

PUBLIC UTILITIES COMMISSION

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November 4, 2022

Advice Letter 6692-E-A

Sidney Bob Dietz II
Director, Regulatory Relations
Pacific Gas and Electric Company
77 Beale Street
San Francisco, California 94177
E-mail: PGETariffs@pge.com

SUBJECT: Southern California Edison Company, Pacific Gas & Electric Company and San Diego Gas & Electric Company's Auto Demand Response Control Incentive Guidelines and Adopted Policies Submitted, Pursuant To Decision 18-11-029

Dear Mr. Dietz:

Pacific Gas and Electric Company Advice Letter 6692-E-A is effective as of October 1, 2022.

Sincerely,

Handwritten signature of Leuwam Tesfai in black ink.

Leuwam Tesfai
Deputy Executive Director for Energy and Climate Policy/
Director, Energy Division
California Public Utilities Commission



Sidney Bob Dietz II
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October 13, 2022

Advice 6692-E-A

(Pacific Gas and Electric Company ID U 39 E)

Advice 4859-E-A

(Southern California Edison Company ID U 338 E)

Advice 4066-E-A

(San Diego Gas and Electric Company ID U 902 E)

Public Utilities Commission of the State of California

Subject: Supplemental: Southern California Edison Company, Pacific Gas & Electric Company and San Diego Gas & Electric Company's Auto Demand Response Control Incentive Guidelines and Adopted Policies Submitted, Pursuant to Decision 18-11-029

Purpose

This supplemental advice letter is submitted to remove text on Page 5 of Appendix A and replaces the advice letter in its entirety. Pursuant to Ordering Paragraph (OP) 8 of the California Public Utilities Commission (CPUC or Commission) Decision (D.) 18-11-029, Southern California Edison Company (SCE), Pacific Gas and Electric Company (PG&E) and San Diego Gas & Electric Company (SDG&E) (collectively, the IOUs) respectfully submit their joint updates to the Auto Demand Control Incentive Guidelines and Adopted Policies (Guidelines), which are provided as Appendix A.

Background

On January 17, 2017, each IOU filed an application with the Commission for approval of their demand response (DR) portfolio and budgets for the program period 2018-2022. On December 21, 2017, the CPUC issued D.17-12-003 adopting PG&E's multi-party settlement and approving the IOUs' DR budgets to conduct DR programs, pilots and associated activities for program years 2018 through 2022. D.17-12-003 also determined the proceeding (A.17-01-012 et al.) should remain open to consider unresolved issues associated with Automated Demand Response (ADR).

Pursuant to D.17-12-003, OP 29, on February 20, 2018, the IOUs submitted revised ADR guidelines, "The Auto Demand Response Guidelines and Adopted Policies (Guidelines)". On May 8, 2018, the assigned Administrative Law Judge (ALJ) facilitated a workshop to discuss the updates to the Guidelines. During the workshop, stakeholders shared operational concerns of offering ADR control incentives to Demand Response Auction Mechanism (DRAM) participants and fundamental concerns of offering ADR incentives for battery storage controls. Stakeholders also discussed ADR program incentive cost effectiveness.

On June 15, 2018, the assigned ALJ issued a ruling directing parties to respond to a series of questions on several issues, including the Guidelines, ADR controls definition, Reliability Demand Response Resources (RDRR), cost causation, frequency of incentives, incremental load reduction, cost effectiveness and ADR battery storage control policies. Parties filed responses to the ALJ's questions on July 20, 2018 and reply comments on August 3, 2018.

On December 10, 2018, the CPUC issued D.18-11-029 which determined the proceeding (A.17-01-012 et al.) should remain open to consider a number of unresolved issues, including ADR battery storage control policies, and established an annual process to address emerging issues for the ADR Program.

CPUC D.18-11-029, OP 9, directed the IOUs to develop proposals to address the following ADR issues (issues e. and f. were limited to PG&E only):

- a. Review of the approach to calculate control incentives;
- b. Implementation of the policy that Reliability Demand Response Resources are not eligible to receive auto demand response control incentives;
- c. Determination of the frequency of control incentives;
- d. Calculation of incentive cost-effectiveness;
- e. Development of a list of residential Auto Demand Response enabled end-use devices to be considered for an Auto Demand Response Incentive; and
- f. Development of criteria to determine the order for PG&E to evaluate load impacts attributable to the residential ADR devices.

Although issues b. through f. were resolved with the Commission's approval of Advice Letters 3427-E (SDG&E), 5629-E (PG&E), and 4096-E (SCE), issue a. remained outstanding pending further research. In late 2019, the IOUs led a research project that was conducted by a third-party to review the approach to calculate control incentives, with the objective of identifying a new approach for non-residential customers. Although the research project report contained a dense repository of data and information, along with recommendations, the IOUs did not agree with the recommendations. Additionally, stakeholders did not submit feedback on the report or recommendations.

The IOUs are leveraging the information in the research project report to continue to review the approach and potential new approaches to calculating incentive structures through frequent work sessions. The IOUs held a public virtual workshop on March 15,

2021 and presented four ideas currently under consideration. Approximately 50 individuals logged in to the workshop and the IOUs shared the chat and attendees list with CPUC staff. As explained herein, IOUs consider this item (a.) as completed because extensive review has occurred and proposals for changes, if any, were included in the IOUs' 2023-27 applications.

In this supplemental advice letter, text on Page 5 that reads: "The IOUs continue to refine and expand ADR incentives to provide incentives to other residential ADR controls" has been removed.

2022 GUIDELINES UPDATE

In summary, the IOUs have minor edits to the draft Guidelines.

