

PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

ENERGY DIVISION

**RESOLUTION E-5341
September 12, 2024**

R E S O L U T I O N

Resolution E-5341. Pacific Gas and Electric Company's Automated Response Technology Program

PROPOSED OUTCOME:

- Approves, with modification, Pacific Gas and Electric (PG&E) Advice Letters 7193-E and 7193-E-A detailing the Automated Response Technology (ART) program.
- This Resolution orders PG&E to file a Tier 2 advice letter proposing a penalty structure for ART, due no later than 90 days after the issued date of this Resolution.

SAFETY CONSIDERATIONS:

- There are no safety considerations associated with this resolution.

ESTIMATED COST:

- D.23-12-005 authorized PG&E to recover \$43.80 million from ratepayers for the ART program in 2024-2027. The decision stated that \$20 million of the \$43.80 will be made available only after PG&E has submitted a Tier 3 advice letter providing sufficient justification for the increased budget. This letter shall be due by November 1, 2025, with the other mid-cycle review advice letters.

By Advice Letters PG&E 7193-E and PG&E 7193-E-A Filed on 2/28/2024 and 6/7/2024.

SUMMARY

This Resolution authorizes Pacific Gas and Electric (PG&E) to proceed with the Automated Response Technology (ART) program as detailed in PG&E Advice Letters (AL) 7193-E and 7193-E-A, as modified herein.

PG&E is directed to submit a Tier 2 advice letter proposing a penalty structure for ART. PG&E may submit additional advice letters as needed to improve the program design as lessons are learned through implementation of ART.

BACKGROUND

Procedural History

On May 2, 2022, PG&E filed Application (A.) 22-05-002 seeking authorization of its 2024-2027 Demand Response (DR) portfolio. PG&E's application proposed a new residential DR market-integrated program, the ART program. As noted in PG&E's testimony, the ART program incentivizes third-party providers to recruit customers with smart home technologies to participate in DR events and load shifting.¹ Third parties will participate in the ART program as "Providers" who will interface with customers in recruitment, customers management, and event management activities. Initial technologies include smart thermostats, heat pump water heaters, electric vehicle (EV) chargers, and batteries. The first technology enrolled in ART will be the 100,000 smart thermostats transitioning from PG&E's Summer Reliability Smart Thermostat Control Pilot, known as the "Bring Your Own Thermostat" program.²

On December 20, 2023, the Commission issued Decision (D.) 23-12-005 (Decision).³ The Decision approved PG&E's ART program and authorized PG&E to recover a total of \$43.80 million for ART in 2024-2027. The Decision noted that PG&E's proposal lacked sufficient detail and directed PG&E to submit a Tier 3 advice letter detailing the program design before proceeding with the ART program. PG&E was authorized to utilize up to \$1.6 million of its allotted 2024 ART budget to transition customers from the Summer Reliability Smart Thermostat Control Pilot to the ART program. This initial funding was made available from January 1, 2024 to June 30, 2024, or until the ART program design is approved by the Commission.

¹ Application (A.) 22-05-002, Exhibit PG&E-2, p. 3-36.

² PG&E AL 7193-E, p. 2.

³ *Decision Directing Certain Investor-Owned Utilities' Demand Response Programs, Pilots, and Budgets for the Years 2024-2027.*

On February 28, 2024, PG&E filed AL 7193-E adding further details to the program design of the ART program.

On May 28, 2024, the Commission's Energy Division (ED) requested that PG&E file a supplement to AL 7193-E to provide additional clarification and details regarding its ART proposal.

On June 7, 2024, PG&E filed supplemental AL 7193-E-A.

Summary of Advice Letter 7193-E

The ART tariff parameters are summarized below:

Supply Side Program Eligible for Resource Adequacy: The ART is integrated into the California Independent System Operators (CAISO) wholesale market as a Proxy Demand Resource and will be bid at PG&E's sole discretion. It is available throughout PG&E's service territory.

Customer Eligibility: ART is available to all PG&E (bundled and unbundled) residential customers.⁴ Customers cannot be simultaneously enrolled in another supply-side demand response or event-based load modifying pilot or program. Customer enrollment is through a third-party Provider and is limited to one Provider per eligible service agreement. Multiple providers are not able to enroll the same customer service agreement even if they intend to enroll different technologies at the customer site.

Provider: Customers with eligible smart technologies can enroll in ART through a PG&E-contracted third-party "Provider." The Provider will act on the customer's behalf, including (1) administering enrollment and disenrollment communications, (2) receiving event notifications, (3) receiving incentive payments, and (4) receiving updates to the ART tariff that may impact the customer.

Per the proposed tariff, if a customer is on a time-varying rate, the Provider must implement a daily load-shifting strategy according to the customer's time-varying rates using smart technologies. Regardless of daily load shifting, all customers will be

⁴ An "unbundled" residential customer is one who receives energy generation services from a non-utility load serving entity (LSE) such as a Community Choice Aggregator (CCA) but receives all other services from PG&E.

included in DR events. The customer has the option to opt out of the daily load shifting strategy. The daily load-shifting requirement applies to time-of-use (TOU) rates and in the future could apply to real time pricing (RTP).

Availability, Triggers, and Notification: ART is available twelve months a year, 24 hours-a-day, seven days a week. Triggers shall be Day-Ahead, based on CAISO market award dispatch, or Day-Of for PG&E system emergencies. For Day-Ahead market events, PG&E will notify the Providers no later than 5 p.m. the day before dispatch, or as soon as reasonably possible. For Day-Of emergency and near-emergency events, PG&E will notify Providers as soon as possible after being informed of dispatch.

PG&E requests the authority to submit advice letters as necessary to implement revisions to the ART program tariff as experience is gained in implementing the program.

Customer Specific Energy Baseline (CSEB): To participate in ART, a customer must have ten days of meter data prior to the first day of program enrollment. Each provider's portfolio will have its own CSEB based on the aggregated CSEBs of each customer within the resource. The CSEB on any given day is the sum of the individual baselines of each service agreement in the portfolio.

The program will utilize a 5-in-10 baseline with an optional same-day adjustment. For events that occur on weekdays, each individual service agreement baseline is the average load for each corresponding hour over the five out of ten past similar weekdays prior with the highest energy consumed over the event period. The load during each corresponding hour of the five days will be averaged to calculate a baseline for each hour. For events that occur on weekends, each individual service agreement baseline is the weighted average load for each corresponding hour over the last three out of five past similar weekends with the highest energy consumed over the event period.

The day-of adjustment is the ratio of a) the average load of the first three of four hours prior to the start of the event to b) the average load of the corresponding hours from the service agreement baseline. The day-of adjustment is applied by multiplying each hourly baseline value by the day-of adjustment.

Incentive Payment: Program incentives are directly paid to ART Providers on a performance basis. Performance is measured at PG&E's meter level and aggregated to the Provider's portfolio based on actual or test events. Incentive payments to participating customers are the responsibility of and at the discretion of the Providers.

PG&E will conduct an analysis of each Provider's portfolio once per month to calculate Provider incentive payments based on event performance, referred to as capacity payments.

To calculate the capacity payment, service agreement meter data will be compared to a customer's CSEB to determine the reduction in delivered energy to a customer's PG&E meter, defined as the load impact. The load impact for each event hour that a customer participated in, will be averaged across the month to determine the Measured Average Hourly Load Impact. To determine the capacity payments per Provider, the Measured Average Hourly Load Impact per customer will be aggregated for the Provider's portfolio and multiplied by the monthly capacity price (per kW).

Summary of Advice Letter 7193-E-A

PG&E's supplemental advice letter includes tariff revisions to the ART tariff in compliance with Ordering Paragraph 30 of D.23-06-029, *Decision Adopting Local Capacity Obligations for 2024-2026, Flexible Capacity Obligations for 2024, and Program Refinements* from Rulemaking (R.) 21-10-002, to include additional availability requirements for Proxy Demand Resources (PDR). The supplement also includes responses to 14 questions from ED staff as listed below.

1. Confirm providers will offer support for more than one smart technology.
2. Provide additional detail regarding new systems needed to support ART and the timing of system development and availability.
3. Explain when ART will be expanded to other technologies beyond the smart thermostats transferred from the Summer Reliability Smart Control Thermostat program.
4. Identify how customers will know the different available incentives without having to solicit information from each Provider.
5. Clarify the meaning of "commission guidelines" in the "Subscription Limit" section of the tariff.
6. Explain how PG&E will avoid underutilization of all available smart customer devices in a situation where a Provider enrolls a customer in ART with one smart device (i.e smart controllable thermostat) without having access to the customer's other smart devices (i.e battery storage device or EV charger).
7. Clarify in the tariff whether the customer is required to be on a time-varying rate and to also participate in CAISO markets.
8. Include the cap on the number of dispatches per day. If there are none, clarify in the tariff.

9. Include the cap on the number of consecutive days of dispatch. If there are none, clarify in the tariff.
10. Adopt the requirements of D.23-06-029, OP 30, to include additional availability requirements for PDR resources in the proposed tariff.
11. Clarify whether the capacity payments under the “Rates” section in the tariff is to the Provider and explain how individual customers will be paid by their contracted Provider.
12. Identify the minimum CAISO PDR kW requirements for the program Providers.
13. Clarify Providers’ responsibility and timeline to provide notice of events to their customers.
14. Explain how PG&E will ensure program performance given this is an RA-eligible voluntary program with no penalties?

NOTICE

Notice of PG&E AL 7193-E and PG&E AL 7193-E-A were made by publication in the Commission’s Daily Calendar. PG&E states that a copy of both advice letters was mailed and distributed in accordance with Section 4 of General Order 96-B.

PROTESTS AND RESPONSES

Three responses to PG&E AL 7193-E were timely received on March 19, 2024, from:

- California Efficiency + Demand Management Council (CEDMC);⁵
- Advanced Energy United (AEU);⁶ and
- Uplight Inc. (Uplight).⁷

PG&E did not reply to the responses to AL 7193-E.

On June 7, 2024, PG&E filed Supplemental AL 7193-E-A, in which PG&E requested the protest period be reopened for 10 days rather than the standard 20 days. On June 12, 2024, The Public Advocates Office at the California Public Utilities Commission (Cal Advocates) sent an email to the service list of A.22-05-002 objecting to a shortened

⁵ CEDMC, “Advice Letter (AL) 7193-E (Pacific Gas & Electric Company) Detailing the Automated Response Technology Program, in Compliance with D.23-12-005 RESPONSE OF THE CALIFORNIA EFFICIENCY + DEMAND MANAGEMENT COUNCIL,” March 19, 2024.

