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January 24, 2019

**Advice 5472-E**

(Pacific Gas and Electric Company ID U 39 E)

**Advice 3939-E**

(Southern California Edison Company ID U 338 E)

**Advice 3336-E**

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

Public Utilities Commission of the State of California

**Subject: Update to Auto Demand Response Guidelines per D. 18-11-029**

**Purpose**

Pacific Gas and Electric Company (PG&E) hereby submits this advice letter on behalf of Southern California Edison Company (SCE), San Diego Gas & Electric Company (SDG&E), and itself, jointly the Investor Owned Utilities (IOUs). The IOUs are presenting this update to the existing Auto Demand Response (ADR) Guidelines<sup>1</sup> pursuant to the California Public Utilities Commission (Commission or CPUC), Decision (D.) 18-11-029, Ordering Paragraph (OP) 7.

**Background**

OP 7 of D. 18-11-029 ordered the IOUs to file a Tier 1 Advice Letter updating the ADR Guidelines no later than 45 days from the issuance of D.18-11-029.<sup>2</sup> These updates are being made to the existing ADR guidelines<sup>3</sup> based on changes set forth in OP 6 and OP 7, the processes established in OP 8, the 2019 topics identified in OP 9 along with the limitation placed on ADR incentives for battery storage controls in OP 10.

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<sup>1</sup> The ADR Guidelines is short-hand for the full document titled "The Auto Demand Response Guidelines and Adopted Policies (Guidelines)" as renamed per OP 7 of D. 18-11-029.

<sup>2</sup> D.18-11-029 was issued on December 10, 2018.

<sup>3</sup> These updates are being made to the current ADR Guidelines dated February 20, 2018, as included in Attachment 1 of the Decision.

## **Overview of Updates**

### **OP 6 Updates**

OP 6 calls for the following specific modifications to the control incentive policies, which are reflected on pages 9-10 of the updated ADR Guidelines.

- a) Externally contracted demand response resources are not eligible to receive auto demand response control incentives.
- b) Customers of the Demand Response Auction Mechanism Pilot (Auction Pilot), being a demand response pilot, are eligible to receive auto demand response control incentives unless customers are registered in Reliability Demand Response Resources (RDRR). RDRR bid in the California Independent System Operator market through the Auction Pilot are not eligible to receive Auto Demand Response control incentives.
- c) Auto Demand Response is not eligible for “similar” status.
- d) Receiving a text or email communication in addition to an automatic demand response signal does not disqualify a customer from receiving Auto Demand Response control incentives.
- e) For eligible automated controls, only the cost of the automated control qualifies for a control incentive.
- f) Devices unable to receive an auto demand response signal are not eligible to receive auto demand response control incentives.
- g) For residential, small and medium business customers, 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.
- h) 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 Auto Demand Response in which the customer is enrolled, such as a deemed incentive based on the average kilowatt load drop for the control in that sector.
- i) 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 Auto Demand Response communication protocols and standards (currently OpenADR 2.0a or 2.0b). The Utility 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.

### OP 8 Updates

OP 8 calls for the establishment of an annual stakeholder process starting in 2019 to address ongoing ADR issues. This stakeholder process relies on “workshops and webinars” with clearly established milestones as found on page 11 of the updated ADR Guidelines and summarized in the following table.

<b>Activity</b>	<b>Date</b>
IOUs and other stakeholders to identify issues for upcoming year (except for 2019 which were identified in OP 9)	<u>October 31</u> of the prior year
IOUs with Energy Division input shall develop proposals and “ <u>serve</u> ” them on stakeholders	May 1 of the current year
IOUs to hold workshops or webinars	Date is to be determined by the IOUs
IOUs to “ <u>file</u> ” DRAFT updates to the ADR Guidelines	<u>August 15</u> of the current year
Informal comments can be provided to the service list by stakeholders	Date is to be determined (ED is authorized to establish the deadline).
IOUs to “ <u>submit</u> ” a Tier 2 advice letter for the ADR updates, including party comments	No later than <u>September 1</u> of the current year.

### OP 9 Updates

OP 9 addresses ADR issues to be resolved in 2019 and includes the following elements found on page 11 of the updated ADR Guidelines.

- 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; and
- e) Development of a list of residential Auto Demand Response enabled end-use devices to be considered by Pacific Gas and Electric Company (PG&E) for eligibility 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 devices.

### OP 10 Updates

OP 10 places a limitation on battery storage controls to receive Auto Demand Response control incentives, unless their application was received before October 26, 2018. This provision related to battery storage was incorporated into the updated ADR Guidelines on the bottom of page 10.

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

### Protests

Anyone wishing to protest this filing may do so by letter sent via U.S. mail, facsimile or E-mail, no later than February 13, 2019, which is 20 days after the date of this filing. Protests must be submitted to:

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

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

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

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

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

Gary A. Stern, Ph.D.  
Managing Director, State Regulatory Operations  
Southern California Edison Company  
8631 Rush Street  
Rosemead, California 91770  
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Laura Genao  
Managing Director, State Regulatory Affairs  
c/o Karyn Gansecki  
Southern California Edison Company  
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San Francisco, California 94102  
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8330 Century Park Court, CP31F  
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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, telephone number, postal address, and (where appropriate) e-mail address of the protestant; and statement that the protest was sent to the utility no later than the day on which the protest was submitted to the reviewing Industry Division (General Order 96-B, Section 3.11).

### **Effective Date**

PG&E requests that this Tier 1 advice filing become effective upon date of filing, which is January 24, 2019.

### **Notice**

In accordance with General Order 96-B, Section IV, a copy of this advice letter is being sent electronically and via U.S. mail to parties shown on the attached list. Address changes to the General Order 96-B service list should be directed to PG&E at email address [PGETariffs@pge.com](mailto: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 filings can also be accessed electronically at: <http://www.pge.com/tariffs/>.

\_\_\_\_\_  
/S/

Erik Jacobson  
Director, Regulatory Relations

Attachments

cc: Service List A.17-01-012 et al.



# 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 U39E)

Utility type:

- ELC       GAS       WATER  
 PLC       HEAT

Contact Person: Yvonne Yang

Phone #: (415)973-2094

E-mail: PGETariffs@pge.com

E-mail Disposition Notice to: Yvonne.Yang@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) #: 5472-E et al.

Tier Designation: 1

Subject of AL: Update to Auto Demand Response Guidelines per D. 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: 1/24/19

No. of tariff sheets: N/A

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 proposed<sup>1</sup>: N/A

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

<sup>1</sup>Discuss in AL if more space is needed.

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

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

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

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

Clear Form

## **Attachment 1**

# **Joint Investor Owned Utilities (IOU) The Auto Demand Response Guidelines and Adopted Policies (Guidelines)**

**Clean Version**

# Joint Investor Owned Utilities (IOU) The Auto Demand Response Guidelines and Adopted Policies (Guidelines)

January 24, 2019



## Prepared By



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## 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 (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 automated demand response control incentive offerings as approved by California Public Utilities Commission (CPUC) Decision (D.) 17-12-003 and D.18-11-029.