The advice letter would not increase any current rate or charge, cause the withdrawal of service, or conflict with any rate schedule or rule.

Protests

Pursuant to CPUC General Order 96-B, Section 7.5.1, the Utilities hereby request the protest period be waived.

Effective Date

The Utilities believe that this submittal is subject to Energy Division disposition and should be classified as Tier 2 (effective after staff approval) pursuant to General Order (GO) 96-B. The Utilities respectfully request that this Tier 2 advice submittal become effective concurrent with original Advice Letter 6692-E, et al., which is October 1, 2022.

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.17-01-012. Address changes to the General Order 96-B service list should be directed to PG&E at email address PGETariffs@pge.com. For changes to any other service list, please contact the Commission's Process Office at (415) 703-2021 or at Process_Office@cpuc.ca.gov. Send all electronic approvals to PGETariffs@pge.com. Advice letter submittals can also be accessed electronically at: <http://www.pge.com/tariffs/>.

/S/

Sidney Bob Dietz II
Director, Regulatory Relations

Attachments:

Appendix A: 2022 – The Auto Demand Response Control Incentives Guidelines and
Adopted Policies

cc: Service List A.17-01-012



ADVICE LETTER SUMMARY

ENERGY UTILITY



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

Company name/CPUC Utility No.: Pacific Gas and Electric Company (ID U39 E)

Utility type:

- ELC GAS WATER
 PLC HEAT

Contact Person: Kimberly Loo

Phone #: (415)973-4587

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) #: 6692-E-A, et al.

Tier Designation: 2

Subject of AL: Supplemental: Southern California Edison Company, Pacific Gas & Electric Company and San Diego Gas & Electric Company's Auto Demand Response Control Incentive Guidelines and Adopted Policies Submitted, Pursuant To Decision 18-11-029

Keywords (choose from CPUC listing): Compliance

AL Type: Monthly Quarterly Annual One-Time Other:

If AL submitted in compliance with a Commission order, indicate relevant Decision/Resolution #: D.18-11-029

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: 10/1/22

No. of tariff sheets: 0

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

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

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

Tariff schedules affected: N/A

Service affected and changes proposed¹: N/A

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

¹Discuss in AL if more space is needed.

Protests and 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

Appendix A
2022 – The Auto Demand Response Control Incentives Guidelines and
Adopted Policies

Joint Investor-Owned Utilities (IOU)
Auto Demand Response
Control Incentives Guidelines
and Adopted Policies
(Guidelines)

August 15, 2022



Prepared By



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Deemed Incentives

APPENDIX D – Allocation of Auto-DR Costs for Cost Effectiveness

APPENDIX E – Determination of whether or not the incremental load reduction covers
the incentive costs

Abstract

The Automated Demand Response (ADR) technology incentives offset ADR Control costs incurred by customers who wish to enroll in demand response (DR) programs utilizing software and systems to effectuate load drop with no manual intervention. The ADR Control automates participation in DR events to ensure customers provide reliable load shed during DR program events. Although non-residential customers have been the primary customer class to be eligible for these incentives, the three electric investor-owned utilities, Southern California Edison (SCE), Pacific Gas & Electric Company (PG&E), and San Diego Gas & Electric (SDG&E) (collectively, the IOUs), have also provided ADR technology incentives to mass market customers, including residential and small-to-medium business (SMB) customers, to increase customer adoption of ADR Controls that can automate and provide reliable DR benefits.

The guidelines in this document provide the general program parameters for the IOUs' ADR control incentive offerings as approved by California Public Utilities Commission (CPUC) Decision (D.) 17-12-003 and D.18-11-029. The resolutions of the 2019 ADR technical issues listed in Ordering Paragraph (OP) 9 of D.18-11-029 are included as well.

Abbreviations

AB 793	Assembly Bill 793
Auto-DR or ADR	Automated Demand Response Technology Incentive Program
BIP	Base Interruptible Program
CBP	Capacity Bidding Program
CCA	Community Choice Aggregation
CNCC	Competitive Neutrality Cost Causation
CPP	Critical Peak Pricing Program
CPUC	California Public Utilities Commission
DA	Direct Access
DR	Demand Response
DRAM	Demand Response Auction Mechanism Pilot
DRAS	Demand Response Automation Server
DRP	Demand Response Provider
EMS	Energy Management System
IOU or IOUs	Investor-Owned Utility or Investor-Owned Utilities
kW	Kilowatt
M&V	Measurement & Valuation
MW	Megawatt
OpenADR	Open Automated Demand Response
PDP	Peak Day Pricing Program
PG&E	Pacific Gas and Electric Company
RTP	Real Time Pricing Program
SCE	Southern California Edison Company
SDG&E	San Diego Gas and Electric Company
SEP	Smart Energy Program
SMB	Small and Medium Business
SSP	PG&E Supply Side DR Pilot
TA&TI	Technical Assistance and Technology Incentives Program
TD	Technology Deployment

Definitions

ADR Control:

The ability to receive an ADR signal to enable the customer to participate in a DR event without any manual customer intervention.*

**The IOUs note that many controls either allow or require the customer to acknowledge the signal before it begins equipment shutdown and that customers have override authority when a signal is received.*

Open ADR:

An open and standardized software protocol for electricity providers and system operators to communicate DR signals with each other and with their customers using a common language over any existing IP-based communications network, such as the Internet.

Dispatch or Dispatchable or DR Event:

The act of reducing existing load at the Customer's facility(ies), in response to a signal or dispatch instruction from an IOU's DRAS or DRP's automated dispatch system, for all or a portion of the Customer's electrical consumption during the DR event.