⁶ AEU, “AL 7193-E Response Letter,” March 19, 2024.

⁷ Uplight, “Pacific Gas & Electric Company’s Advice Letter (AL) 7193-E (Letter Detailing the Automated Response Technology Program, in Compliance with Decision 23-12-005),” March 19, 2024.

protest period and requesting 20 days to protest AL 7193-E-A. On June 13, 2024, CEDMC responded to Cal Advocates' email with support for PG&E's request for a 10-day protest period.

Per General Order 96-B, Section 7.5.1, the reviewing Industry Division may issue a notice reopening the protest period. Energy Division staff noticed the service list of A.22-05-002 on re-opening the 20-day protest period.

AL 7193-E-A was timely protested by Cal Advocates on June 27, 2024.⁸ One additional response of support for AL 7193-E-A was received on June 27, 2024, jointly filed by CEDMC and Uplight Inc.⁹ PG&E replied to Cal Advocates' protest on July 5, 2024.¹⁰

The protests, responses, and replies to AL 7193-E and 7193-E-A are further described, discussed, and resolved in the Discussion section below:

DISCUSSION

We discuss and resolve below the advice letter, supplement, and issues raised in protests. We also make further clarifications and modifications to the programmatic details in the tariff.

The issues addressed in this section are organized as follows:

1. ART program expansion
 - a. Support for customers with multiple devices
 - b. Expansion to technologies beyond smart thermostats
2. Proxy Demand Resource (PDR) minimum size requirements
3. Provider's requirement on daily load shifting of customers on time varying rates
4. Program Performance, Resource Adequacy (RA) obligations and grid reliability

⁸ Cal Advocates, "Public Advocates Office Protest of Pacific Gas and Electric Company's Advice Letter 7193-E-A (Supplement: Detailing the Automated Response Technology Program, in Compliance with Decision 23-12-005 and Decision 23-06-029)," June 27, 2024.

⁹ CEDMC, "Advice Letter (AL) 7193-E-A (Pacific Gas & Electric Company) Supplemental: PG&E Advice Letter Detailing the Automated Response Technology Program, in Compliance with Decision 23-12-005 and Decision 23-06-029 RESPONSE OF CALIFORNIA EFFICIENCY + DEMAND MANAGEMENT COUNCIL AND UPLIGHT INC.," June 27, 2024.

¹⁰ PG&E, "Pacific Gas and Electric Company's Reply to the Protest of Advice Letter 7193-E-A (Supplement: PG&E Advice Letter Detailing the Automated Response Technology Program, in Compliance with Decision 23-12-005 and Decision 23-06-029)," July 5, 2024.

5. Customer acceptance of terms and conditions
6. Authority to file additional advice letters

1. ART program expansion

a. Support for customers with multiple devices

Energy Division requested that PG&E confirm technology providers will offer support for more than one smart technology in its supplemental advice letter.

PG&E AL 7193-E-A states that a customer will be able to enroll any eligible smart technology that their Provider supports. PG&E stated it cannot mandate third-party Providers to enter contracts with specific technology vendors, but it will encourage Providers to contract with common technology manufacturers to ensure customers with multiple technologies can enroll them.¹¹

Cal Advocates asserts that PG&E's response in the supplemental advice letter contradicts PG&E's original ART proposal that claimed ART would allow customers to participate with multiple technologies outside of smart thermostats. Cal Advocates states that PG&E's proposal should be rejected because it does not comply with the ART program as approved in D.23-12-005.¹²

PG&E replies that Cal Advocates' claim is not accurate because the ART program proposal did not include details regarding technology providers' support for more than one technology. The proposal did state what technologies would be included, but not limited to, in the program.¹³

PG&E's reply also states that PG&E has been in discussion with vendors on whether vendors should partner with other technology providers, or contract separately to support customers to participate in ART with multiple technologies.¹⁴

¹¹ PG&E AL 7193-E-A, p. 3.

¹² Cal Advocates' Protest, p. 3.

¹³ PG&E Reply, p. 2.

¹⁴ PG&E Reply, p. 3.

Disposition

We reject Cal Advocates' protest that PG&E's response to the request does not meet the original ART proposal. Neither D.23-12-005 nor PG&E's testimony¹⁵ mention that Providers will be required to enroll more than one smart technology, only that multiple technologies will be offered.

We emphasize, however, that it is important that customers can leverage all of their eligible smart technologies to participate in DR events and load-shifting through ART. PG&E notes that a primary objective of the ART program is to promote customers to leverage their multiple automated technologies for load management purposes.¹⁶ As such, given that a customer can only enroll with one Provider in the ART program, PG&E must ensure that customers can leverage all of their eligible smart technologies when enrolling in ART to avoid leaving potential DR benefits on the table. We expect that PG&E will prioritize enrolling providers with support for multiple technologies in the ART program.

b. Expansion to technologies beyond smart thermostats

Energy Division requested that PG&E explain when ART will be expanded to other technologies beyond the smart thermostats transferred from the Bring Your Own Thermostat Pilot.¹⁷

CEDMC states that PG&E should expand ART program eligibility to other smart technologies quickly in order to maximize the amount of capacity delivered.¹⁸ PG&E AL 7193-E-A states that the ART program can expand to other technologies as soon as ART is approved.¹⁹

Cal Advocates states that PG&E does not offer a timeline for the expansion of ART and does not specify what technologies will be included. Cal Advocates states that PG&E's response to when ART will be expanded to other technologies creates uncertainty regarding if and when ART will be expanded.²⁰

¹⁵ A.22-05-002, Exhibit PG&E-2.

¹⁶ PG&E Reply, p. 3.

¹⁷ PG&E AL 7193-E-A, p. 4.

¹⁸ CDEMC Response, p. 2.

¹⁹ PG&E Reply, p. 4.

²⁰ Cal Advocates Protest, p. 4.

PG&E replies that it is already functionally and operationally able to support other technologies, and it has already documented engagement with vendors to expand beyond smart thermostats.²¹ As detailed in AL 7193-E, PG&E conducted a request for information (RFI) to solicit feedback from 17 respondents: five EV Providers, three battery Providers, three thermostat Providers, four platform Providers, and two companies who labeled themselves as “aggregators of aggregators.” According to PG&E, 11 of those respondents indicated they would be interested in participating in the ART program in 2024.²²

Disposition

We acknowledge Cal Advocates’ concern on the uncertainty surrounding the expansion of the ART program to other smart technologies. PG&E has stated that it has engaged with providers to support technologies beyond smart thermostats, as shown by its Request for Information (RFI). We do not adopt a prescribed timeline for PG&E to add other technologies beyond smart thermostats; however, we encourage PG&E to start enrolling other available smart technologies as soon as possible.

2. Proxy Demand Resource (PDR) minimum size requirements

Energy Division requested that PG&E identify the minimum CAISO PDR kW requirements for ART Providers.

PG&E AL 7193-E-A states that it has not set a minimum kW requirement for ART Providers. CAISO PDRs must meet a 100kW minimum size requirement, and PG&E, as the Scheduling Coordinator, will combine customers from multiple Providers to achieve the CAISO PDR minimum size requirement.²³

Cal Advocates states that PG&E should reject AL 7193-E-A because PG&E offers no contingency plan for if there are insufficient kW to meet the CAISO minimum size requirement for PDRs.²⁴

PG&E replies that requiring Providers to meet the 100kW requirement per SubLAP would be challenging for smaller DR Providers and can cause an unnecessary barrier to

²¹ PG&E Reply, pp. 2-3.

²² PG&E Reply, p. 3.

²³ PG&E Reply, p. 6.

²⁴ Cal Advocates Protest, p. 4.

entry to participation in ART.²⁵ PG&E states that the ART program will provide benefits beyond wholesale market value and will be leveraged to shift or curtail use during high-cost TOU rate periods. PG&E adds that because ART will be available for dispatch during CAISO Flex Alerts, Grid Warning, Alerts, or Notices, or in the event the Governor's Office issues an emergency notification, if aggregation of DR Providers in a SubLAP is not sufficient to meet the 100kW PDR requirement, those customers would still provide value to the grid.²⁶

Disposition

The Commission agrees that requiring individual Providers to meet the 100kW CAISO PDR size requirement may present a barrier to entry for smaller DR Providers to participate in ART. It is, however, PG&E's responsibility to ensure that CAISO PDR size requirements are met, and resources are aggregated and bid into the market accordingly. PG&E may aggregate resources from multiple Providers to meet the 100kW size requirement; however, PG&E may not enroll or retain customers in the ART program that cannot be aggregated and bid into the CAISO market as a PDR resource. ART is a supply side program counted towards RA and as such, all resources within the program must be integrated into the CAISO markets.

In addition, PG&E must ensure that combining resources from multiple Providers or with PG&E's own resources does not create baseline and performance calculation challenges between the CAISO wholesale baseline and performance calculations and the baseline and performance calculations in the ART program.

3. Provider's requirement on daily load shifting of customers on time-varying rates

PG&E AL 7193-E states that if a customer is on a time-varying rate, the Provider must implement a daily load-shifting strategy according to the customer's time-varying rates using their smart technologies. The AL also notes that all customers will be included in DR events, irrespective of the daily load shifting. The AL proposes to give the customer the option to opt out of the daily load shifting strategy.

²⁵ PG&E Reply, p. 5.

²⁶ PG&E Reply, pp. 4-5.

Disposition

The combination of daily load shifting and event-based DR is a novel program design. The Commission is interested in exploring the potential for a resource to provide marginal load flexibility beyond what a customer would provide on their daily load shifting in response to their time-varying rates.

We approve the proposed daily load-shifting requirement for the Provider and also the customer opt-out option, but modify the tariff to maintain the daily load-shifting for a minimum of twelve months after a customer enrolls in ART to a) allow the customer to see the savings from daily load shifting and b) examine through ex post analysis the potential for this program design.

We direct PG&E to submit ex-post load impact analyses for the period beginning with the approval of this Resolution and ending October 31, 2026. The analyses shall be submitted to Energy Division and distributed to the service list for A.22-05-002 et al. At a minimum, each year's ex-post analysis should include the following elements:

- A description of the daily load shifting strategy used by each participating aggregator for each resource type.²⁷
- Load impacts for daily load shifting and for DR events separately, relative to a control group of similar non-participating customers on time varying rates (or an equivalent baseline showing what the load of the participating customers would have been without joining ART).
- Load impacts comparison between participating customers who have opted out of daily load shifting and participating customers who have not opted out.