## Abbreviations

AB 793	Assembly Bill 793
Auto-DR or ADR	Automated Demand Response Technology Incentive Program
BIP	Base Interruptible Program
BTM	Behind-the-Meter
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
DRET	Demand Response Emerging Technology
EMS	Energy Management System
EE	Energy Efficiency
ESA	Energy Savings Assistance
ESP	Electric Service Providers
EUL	Effective Useful Life (of measure)
HVAC	Heating, Ventilation, and Air Conditioning
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
PTR-ET-DLC	SCE Peak Time Rebate Enabling Technology Direct Load Control Program
RTP	Real Time Pricing Program
SCE	Southern California Edison Company
SDG&E	San Diego Gas and Electric Company
SGIP	Self-Generation Incentive Program
SMB	Small and Medium Business
SSP	PG&E Supply Side DR Pilot
TA&TI	Technical Assistance and Technology Incentives Program
TD	Technology Deployment
XSP	PG&E Excess Supply DR Pilot

## Definitions

**ADR Control** - The ability to receive an automated demand response signal to enable the customer to participate in a demand response event without any manual customer intervention.\*

*\*We note and recognize 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.*

**OpenADR** – 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 a Utilities' DRAS or automated dispatch system, for all or a portion of the Customer's electrical consumption during the demand response event duration.

**Eligible Measures** – A measure that is eligible for ADR incentives must meet all of the following criteria:

- (i) Must be operating or online at the Customer facility or premise;
- (ii) Must be incremental or has not previously received ADR Program incentives for the specified measure; and
- (iii) Must be Dispatchable under the requirements identified in Appendix A, Appendix B, and Appendix C.

**Qualifying DR Program** – A DR program, approved by the CPUC, in which the program's participant(s) are eligible to receive ADR incentives which automate a customer's participation in program events.

## Background on the ADR Program

In late 2006, the Commission modified the IOUs' 2006-2008 Demand Response portfolios by adopting programs for 2007 and 2008 that encourage automated demand response for commercial, industrial, and agricultural customers.<sup>1</sup> The three California IOUs have administered the statewide Automated Demand Response 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 are able to 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 (e.g., customizable load shed strategies) and ease-of-use without the need for manual response or intervention.

Reimbursement through the 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, must enroll and participate in at least one Qualifying DR Program, must be able to demonstrate automated curtailment, and must demonstrate receipt of an ADR signal from the utility's DRAS or utility's automated dispatch system.

In CPUC Decision (D.) [16-06-029](#), the Commission directed the Joint IOUs to adopt common program rules and incentives levels in an effort to achieve greater consistency between the IOUs' ADR Programs. In D.16-06-029, the Commission directed each utility to modify its ADR Program for large non-residential customers and offer a 2-part (60/40) incentive, limited an incentive level up to \$200 per kW of verified Dispatchable load reduction, limited to 75 percent (75%) of the total project costs, whichever amount is lower. The first incentive payment is paid at 60 percent (60%) of the total eligible incentives and is paid after installation, M&V load shed test, and customer enrollment in a Qualifying DR Program. The customer is eligible for a portion or all of the remaining second incentive payment, up to 40 percent (40%), 12-months after the first incentive payment is issued. The second incentive is based upon the customer's average actual 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 SMB customers of its ADR Program referred to as Auto-DR Fast Track 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,

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<sup>1</sup> 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.

validated estimate of peak demand savings for lighting and HVAC controls, SMB customers, may be ADR-enabled more efficiently and cost-effectively than through a site-specific calculated measurement and verification process.

Over the last few years<sup>2</sup>, the IOUs have been providing incentives for residential technologies, such as ADR-enabled smart thermostats, in response to reliability issues, such as Aliso Canyon and in response to legislation, such as AB 793. The IOUs continue to refine and expand residential ADR incentives to provide incentives to other residential Controls that are ADR-enabled.

## Purpose

The purpose of these Joint IOU ADR guidelines is to document eligibility rules and requirements for the IOUs ADR Program (e.g. address program eligibility for ADR incentives offered to residential and SMB customers), in compliance with Ordering Paragraph (OP) 29 of D.17-12-003.

The appendices contained in these Guidelines summarize the Utilities' ADR program rules approved up to and including D.18-11-029.

- Appendix A –Program Rules and Eligibility Requirements for Utilities' Residential ADR Program
- Appendix B – Program Rules and Eligibility Requirements for Utilities' Established Large Non-Residential ADR Program (i.e. Customized ADR Program)
- Appendix C – Program Rules and Eligibility Requirements for Utilities' Established SMB ADR Program (i.e. Fast Track or Express ADR Program)

## Guiding Principles

Guiding principles affect the implementation and administration of the Statewide ADR Program. Guiding Principles serve as a 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.

### *Current Guiding Principles*

#### *Auto-DR Rules and Guiding Principles Adopted in D.09-08-027*

- Authorizes Utilities to require a Qualifying DR Program enrollment and participation requirement to receive incentives.

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

- Required reporting of incentive commitments into Utilities' DR CPUC Monthly Report.
- Established consistent incentive amounts for the IOUs TA&TI

*Auto-DR Rules and Guiding Principles Adopted in D.12-04-045*

- Directed Utilities 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.

*Auto-DR Rules and Guiding Principles Adopted in D.14-05-025*

- Directed Utilities to create and implement a statewide ADR program.
- Streamline the ADR application process.
- Provide technical assistance to ADR customers.

*Auto-DR Rules and Guiding Principles 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.
- Prohibits BIP as a Qualifying DR Program

*Auto-DR Rules and Guiding Principles Adopted in D.17-11-003*

- The IOUs shall provide Auto Demand Response technology incentives to participants of any supply side demand response programs/activities not required to be analyzed for cost-effectiveness.
- PG&E's Automatic Demand Response Program was approved as amended.
- SCE's Automated Demand Response Technology Incentive Program and Programmable Communicating Thermostat Incentive Program was approved as amended.
- SDG&E's Auto Demand Response Program was approved as amended.

*Auto-DR Rules and Guiding Principles Adopted in D.18-11-029*

- Externally contracted demand response resources are not eligible to receive auto demand response control incentives.
- Customers of the Demand Response Auction Mechanism Pilot (Auction Pilot), being a demand response pilot, are eligible to receive auto demand response

control incentives unless customers are registered in Reliability Demand Response Resources (RDRR). RDRR bid in the California Independent System Operator market through the Auction Pilot are not eligible to receive Auto Demand Response control incentives.

- Auto Demand Response is not eligible for “similar” status under D.17-10-017.
- Receiving a text or email communication in addition to an automatic demand response signal does not disqualify a customer from receiving Auto Demand Response control incentives.
- For eligible automated controls, only the cost of the automated control qualifies for a control incentive.
- Devices unable to receive an auto demand response signal are not eligible to receive auto demand response control incentives.
- For residential, small and medium business customers, 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.
- 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 Auto Demand Response 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 Auto Demand Response communication protocols and standards (currently OpenADR 2.0a or 2.0b). The Utility 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 Auto Demand Response control incentives, unless their application was received before October 26, 2018.