Qualifying DR Program:

A DR program, approved by the CPUC, in which program participants are eligible to receive ADR incentives that automate customer participation in program events.

Background on the ADR Program

In late 2006, the Commission modified the IOUs' 2006-2008 DR portfolios by adopting programs for 2007 and 2008 that encouraged ADR for commercial, industrial, and agricultural customers.¹ The IOUs have administered the statewide ADR Technology Incentive Program (ADR Program) since that time.

The ADR Program primarily provides incentives to non-residential customers that purchase and install ADR Controls at the customers' facility or site to automate their participation and load curtailment in a Qualifying DR program. Non-residential customers can pre-program their DR participation levels, referred to as "shed strategies," through an ADR-enabled energy management system or technology, which allows the facility or building to automatically participate in a DR event. ADR Controls provide customers with increased flexibility (i.e., customizable load shed strategies) and ease-of-use without the need for manual response or intervention.

Reimbursement through the original ADR Program is available for the purchase and installation of ADR Controls to all non-residential customers. Non-residential customers must also have an interval meter, enroll and participate in at least one Qualifying DR Program, demonstrate automated curtailment, and demonstrate receipt of an ADR signal from the IOU's DRAS or DRP's automated dispatch system.

In D. [16-06-029](#), the Commission directed the IOUs to adopt common program rules and incentives levels in an effort to achieve greater consistency among the IOUs' ADR Programs. The Commission directed each IOU to modify its ADR Program for large non-residential customers and offer a 2-part (60/40) incentive, up to \$200 per kW of verified Dispatchable load reduction, or 75 percent (75%) of total project costs, whichever amount is lower. The first incentive payment is paid at 60 percent (60%) of the total eligible incentives after installation, M&V load shed test, and enrollment in a Qualifying DR Program. The customer is eligible for part or all of the remaining incentive payment, up to 40 percent (40%), 12-months after the first incentive payment is issued. The second incentive is based on the customer's average DR performance during the 12-month period or a full DR season, whichever is shorter.

PG&E and SCE also offer a deemed incentive to some segments of SMB customers of their ADR Programs referred to as Auto-DR FastTrack and Auto-DR Express, respectively. These programs streamline the ADR application process and provide incentives for the installation of ADR Controls specific to lighting and HVAC controls. By offering a pre-determined, validated estimate of peak demand savings for lighting

¹ Administrative Law Judge's Ruling Providing Guidance on Content and Format of the 2009-2011 Demand Response Activity Applications issued on February 27, 2008 in CPUC Rulemaking (R.) 07-01-041.

and HVAC controls, these customers may be ADR-enabled more efficiently and cost-effectively than through a site-specific calculated measurement and verification process.

In recent years,² the IOUs have been providing incentives for residential technologies, such as ADR-enabled smart thermostats. SCE began offering incentives for residential thermostats in response to reliability issues (such as those that arose in relation to events at Aliso Canyon) and in response to legislation (such as AB 793). In D.17-12-003, SCE was authorized to continue offering the \$75 Smart Energy Program thermostat rebate in 2018 – 2022. SDG&E launched a residential thermostat program in 2014, which the CPUC classified as an ADR program beginning in 2018.

Purpose

The purpose of these Guidelines is to document eligibility rules and requirements, and Commission policy, for the IOUs' ADR Program (i.e., address program eligibility for ADR incentives offered to residential and non-residential customers), in compliance with OP 29 of D.17-12-003.

The appendices contained in these Guidelines summarize the IOUs' ADR proposals, and program rules approved in previous CPUC decisions, most recently, D.18-11-029.

- Appendix A – Program Rules and Eligibility Requirements for Residential ADR Incentives
- Appendix B – Program Rules and Eligibility Requirements for Non-Residential ADR Calculated Incentives Program
- Appendix C – Program Rules and Eligibility Requirements for Non-Residential ADR Deemed Incentives (i.e., FastTrack or Express ADR Program)
- Appendix D – Allocation of ADR Costs for Cost Effectiveness
- Appendix E – Determination of whether or not the incremental load reduction covers the incentive costs

Guidelines and Policies

Guidelines and policies affect the implementation and administration of the Statewide ADR Program. Guidelines and policies were the foundation upon which the original components of the ADR Program were established and serve as basic criteria for other ADR incentive programs, such as a residential ADR incentive program.

² PG&E started to offer residential ADR incentive to Smart Thermostat in September 2017.

Current Guidelines and Policies

ADR Guidelines and Policies Adopted in D.09-08-027

- Authorized the IOUs to require a Qualifying DR Program enrollment and participation requirement to receive incentives.
- Required reporting of incentive commitments into IOUs' DR CPUC Monthly Report.
- Established consistent incentive amounts for the IOUs TA&TI (Incentives for DR audits and non-ADR technologies)

ADR Guidelines and Policies Adopted in D.12-04-045

- Defined Auto Demand Response as automated technologies that allow a customer's equipment or facilities to reduce demand automatically in response to a demand response event or price signal, without the customer taking individual action.
- Directed IOUs to fund ADR technologies that interoperate using generally accepted industry open standards or protocols (i.e., OpenADR).
- Implemented the 60-40 split incentive for all non-residential customers to improve cost-effectiveness and motivate customers to demonstrate load shed performance at the level the equipment was incentivized and designed to achieve.
- Authorized AMP as a Qualifying DR Program for PG&E's ADR incentives.

ADR Guidelines and Policies Adopted in D.14-05-025

- Directed IOUs to create and implement a statewide ADR program.
- Streamlined the ADR application process.
- Provided technical coordinator assistance to ADR customers.