4. Program Performance, RA obligations and grid reliability

PG&E has proposed the ART program as a voluntary program with no penalties. Energy Division requested that PG&E explain how it will ensure ART program performance, given that PG&E proposed ART as an RA-eligible, voluntary program with no penalties.

PG&E AL 7193-E-A states that its distributed energy resource management system (DERMS) will conduct performance measurement to inform forecasting with learning

²⁷ This element may be submitted confidentially to Energy Division but must provide substantial detail.

from previous events to ensure forecast accuracy. Annual Load Impact Protocols (LIP) will be used to improve expected MW delivery from the ART program.²⁸

Cal Advocates states that PG&E has no mechanism, such as penalties, to ensure that ART capacity performs when the resources are dispatched. Cal Advocates states that this puts the grid and ratepayers at risk during grid emergencies and would be an unjust and unreasonable use of ratepayer funds. Therefore, according to Cal Advocates, PG&E's proposal should be rejected.²⁹

PG&E disagrees that a DR program must include performance penalties in order to provide reliable load reduction when it is a pay-for-performance program. PG&E states that load reduction achieved with technology-enabled automation, such as with the ART program, improves reliability compared to load reduction via behavior or manual intervention. PG&E states that market response to the ART RFI indicated that Providers prefer a strict pay-for-performance structure over a program design that incorporates penalties, and they are willing to forego traditional "capacity" payments in order to avoid penalties.³⁰ We note that the ART program as proposed provides capacity payments to Providers.

In response to Cal Advocates concerns on the program's performance and its potential negative impacts on grid reliability resulting in unjust and unreasonable use of ratepayer funds, PG&E states that the Commission already considered the program "promising" and "reasonable" to authorize through 2027.^{31,32} We note that while the Commission approved the program in D.23-12-005, the decision clearly stated that PG&E's proposal lacked sufficient detail and as such explicitly directed PG&E to submit a Tier 2 advice letter detailing the program design before proceeding with the ART program.³³

²⁸ PG&E AL 7193-E-A, p. 6.

²⁹ Cal Advocates' Protest, p. 4.

³⁰ PG&E Reply, p. 7.

³¹ PG&E Reply, p. 5.

³² D.23-12-005, p. 223 (OP 25).

³³ D.23-12-005, p. 65.

Disposition

We agree with PG&E that automated load reduction achieved with technology-enabled automation provides a better response compared to load reduction via behavior or manual intervention. However, we share Cal Advocates concerns on grid reliability, should these RA-eligible resources not perform when dispatched.

While we are cognizant of the preferences of providers as reported by PG&E, the Commission has an obligation to ensure that the RA resources funded by ratepayers show up and deliver as accounted for in order to ensure grid reliability and the reasonableness of rates. While PG&E has considerable experience with market integration and forecasting load impacts of DR resources, these are not sufficient to ensure that ART resources will perform as forecast. As such, we agree with Cal Advocates that performance penalties should be included in the ART program design.

We direct PG&E to submit a Tier 2 advice letter proposing a penalty structure for ART. The advice letter is due no later than 90 days from the issuance date of this Resolution.

To prevent further delays in the program's launch, we hereby authorize PG&E to commence customer enrollment in 2024, with the penalty structure becoming effective in 2025.

5. Customer acceptance of terms and conditions

PG&E AL 7193-E states that “customers will be required to accept the program terms and conditions at the time of enrollment.”³⁴

CEDMC expresses concern that requiring Providers’ customers to directly accept PG&E’s terms and conditions could cause confusion for customers who are not aware of what program they are enrolled in. CEDMC recommends that Providers be required to accept PG&E’s terms and conditions on behalf of their customers.³⁵

³⁴ PG&E AL 7193-E, p. 5.

³⁵ CEDMC Response, p. 3.

Disposition

First, we remind CEDMC that concerns on an advice letter should be expressed in a protest, rather than a response. In accordance with General Order 96-B, section 3.13, a response to an advice letter is intended for “unconditional support” of the relief requested in the advice letter and can include additional useful information.³⁶ Nonetheless, we consider and address CEDMC’s concerns below.

The ART program is available to PG&E residential customers receiving bundled or unbundled service and billed on a PG&E residential rate schedule.³⁷ The Schedule E-ART tariff clearly identifies ART as a PG&E-program, and appropriately lists the role of the Provider to act on a customer’s behalf. As customers will be enrolled under a PG&E tariff, we find it appropriate that customers accept PG&E’s terms and conditions as proposed in PG&E AL 7193-E.

6. Authority to file additional advice letters

PG&E requests the authority to file additional advice letters as needed before the mid-cycle review process in 2025. PG&E states that authority will allow PG&E to update the ART program tariff as experience is gained in implementing the program.³⁸

Advanced Energy United supports the continued evolution of the ART program through requests submitted in advice letters during the program lifecycle, including outside of the mid-cycle review.³⁹

Disposition

As discussed earlier, PG&E’s ART program still needs improvement and will benefit from lessons learned as the program is implemented. PG&E is authorized to file additional Tier 2 advice letters to propose improvements to the program design as lessons are learned through implementation of ART.

³⁶ CPUC General Order 96-B, Section 3.13.

³⁷ PG&E AL 7193-E, p. 5.

³⁸ PG&E AL 7193-E, p. 8.

³⁹ AEU Response Letter, p. 2.

COMMENTS

Public Utilities Code section 311(g)(1) provides that this Resolution must be served on all parties and subject to at least 30 days public review. Section 311(g)(2) provides that this 30-day review period and 20-day comment period may be reduced or waived upon the stipulation of all parties in the proceeding.

The 30-day review and 20-day comment period for the draft of this resolution was neither waived nor reduced. Accordingly, this draft resolution was mailed to parties for comments on August 9, 2024.

PG&E and CEDMC (jointly filed with Uplight, Inc.) filed timely comments on the draft Resolution on August 29, 2024.

PG&E recommends changes to the PDR requirement and the load impact analysis requirement and opposes the adoption of a penalty mechanism that is similar to the one in CBP.

CEDMC and Uplight express concern over the adoption of a penalty structure for ART but state that if a penalty mechanism is necessary, it should only be comparable to CBP in certain parameters and not others.

1. ART Resources not integrated into CAISO markets

PG&E requests revising the requirement that bars enrollment of customers who cannot immediately be bid into CAISO as a PDR due to the size limitation. PG&E states that this requirement is operationally impractical to implement and undermines the potential for ART's success.⁴⁰ PG&E asserts that the Resolution's language incorrectly assumes that enrolling "islanded" customers in ART is a cost to ratepayers for RA value not delivered. PG&E also asserts that the Resolution's language incorrectly assumes that islanded ART customers provide no value to the grid.⁴¹

PG&E is incorrect to assert that the language of the Resolution assumes that customers who cannot be bid into the CAISO market provide no value to the grid. The Resolution states that "ART is a supply side program counted towards RA and as such, all resources within the program must be integrated into the CAISO markets." The

⁴⁰ PG&E Comments on Draft Resolution E-5341, p. 2.

⁴¹ PG&E Comments on Draft Resolution E-5341, p. 3.

Resolution is reiterating the Commission's longstanding bifurcation policy where RA eligible supply-side resources, such as those in the ART program, must be integrated into the CAISO energy markets.⁴²

PG&E notes that islanded customers can be dispatched out of market to address emergency conditions, such as the issuance of a Flex Alert or Energy Emergency Alert (EEA) by CAISO. We note that the Commission has specific non-RA programs such as the Emergency Load Reduction Program that can be used for resources that cannot be integrated into the market.

PG&E also asserts that because PG&E's ex-ante forecasts for ART will be conservative for the first few years of the program, and islanded customers will not be used to inform the ex-ante forecasts, therefore, retention of any islanded customers does not impact the RA credit PG&E would receive for running the ART program.⁴³ We do not agree with PG&E's claim on the islanded customers having no impact on RA.

These islanded customers cannot be enrolled in any other supply side programs due to the Commission dual participation policy. Also, the potential RA benefits that these customers could have provided by being in another DR program cannot be realized. In addition, there are often customer acquisition and retention fees (such as monthly licensing fees charged per device by Providers) that would be funded by the ART program budget. Given the Commission's long-standing bifurcation policy, it is not appropriate to authorize ratepayer funding that does not conform with Commission policy. Therefore, PG&E's request to modify this requirement is denied.

2. Load Impact Analysis

PG&E recommends revising the load impact analysis requirement to align with the schedule for PG&E's annual load impact evaluation due April 1 each year. PG&E requests that the research elements be broken out by program year and addressed in the annual load impact evaluation of the year, so that the load shifting strategy and the customer impacts in a program year would be included in the load impact report of that year.⁴⁴

⁴² D.14-03-026, *Decision Addressing Foundational Issue of the Bifurcation of Demand Response Programs*, April 4, 2014, Ordering Paragraph 3

⁴³ PG&E Comments on Draft Resolution E-5341, p. 3.

⁴⁴ PG&E Comments on Draft Resolution E-5341, p. 4.

PG&E also requests to be allowed an alternative to control groups to estimate the load impacts for daily load shifting and DR events. PG&E states that should an unforeseen circumstance appear where there are no similar non-participating customers, a control group using unrepresentative non-participants may not be the best approach to construct the baseline. In this scenario, PG&E would construct the baseline using pre and post enrollment data of the program participants.⁴⁵

We find it reasonable to align the schedule for the ART specific load impact analysis required by this Resolution with the submission of PG&E's annual load impact evaluation due on April 1. It is also reasonable to allow PG&E an alternative to control groups in performing their evaluation of daily load shifting and event DR. While we allow for aligning the ART report timeline with PG&E's annual impact evaluation, PG&E must include in its analysis all elements of the ART report as adopted in this Resolution.

PG&E's request is approved, but PG&E must include in its analysis all elements of the ART report as adopted in this Resolution. Ordering Paragraph 4 is updated accordingly.

3. Penalty Structure

PG&E requests that the due date to file a Tier 2 Advice Letter proposing a penalty structure be extended from 60 days to 120 days to allow time for PG&E to develop a penalty structure with stakeholder input. PG&E states that adopting a penalty structure similar to CBP is not the appropriate solution for an ART penalty mechanism because ART and CBP are dissimilar programs. PG&E requests that the resolution be modified so that the proposed penalty structure is not required to be modeled after the CBP.⁴⁶

CEDMC and Uplight also express concerns that if applied too broadly, the Draft Resolution's directive to PG&E to develop a penalty mechanism similar to CBP would undermine ART's potential to attract more DR participation. They state that should a penalty mechanism be necessary, it should be based on day-ahead performance forecasts. CEDMC and Uplight recommend that a penalty mechanism should only be comparable to CBP in that it uses the same Adjusted Hourly Capacity Payment/Penalty structure.⁴⁷

⁴⁵ PG&E Comments on Draft Resolution E-5341, p. 5.