## Discussion Items for ADR Workshop

Per D.18-11-029, Ordering Paragraph 8, Energy Division will work with the IOUs and other stakeholders to identify a set of Auto DR issues to resolve for each year. The relevant text from OP 8 is below:

- For future years, the set of issues shall be identified no later than October 31 of the prior year.
- With Energy Division input, the Utilities shall develop proposals to address the issues and serve them on stakeholders no later than May 1 of each year, beginning in 2019.
- The Utilities shall hold workshops or webinars, noticed to the most recent and broadest demand response proceeding service list.
- Based upon the discussions at the workshops, the Utilities shall file, no later than August 15 of each year, draft updates to the Auto Demand Response 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 the Energy Division is authorized to establish a deadline for submitting the informal comments.
- No later than September 1 of each year, the Utilities shall submit a Tier Two advice letter incorporating the proposals into the Guidelines and including all party comments in the advice letter.

Per D.18-11-029, Ordering Paragraph 9, the Auto Demand Response issues identified six issues to be resolved in 2019 as follows:

- Review of the approach to calculate control incentives;
- Implementation of the policy that Reliability Demand Response Resources are not eligible to receive auto demand response control incentives;
- Determination of the frequency of control incentives;
- Calculation of incentive cost-effectiveness;
- Development of a list of residential Auto Demand Response enabled end-use devices to be considered by Pacific Gas and Electric Company (PG&E) for eligibility for an Auto Demand Response incentive; and
- Development of criteria to determine the order for PG&E to evaluate load impacts attributable to the devices.

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

IOU Program Name	SCE PCT Incentive Program		PG&E AutoDR Incentive Program	SDG&E Technology Deployment (TD) Program
Customer Segment	Residential ( <i>Bundled Only</i> )	Residential & SMB (<200kW)	Residential	Residential
Qualifying DR Programs	PTR-ET-DLC	CPP, CBP Res Pilot, PDR DRAM	Res CBP, Res PDR DRAM, Smart Rate, Res SSP and XSP	AC Saver, rate with events, PDR DRAM <sup>4</sup>
Minimum DR Program Enrollment Requirement	No minimum DR program requirement at this time. Will evaluate the effectiveness and determine if changes need to be made in the mid-cycle review.		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 <sup>3</sup>		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	Bill credit issued to customer ( <i>eventually same process and payment structure as EE incentives; TBD in mid-cycle</i> )	Rebate check to customer	Gift card issued to customer
Frequency of Incentives	Technology Useful Life ( <i>currently 11 years per the approved EE workpaper</i> )			5 years (depreciation period used in DR C/E calculations)
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 Measures	PTR-ET-DLC Qualifying Thermostats	Qualifying Thermostats that meet the above requirement.	Smart Thermostat. Other technologies in the future based on the Annual ADR process	Controllable Thermostat. Other technologies in the future based on the stakeholder collaborative process
Application Process	<a href="https://pages.email.sce.com/SCESmartBonus/">PTR-ET-DLC Landing Page</a>	Online <a href="https://images.enervvee.com/image/upload/q_auto:eco/email/SCE/smart-thermostat-incentive-form_v3_wcag_linked.pdf">https://images.enervvee.com/image/upload/q_auto:eco/email/SCE/smart-thermostat-incentive-form_v3_wcag_linked.pdf</a>	PG&E eRebate and hardcopy application process ( <a href="http://www.pge.com/rebates">www.pge.com/rebates</a> )	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.

<sup>3</sup> Customers that receive a free smart thermostat through an existing ratepayer-funded incentive program or pilot are not eligible for an additional PCT incentive.

## APPENDIX B –Program Rules and Eligibility Requirements for Large C&I ADR Incentives

IOU Program Name	SCE ADR Customized <sup>4</sup>	PG&E ADR Program	SDG&E ADR Program
Customer Segment	Large Commercial, Industrial, & Agricultural (must provide at least 30kW of automated load reduction)	Large Commercial, Industrial, & Agricultural	Commercial, Industrial, & Agricultural
Qualifying DR Programs	CBP, CPP, RTP, PDR DRAM, or Other Qualifying Pilots	PDP, CBP, PDR DRAM, SSP and XSP	CBP, CPP, 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		
Incentive Type	Calculated		
Incentive Structure	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 must sign an LOA	Not Applicable	
Incentive/Rebate Recipient	Rebate check issued to customer		
Frequency of Incentives	One time. Customer can re-apply for incentives if they can demonstrate incremental kW.	Technology Useful Life	twice (based upon the 60/40 split payment methodology)
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 (6) 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 able to communicate and demonstrate operability using the current Open Auto Demand Response communication protocols and standards (currently OpenADR 2.0a or 2.0b).		
Eligible Measures	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		

<sup>4</sup> 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 utility Request For Offer (RFO) solicitations, unless explicitly exempted.

## APPENDIX C –Program Rules and Eligibility Requirements for SMB ADR Incentives

IOU Program Name	SCE PCT Incentive	SCE ADR Express <sup>5</sup>	PG&E Fast Track	SDG&E Small Commercial Energy Management Pilot <sup>6</sup>	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)	SMB	SMB (with no less than 3 locations: =<20kW peak demand per site)	Commercial	
Qualifying DR Programs		CBP, CPP, RTP, PDR DRAM, or Other Qualifying Pilots	PDP, CBP, PDR DRAM, SSP and XSP	CBP, CPP, 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		Must be enrolled in a Qualifying DR Program for at least 24 consecutive months		One-Year
Incentive Type		Deemed		Calculated		Deemed
Incentive Structure		100% Up-Front				
Incentive Level		Up to \$300/kW	Up to \$200/kW		TBD (based upon \$100/kW)	
Incentive Calculation Methodology		Incentive based upon pre-determined kW reduction potential of the specific measure		Incentive based upon verified dispatchable load reduction		Cost of the technology
Incentive Project Cap of Eligible Costs		100% of project cost		Capped at 50% of the actual project cost (including the purchase price & costs for installation by a third-party)		
Incentive/Rebate Cap		\$1 million per customer per funding cycle (Incentive requests >\$200k require a Letter of Agreement)	Not Applicable	\$10,000 or cost cap, whichever is lower		
Incentive/Rebate Recipient		Rebate check issued directly to customer				Customer or Vendor/Installer
Frequency of Incentives		One time. Customer can re-apply for incentives if they can demonstrate incremental kW.	Technology Useful Life	One time		5 years, used in DR C/E calculations
Evidence of Purchase		Customers must provide receipts for actual costs incurred	Customers must provide receipts for actual costs incurred	Customers require to invoices and/or documentation to support measure costs. Such documents must comply with SDG&E's SBCP Invoicing Guidelines.		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 Measures		Systems that control standard lighting and HVAC technologies, IOUs may add controls for different end uses technologies as appropriate.		All controllable devices that meet communication protocol requirement are commercially available and are cloud based.		Controllable Thermostat. Other technologies in the future based on the stakeholder process
Application Process	Submission of hard copy or online application and customer agreement				TBD	

<sup>5</sup> 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 utility Request-For-Offer (RFO) solicitations, unless explicitly exempted.