ADR Guidelines and Policies Adopted in D.16-06-029

- Modified eligible incentive amounts for IOUs Customized ADR Programs up to \$200 per kW or 75% of total project costs, whichever is less.
- Re-affirmed 60-40 split incentive for Customized ADR incentives.
- Clarified that all reliability programs, including BIP, are ineligible for ADR control incentives.

ADR Guidelines and Policies Adopted in D.17-12-003

- Provided Auto Demand Response control incentives to participants of any supply side demand response programs/activities not required to be analyzed for cost-effectiveness. This includes pilots but does not include non-event-based rates.

- Directed the IOUs to report their ADR costs associated with all programs that qualify for ADR incentives, as well as their cost-effectiveness ratios with and without the ADR incentives, and to indicate the total ADR incentives excluded from portfolio cost-effectiveness analysis and the costs associated with customers participating in each program qualifying for ADR incentives.
- PG&E's ADR Program was approved as amended.
- SCE's ADR Technology Incentive Program and Programmable Communicating Thermostat Incentive Program were approved as amended.
- SDG&E's ADR Program was approved as amended.

ADR Guidelines and Policies Adopted in D.18-11-029

- Affirmed that the Commission did not establish a requirement that the IOUs must provide ADR control incentives for supply side programs subject to cost-effectiveness analyses, nor did the Commission prohibit the IOUs from providing these incentives for supply side programs subject to cost-effectiveness.
- Directed IOUs to report in their annual Load Impact Reports the incremental load reduction provided by ADR controls and determine whether the load reduction fully covers additional cost of the control incentives allocated to the qualifying DR programs.
- Prohibited participants of externally contracted demand response resources (i.e., external to the IOU portfolio and DRAM) from receiving ADR control incentives.
- Determined that customers of the Demand Response Auction Mechanism Pilot (Auction Pilot), being a DR pilot, are eligible to receive ADR control incentives unless those customers are registered as a Reliability Demand Response Resource (RDRR). RDRR bid into the California Independent System Operator (CAISO) wholesale energy market through the Auction Pilot are not eligible to receive ADR control incentives.
- ADR is not eligible for "similar" status under D.17-10-017, in regard to the cost causation competitive neutrality principle for unbundled customers. D.17-10-017 defines "similar" program as "a Community Choice Aggregator or Direct Access Provider's (also referred to as a "Competing Provider") DR program is considered similar to a DR program provided by an investor-owned utility if the Competing Provider's program meets all specified requirements." The ADR Program is neither a load modifying nor a supply resource, therefore, it cannot be subject to "similar" status under D.17-10-017.
- In regard to Behavioral Demand Response, receiving a text or email communication in addition to an automatic demand response signal does not disqualify a customer from receiving ADR control incentives.
- For eligible automated controls, only the cost of the automated control qualifies for a control incentive, not the cost of the behavioral communication method.

- Devices unable to receive an ADR signal are not eligible to receive ADR control incentives. Overcoming barriers to adoption of devices, such as low awareness, perceived lack of need, or discomfort with using device, is not the purpose of the ADR program.
- For residential, small and medium business customers, the control must be able to communicate and demonstrate operability using the current Open ADR communication protocols and standards (currently OpenADR 2.0a or 2.0b). The control may be located either on site or as part of a control system, on site and at the manufacturer/demand response aggregator or provider cloud level. Only the customer is eligible for the ADR control incentive, not the aggregator, DR provider, or manufacturer cloud portion of the control.
- In the case of the small & medium business customer class and associated end uses, residential customers receiving incentives for thermostats, and customers enrolled in SDG&E's Technology Deployment Program: the criteria depend upon the type of ADR in which the customer is enrolled, such as a deemed incentive based on the average kilowatt load drop for the control in that sector.
- For commercial and industrial customers applying for calculated incentives, the control must be onsite and able to communicate and demonstrate operability using the current Open ADR communication protocols and standards (currently OpenADR 2.0a or 2.0b). The IOU must also be able to verify the anticipated kilowatts expected from the end uses equipped with the control as that is what determines the calculated incentive for that class of customers.
- Battery storage controls are not eligible for ADR control incentives, unless their Auto-DR application was received before October 26, 2018.

ADR Guidelines and Policies Adopted in D.19-07-009

- Reaffirms the policy that battery storage controls are not eligible for auto demand response control incentives.
- Excludes Reliability Demand Response Resources in the Auction Mechanism.

ADR Guidelines and Policies Adopted in D.21-12-015

- Authorized the IOUs to pay 100% of incentives for customized incentives up front, provided that the customer remains enrolled in a qualifying DR program for 60 months.³
- This option is in addition to the current 60/40% payment structure that requires customers to remain in a qualifying DR program for 36 months.
- Program years 2022 and 2023 only.

³ SDG&E will not be implementing this option in 2022-2023

Future Revisions to the Guidelines: Annual Process for “Complex and Technical” Refinements

The Commission determined that due to the evolving nature of DR and associated technologies, it is appropriate to address complex and technical issues on an ongoing basis through an annual stakeholder process. Any proposed change must rely upon current budget authorizations for implementation; otherwise, the proposal is not appropriate for this process.