⁴⁶ PG&E Comments on Draft Resolution E-5341, p. 5.

⁴⁷ CEMDC and Uplight Comments on Draft Resolution E-5341, p. 3.

We find the CBP penalty structure to be a good starting point and valuable model to draw upon. We also find it reasonable to allow PG&E flexibility in designing a new penalty structure for the ART program. However, the penalty framework should be designed in a way that does not inadvertently incentivize resource shuffling across programs. We understand that proposing a new penalty structure may take longer to develop and are willing to extend the due date. However, in order to ensure adoption and implementation of the penalty structure in 2025, we require that PG&E submit the Tier 2 advice letter no later than 90 days from the issuance of this Resolution.

Ordering Paragraph 5 is updated accordingly.

FINDINGS

1. A primary objective of the ART program is to promote customers to leverage their multiple automated technologies for load management purposes.
2. PG&E has proven that it has already engaged with providers to support technologies beyond smart thermostats, as shown by its Request for Information (RFI).
3. PG&E may aggregate Providers to meet the 100kW CAISO size requirement, as long as this does not create challenges between ART program and CAISO baseline and performance calculations.
4. The combination of daily load-shifting and event-based DR is a novel program design.
5. The Commission is interested in exploring the potential for a resource to provide marginal load flexibility beyond what a customer would provide on their daily load shifting in response to their time-varying rate.
6. The Commission needs more assurance on RA eligible MWs as the non-realization of these capacity values not only has ratepayer implications but also directly impacts grid reliability.
7. It is appropriate that customers accept PG&E's terms and conditions in the program tariff.
8. PG&E's ART program will likely benefit from lessons learned as the program is implemented.

THEREFORE IT IS ORDERED THAT:

1. Pacific Gas and Electric Company (PG&E) Advice Letters 7193-E and 7193-E-A are approved as modified herein.
2. PG&E must continue to consider ways to prioritize enrolling provides with support for multiple technologies in the ART program.
3. PG&E may not enroll or retain customers in the ART program that cannot be aggregated and bid into the CAISO market as a PDR resource. ART is a supply-side program counted towards RA and as such, all resources within the program must be integrated into the CAISO markets.
4. PG&E is directed to submit load impact analyses for the period beginning with the approval of this Resolution and ending October 31, 2026. The analysis of each program year directed by this Resolution shall be submitted with PG&E's annual load impact evaluation and shall be submitted to Energy Division and distributed to the service list for A.22-05-002. PG&E's ART report must include the following elements:
 - A description of the daily load shifting strategy used by each participating aggregator for each resource type.⁴⁸
 - Load impacts for daily load shifting and for DR events separately, relative to a control group of similar non-participating customers on time varying rates (or an equivalent baseline showing what the load of the participating customers would have been without joining ART).
 - Load impacts comparison between participating customers who have opted out of daily load shifting and participating customers who have not opted out.
5. PG&E is directed to submit a Tier 2 advice letter proposing a penalty structure for ART. PG&E will draw upon the CBP penalty structure with flexibility in designing the ART penalty structure. The penalty framework shall not inadvertently incentivize resource shuffling across programs. The penalty structure must be in effect beginning in 2025. The advice letter is due no later than 90 days from the issuance date of this Resolution.
6. PG&E is authorized to file additional Tier 2 advice letters to improve the ART program design as lessons are learned through implementation of the ART program.

⁴⁸ This element may be submitted confidentially to Energy Division but must provide substantial detail.

This Resolution is effective today.

I certify that the foregoing resolution was duly introduced, passed, and adopted at a conference of the Public Utilities Commission of the State of California held on September 12, 2024; the following Commissioners voting favorably thereon:

/s/ RACHEL PETERSON

Rachel Peterson
Executive Director

ALICE REYNOLDS
President

DARCIE HOUCK
JOHN REYNOLDS
KAREN DOUGLAS
Commissioners

Commissioner Matthew Baker recused himself
and did not participate in the vote of this item.

June 7, 2024

Advice 7193-E-A

(Pacific Gas and Electric Company ID U 39 E)

Public Utilities Commission of the State of California

Subject: Supplemental: PG&E Advice Letter Detailing the Automated Response Technology Program, in Compliance with Decision 23-12-005 and Decision 23-06-029

Purpose

Pacific Gas and Electric Company (PG&E) hereby submits this supplemental Tier 3 advice letter (AL), in compliance with Ordering Paragraph (OP) 25 of California Public Utilities Commission (Commission or CPUC) Decision (D.) 23-12-005, *Decision Directing Certain Investor-Owned Utilities' Demand Response Programs, Pilots, and Budgets for the Years 2024-2027* (Decision). The Decision required PG&E to submit a Tier 3 advice letter no later than February 28, 2024, detailing the full program characteristics of the Automated Response Technology (ART) program. This supplemental AL includes redlined tariff revisions to the E-ART Tariff ("the tariff"), in compliance with OP 30 of D.23-06-029, *Decision Adopting Local Capacity Obligations for 2024-2026, Flexible Capacity Obligations for 2024, and Program Refinements* from Rulemaking (R.) 21-10-002, to include additional availability requirements for Proxy Demand Response (PDR) resources. This supplemental AL is also submitted following a request from the Commission's Energy Division (ED) staff on May 28, 2024, and provides information incremental to PG&E's original ART AL (PGE Advice 7193-E).

Background

On December 20, 2023, the Commission issued D.23-12-005, *Decision Directing Certain Investor-Owned Utilities' Demand Response Programs, Pilots, and Budgets for the Years 2024-2027*. In D.23-12-005, the Commission noted that "PG&E's ART program is promising and has the potential to provide far greater return on ratepayer funds."¹ The Commission approved PG&E's ART program, and authorized PG&E to recover \$23.8 million for ART in 2024-2027.² PG&E is authorized to recover an additional \$20 million

¹ D.23-12-005, p. 63.

² D.23-12-005, OP 25.

for its ART program following submittal of a Tier 3 advice letter justifying additional budget for the ART program during the mid-cycle review process in 2025.³

In D.23-12-005, the Commission noted “PG&E’s proposal lacks in many specifics,”⁴ and noted PG&E would rely on the Request for Proposal (RFP) process to inform the program design.⁵ The Commission directed PG&E to submit a Tier 3 AL by February 28, 2024, detailing the program design, before proceeding with the ART program. To that end, PG&E provided the full details of the ART program in its Advice Letter 7193-E. In the interim, PG&E is authorized to utilize up to \$1.6 million of its allotted 2024 ART budget to transition customers from the Summer Reliability Smart Thermostat Control Pilot to the ART program. This initial \$1.6 million in funding was made available from January 1, 2024 to June 30, 2024, or until the ART program design is approved by the Commission.⁶

On May 28, 2024, PG&E received a request from ED to file a supplemental AL to 7193-E to clarify the original filing, as follows:

1. Confirm technology providers will offer support for more than one smart technology.
2. Provide additional detail regarding new systems needed to support ART and the timing of system development and availability.
3. Explain when ART will be expanded to other technologies beyond the smart thermostats transferred from the Summer Reliability Smart Control Thermostat program.
4. Identify how customers will know the different available incentives without having to solicit information from each Provider.
5. Clarify the meaning of “commission guidelines” in the “Subscription Limit” section of the tariff.
6. Explain how PG&E will avoid underutilization of all available smart customer devices in a situation where a Provider enrolls a customer in ART with one smart device (i.e smart controllable thermostat) without having access to the customer’s other smart devices (i.e battery storage device or EV charger).
7. Clarify in the tariff whether the customer is required to be on a time-varying rate and to also participate in CAISO markets.
8. Include the cap on the number of dispatches per day. If there are none, clarify in the tariff.
9. Include the cap on the number of consecutive days of dispatch. If there are none, clarify in the tariff.
10. Adopt the requirements of D.29-06-029, OP 30, to include additional availability requirements for PDR resources in the proposed tariff.

³ D.23-12-005, OP 25.

⁴ D.23-12-005, pg. 65.

⁵ *PG&E’s Direct Testimony in Support of 2023-2027 Demand Response Programs*, A.22-20-005, at p. 2-21. <https://docs.cpuc.ca.gov/PublishedDocs/SupDoc/A2205002/6051/508571690.pdf>

⁶ D.23-12-005, OP 25.

11. Clarify whether the capacity payments under the “Rates” section in the tariff is to the Provider and explain how individual customers will be paid by their contracted Provider.
12. Identify the minimum CAISO PDR kW requirements for the program Providers.
13. Clarify Providers’ responsibility and timeline to provide notice of events to their customers.
14. Explain how PG&E will ensure program performance, given this is a resource adequacy (RA) eligible, voluntary program with no penalties.

PG&E herein provides additional details and clarifications on the ART program details, as requested.

Clarifying Details of the Automated Response Technology Program

Below, PG&E provides responses to the ED requests listed above, as well as the location in the E-ART tariff where these adjustments for clarity have been made, if applicable. These clarifications include ART program details incremental to those included in AL 7193-E.