<sup>6</sup> Part of AB793. Marketed as the Small Business Real Time Energy Manager (SBREM).

## **Attachment 2**

# **Joint Investor Owned Utilities (IOU) The Auto Demand Response Guidelines and Adopted Policies (Guidelines)**

**Redlined Version**

# Joint Investor Owned Utilities (IOU)

## ~~Proposed Guidelines for the~~ ~~2018-2022 Automated~~ The Auto Demand Response ~~Technology~~ ~~Incentive (Auto-DR)~~ ~~Program~~ Guidelines and Adopted Policies (Guidelines)

~~February 20, 2018~~ January 24, 2019



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## Abstract

~~Technical Assistance and~~The Automated Demand Response (ADR) technology incentives offset ~~capital~~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. ~~These technologies automate~~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 (IOUs) have also provided ADR technology incentives to mass market customers, including residential and small-to-medium business (SMB) customers, to increase ~~customer's~~customer adoption ~~of~~ ADR ~~enabled end-use technologies~~Controls that can automate and provide reliable DR benefits.

The guidelines in this document provide the general program parameters for the IOUs automated demand response technologycontrol incentive offerings as approved by California Public Utilities Commission (CPUC) Decision (D.) 17-12-003 and D.18-11-029.

~~While these guidelines are intended to provide additional information about the programs' parameters, as required in D.17-12-003 Ordering Paragraph 29, these guidelines also identify potential unintended consequences from policies and requirements from other CPUC decisions such as D.17-10-017 (Competitive Neutrality Cost Causation Decision), D.17-12-003 (2018-2022 DR Application Decision), and D.18-01-003 (Multiple Use Application Decision).~~

## Abbreviations

AB 793	Assembly Bill 793
Auto-DR or ADR	Automated Demand Response Technology Incentive Program
BIP	Base Interruptible Program
BTM	Behind-the-Meter
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
DRET	Demand Response Emerging Technology
EMS	Energy Management System
EE	Energy Efficiency
ESA	Energy Savings Assistance
ESP	Electric Service Providers
EUL	Effective Useful Life (of measure)
HVAC	Heating, Ventilation, and Air Conditioning
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
PTR-ET-DLC	SCE Peak Time Rebate Enabling Technology Direct Load Control Program
RTP	Real Time Pricing Program
SCE	Southern California Edison Company
SDG&E	San Diego Gas and Electric Company
SGIP	Self-Generation Incentive Program
SMB	Small and Medium Business
SSP	PG&E Supply Side DR Pilot
TA&TI	Technical Assistance and Technology Incentives Program
TD	Technology Deployment
XSP	PG&E Excess Supply DR Pilot

## Definitions

**ADR Control** - The ability to receive an automated demand response signal to enable the customer to participate in a demand response event without any manual customer intervention.\*

*\*We note and recognize 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.*

**OpenADR** – 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 a Utilities' DRAS or automated dispatch system, for all or a portion of the Customer's electrical consumption during the demand response event duration.

**QualifyingEligible Measures** – A measure that qualifiesis eligible for ADR incentives must meet all of the following criteria:

- (i) Must be operating or online at the Customer facility or premise;
- (ii) Must be incremental or has not previously received ADR Program incentives for the specified measure; and
- (iii) Must be Dispatchable under the requirements identified in Appendix A, Appendix B, and Appendix C.

**Qualifying DR Program** – A DR program, approved by the CPUC, in which the program's participant(s) are eligible to receive ADR incentives which automate a customer's participation in program events.

## Background on the ADR Program

In late 2006, the Commission modified the IOUs' 2006-2008 Demand Response portfolios by adopting programs for 2007 and 2008 that encourage automated demand response for commercial, industrial, and agricultural customers.<sup>1</sup> The three California IOUs have administered the statewide Automated Demand Response Technology Incentive Program (ADR Program) since that time.

The ADR Program primarily provides incentives to non-residential customers that purchase and install ADR ~~enabled technology~~ Controls at the customers' facility or site to automate their participation and load curtailment in a Qualifying DR program. Non-residential customers are able to 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. ~~The ADR system provides the~~ Controls provide customers with increased flexibility (e.g., customizable load shed strategies) and ease-of-use without the need for manual response or intervention.

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

In CPUC Decision (D.) [16-06-029](#), the Commission directed the Joint IOUs to adopt common program rules and incentives levels in an effort to achieve greater consistency between the IOUs' ADR Programs. In D.16-06-029, the Commission directed each utility to modify its ADR Program for large non-residential customers and offer a 2-part (60/40) incentive, limited an incentive level up to \$200 per kW of verified Dispatchable load reduction, limited to 75 percent (75%) of the total project costs, whichever amount is lower. The first incentive payment is paid at 60 percent (60%) of the total eligible incentives and is paid after installation, M&V load shed test, and customer enrollment in a Qualifying DR Program. The customer is eligible for a portion or all of the remaining second incentive payment, up to 40 percent (40%), 12-months after the first incentive payment is issued. The second incentive is based upon the customer's average actual 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 SMB customers of its ADR Program referred to as Auto-DR Fast Track and Auto-DR Express, respectively. These programs

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<sup>1</sup> 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.

streamline the ADR application process and provide incentives for the installation of ADR ~~enabled technologies~~Controls specific to lighting and HVAC controls. By offering a pre-determined, validated estimate of peak demand savings for lighting and HVAC controls, SMB customers, may be ADR-enabled more efficiently and cost-effectively than through a site-specific calculated measurement and verification process.

Over the last few years<sup>2</sup>, the IOUs have been providing incentives for residential technologies, such as ADR-enabled smart thermostats, in response to reliability issues, such as Aliso Canyon and in response to ~~legislative matters~~legislation, such as AB 793. The IOUs continue to refine and expand residential ADR incentives to provide incentives to other residential ~~end-uses~~Controls that are ADR-enabled.

## Purpose

The purpose of these Joint IOU ADR guidelines is to ~~identify previously unspecified program document~~ eligibility rules and requirements for the IOUs ADR Program (e.g. address program eligibility for ADR incentives offered to residential and SMB customers), in compliance with Ordering Paragraph (OP) 29 of D.17-12-003.