D.18-11-029, OP 8, established an annual stakeholder process and authorized the Commission’s Energy Division (ED) to work with the IOUs and other stakeholders to identify a set of ADR issues to be resolved for that year. The relevant provisions of OP 8 are below:

- The set of issues shall be identified no later than October 31 of the prior year.
- With ED input, the IOUs shall develop proposals to address the issues and serve them on stakeholders no later than May 1 of each year.
- The IOUs shall hold workshops or webinars, noticed to the most recent and broadest DR proceeding service list.
- Based on the discussions at the workshops, the IOUs shall file, no later than August 15 of each year, draft updates to the ADR Control Incentives Guidelines and Adopted Policies (Guidelines), incorporating the proposals to address the set of issues for that year.
- All stakeholders may provide informal comments to the service list on the draft updated Guidelines; the Director of ED is authorized to establish a deadline for submitting the informal comments.
- No later than September 1 of each year, the IOUs shall submit a Tier Two advice letter incorporating the proposals into the Guidelines and including all party comments in the advice letter.

D.18-11-029, OP 9, identified six ADR issues to be resolved in 2019:

- a. Review of the approach to calculate control incentives;
- b. Implementation of the policy that Reliability Demand Response Resources are not eligible to receive ADR control incentives;
- c. Determination of the frequency of control incentives;
- d. Calculation of incentive cost-effectiveness;
- e. Development of a list of residential ADR enabled enduse devices to be considered by PG&E for eligibility for an ADR incentive; and

- f. Development of criteria to determine the order for PG&E to evaluate load impacts attributable to the devices.

In addition, D.18-11-029 required that the IOUs track the incremental load reduction provided by ADR controls and determine whether the load reduction fully covers additional cost of the control incentives allocated to DR programs.⁴

Resolution of 2019 Complex and Technical Refinements

The IOUs provided a joint proposal as a follow up to the ADR workshop held in June 2019. OP 8 of D.18-11-029 directed the IOUs to develop proposals to address the ADR issues identified in D.18-11-029, OP 9, and to serve them to stakeholders on the service list no later than May 1, 2019. The IOUs complied by filing separate and different draft proposals. In June 2019, the IOUs and ED hosted an in-person workshop with all stakeholders to discuss each IOU's proposal. At the workshop, the proposals were discussed and ED Staff recommended that the IOUs follow up by creating a joint IOU proposal. The IOUs proposed the following resolution to the technical issues included in D.18-11-029:

- a. No changes to the calculation of control incentives should be made until further research is completed.
- b. No proposal needed. On July 12, 2019, the Commission issued D.19-07-009, Decision Addressing Auction Mechanism, Baselines, and Auto Demand Response for Battery Storage. OP 6 of the Decision excludes the procurement of RDRR in the DRAM. This policy alleviates the need for the IOUs to develop and implement a policy to verify that customers participating in DRAM, as an RDRR, from Receiving ADR control incentives.
- c. Current and legacy customers⁵ should be eligible for ADR Incentives once every 7.5 years for controls of the same end use. Consistent with the amortization period formula from the cost-effectiveness protocols, the 7.5-year period was derived by taking the average of the 10-year expected useful life of most ADR Control devices and the 5-year 2018-2022 funding cycle.
 - i) If a customer's incentivized ADR controls are no longer able to communicate with an IOU's system to receive demand response event signals due to change in the communication protocols or a change in the IOU's qualifying Enabling Technologies, the IOU may allow the customer to receive another

⁴ D.18-11-029 page 47.

⁵ Current customers are defined as customers participating in ADR incentive programs in 2018 and beyond. Legacy customers are defined as customers who previously participated in ADR incentive programs prior to 2018.

- incentive before the 7.5-year time period elapses. The IOUs also expect to be able to incentivize new ADR controls that provide new incremental demand response load at a site that has already received ADR control incentives, if the new ADR control will control a different end-use. For example, a residential customer previously received incentives for a qualifying thermostat and now seeks to receive incentives for a different type of qualifying device that controls a different end-use, such as a pool pump.
- d. Proposals regarding cost effectiveness:
- i) Allocation of ADR costs:
Auto-DR incentives should be allocated in line with the forecasted load reduction from new Auto-DR participants in each program. Auto-DR administrative costs should also be allocated based on total load reduction by program. Details of the methodology can be found in Appendix D.
 - ii) Determination of whether the load reduction fully covers the additional cost of the control incentives:
Each IOU has provided an analysis on whether the load reduction from the ADR program fully covers the additional cost of the ADR control incentives. Details of the methodology used for this analysis can be found in Appendix E. The IOUs will provide an annual report on this analysis each year in the May 1st proposals ordered by D.18-11-029.
- e. PG&E completed the initial Collaborative Stakeholder Process in 2020. The list of residential end use devices was developed as a result of the process and was included in the final report provided to the stakeholders on April 2, 2020.
- f. The criteria (to determine the order for PG&E to evaluate load impacts attributable to the devices) was developed as a result of the Collaborative Stakeholder Process and was included in the final report provided to the stakeholders on April 2, 2020.

Issues b. through f. above were resolved with the Commission's approval of Advice Letters 3427-E (SDG&E), 5629-E (PG&E), and 4096-E (SCE).

Issue a. above remained outstanding pending further research and was resolved as follows.

Resolution of Issue (a.) from D.18-11-029, OP 9

a. Review of the approach to calculate control incentives

In late 2019, the IOUs led a research project that was conducted by a third-party to review the approach to calculate control incentives, with the objective of identifying a new approach for non-residential customers. Although the research project report generated significant data and information, the IOUs did not agree with its recommendations. Additionally, although stakeholders provided feedback in the workshop and some gave incremental input into the report as it was being written, stakeholders did not submit written feedback on the final report itself or on the report's recommendations.

The IOUs are leveraging the information in the research project report to continue to review the approach and potential new approaches to calculating incentive structures through frequent work sessions. The IOUs held a public virtual workshop on March 15, 2021 and presented four ideas currently under consideration. Approximately 50 individuals logged in to the workshop and the IOUs shared the chat and attendees list with CPUC staff.