ED Request #	Change Requested	Clarification	Tariff Section	Sheet #
1	Confirm technology providers will offer support for more than one smart technology.	A customer with more than one technology will be able to enroll any eligible smart technology that their Provider supports. Providers will be encouraged to contract with common technology manufacturers to ensure customers with multiple technologies can enroll them. PG&E cannot mandate third-party Providers to enter into contracts with specific technology vendors.	N/A	N/A
2	Provide additional detail regarding new systems needed to support ART and the timing of system development and availability.	PG&E will leverage its distributed energy resource management system (DERMS) beginning in 2025 to facilitate customer eligibility checks, enroll/disenroll operations, and dispatch events for the ART program. Development will begin in 2024 and continue in 2025. PG&E has the capability to dispatch the ART program as soon the ART tariff is approved and the first contract is executed.	N/A	N/A

3	Explain when ART will be expanded to other technologies beyond the smart thermostats transferred from the Summer Reliability Smart Control Thermostat program.	The ART program can expand to other technologies as soon as ART is approved.	N/A	N/A
4	Identify how customers will know the different available incentives without having to solicit information from each Provider.	Customers will have to research incentives offered under Provider programs. PG&E will not require Providers to report incentives that they pay or offer to customers. Providers may have different approaches to rewarding customers for their participation (which could change frequently), including gift cards, or a reward system that does not include traditional incentives. PG&E is unable to compile and provide a list of the Providers' incentives because this flexibility is left up to the Provider.	N/A	N/A
5	Clarify the meaning of "Commission guidelines" in the "Subscription Limit" section of the tariff.	The reference to "Commission guidelines," is meant to refer to the Commission's jurisdiction. PG&E revised the proposed E-ART tariff to now convey that Subscription Limits are subject to "CPUC authorization and funding."	Subscription Limit	1
6	Explain how PG&E will avoid underutilization of all available smart customer devices in a situation where a Provider enrolls a customer in ART with one smart device (i.e. smart controllable thermostat) without having access to the customer's other smart devices (i.e. battery storage device or EV charger).	<p>PG&E cannot dictate contractual relationships between Providers and technology manufacturers. There are a few strategies PG&E can implement to monitor for devices on the service premises which are operated by a different Provider than the Provider with the customer enrolled in ART.</p> <p>PG&E will actively solicit the participation of Providers with multiple technologies and will consider partnerships. PG&E will monitor customers on rates associated with EV and battery and not in the program but located at enrolled service premises. PG&E will conduct participant educational campaigns to promote higher load technology participation, when those options exist. And PG&E will conduct surveys of participants to query for other technologies in the home.</p>	N/A	N/A

7	Clarify in the tariff whether the customer is required to be on a time-varying rate and to also participate in CAISO markets.	It is not an ART program requirement for customers to be on a Time-Of-Use (TOU) rate. PG&E has revised the proposed E-ART tariff to insert, "Regardless of daily load shifting, all customers will be included in DR events." As stated in the tariff, PG&E will bid the ART program into the CAISO market.	Rates	2
8	Include the cap on the number of dispatches per day. If there are none, clarify in the tariff.	PG&E has revised the proposed E-ART tariff to insert, "There is no limit on the number of dispatches in a day or consecutive days of dispatch."	Availability, Triggers & Notification	4
9	Include the cap on the number of consecutive days of dispatch. If there are none, clarify in the tariff.	PG&E has revised the proposed E-ART tariff to insert, "There is no limit on the number of dispatches in a day or consecutive days of dispatch."	Availability, Triggers & Notification	4
10	Adopt the requirements of D.23-06-029, OP 30, to include additional availability requirements for PDR resources in the tariff.	PG&E has revised the proposed E-ART tariff to insert language required by D.23-06-029, OP 30: "Schedule E-ART will be available for dispatch for the duration of CAISO Flex Alerts, Grid Warning, Alerts or Notices, or when the Governor's Office issues an emergency notice. Schedule-ART will be available for the duration of an Alert, Warning, or Notice that is issued prior and up to the 10 a.m. day-ahead market bid deadline."	Availability, Triggers & Notification	4
11	Clarify whether the capacity payments under the "Rates" section in the tariff is to the Provider, and explain how individual customers will be paid by their contracted Provider.	PG&E has revised the proposed E-ART tariff to insert, "Incentive payments to participating customers are the responsibility of and at the discretion of Providers." PG&E also previously stated in the AL, "PG&E will conduct an analysis of each Provider's Portfolio once per month based on the active service agreements enrolled in PG&E's system in order to calculate Provider incentive payments, referred to as Capacity Payments."	Rates Capacity Payments	6

12	Identify the minimum CAISO PDR kW requirements for the program Providers.	PG&E has revised the proposed E-ART tariff to insert a new last paragraph, "There is no minimum CAISO PDR kW requirements for ART Providers. CAISO PDR resources must meet a 100kW minimum size requirement and PG&E, as the Scheduling Coordinator, will combine customers from multiple Providers to achieve the requirement."	Customer Eligibility	3
13	Clarify Providers' responsibility and timeline to provide notice of events to their customers	PG&E revised the proposed E-ART tariff as follows, "For Day-Ahead market-events, PG&E will notify the Providers after awards are received, but no later than 5:00 pm the day before dispatch or as soon as reasonably possible. For Day-Ahead test events, PG&E will notify the Providers by 5:00 p.m. For Day-Of emergency and near emergency events, PG&E will notify Providers as soon as possible, but no later than 1 hour after being informed of dispatch. Notification to customers and the timeline to notify customers is the responsibility of the Providers.	Availability, Triggers & Notification	4
14	Explain how PG&E will ensure program performance, given this is a resource adequacy (RA) eligible, voluntary program with no penalties.	<p>To ensure program performance, functionality within the DERMS will conduct forecasting and performance measurement. Performance measurement will inform forecasting with continuous learning from previous events (actual market awards, and test events) to ensure forecast accuracy.</p> <p>In addition, annual Load Impact Protocols (LIP) will be used to improve upon expected MW delivery from the ART program. Providers will be given feedback to improve upon the MW portfolio expectations.</p>	N/A	N/A

PG&E provides the updated E-ART tariff for consideration in redline and clean form as Attachments A and B, respectively. This submittal completely replaces the E-ART tariff submitted in AL 7193-E.

Conclusion

PG&E appreciates the Commission's recognition of "the importance of ART in PG&E's portfolio".⁷ In order to support the swift launch of the ART program and enable the availability of this new offering during what is expected to be a hotter than average⁸ 2024 summer season, PG&E respectfully requests expeditious resolution of this AL and AL 7193-E: (1) approving launch of the ART program, and (2) authorizing the submission of additional ALs, if necessary, to conform ART program operations and the new ART tariff to a Resolution.

Protests

To expedite the launch of the ART program and ensure its availability to customers this summer, PG&E is requesting a shortened protest period. Anyone wishing to protest this submittal may do so by letter sent electronically via E-mail, no later than June 17, 2024, which is 10 days after the date of this submittal. Protests must be submitted to:

CPUC Energy Division
ED Tariff Unit
E-mail: EDTariffUnit@cpuc.ca.gov

The protest shall also be electronically sent to PG&E via E-mail at the address shown below on the same date it is electronically delivered to the Commission:

Sidney Bob Dietz II
Director, Regulatory Relations
c/o Megan Lawson
E-mail: PGETariffs@pge.com

Any person (including individuals, groups, or organizations) may protest or respond to an advice letter (General Order 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 and 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

Pursuant to General Order (GO) 96-B, Rule 5.3, and OP 25 of D.23-12-005, this advice letter is submitted with a Tier 3 designation. PG&E requests that this Tier 3 advice submittal become effective upon Commission approval.

⁷ D.23-12-005, p. 66.

⁸ National Oceanic and Atmospheric Administration (NOAA) Climate Prediction Center Seasonal Temperature Outlook issued May 16, 2024.

Notice

In accordance with General Order 96-B, Section IV, a copy of this advice letter is being sent electronically to parties shown on the attached list and the parties on the service list for A.22-05-002. 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/

Sidney Bob Dietz II
Director, Regulatory Relations
CPUC Communications

Attachments:

Attachment A – Redlined E-ART Tariff (vs. Advice 7193-E)
Attachment B – Clean E-ART Tariff

cc: Service List A.22-05-002



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 (ID U39 E)

Utility type:

- ELC GAS WATER
 PLC HEAT

Contact Person: Kimberly Loo

Phone #: (279)789-6209

E-mail: PGETariffs@pge.com

E-mail Disposition Notice to: KELM@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) #: 7193-E-A

Tier Designation: 3

Subject of AL: Supplemental: PG&E Advice Letter Detailing the Automated Response Technology Program, in Compliance with Decision 23-12-005

Keywords (choose from CPUC listing): Compliance, Demand Response

AL Type: Monthly Quarterly Annual One-Time Other:

If AL submitted in compliance with a Commission order, indicate relevant Decision/Resolution #: D.23-12-005

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:

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:

No. of tariff sheets: 9

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: See Attachment B

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 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: Sidnev Bob Dietz II. c/o Megan Lawson
Title: Director, Regulatory Relations
Utility/Entity Name: Pacific Gas and Electric Company

Telephone (xxx) xxx-xxxx:
Facsimile (xxx) xxx-xxxx:
Email: PGETariffs@pge.com

Contact Name:
Title:
Utility/Entity Name:

Telephone (xxx) xxx-xxxx:
Facsimile (xxx) xxx-xxxx:
Email:

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

Clear Form

Attachment A

Redlined E-ART Tariff (vs. Advice 7193-E)



ELECTRIC SCHEDULE E-ART
AUTOMATED RESPONSE TECHNOLOGY PROGRAM

Sheet 1

(N)
(N)

APPLICABILITY: The Automated Response Technology (ART) program is a voluntary residential demand response program that offers third-party "Providers" incentives for reducing energy consumption when requested by PG&E through the dispatch of smart technologies, also known as distributed energy resources (DERs). When aggregated together, DERs have the potential to serve as a virtual power plant (VPP) and provide valuable grid services. The ART program integrated into the California Independent System Operators (CAISO) wholesale market as a Proxy Demand Resource (PDR) and PG&E will bid the program resources at its sole discretion. The PDR models the physical characteristics of a resource supplied to the CAISO and is the basis for bidding, awards, dispatch, outages, and settlements. ART PDRs must comply with the current CAISO Tariff requirements on market participation.

(N)

TERRITORY: This Schedule (Schedule E-ART or Schedule) is available throughout PG&E's electric service area.

SUBSCRIPTION LIMIT: PG&E reserves the right to limit the number of Providers and enrolled customers that participate in Schedule E-ART, consistent with Commission [guidelines authorization and funding](#).

PROVIDER: Customers with smart technologies can enroll under this Schedule through a PG&E-contracted Provider. A Provider is a PG&E-contracted entity which can be chosen by a customer to act on behalf of the customer with respect to all aspects of this Schedule including, but not limited to (1) enrollment and disenrollment; (2) event notifications; (3) incentive payments; and (4) scheduling updates which may impact the customer.

PROVIDER CONTRACT TERM: The minimum term of a contract between PG&E and Providers is for a twelve (12)-month period. Customers enrolled in the ART program by a Provider will be disenrolled from ART upon the conclusion of that Provider's contract term, if not renewed.

(N)

(Continued)

Advice 7193-E
Decision D.23-12-005

Issued by
Shilpa Ramaiya
Vice President

Submitted
Effective
Resolution

February 28, 2024



ELECTRIC SCHEDULE E-ART
AUTOMATED RESPONSE TECHNOLOGY PROGRAM

Sheet 2

(N)
(N)

PROVIDER'S PORTFOLIO:

Providers may use multiple types of smart technologies in their portfolios to reduce load when dispatched. ART Provider incentives are paid on a performance basis as measured at PG&E's meter level and aggregated to the Provider's portfolio based on actual events or test events.