~~In addition to these Guidelines, there are other issues that touch upon and impact the ADR Program, so we request that the issues identified in the “Other Issues Section” be discussed with stakeholders at the CPUC ADR workshop.~~

~~These Guidelines will also address other ADR Program changes in compliance with the following ordering paragraphs:~~

- ~~• The IOUs shall provide Auto Demand Response technology incentives to participants of any supply side demand response programs/activities not required to be analyzed for cost effectiveness. (D.17-12-003, OP 28)~~
- ~~• PG&E’s Automatic Demand Response Program is approved as amended. PG&E shall provide Auto Demand Response technology incentives to participants of any supply side demand response program/activity not required to be analyzed for cost effectiveness. (D.17-12-003, OP 30)~~
- ~~• SCE’s Automated Demand Response Technology Incentive Program and Programmable Communicating Thermostat Incentive Program are approved as amended. SCE shall provide Auto Demand Response technology incentives to participants of any supply side demand response program/activity not required to be analyzed for cost effectiveness. (D.17-12-003, OP 32)~~
- ~~• SDG&E’s Auto Demand Response program is approved as amended. SDG&E shall provide Auto Demand Response technology incentives to participants of~~

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

~~any supply side demand response program/activity not required to be analyzed for cost-effectiveness. (D.17-12-003, OP 34)~~

The appendices contained in these Guidelines summarize ~~the~~ Utilities' ADR ~~proposals submitted in their respective 2018-2022 DR Applications and highlight the changes to their respective ADR Programs in compliance with D.17-12-003~~ program rules approved up to and including D.18-11-029.

- Appendix A – ~~Proposed~~ Program Rules and Eligibility Requirements for Utilities' Residential ADR Program
- Appendix B – Program Rules and Eligibility Requirements for Utilities' Established Large Non-Residential ADR Program (i.e. Customized ADR Program)
- Appendix C – Program Rules and Eligibility Requirements for Utilities' Established SMB ADR Program (i.e. Fast Track or Express ADR Program)

## Guiding Principles

Guiding principles affect the implementation and administration of the Statewide ADR Program. Guiding Principles serve as a 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.

### *Current Guiding Principles*

#### *Auto-DR Rules and Guiding Principles Adopted in D.09-08-027*

- Authorizes Utilities to require a Qualifying DR Program enrollment and participation requirement to receive incentives.
- Required reporting of incentive commitments into Utilities' DR CPUC Monthly Report.
- Established consistent incentive amounts for the IOUs TA&TI

#### *Auto-DR Rules and Guiding Principles Adopted in D.12-04-045*

- Directed Utilities 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.

*Auto-DR Rules and Guiding Principles Adopted in D.14-05-025*

- Directed Utilities to create and implement a statewide ADR program.
- Streamline the ADR application process.
- Provide technical assistance to ADR customers.

*Auto-DR Rules and Guiding Principles 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.
- Prohibits BIP as a Qualifying DR Program-

*Auto-DR Rules and Guiding Principles Adopted in D.17-11-003*

- The IOUs shall provide Auto Demand Response technology incentives to participants of any supply side demand response programs/activities not required to be analyzed for cost-effectiveness.
- PG&E's Automatic Demand Response Program was approved as amended.
- SCE's Automated Demand Response Technology Incentive Program and Programmable Communicating Thermostat Incentive Program was approved as amended.
- SDG&E's Auto Demand Response Program was approved as amended.

*Auto-DR Rules and Guiding Principles Adopted in D.18-11-029*

- Externally contracted demand response resources are not eligible to receive auto demand response control incentives.
- Customers of the Demand Response Auction Mechanism Pilot (Auction Pilot), being a demand response pilot, are eligible to receive auto demand response control incentives unless customers are registered in Reliability Demand Response Resources (RDRR). RDRR bid in the California Independent System Operator market through the Auction Pilot are not eligible to receive Auto Demand Response control incentives.
- Auto Demand Response is not eligible for "similar" status under D.17-10-017.
- Receiving a text or email communication in addition to an automatic demand response signal does not disqualify a customer from receiving Auto Demand Response control incentives.
- For eligible automated controls, only the cost of the automated control qualifies for a control incentive.
- Devices unable to receive an auto demand response signal are not eligible to receive auto demand response control incentives.

- For residential, small and medium business customers, 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.
- 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 Auto Demand Response 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 Auto Demand Response communication protocols and standards (currently OpenADR 2.0a or 2.0b). The Utility 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 Auto Demand Response control incentives, unless their application was received before October 26, 2018.

## Discussion Items for ADR Workshop

~~As noted previously, the Joint IOUs have identified other CPUC requirements and policies that may need to be addressed in the Commission's ADR workshop. The Joint IOUs would like greater discussion and resolution or clarification of any potential inconsistencies.~~

~~*Are Auto-DR Technology Incentives Intended for All Supply Side DR Programs?*~~

~~In D.17-12-003, OP 28 directs ADR technology incentives to participants of *any supply side demand response program* or activity not required to be analyzed for cost-effectiveness.~~

~~Since the Base Interruptible Program (BIP) is a supply side DR program (integrated into the CAISO markets as Reliability Demand Response Resource (RDRR)), PG&E is seeking clarification as to whether to add BIP as an eligible Qualifying DR Program to~~

~~receive an ADR incentive. This would require a modification from the 2017 DR Bridge Funding Decision, based on D.16-06-029 OP 23f, where PG&E's Reliability Demand Response Programs were deemed ineligible as a Qualifying DR Program for ADR incentives. PG&E is seeking clarification on whether D.17-12-003 reverses the 2017 Bridge Funding Decision. For the time being, PG&E will continue to exclude BIP from the list of Qualifying DR Programs for ADR incentives in the 2018-2022 DR program cycle. PG&E appreciates the opportunity to clarify this issue at the Commission's ADR workshop.~~

~~SCE does not plan to allow BIP (supply side DR programs) to be considered as an ADR Qualifying DR Program. SCE's AP-I and SDP programs are also not eligible for ADR incentives because these are direct load control programs where SCE installs devices (at no cost to the customer) to customers' equipment.~~

~~SDG&E agrees that clarification as to whether or not BIP is an eligible program that can receive ADR incentive would be beneficial. SDG&E notes that BIP is required to be analyzed for cost-effectiveness so in its opinion D.17-12-003, Ordering Paragraph 28 which states that "the Utilities shall provide Auto Demand response technology incentives to participants of any supply side demand response program/activity not required to be analyzed for cost-effectiveness" does not apply to BIP. However, the slash between activity and program does leave room for debate as to whether the clause "required to be analyzed for cost-effectiveness" modifies both the words "program" and "activity" and, therefore, SDG&E agree that clarification would be beneficial.~~

~~In addition, SDG&E supports a fair and level playing field between third party and utility programs and thereby agrees with PG&E opening comments on the proposed decision that DRAM participants bidding into the emergency RDRR product should not be eligible for ADR incentives when DRAM is no longer a pilot. This would be consistent with concepts in D.16-06-029 which states that reliability demand response programs are not eligible for ADR incentives.~~

#### ~~*Are DR Programs Subject to Cost-Effectiveness Still Qualifying DR Programs?*~~

~~On page 79 of the decision 17-12-003, it stated that, "Accordingly, the Utilities shall offer Auto Demand Response technology incentives to customers of all supply side programs/activities *not subject to cost-effectiveness analysis*; this includes the Demand Response Auction Mechanism and, where applicable, pilots."~~

~~PG&E's Capacity Bidding Program is the only DR program that is subject to cost effectiveness and historically part of the qualifying DR programs for ADR incentive. PG&E interpreted that, both, Utility DR programs subject to cost effectiveness as well as supply side programs/activities not subject to cost-effectiveness analysis are qualifying DR programs for ADR incentive, and seeks confirmation of this interpretation from the Commission.~~

SDG&E agrees that customers enrolled on utility supply side programs which are subject to cost-effectiveness such as CBP and AC Saver should remain eligible for ADR and Technology Deployment (TD) incentives. Although D.17-12-003, page 79, explicitly calls out only programs/activities not subject to cost-effectiveness analysis it does not explicitly state that Utility DR programs subject to cost effectiveness are not eligible for ADR and TD incentives.