As explained herein, IOUs consider this item (a.) as completed because extensive review has occurred and proposals for changes, if any, were included in the IOUs' 2023-27 DR applications.

APPENDIX A - Program Rules and Eligibility Requirements for Residential ADR Incentives

IOU Program Name	SCE PCT Incentive Program		PG&E AutoDR Residential Program	SDG&E Technology Deployment (TD) Program
Customer Segment	Residential <i>(Limitation to Bundled Service Only ends on 10/1/2022)</i>	Residential & SMB (<200kW)	Residential	Residential
Qualifying DR Programs⁶	Smart Energy Program - SEP	CPP, CBP Res, PDR DRAM	CBP, PDR DRAM, SmartRate	AC Saver, rate with events, PDR DRAM
Minimum DR Program Enrollment Requirement	No minimum DR program requirement at this time.		1 year or 1 DR season, depending on the DR program requirement.	No minimum DR program enrollment requirement.
Incentive/Rebate Amount	\$75		\$50 for Smart Thermostat. Incentive and eligibility for other technologies (TBD)	\$50
Incentive/Rebate Cap	One incentive per service account ⁷		One rebate per household for Smart Thermostat. Rebate cap for other incentivized technologies (TBD)	Two rebates/incentives per household
Incentive/Rebate Recipient	Bill credit issued to customer		Rebate check to customer	Gift card issued to customer
Frequency of Incentives	7.5 years			
Evidence of Purchase	Device registration and verification w/ authorized 3rd party	Evidence of device registration and verification w/ an authorized 3rd party	Customer required to upload copy of receipt for Smart Thermostat. Evidence of Purchase for other technologies TBD	Device verification w/ authorized 3rd party
Controllability/Technology Registration Requirement	The control must be able to communicate and demonstrate operability using the current Open Auto Demand Response communication protocols and standards (currently OpenADR 2.0a or 2.0b). The control may be located either on site or as part of a control system, on site and at the manufacturer/demand response aggregator or provider cloud level. Only the customer is eligible for the Auto Demand Response control incentive, not the aggregator, demand response provider, or manufacturer cloud portion of the control.			
Eligible Measures⁸	SEP Qualifying Thermostats	Qualifying Thermostats that meet the above requirements.	Smart Thermostat. Other technologies in the future based on the collaborative stakeholder process.	Controllable Thermostat. Other technologies in the future based on the stakeholder collaborative process
Application Process	SEP www.sce.com/sep	CPP Landing Page www.sce.com/cpp Customers participating with a DRAM provider or CBP Aggregator should contact their third-party provider on how to apply	PG&E eRebate or hardcopy application process (www.pge.com/rebates)	Online
Double Dipping Validation <i>(cannot receive multiple incentives)</i>	During eligibility verification process, Customer's Service Account (SA) will be validated that only one incentive was issued to the SA based upon the EUL identified above.		During eligibility verification process, Customer's Service Account (SA) will be validated that only one incentive was issued to the SA based upon the EUL identified above.	During eligibility verification process the customer service account will be validated.

⁶ Externally contracted demand response resources (e.g. external to the IOU portfolio and DRAM) are not eligible to receive ADR control incentives. For example, externally contracted demand response resources are demand response resources procured through an IOU Request for Offer (RFO), such as SCE's Local Capacity Resource (LCR) RFO or Preferred Resources Pilot (PRP) RFO.

⁷ Customers who enroll with a thermostat that was previously issued any DR thermostat incentive or a smart thermostat that was installed at no cost through an existing ratepayer-funded incentive program or pilot are not eligible for the PCT incentive.

⁸ ADR incentives for battery storage controls is prohibited except in the case of incentive applications received before October 26, 2018. For eligible automated controls, only the cost of the automated control qualifies for a control incentive.

APPENDIX B – Program Rules and Eligibility Requirements for Non-Residential ADR Calculated Incentives

IOU Program Name	SCE ADR Customized ⁹	PG&E ADR Program	SDG&E Technology Incentive (TI) Program
Customer Segment	Large Commercial, Industrial, & Agricultural (must provide at least 30kW of automated load reduction)	Non-qualifying FastTrack Commercial, Industrial, & Agricultural	Commercial, Industrial, & Agricultural
Qualifying DR Programs¹⁰	CBP, CPP, RTP, PDR DRAM, or Other Qualifying Pilots	PDP, CBP, PDR DRAM, or other qualifying pilots	CBP, CPP, DRAM or Other Qualifying Pilots
Minimum DR Program Enrollment Requirement	Must be enrolled in a Qualifying DR Program for at least 36 consecutive months for 60/40% split or 60 months for 100%		Must be enrolled in a Qualifying DR Program for at least 36 consecutive months
Incentive Type	Calculated		
Incentive Structure	60% / 40% Split Incentive Payment or 100% Up-Front		60% / 40% Split Incentive Payment
Incentive Level	Up to \$200 per kW		
Incentive Calculation Methodology	Incentive calculated based upon verified load shed test (e.g. subject to 2-hour M&V test)	Incentive based upon engineering calculations and/or verified load shed test, whichever is lower	Incentive based upon engineering calculations and/or verified load shed test
Incentive Project Cap of Eligible Costs	75% of total actual eligible control costs.		
Incentive/Rebate Cap	\$5 million per customer per funding cycle; Individual SAs requesting incentives >\$200k held to performance requirements for the full 36 months	Not Applicable	
Incentive/Rebate Recipient	Rebate check issued to customer	Rebate check issued to customer and/or project sponsor	Rebate check issued to customer
Frequency of Incentives	7.5 years		
Evidence of Purchase	Customers must provide receipts for actual costs incurred	Customers must provide receipts for actual costs incurred	Customer required to provide invoices and/or documentation to support measure costs. Such documents must comply with SDG&E's Invoicing Guidelines and any other documents related to the Project, Project Site, measures, load reduction (kW) or otherwise requested by SDG&E.
Controllability/Technology Registration Requirement	The control must be onsite and able to communicate and demonstrate operability using the current Open Auto Demand Response communication protocols and standards (currently OpenADR 2.0a or 2.0b). The IOU must also be able to verify the anticipated kilowatts expected from the end uses equipped with the control as that is what determines the calculated incentive for that class of customers.		
Eligible Measures¹¹	ADR enabled equipment that facilitates sitewide automatic load reduction such as controls for lighting, motors, pumps, fans, air compressors, process equipment, HVAC load control devices, etc.		
Application Process	Submission of hard copy ADR application and customer agreement		