(N)

Providers will integrate into PG&E's system via bi-directional Application Programming Interface (API) for the purpose of determining customer eligibility and for updates to the enrollment status. PG&E's system will provide confirmation of eligibility in a standard format via Application Programming Interface (API) and will provide updates to that eligibility should they change. PG&E will include the Sub-Load Aggregation Point (Sub-LAP) on a per customer basis. PG&E may provide a more granular level designation for particularly constrained distribution areas. Provider must ensure dispatch availability at these levels.

REQUIREMENTS FOR CUSTOMERS ON A TIME VARYING RATE:

If a customer is on a time-varying rate, the Provider must implement a daily load-shifting strategy during the hours with time-varying rates using the automated technology. The customer has the option to opt out ~~of~~ the daily load shifting strategy, which- cCurrently, this applies to TOU rates and in the future could apply to real time pricing (RTP). Regardless of daily load shifting, all customers will be included in DR events.

CUSTOMER ACCEPTANCE OF TERMS & CONDITIONS:

Customers will be required to accept the program terms and conditions at the time of enrollment. Customers must submit disenrollment requests with their Provider and the Provider will transmit the disenrollment to PG&E via API. A customer will be automatically disenrolled in PG&E's system when their service account is no longer active and that disenrollment will be transmitted to the Provider via API. In the event of a CAISO location registration dispute with another supply-side program, the earliest enrollment date will dictate which program retains the customer. Any disputes arising between Provider and a customer shall be resolved by the Provider and customer.

(N)

(Continued)

Advice 7193-E
Decision D.23-12-005

Issued by
Shilpa Ramaiya
Vice President

Submitted
Effective
Resolution

February 28, 2024



ELECTRIC SCHEDULE E-ART
AUTOMATED RESPONSE TECHNOLOGY PROGRAM

Sheet 3

(N)
(N)

CUSTOMER ELIGIBILITY:

Schedule E-ART is available to PG&E residential customers receiving bundled service or Community Choice Aggregation (CCA) service and being billed on a PG&E residential rate schedule. An eligible customer must continue to take service under the provisions of its otherwise applicable schedule (OAS). Providers participating in Schedule E-ART must comply with the terms of this Schedule and associated agreements. Customers cannot simultaneously be enrolled in another supply-side demand response pilot or program offered by PG&E, third-party DR provider (DRP), CCA, or an event-based load modifying program offered by PG&E.

(N)

Customer enrollment is limited to one Provider per eligible customer service agreement. Multiple Providers are not able to enroll the same customer service agreement.

PG&E must be able to register customers' service agreements who are participating under Schedule E-ART into the CAISO Demand Response Registration System (DRRS), which requires Load Serving Entity (LSE) approval. If PG&E is unable to register the customer's service agreement and/or the customer's LSE does not allow the customer's service agreement to be registered, then the customer will be ineligible to participate under Schedule E-ART.

In accordance with CAISO requirements, at least 90 calendar days of historic interval meter data using metering equipment (including telephone line, cellular, or radio control communication device) must be submitted to CAISO for each service agreement, prior to that service agreement participating in Schedule E-ART. The meter data must be Revenue Quality Meter Data (RQMD).

There is no minimum CAISO PDR kW requirements for ART Providers. CAISO PDR resources must meet a 100kW minimum size requirement and PG&E, as the Scheduling Coordinator, will combine customers from multiple Providers to achieve the requirement.

AVAILABILITY, TRIGGERS & NOTIFICATION:

Schedule E-ART is available every month of the year, 24 hours-a-day, seven days a week.

Triggers shall be Day-Ahead, based on the California Independent System Operator (CAISO) market award dispatch, or Day-Of for PG&E system emergencies or near-emergencies for distribution service. Schedule E-ART will be available for dispatch for the duration of CAISO Flex Alerts, Grid Warning, Alerts or Notices, or the Governor's Office has an emergency notice. Schedule-ART be available for the duration of an Alert, Warning, or Notice that is issued prior and up to the 10 a.m. day-ahead market bid deadline.

Total demand response event hours per service agreement can be up to six (6) hours in a day. There is no limit on the number of dispatches in a day or on consecutive days of dispatch.

(Continued)

Advice 7193-E
Decision D.23-12-005

Issued by
Shilpa Ramaiya
Vice President

Submitted
Effective
Resolution

February 28, 2024



ELECTRIC SCHEDULE E-ART
AUTOMATED RESPONSE TECHNOLOGY PROGRAM

Sheet 3

(N)
(N)

All operating months begin and end at the beginning and ending of its corresponding calendar month.

|
(N)

For Day-Ahead market events, PG&E will notify the Providers by 5:00 p.m. after awards are received, but no later than 5 p.m. the day before dispatch, or as soon as reasonably possible. For Day-Ahead test events, PG&E will notify the Providers by 5:00 p.m. For Day-Of emergency and near emergency events, PG&E will notify Providers as soon as possible, but no later than 1 hour after being informed of dispatch. Notification to customers and the timeline to notify customers is the responsibility of the Providers.

(Continued)

Advice 7193-E
Decision D.23-12-005

Issued by
Shilpa Ramaiya
Vice President

Submitted
Effective
Resolution

February 28, 2024



ELECTRIC SCHEDULE E-ART
AUTOMATED RESPONSE TECHNOLOGY PROGRAM

Sheet 4

(N)
(N)

CUSTOMER SPECIFIC ENERGY BASELINE:

To participate under Schedule E-ART, a customer must have ten calendar days of meter data prior to the first day of program enrollment to calculate a valid Customer Specific Energy Baseline (CSEB).

(N)

Each provider's portfolio will have its own CSEB based on the aggregated CSEBs of each customer within the resource. The CSEB on any given day during the program is the sum total of the individual baselines of each service agreement in the portfolio. The program will utilize a 5-in-10 baseline with an optional same-day adjustment. For events that occur on weekdays, each individual service agreement baseline is the average load for each corresponding hour over the five (5) out of ten (10) past similar weekdays prior to an event with the highest energy consumed over the event period. The load during each corresponding hour of the five days will be averaged to calculate a baseline for each hour. For events that occur on weekends, each individual service agreement baseline is the weighted average load for each corresponding hour over the three (3) out of five (5) past similar weekends prior to an event with the highest energy consumed over the event period, with weights of 50-, 30-, and 20-percent applied to the baseline days in order by most recent. Similar weekdays will include Monday through Friday and similar weekends will include Saturday, Sunday, and NERC holidays. Days prior to the event in which the customer was: 1) subject to an event; 2) subject to an outage; or 3) was interrupted will be excluded from the baseline.

The day-of adjustment is the ratio of a) the average load of the first three of the four hours prior to the start of the event to b) the average load of the corresponding hours from the service agreement baseline, as discussed above. The day-of adjustment will be limited to +/- 40% of each individual service agreement baseline in the group. The day-of adjustment is applied by multiplying each hourly baseline value by the day-of adjustment. The day-of adjustment will be applied by default per Customer unless the Provider elects to opt-out of this adjustment. If more than one event occurs on the same day, the day-of adjustment from the event with the earliest start time will be used for the individual service agreement's events that day requiring a day-of adjustment.

RATES:

The payments to Providers under this rate schedule will be determined from the following components:

- a. Capacity Prices
- b. Capacity Payments

Incentive payments to participating customers are the responsibility of and at the discretion of Providers.

(N)

(Continued)



ELECTRIC SCHEDULE E-ART
AUTOMATED RESPONSE TECHNOLOGY PROGRAM

Sheet 5

(N)
(N)

CAPACITY PRICES:

The following are Capacity Prices by month as \$/kW values:

(N)

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
\$2.60	\$2.12	\$1.57	\$2.79	\$7.45	\$12.27	\$12.15	\$27.66	\$28.83	\$13.55	\$2.84	\$6.18

CAPACITY PAYMENTS:

PG&E will conduct an analysis of each Provider's Portfolio once per month based on the active service agreements enrolled in PG&E's system in order to calculate Provider incentive payments, referred to as Capacity Payments. Capacity Payments will be based on event performance as measured with PG&E's meter data. In the absence of economic, emergency, or near emergency event performance, test event performance will be used.

The analysis will begin on the first business day of a new month and will include service agreements enrolled through the last day of the prior month. The analysis will conclude by the 15th of the calendar month. Capacity Payments will be issued by PG&E by the last business day the calendar month. For service agreements with incomplete meter data, PG&E will issue a second payment once meter data is available and settlement for those service agreements is calculated. The following are the steps associated with Capacity Payment Calculation:

- Service agreement meter data will be compared to a customer's CSEB to determine the reduction in delivered energy to an enrolled customer's PG&E meter and defined as the load impact.
- The load impact for each event hour that a customer participated in will be assessed and averaged across the entire month to determine the Measured Average Hourly Load Impact. In instances where a customer's Measured Average Hourly Load Impact increases, the value for that customer will be zero.
- To determine Capacity Payments per Provider, Measured Average Hourly Load Impact per customer will be aggregated for the Provider's portfolio.

Monthly Capacity Price (per kW) x Aggregate Measured Average Hourly Load Impact

(N)

(Continued)

Advice 7193-E
Decision D.23-12-005

Issued by
Shilpa Ramaiya
Vice President

Submitted
Effective
Resolution

February 28, 2024



ELECTRIC SCHEDULE E-ART
AUTOMATED RESPONSE TECHNOLOGY PROGRAM

Sheet 6

(N)
(N)

PROGRAM TESTING:

PG&E will have the option to call up to one test event per month for resources that do not receive a market award in the given month, including weekends. The test event will be called to demonstrate capacity for the purpose of calculating Capacity Payments. A test event will not exceed three hours in duration. A test event would occur from the 20th day to the last day of a calendar month if unfavorable weather and grid conditions are forecast.

(N)

CONFIDENTIALITY:

PG&E will consider interactions and strategies with Provider to be confidential information, when PG&E and or the provider determines that the information exchanged constitutes or include confidential information. PG&E shall protect this confidential information from public disclosure, and shall not disclose such confidential information to unauthorized third parties, except for PG&E's employees, agents, counsel, accountants, advisors, individual customers who authorize the release of their customer information pursuant to an approved process (such as Electric Rule 24), utility contractors, or Commission staff/contractors who have a need to know such information and have agreed to keep such information confidential and except as provided otherwise in this section, or by operation of state law or regulation, or federal law or regulation.