*Does the Multiple Use Application Decision impact the ADR Program?*

On January 17, 2018, the CPUC issued D.18-01-003 “Decision on Multiple Use Application Issues.” D.18-01-003 provides direction to the Utilities on how to promote the ability of storage resources to realize their full economic value when these resources are capable of providing multiple benefits and services to the electricity system. The Commission adopts eleven rules to govern the evaluation of multiple-use energy storage applications, along with definitions of service domains, reliability services, and non-reliability services, as reflected in Table 1 below.

Table 1. Domains: Reliability Services and Non-Reliability Services

Domain	Reliability Services	Non-Reliability Services
Customer	None	TOU bill management; Demand charge management; Increased self-consumption of on-site generation; Back-up power; Supporting customer participation in DR programs
Distribution <sup>7</sup>	Distribution capacity deferral; Reliability (back-tie) services; Voltage support; Resiliency/microgrid/islanding	None
Transmission	Transmission deferral; Inertia*; Primary frequency response*; Voltage support*; Black start	None
Wholesale Market	Frequency regulation; Spinning reserves; Non-spinning reserves; Flexible ramping product	Energy
Resource Adequacy	Local capacity; Flexible capacity; System capacity	None
*Voltage support, inertia, and primary frequency response have traditionally been obtained as inherent characteristics of conventional generators, and are not today procured as distinct services. We include them here as placeholders for services that could be defined and procured in the future by the CAISO.		

The definitions of service domains, reliability services, and non-reliability services set forth in D.18-01-003 conflict with DR policies and principles adopted in D.14-12-024. D.14-12-024, OP 4.a., states all demand response programs will need to meet resource adequacy rules to either reduce the resource adequacy requirement as a load-modifying resource or to count toward meeting the resource adequacy requirement as a

supply resource.<sup>3</sup> Under this premise, DR programs that meet the bifurcation requirements shall receive RA and thus, under D.18-01-003 Table 1, DR programs are considered Reliability Services. But the Table lists customer participation in DR programs as “Non-Reliability Services.”

In addition, PG&E recognizes the MUA is intended to be rules for energy storage only but find the designation of Resource Adequacy as a Reliability Service in conflict with the aforementioned D.16-06-029 (OP 23f) that prohibits PG&E from offering Automated Demand Response incentives to any Reliability Demand Response Programs. PG&E recognizes that this may not be the intent of the ruling, however, further clarification is needed during the Commission’s ADR workshop.

*Does the Competitive Neutrality Cost Causation Principle (CNCC) Apply to ADR Incentives?*

On November 1, 2017, the CPUC issued D.17-10-017 “Decision adopting steps for implementing the competitive neutrality cost causation principle, requiring an auction in 2018 for the Demand Response Auction Mechanism, and establishing a working group for the creation of new models of demand response.” D.17-10-017 adopts steps to implement the CNCC Principle, which allows CCA or DA ESPs to create and administer their own “similar” DR programs, thus exempting the CCA or DA provider’s customers from the costs of the Utility’s “similar” DR program.

While D.17-10-017 specifically exempted funding pertaining to DRAM and pilots from the CNCC principle, it’s unclear if the CNCC principle applies to the ADR Program. Since D.17-10-017 exempts DRAM and pilots from the CNCC principle, it would be prudent to also exclude the ADR Program since DRAM and pilots are eligible for Auto-DR incentives. But there are still many implementation questions that need to be answered as to how the existing CNCC principles impact the IOUs’ ADR Programs. The Joint IOUs seek clarity from the CPUC at the Commission’s ADR workshop regarding this matter.

*Should third party DRPs with ADR enabled end-uses require authorization by manufacturer/service provider in order to qualify for ADR incentive?*

In PG&E’s reply comments to other parties’ opening comments on the 2018-2022 DR Proposed Decision, PG&E stated that:

*The Joint DR Parties indicate that only third-party DRPs with programmatic device control “authorized by both the manufacturer/service provider and the customer should be able to make the \$75 PCT incentive available to their customers.” PG&E assumes this comment, while*

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<sup>3</sup> Complete implementation of bifurcation cannot occur until resource adequacy issues have been resolved.

~~directed at SCE's program, also applies to PG&E's proposed residential ADR Program. PG&E cautions that such policy would require all manufacturers and service providers to share their "authorized" third party partners with the utilities, and update this authorized list for ADR rebate processing. It is unclear to PG&E if all ADR enabling technology manufacturers and service providers would be willing to take on such a task. In addition, this new requirement would create additional administrative cost to the ADR Program when implementing product eligibility.~~

~~PG&E believes that the ADR workshop will be an appropriate channel to discuss this suggestion by Joint DR Parties since all the parties that are interested in contributing toward ADR Program design will likely participate in the Commission's ADR workshop.~~

~~SCE and SDG&E support the Joint DR Parties' proposed requirement that "only third-party DRPs with programmable device control" authorized by both the manufacturer/service provider and the customer" should be able to receive technology incentives. When third parties attempt to control devices without manufacturer and/or customer permissions, the manufacturer or customer cannot prohibit the device from being controlled by more than one demand response provider. In addition, SDG&E is committed to protecting customer privacy and therefore does not support 3<sup>rd</sup>-party demand response providers adjusting customer technology settings by requiring customers to supply their technology passwords. Eligible third-party providers should be sending an open ADR or other open protocol signal to the manufacturer cloud with the permission of the manufacturer.~~

~~The 3<sup>rd</sup>-party authorization section above is another example of how the existing ADR Program design does not cover all aspects of the residential market. The residential ADR technology market is far more complex than the non-residential ADR technology market due to the number of actors involved and the different business models of each actor. The existing ADR Program design was developed 10 years ago and focused on non-residential customers. PG&E notices that some of the program designs may not be conducive for mass market/residential customers or technology vendors. In conclusion, PG&E proposes using the Commission's ADR workshop to focus on the development of future ADR Program designs (such as residential ADR technologies' eligibility frequency and eligible devices) that fit better with the current and future technology paradigms, and use the information to propose program redesign proposals for the mid-cycle filing.~~

Per D.18-11-029, Ordering Paragraph 8, Energy Division will work with the IOUs and other stakeholders to identify a set of Auto DR issues to resolve for each year. The relevant text from OP 8 is below:

- For future years, the set of issues shall be identified no later than October 31 of the prior year.
- With Energy Division input, the Utilities shall develop proposals to address the issues and serve them on stakeholders no later than May 1 of each year, beginning in 2019.
- The Utilities shall hold workshops or webinars, noticed to the most recent and broadest demand response proceeding service list.
- Based upon the discussions at the workshops, the Utilities shall file, no later than August 15 of each year, draft updates to the Auto Demand Response 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 the Energy Division is authorized to establish a deadline for submitting the informal comments.
- No later than September 1 of each year, the Utilities shall submit a Tier Two advice letter incorporating the proposals into the Guidelines and including all party comments in the advice letter.