⁹ ADR Program incentives cannot be provided to customers that have received rebates, incentives, funding, or services for measures and/or costs from other utility, third party, or government (federal, state, or local) program funded by public purpose funds, taxpayers, or IOU Request For Offer (RFO) solicitations, unless explicitly exempted.

¹⁰ Externally contracted demand response resources (e.g., external to the IOU portfolio and DRAM) are not eligible to receive ADR control incentives. For example, externally contracted demand response resources are demand response resources procured through an IOU Request For Offer (RFO), such as SCE's Local Capacity Resource (LCR) RFO or Preferred Resources Pilot (PRP) RFO.

¹¹ ADR incentives for battery storage controls is prohibited except in the case of incentive applications received before October 26, 2018. For eligible automated controls, only the cost of the automated control qualifies for a control incentive.

APPENDIX C – Program Rules and Eligibility Requirements for Non-Residential ADR Deemed Incentives

IOU Program Name	SCE PCT Incentive	SCE ADR Express¹²	PG&E FastTrack	SDG&E TD Program
Customer Segment	See details in Appendix A	Small Retail Stores, Small Office (<100,000 sq ft), and Food Stores (including liquor stores)	Office, Retail, Quick-serve Restaurant, Conditioned Warehouse, Hotel, Grocery ≤499kW	Commercial
Qualifying DR Programs¹³		CBP, CPP, RTP, PDR DRAM, or Other Qualifying Pilots	PDP, CBP, PDR DRAM, or other qualifying pilots	AC Saver, rate with events, CBP, PDR DRAM, or other qualifying pilots
Minimum DR Program Enrollment Requirement		Must be enrolled in a Qualifying DR Program for at least 36 consecutive months		One-Year
Incentive Type		Deemed		
Incentive Structure		100% Up-Front		
Incentive Level		Up to \$300/kW	Up to \$200/kW	\$50 per Smart Thermostat
Incentive Calculation Methodology		Incentive based upon pre-determined kW reduction potential of the specific measure		Incentive based upon pre-determined kW reduction potential of the specific measure
Incentive Project Cap of Eligible Costs		100% of project cost		Not Applicable
Incentive/Rebate Cap		\$1 million per customer per funding cycle (Incentive requests >\$200k are subject to additional performance requirements)	Not Applicable	Four incentives per service account (larger customers may qualify for more)
Incentive/Rebate Recipient		Rebate check issued directly to customer	Rebate check issued directly to customer and/or project sponsor	Rebate check issued directly to customer
Frequency of Incentives		7.5 years		
Evidence of Purchase		Customers must provide receipts for actual costs incurred		Device verification w/ authorized 3rd party
Controllability/Technology Registration Requirement		The control must be able to communicate and demonstrate operability using the current Open Auto Demand Response communication protocols and standards (currently OpenADR 2.0a or 2.0b). The control may be located either on site or as part of a control system, on site and at the manufacturer/demand response aggregator or provider cloud level. Only the customer is eligible for the Auto Demand Response control incentive, not the aggregator, demand response provider, or manufacturer cloud portion of the control.		
Eligible Measures¹⁴		Systems that control standard lighting and HVAC technologies, IOUs may add controls for different end use technologies as appropriate		Controllable Thermostat. Other technologies in the future based on the stakeholder process
Application Process	Submission of hard copy or online application and customer agreement		Submission of online application through authorized 3 rd party	

¹² ADR Program incentives cannot be provided to customers that have received rebates, incentives, funding, or services for measures and/or costs from other utility, third party, or government (federal, state, or local) program funded by public purpose funds, taxpayers, or IOU Request For Offer (RFO) solicitations, unless explicitly exempted.

¹³ Externally contracted demand response resources (e.g., external to the IOU portfolio and DRAM) are not eligible to receive ADR control incentives. For example, externally contracted demand response resources are demand response resources procured through an IOU Request For Offer (RFO), such as SCE’s Local Capacity Resource (LCR) RFO or Preferred Resources Pilot (PRP) RFO.

¹⁴ ADR incentives for battery storage controls is prohibited except in the case of incentive applications received before October 26, 2018. For eligible automated controls, only the cost of the automated control qualifies for a control incentive.

APPENDIX D – Allocation of Auto-DR Costs for Cost Effectiveness

In the 2022 -2023 DR Program Cycle, the IOUs will continue with the following methodology to allocate ADR incentive costs and ADR administrative costs across ADR eligible DR programs (including Supply side DR Programs, Load Modifying DR Programs and DRAM).