PG&E will provide the Commission with confidential Provider information under Commission procedures for identifying and claiming confidential treatment. Release of confidential Provider information to utility and Commission contractors will be subject to such parties' agreement to protect the information from unauthorized use or public disclosure on terms consistent with PG&E and the Commission's rules and state or federal law or regulation.

(N)

Cal P.U.C. Sheet No.	Title of Sheet	
58117-E	ELECTRIC SCHEDULE E-ART AUTOMATED RESPONSE TECHNOLOGY PROGRAM Sheet 1	
58118-E	ELECTRIC SCHEDULE E-ART AUTOMATED RESPONSE TECHNOLOGY PROGRAM Sheet 2	
58119-E	ELECTRIC SCHEDULE E-ART AUTOMATED RESPONSE TECHNOLOGY PROGRAM Sheet 3	
58120-E	ELECTRIC SCHEDULE E-ART AUTOMATED RESPONSE TECHNOLOGY PROGRAM Sheet 4	
58121-E	ELECTRIC SCHEDULE E-ART AUTOMATED RESPONSE TECHNOLOGY PROGRAM Sheet 5	
58122-E	ELECTRIC SCHEDULE E-ART AUTOMATED RESPONSE TECHNOLOGY PROGRAM Sheet 6	
58123-E	ELECTRIC SCHEDULE E-ART AUTOMATED RESPONSE TECHNOLOGY PROGRAM Sheet 7	
58124-E	ELECTRIC TABLE OF CONTENTS Sheet 1	58055-E
58125-E	ELECTRIC TABLE OF CONTENTS Sheet 7	58056-E



ELECTRIC SCHEDULE E-ART
AUTOMATED RESPONSE TECHNOLOGY PROGRAM

Sheet 1

(N)
(N)

APPLICABILITY: The Automated Response Technology (ART) program is a voluntary residential demand response program that offers third-party "Providers" incentives for reducing energy consumption when requested by PG&E through the dispatch of smart technologies, also known as distributed energy resources (DERs). When aggregated together, DERs have the potential to serve as a virtual power plant (VPP) and provide valuable grid services. The ART program integrated into the California Independent System Operators (CAISO) wholesale market as a Proxy Demand Resource (PDR) and PG&E will bid the program resources at its sole discretion. The PDR models the physical characteristics of a resource supplied to the CAISO and is the basis for bidding, awards, dispatch, outages, and settlements. ART PDRs must comply with the current CAISO Tariff requirements on market participation.

(N)

TERRITORY: This Schedule (Schedule E-ART or Schedule) is available throughout PG&E's electric service area.

SUBSCRIPTION LIMIT: PG&E reserves the right to limit the number of Providers and enrolled customers that participate in Schedule E-ART, consistent with Commission authorization and funding.

PROVIDER: Customers with smart technologies can enroll under this Schedule through a PG&E-contracted Provider. A Provider is a PG&E-contracted entity which can be chosen by a customer to act on behalf of the customer with respect to all aspects of this Schedule including, but not limited to (1) enrollment and disenrollment; (2) event notifications; (3) incentive payments; and (4) scheduling updates which may impact the customer.

PROVIDER CONTRACT TERM: The minimum term of a contract between PG&E and Providers is for a twelve (12)-month period. Customers enrolled in the ART program by a Provider will be disenrolled from ART upon the conclusion of that Provider's contract term, if not renewed.

(N)

(Continued)

Advice 7193-E-A
Decision D.23-12-005

Issued by
Shilpa Ramaiya
Vice President

Submitted
Effective
Resolution

June 7, 2024



ELECTRIC SCHEDULE E-ART
AUTOMATED RESPONSE TECHNOLOGY PROGRAM

Sheet 2

(N)
(N)

PROVIDER'S PORTFOLIO:

Providers may use multiple types of smart technologies in their portfolios to reduce load when dispatched. ART Provider incentives are paid on a performance basis as measured at PG&E's meter level and aggregated to the Provider's portfolio based on actual events or test events.

(N)

Providers will integrate into PG&E's system via bi-directional Application Programming Interface (API) for the purpose of determining customer eligibility and for updates to the enrollment status. PG&E's system will provide confirmation of eligibility in a standard format via Application Programming Interface (API) and will provide updates to that eligibility should they change. PG&E will include the Sub-Load Aggregation Point (Sub-LAP) on a per customer basis. PG&E may provide a more granular level designation for particularly constrained distribution areas. Provider must ensure dispatch availability at these levels.

REQUIREMENTS FOR CUSTOMERS ON A TIME VARYING RATE:

If a customer is on a time-varying rate, the Provider must implement a daily load-shifting strategy during the hours with time-varying rates using the automated technology. The customer has the option to opt out of the daily load shifting strategy, which currently applies to TOU rates and in the future could apply to real time pricing (RTP). Regardless of daily load shifting, all customers will be included in DR events.

CUSTOMER ACCEPTANCE OF TERMS & CONDITIONS:

Customers will be required to accept the program terms and conditions at the time of enrollment. Customers must submit disenrollment requests with their Provider and the Provider will transmit the disenrollment to PG&E via API. A customer will be automatically disenrolled in PG&E's system when their service account is no longer active and that disenrollment will be transmitted to the Provider via API. In the event of a CAISO location registration dispute with another supply-side program, the earliest enrollment date will dictate which program retains the customer. Any disputes arising between Provider and a customer shall be resolved by the Provider and customer.

(N)

(Continued)

Advice 7193-E-A
Decision D.23-12-005

Issued by
Shilpa Ramaiya
Vice President

Submitted June 7, 2024
Effective _____
Resolution _____



ELECTRIC SCHEDULE E-ART
AUTOMATED RESPONSE TECHNOLOGY PROGRAM

Sheet 3

(N)
(N)

CUSTOMER ELIGIBILITY:

Schedule E-ART is available to PG&E residential customers receiving bundled service or Community Choice Aggregation (CCA) service and being billed on a PG&E residential rate schedule. An eligible customer must continue to take service under the provisions of its otherwise applicable schedule (OAS). Providers participating in Schedule E-ART must comply with the terms of this Schedule and associated agreements. Customers cannot simultaneously be enrolled in another supply-side demand response pilot or program offered by PG&E, third-party DR provider (DRP), CCA, or an event-based load modifying program offered by PG&E.

Customer enrollment is limited to one Provider per eligible customer service agreement. Multiple Providers are not able to enroll the same customer service agreement.

PG&E must be able to register customers' service agreements who are participating under Schedule E-ART into the CAISO Demand Response Registration System (DRRS), which requires Load Serving Entity (LSE) approval. If PG&E is unable to register the customer's service agreement and/or the customer's LSE does not allow the customer's service agreement to be registered, then the customer will be ineligible to participate under Schedule E-ART.

In accordance with CAISO requirements, at least 90 calendar days of historic interval meter data using metering equipment (including telephone line, cellular, or radio control communication device) must be submitted to CAISO for each service agreement, prior to that service agreement participating in Schedule E-ART. The meter data must be Revenue Quality Meter Data (RQMD).

There is no minimum CAISO PDR kW requirements for ART Providers. CAISO PDR resources must meet a 100kW minimum size requirement and PG&E, as the Scheduling Coordinator, will combine customers from multiple Providers to achieve the requirement.

(N)

(N)

(Continued)

Advice 7193-E-A
Decision D.23-12-005

Issued by
Shilpa Ramaiya
Vice President

Submitted June 7, 2024
Effective _____
Resolution _____



ELECTRIC SCHEDULE E-ART
AUTOMATED RESPONSE TECHNOLOGY PROGRAM

Sheet 4

(N)
(N)

**AVAILABILITY,
TRIGGERS &
NOTIFICATION:**

Schedule E-ART is available every month of the year, 24 hours-a-day, seven days a week.

(N)

Triggers shall be Day-Ahead, based on the California Independent System Operator (CAISO) market award dispatch, or Day-Of for PG&E system emergencies or near-emergencies for distribution service. Schedule E-ART will be available for dispatch for the duration of CAISO Flex Alerts, Grid Warning, Alerts or Notices, or the Governor's Office has an emergency notice. Schedule-ART be available for the duration of an Alert, Warning, or Notice that is issued prior and up to the 10 a.m. day-ahead market bid deadline.

Total demand response event hours per service agreement can be up to six (6) hours in a day. There is no limit on the number of dispatches in a day or on consecutive days of dispatch.

All operating months begin and end at the beginning and ending of its corresponding calendar month.

For Day-Ahead market events, PG&E will notify the Providers after awards are received, but no later than 5 p.m. the day before dispatch, or as soon as reasonably possible. For Day-Ahead test events, PG&E will notify the Providers by 5:00 p.m. For Day-Of emergency and near emergency events, PG&E will notify Providers as soon as possible, but no later than 1 hour after being informed of dispatch. Notification to customers and the timeline to notify customers is the responsibility of the Providers.

(N)

(Continued)

Advice 7193-E-A
Decision D.23-12-005

Issued by
Shilpa Ramaiya
Vice President

Submitted June 7, 2024
Effective _____
Resolution _____



ELECTRIC SCHEDULE E-ART
AUTOMATED RESPONSE TECHNOLOGY PROGRAM

Sheet 5

(N)
(N)

**CUSTOMER
SPECIFIC
ENERGY
BASELINE:**

To participate under Schedule E-ART, a customer must have ten calendar days of meter data prior to the first day of program enrollment to calculate a valid Customer Specific Energy Baseline (CSEB).

(N)

Each provider's portfolio will have its own CSEB based on the aggregated CSEBs of each customer within the resource. The CSEB on any given day during the program is the sum total of the individual baselines of each service agreement in the portfolio. The program will utilize a 5-in-10 baseline with an optional same-day adjustment. For events that occur on weekdays, each individual service agreement baseline is the average load for each corresponding hour over the five (5) out of ten (10) past similar weekdays prior to an event with the highest energy consumed over the event period. The load during each corresponding hour of the five days will be averaged to calculate a baseline for each hour. For events that occur on weekends, each individual service agreement baseline is the weighted average load for each corresponding hour over the three (3) out of five (5) past similar weekends prior to an event with the highest energy consumed over the event period, with weights of 50-, 30-, and 20-percent applied to the baseline days in order by most recent. Similar weekdays will include Monday through Friday and similar weekends will include Saturday, Sunday, and NERC holidays. Days prior to the event in which the customer was: 1) subject to an event; 2) subject to an outage; or 3) was interrupted will be excluded from the baseline.