Per D.18-11-029, Ordering Paragraph 9, the Auto Demand Response issues identified six issues to be resolved in 2019 as follows:

- Review of the approach to calculate control incentives;
- Implementation of the policy that Reliability Demand Response Resources are not eligible to receive auto demand response control incentives;
- Determination of the frequency of control incentives;
- Calculation of incentive cost-effectiveness;
- Development of a list of residential Auto Demand Response enabled end-use devices to be considered by Pacific Gas and Electric Company (PG&E) for eligibility for an Auto Demand Response incentive; and
- Development of criteria to determine the order for PG&E to evaluate load impacts attributable to the devices.

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

IOU Program Name		SCE PCT Incentive Program		PG&E AutoDR Incentive Program	SDG&E Technology Deployment (TD) Program
Customer Segment		Residential <i>(Bundled Only)</i>	Residential & SMB <i>(&lt;200kW)</i>	Residential	Residential
Qualifying DR Programs		PTR-ET-DLC	CPP, CBP Res Pilot, <u>PDR DRAM<sup>4</sup></u>	Res CBP, <u>Res PDR DRAM</u> , Smart Rate, <u>Res SSP</u> and XSP	AC Saver, rate with events, <u>PDR DRAM<sup>4</sup></u>
Minimum DR Program Enrollment Requirement		No minimum DR program requirement at this time. Will evaluate the effectiveness and determine if changes need to be made in the mid-cycle review.		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 <u>and eligibility</u> for other technologies (TBD)	\$50
Incentive/Rebate Cap		One incentive per service account <sup>5</sup>		One rebate per household for Smart Thermostat. <u>rebateRebate</u> cap for other incentivized technologies (TBD)	Two rebates/incentives per household
Incentive/Rebate Recipient		Bill credit issued to customer	Bill credit issued to customer <i>(eventually same process and payment structure as EE incentives; TBD in mid-cycle)</i>	Rebate check to customer	Gift card issued to customer
Frequency of Incentives		Technology Useful Life, <u>subject to change at mid cycle</u> <i>(currently 11 years per the approved EE workpaper)</i>			5 years <i>(depreciation period used in DR C/E calculations)</i>
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	<u>Authorized third party must be able to receive OpenADR signal</u>	<u>Qualifying devices must be able to communicate to SCE's VTN or through an authorized third party that communicates with SCE's VTN.</u>	<u>The ADR signal uses one or a combination of qualified open-based standards (OpenADR 2.0, Smart Energy Profile 1.1/2.0, or any other standard that is listed in the Smart Grid Interoperability Panel Catalog of Standards). Compliance testing can be done at the manufacturer's internet/cloud application level rather than at the end use device level itself. 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.</u>		<u>Currently, authorized third party must be able to receive OpenADR signal. Other open standards may become eligible in the future.</u>

<sup>4</sup> Changes in red reflect modifications in compliance with D.17-12-003.

<sup>5</sup> Customers that receive a free smart thermostat through an existing ratepayer-funded incentive program or pilot are not eligible for an additional PCT incentive.

Eligible Measures	PTR-ET-DLC Qualifying Thermostats	Qualifying Thermostats that meet the above requirement.	Smart Thermostat. Other technologies in the future based on the <u>Annual</u> ADR <del>stakeholder collaborative</del> process	Controllable Thermostat. Other technologies in the future based on the stakeholder collaborative process
Application Process	PTR-ET-DLC Landing Page <a href="https://pages.email.sce.com/SCESmartBonus/">https://pages.email.sce.com/SCESmartBonus/</a>	Online <a href="https://images.enervee.com/image/upload/q_auto:eco/email/SCE/smart-thermostat-incentive-form_v3_wcag_linked.pdf">https://images.enervee.com/image/upload/q_auto:eco/email/SCE/smart-thermostat-incentive-form_v3_wcag_linked.pdf</a>	PG&E eRebate and hardcopy application process (www.pge.com/rebates)	Online
Double Dipping Validation (cannot receive multiple incentives)	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, 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.

## APPENDIX B – ~~Proposed~~ Program Rules and Eligibility Requirements for Large C&I ADR Incentives

IOU Program Name	SCE ADR Customized <sup>6</sup>	PG&E ADR Program	SDG&E ADR Program
Customer Segment	Large Commercial, Industrial, & Agricultural (must provide at least 30kW of automated load reduction)	Large Commercial, Industrial, & Agricultural	Commercial, Industrial, & Agricultural
Qualifying DR Programs	CBP, CPP, RTP, <u>PDR</u> DRAM, or Other Qualifying Pilots <sup>7</sup>	PDP, CBP, <u>PDR</u> DRAM, SSP and XSP	CBP, CPP, <u>PDR</u> DRAM or Other Qualifying <del>Pilots</del> <sup>7</sup> Pilots
Minimum DR Program Enrollment Requirement	Must be enrolled in a Qualifying DR Program for at least 36 consecutive months		
Incentive Type	Calculated		
Incentive Structure	60% / 40% Split Incentive Payment		
Incentive Level	<u>Up to</u> \$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 <u>control</u> costs		
Incentive/Rebate Cap	\$5 million per customer per funding cycle; Individual SAs requesting incentives >\$200k must sign an LOA	Not Applicable	

<sup>6</sup> 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 utility Request For Offer (RFO) solicitations, unless explicitly exempted.