Allocation of ADR Incentive Costs: Each IOU will allocate ADR incentive costs to ADR eligible programs based on a forecast of the cumulative incremental ADR enabled KW in each ADR eligible program over the program cycle, multiplied by the estimated \$ per KW ADR incentive applicable for that program. This will involve the following steps:

Step A	Multiplied by Step B	Equals Step C
Estimate the cumulative incremental ADR KW for ADR eligible program each year over the program cycle	Calculate the ADR incentive for each eligible program tested by multiplying the forecasted kW by the ADR \$ per kW incentive.	Include the incentive from Step B in the CE tests as capital costs amortized over time.

Allocation of ADR Program Administrative Costs: The joint IOUs propose to allocate the ADR program administrative costs based on the estimated KW load reductions for each ADR eligible program. This will involve the following steps.

Step A	Step B	Step C
Estimate the KW load impacts for each ADR eligible program over the program cycle ¹⁵	Calculate the pro-rata share of load impacts for each ADR eligible program over the program cycle	Multiply the pro-rata share for each ADR eligible program by the total ADR program administrative budget

¹⁵ DRAM currently is not subject to load impact evaluations; therefore, the IOUs cannot assign administrative costs to DRAM based on load impacts. The IOUs will have to use the best available information at the time.

APPENDIX E – Determination of whether or not the incremental load reduction covers the incentive costs

ADR incremental load reduction compare to ADR incentive - On page 47 of D.18-11-029, the Commission stated that the IOUs should track the incremental load reduction provided by ADR controls, determine whether the load reduction fully covers additional cost of the control incentives allocated to DR programs, and report the incremental load reduction in the annual load impact studies and reports.

Pursuant to the DR cost-effectiveness protocols, the IOUs do not perform a direct cost-effectiveness evaluation of non-resource programs, such as the ADR program. Instead, costs of non-resource programs are included in the cost-effectiveness evaluations of the associated DR resource programs. The IOUs applied the methodology described below for determining whether the load reduction covers the cost of the control incentives.

It should be noted that this methodology is not adopted in any Commission proceeding but is the IOUs' attempt to address the Commission's directive on page 47 of D.18-11-029.

The IOUs reviewed and analyzed its ADR projects that were active during the 2018 Program Year (PY) Load Impact Study period using the following methodology:

1. Obtain the total MW load impact for the ADR customers included in the 2018 PY DR Load Impact studies¹⁶ for accounts who were paid incentives after the changes to the ADR incentive structures in 2013.¹⁷
2. Calculate the 2018 adjusted capacity value or benefit per kW using the approved avoided cost values and methodology in the DR cost effectiveness workbook.¹⁸
3. Determine the sum of the ADR incentives paid to each participating service account from Step 1.
4. Annualized the incentives by dividing total incentives paid (determined in Step 3) by the amortization period used when including these costs in the cost effectiveness test, which is 7.5 years.¹⁹

¹⁶ DRAM currently is not subject to load impact evaluations and cost effectiveness analysis; therefore, the IOUs cannot evaluate whether the load reduction covers the incentives paid to DRAM participants.

¹⁷ The IOUs used two scenarios. One scenario assumed that ADR customers would not join the DR program absent the ADR incentive, therefore, these amounts are considered "incremental." The other assumed that 50% of the ADR load reduction was incremental.

¹⁸ The DR cost effectiveness framework includes other minor benefits (e.g. energy, T&D, GHG) that may or may not be included since the amounts are small relative to the capacity value.

¹⁹ Tracking the load impacts over the length of time customer remains in program would be a better alternative but more difficult.

APPENDIX E – Determination of whether or not the incremental load reduction covers the incentive costs

5. Divide the annualized total incentives paid (Step 4) by the total 2018 ADR load impacts to obtain an annual dollar per kW paid (Step 4 divided by Step 1).
6. Compare the 2018 adjusted capacity value (Adjusted \$/kW) to the 2018 ADR annualized incentive paid per kW (Step 5 compared to Step 2).

If the variance between the two \$/kW figures (Step 5 and Step 2) is positive, then the load reduction is assumed to cover the cost of the control incentive. If the variance is negative, then the load reduction does not cover the cost of the incentive.

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

AT&T
Albion Power Company

Alta Power Group, LLC
Anderson & Poole

Atlas ReFuel
BART

Barkovich & Yap, Inc.
Braun Blasing Smith Wynne, P.C.
California Cotton Ginners & Growers Assn
California Energy Commission

California Hub for Energy Efficiency
Financing

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

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

Chevron Pipeline and Power
City of Palo Alto

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

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

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

GenOn Energy, Inc.
Goodin, MacBride, Squeri, Schlotz &
Ritchie
Green Power Institute
Hanna & Morton
ICF
International Power Technology

Intertie

Intestate Gas Services, Inc.
Kelly Group
Ken Bohn Consulting
Keyes & Fox LLP
Leviton Manufacturing Co., Inc.

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

Modesto Irrigation District
NLine Energy, Inc.
NRG Solar

OnGrid Solar
Pacific Gas and Electric Company
Peninsula Clean Energy

Pioneer Community Energy

Public Advocates Office

Redwood Coast Energy Authority
Regulatory & Cogeneration Service, Inc.

Resource Innovations

SCD Energy Solutions
San Diego Gas & Electric Company

SPURR

San Francisco Water Power and Sewer
Sempra Utilities

Sierra Telephone Company, Inc.
Southern California Edison Company
Southern California Gas Company
Spark Energy
Sun Light & Power
Sunshine Design
Stoel Rives LLP

Tecogen, Inc.
TerraVerde Renewable Partners
Tiger Natural Gas, Inc.

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