The day-of adjustment is the ratio of a) the average load of the first three of the four hours prior to the start of the event to b) the average load of the corresponding hours from the service agreement baseline, as discussed above. The day-of adjustment will be limited to +/- 40% of each individual service agreement baseline in the group. The day-of adjustment is applied by multiplying each hourly baseline value by the day-of adjustment. The day-of adjustment will be applied by default per Customer unless the Provider elects to opt-out of this adjustment. If more than one event occurs on the same day, the day-of adjustment from the event with the earliest start time will be used for the individual service agreement's events that day requiring a day-of adjustment.

(N)

(Continued)

Advice 7193-E-A
Decision D.23-12-005

Issued by
Shilpa Ramaiya
Vice President

Submitted June 7, 2024
Effective _____
Resolution _____



ELECTRIC SCHEDULE E-ART
AUTOMATED RESPONSE TECHNOLOGY PROGRAM

Sheet 6

(N)
(N)

RATES: The payments to Providers under this rate schedule will be determined from the following components:

(N)

- a. Capacity Prices
- b. Capacity Payments

Incentive payments to participating customers are the responsibility of and at the discretion of Providers.

CAPACITY PRICES: The following are Capacity Prices by month as \$/kW values:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
\$2.60	\$2.12	\$1.57	\$2.79	\$7.45	\$12.27	\$12.15	\$27.66	\$28.83	\$13.55	\$2.84	\$6.18

CAPACITY PAYMENTS: PG&E will conduct an analysis of each Provider's Portfolio once per month based on the active service agreements enrolled in PG&E's system in order to calculate Provider incentive payments, referred to as Capacity Payments. Capacity Payments will be based on event performance as measured with PG&E's meter data. In the absence of economic, emergency, or near emergency event performance, test event performance will be used.

The analysis will begin on the first business day of a new month and will include service agreements enrolled through the last day of the prior month. The analysis will conclude by the 15th of the calendar month. Capacity Payments will be issued by PG&E by the last business day the calendar month. For service agreements with incomplete meter data, PG&E will issue a second payment once meter data is available and settlement for those service agreements is calculated.

- Service agreement meter data will be compared to a customer's CSEB to determine the reduction in delivered energy to an enrolled customer's PG&E meter and defined as the load impact.
- The load impact for each event hour that a customer participated in will be assessed and averaged across the entire month to determine the Measured Average Hourly Load Impact. In instances where a customer's Measured Average Hourly Load Impact increases, the value for that customer will be zero.
- To determine Capacity Payments per Provider, Measured Average Hourly Load Impact per customer will be aggregated for the Provider's portfolio.

Monthly Capacity Price (per kW) x Aggregate Measured Average Hourly Load Impact

(N)

(Continued)



ELECTRIC SCHEDULE E-ART
AUTOMATED RESPONSE TECHNOLOGY PROGRAM

Sheet 7

(N)
(N)

PROGRAM TESTING:

PG&E will have the option to call up to one test event per month for resources that do not receive a market award in the given month, including weekends. The test event will be called to demonstrate capacity for the purpose of calculating Capacity Payments. A test event will not exceed three hours in duration. A test event would occur from the 20th day to the last day of a calendar month if unfavorable weather and grid conditions are forecast.

(N)

CONFIDENTIALITY:

PG&E will consider interactions and strategies with Provider to be confidential information, when PG&E and or the provider determines that the information exchanged constitutes or include confidential information. PG&E shall protect this confidential information from public disclosure, and shall not disclose such confidential information to unauthorized third parties, except for PG&E's employees, agents, counsel, accountants, advisors, individual customers who authorize the release of their customer information pursuant to an approved process (such as Electric Rule 24), utility contractors, or Commission staff/contractors who have a need to know such information and have agreed to keep such information confidential and except as provided otherwise in this section, or by operation of state law or regulation, or federal law or regulation.

PG&E will provide the Commission with confidential Provider information under Commission procedures for identifying and claiming confidential treatment. Release of confidential Provider information to utility and Commission contractors will be subject to such parties' agreement to protect the information from unauthorized use or public disclosure on terms consistent with PG&E and the Commission's rules and state or federal law or regulation.

(N)



ELECTRIC TABLE OF CONTENTS

Sheet 1

TABLE OF CONTENTS

SCHEDULE	TITLE OF SHEET	CAL P.U.C. SHEET NO.	
Title Page.....		58124-E	(T)
Rate Schedules.....	56596,57691,57692,56599, 57754, 58125 ,52769,49654,52770-E		(T)
Preliminary Statements.....	52771,48064,52561,41723,57693,54450,57758-E		
Preliminary Statements, Rules.....		57264-E	
Rules		55898,57982-E	
Maps, Contracts and Deviations.....		57773-E	
Sample Forms.....	57694, 57770,57695,57696, 49303,49304,57697,57698,54733,58057,49309,56114,49311-E		

(Continued)

Advice 7193-E-A
Decision D.23-12-005

Issued by
Shilpa Ramaiya
Vice President
Regulatory Proceedings and Rates

Submitted June 7, 2024
Effective _____
Resolution _____



ELECTRIC TABLE OF CONTENTS

Sheet 7

SCHEDULE	TITLE OF SHEET	CAL P.U.C. SHEET NO.
Rate Schedules Other		
NEM2V	Virtual Net Energy Metering Service	57291,57292,47181,37828,57293,37890, 37831,37832,42046,42047,37835,37836,48535,37838, 42048,37840,57294,57295,57296,57297,57298,57299,57300,57301, 57302,57303,57304,57305,57306,57307-E
NEMVMASH	Net Energy Metering – Virtual Net Energy Metering	47185,33922*,47186,44525, 33924,33925,31630,36567,31632,31633,36568, 31635,44526,31637,47187,31639,42066,47188,44528-E
NEM2VMSH	Virtual Net Energy Metering For Multifamily Affordable Housing (MASH/NSHP) With Solar Generator(s)	44518,42595,44519,37850,46197,42598,38176,38177,42599, 42600,38178,37858,37859,37860,44520,38179,37863,42053,44521,44522-E
NEM2VSOM	Virtual Net Energy Metering Solar on Multifamily Affordable Housing (SOMAH) Properties	42116,42117,42118,42119,42120,42668,47183,42123,42124, 42125,42126,42127,42128,46740,42130,42131,42132,42133-E
E-ERA RES-BCT	Energy Rate Adjustments..... Schedule for Local Government Renewable Energy Self-Generation Bill Credit Transfer.....	57550,44102,44103,44104-E 47189,37783,37784,37785,37786, 37787,37788,37789,37790,37791,52982-E
E-OBF	On-Bill Financing Balance Account (OBFB)	58052, 58053, 58054-E
E-OBR	On-Bill Repayment (OBR) Pilots	54783, 54784, 54785, 54786, 54787, 54788, 54789-E
E-SOP	Residential Electric SmartMeter™ Opt-Out Program	35105,57556-E
PEVSP	Plug-In Electric Vehicle Submetering Pilot – Phase 1	40158,35261,34249,40159,35263-E
PEVSP 2	Plug-In Electric Vehicle Submetering Pilot – Phase 2	37688,37689,37690,37691 37692,37693,37694,37695,37696,37697,37698-E
E-CMET	Community Microgrid Enablement Tariff	54454,54455,54456,54457,54458,54459,54460 49639,54461,54462,54463,54464,54465,54466-E
E-BTMM NBT	Behind-the-Meter Microgrids	49666,49667,49668,49669-E
	Net Billing Tariff Service	55791,55439,55440,55792,55442,55443,55444,55445,55446, 56815,55794,55449,55450,55451,55452,55453,55454,55455,55456,55457,55795, 55459,55460,55461,55796,55463,55464,55797,55798,55467,55468,55469,55470, 55471,55472,55473,57699,57700,57701,55477,57702,57703-E
E-ART	Automated Response Technology Program.....	58117,58118,58119,58120,58121, (N) 58122,58123-E (N)
Rate Schedules Agricultural		
AG	Time-of-Use Agricultural Power	48519,54822,48913,57456,57457,57458, 48917,48918,52959,53335,57459,52962, 52963,52964,52965,52966-E
AG-1	Agricultural Power	48927,48928,48929,48930,57460,57461, 57462,53340,53341,57463,53343-E
AG-R	Split-Week Time-of-Use Agricultural Power	48971,48972,48973,52609, 52610,57477,57478,57479,53362,53363,53364,53365,57480,53367-E

(Continued)

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

AT&T	East Bay Community Energy	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	Engineers and Scientists of California	Public Advocates Office
Atlas ReFuel BART		Redwood Coast Energy Authority
	GenOn Energy, Inc.	Regulatory & Cogeneration Service, Inc.
BART	Green Power Institute	Resource Innovations
Buchalter		Rockpoint Gas Storage
Barkovich & Yap, Inc.	Hanna & Morton LLP	SCD Energy Solutions
Braun Blaising Smith Wynne, P.C.		San Diego Gas & Electric Company
	ICF consulting	SPURR
California Community Choice Association	iCommLaw	San Francisco Water Power and Sewer
California Cotton Ginners & Growers Association	International Power Technology	Sempra Utilities
California Energy Commission	Intertie	Sierra Telephone Company, Inc.
California Hub for Energy Efficiency	Intestate Gas Services, Inc.	Southern California Edison Company
California Alternative Energy and Advanced Transportation Financing Authority		Southern California Gas Company
California Public Utilities Commission	Kelly Group	Spark Energy
Calpine	Ken Bohn Consulting	Sun Light & Power
Cameron-Daniel, P.C.	Keyes & Fox LLP	Sunshine Design
Casner, Steve		Stoel Rives LLP
Center for Biological Diversity	Leviton Manufacturing Co., Inc.	Tecogen, Inc.
Chevron Pipeline and Power City of Palo Alto	Los Angeles County Integrated	TerraVerde Renewable Partners
City of San Jose	Waste Management Task Force	Tiger Natural Gas, Inc.
Clean Power Research		TransCanada
Coast Economic Consulting	MRW & Associates	Utility Cost Management
Commercial Energy	Manatt Phelps Phillips	Utility Power Solutions
Crossborder Energy	Marin Energy Authority	
Crown Road Energy, LLC	McClintock IP	
Communities Association (WMA)	McKenzie & Associates	Water and Energy Consulting
	Modesto Irrigation District	Wellhead Electric Company
Davis Wright Tremaine LLP		Western Manufactured Housing Communities Association (WMA)
	NOSSAMAN LLP	
Day Carter Murphy	NRG Solar	Yep Energy
Dept of General Services		
Douglass & Liddell	OnGrid Solar	
Downey Brand LLP		
Dish Wireless L.L.C.		