<sup>7</sup> ~~Changes in red reflect modifications in compliance with D.17-12-003.~~

<b>Incentive/Rebate Recipient</b>	Rebate check issued to customer		
<b>Frequency of Incentives</b>	One time. Customer can re-apply for incentives if they can demonstrate incremental kW.	Technology Useful Life, <del>subject to change at mid-cycle</del>	twice (based upon the 60/40 split payment methodology)
<b>Evidence of Purchase</b>	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 (6) Any other documents related to the Project, Project Site, measures, load reduction (kW) or otherwise requested by SDG&E.
<del><b>DR Event Signal</b></del>	<del>Dispatch signal or instructions from SCE VTN to Customer VEN</del>	<del>Direct to building EMS or devices</del>	
<b>Controllability/Technology Registration Requirement</b>	<del>Customer's ADR device/client must be OpenADR 2.0 certified and be connected to Utility's DRAS<sup>8</sup>. For PG&amp;E, please refer to Controllability/Technology Registration Requirement in Appendix A. 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).</del>		
<b>Eligible Measures</b>	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.		
<b>Application Process</b>	Submission of hard copy ADR application and customer agreement		

~~<sup>8</sup> DRAM participants are not required to be connected to Utility's DRAS because DRAM participants receive dispatch instructions from their third party demand response provider.~~

## APPENDIX C – ~~Proposed~~ Program Rules and Eligibility Requirements for SMB ADR Incentives

IOU Program Name	SCE PCT Incentive	SCE ADR Express <sup>9</sup>	PG&E Fast Track	SDG&E Small Commercial Energy Management Pilot <sup>10</sup>	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)	SMB	SMB (with no less than 3 locations: =<20kW peak demand per site)	Commercial
Qualifying DR Programs		CBP, CPP, RTP, <del>PDR</del> DRAM, or Other Qualifying <del>Pilots</del> <sup>11</sup> <del>Pilots</del>	PDP, CBP, <del>PDR</del> DRAM, SSP and XSP	CBP, CPP, <del>PDR</del> DRAM or Other Qualifying <del>Pilots</del> <sup>11</sup> <del>Pilots</del>	AC Saver, rate with events, CBP, <del>PDR</del> DRAM <sup>11</sup> or other qualifying pilots.
Minimum DR Program Enrollment Requirement		Must be enrolled in a Qualifying DR Program for at least 36 consecutive months	Must be enrolled in a Qualifying DR Program for at least 24 consecutive months	One-Year	
Incentive Type		Deemed	Calculated	Deemed	
Incentive Structure		100% Up-Front			
Incentive Level		Up to \$300/kW	<del>Up to</del> \$200/kW		TBD (based upon \$100/kW)
Incentive Calculation Methodology		Incentive based upon pre-determined kW reduction potential of the specific measure	Incentive based upon verified dispatchable load reduction		Cost of the technology
Incentive Project Cap of Eligible Costs		100% of project cost	Capped at 50% of the actual project cost (including the purchase price & costs for installation by a third-party)		
Incentive/Rebate Cap		\$1 million per customer per funding cycle (Incentive requests >\$200k require a Letter of Agreement)	Not Applicable	\$10,000 or cost cap, whichever is lower	
Incentive/Rebate Recipient		Rebate check issued directly to customer			
Frequency of Incentives	One time. Customer can re-apply for incentives if they can demonstrate incremental kW.	Technology Useful Life, <del>subject to change at mid-cycle</del>	One time		5 years, used in DR C/E calculations

<sup>9</sup> 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 utility Request-For-Offer (RFO) solicitations, unless explicitly exempted.

<sup>10</sup> Part of AB793. Marketed as the Small Business Real Time Energy Manager (SBREM).

<sup>11</sup> ~~Changes in red reflect modifications in compliance with D.17-12-003.~~

Evidence of Purchase		Customers must provide receipts for actual costs incurred	Customers must provide receipts for actual costs incurred	Customers require to invoices and/or documentation to support measure costs. Such documents must comply with SDG&E's SBCP Invoicing Guidelines.	Device verification w/ authorized 3rd party
<del>DR Event Signal</del>		<del>Dispatch signal or instructions from SCE VTN to Customer VEN</del>	<del>Direct to building EMS or devices</del>	<del>Direct to device or through manufacturer's cloud</del>	<del>Currently, authorized third party must be able to receive an OpenADR signal. Other open standards may become eligible in the future.</del>
Controllability/Technology Registration Requirement		<del>Customer's ADR device/client must be OpenADR 2.0 certified and be connected to Utility's DRAS<sup>12</sup>. For PG&amp;E, please refer to Controllability/Technology Registration Requirement in Appendix A.</del>	<del>The ADR signal uses one or a combination of qualified open ADR standards (OpenADR 2.0a or 2.0b). 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.</del>		
Eligible Measures		Systems that control standard lighting and HVAC technologies, <u>IOUs may add controls for different end uses technologies as appropriate.</u>		All controllable devices that meet communication protocol requirement are commercially available and are cloud based.	Controllable Thermostat. Other technologies in the future based on the stakeholder process
Application Process		Submission of hard copy <u>or online</u> application and customer agreement			TBD

<sup>12</sup> ~~DRAM participants are not required to be connected to Utility's DRAS because DRAM participants receive dispatch instructions from their third party demand response provider.~~

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

AT&T	Downey & Brand	Pioneer Community Energy
Albion Power Company	East Bay Community Energy	Praxair
Alcantar & Kahl LLP	Ellison Schneider & Harris LLP	Regulatory & Cogeneration Service, Inc.
	Energy Management Service	SCD Energy Solutions
Alta Power Group, LLC	Evaluation + Strategy for Social	
Anderson & Poole	Innovation	SCE
	GenOn Energy, Inc.	SDG&E and SoCalGas
Atlas ReFuel	Goodin, MacBride, Squeri, Schlotz &	
BART	Ritchie	SPURR
	Green Charge Networks	San Francisco Water Power and Sewer
Barkovich & Yap, Inc.	Green Power Institute	Seattle City Light
Braun Blaising Smith Wynne	Hanna & Morton	Sempra Utilities
P.C. CalCom Solar	ICF	Southern California Edison Company
California Cotton Ginners & Growers Assn	International Power Technology	Southern California Gas Company
California Energy Commission	Intestate Gas Services, Inc.	Spark Energy
California Public Utilities Commission	Kelly Group	Sun Light & Power
California State Association of Counties	Ken Bohn Consulting	Sunshine Design
Calpine	Keyes & Fox LLP	Tecogen, Inc.
Casner, Steve	Leviton Manufacturing Co., Inc.	TerraVerde Renewable Partners
Cenergy Power	Linde	Tiger Natural Gas, Inc.
Center for Biological Diversity	Los Angeles County Integrated Waste	
City of Palo Alto	Management Task Force	TransCanada
	Los Angeles Dept of Water & Power	Troutman Sanders LLP
City of San Jose	MRW & Associates	Utility Cost Management
Clean Power Research	Manatt Phelps Phillips	Utility Power Solutions
Coast Economic Consulting	Marin Energy Authority	Utility Specialists
Commercial Energy	McKenzie & Associates	
County of Tehama - Department of Public		Verizon
Works	Modesto Irrigation District	Water and Energy Consulting
Crossborder Energy	Morgan Stanley	Wellhead Electric Company
Crown Road Energy, LLC	NLine Energy, Inc.	Western Manufactured Housing
Davis Wright Tremaine LLP	NRG Solar	Communities Association (WMA)
Day Carter Murphy		Yep Energy
	Office of Ratepayer Advocates	
Dept of General Services	OnGrid Solar	
Don Pickett & Associates, Inc.	Pacific Gas and Electric Company	
Douglass & Liddell		