve	Keyes & Fox LLP	Sunshine Design
Center for Biological Diversity		Stoel Rives LLP
Chevron Pipeline and Power	Leviton Manufacturing Co., Inc. Los Angeles County Integrated	Tecogen, Inc.
		TerraVerde Renewable Partners
Clean Power Research	Waste Management Task Force	Tiger Natural Gas, Inc.
Coast Economic Consulting		
Commercial Energy	MRW & Associates	Utility Cost Management
Crossborder Energy	Manatt Phelps Phillips	
Crown Road Energy, LLC	Marin Energy Authority	Water and Energy Consulting
	McClintock IP	
	McKenzie & Associates	
Davis Wright Tremaine LLP	Modesto Irrigation District	
Day Carter Murphy	NLine Energy Inc.	Yep Energy
Dept of General Services	NOSSAMAN LLP	
Diablo Canyon Independent Safety Committee	NRG Energy Inc.	
Douglass & Liddell		
Downey Brand LLP		