

Docket No.: R.23-01-007

Exhibit No.: CalCCA-04

Date: August 25, 2023

Sponsor/Witness: Exhibit in Lieu of Cross – Ketelsen, Kikuyama (PG&E)

**EXHIBIT CALCCA-04**  
**Stipulated PG&E DR Responses**

**August 25, 2023**

**PACIFIC GAS AND ELECTRIC COMPANY**  
**Diablo Canyon Power Plant Operations Extension OIR**  
**Rulemaking 23-01-007**  
**Data Response**

PG&E Data Request No.:	CalCCA_003-Q001		
PG&E File Name:	DiabloCanyonPowerPlantOperationsExtensionOIR_DR_CalCCA_003-Q001		
Request Date:	August 15, 2023	Requester DR No.:	003
Date Sent:	August 21, 2023	Requesting Party:	California Community Choice Association
PG&E Witness:	Rhett Kikuyama	Requester:	Nikhil Vijaykar

**QUESTION 001**

Refer to PG&E’s Rebuttal Testimony at 2-17:32 to 2-18:4: please confirm or deny Witness Kikuyama reviewed the *Opening Testimony of Eric Little and Andrew Mills On Behalf Of The California Community Choice Association, and its Attachment C, California’s Constrained Resource Adequacy Market: Ratepayers Left Standing in a Game Of Musical Chairs* (Little-Mills Testimony). If confirmed, please identify any conclusion in the Little-Mills Testimony with which Witness Kikuyama disagrees and explain why he disagrees. Please provide all analyses, underlying data, and workpapers, in the original electronic format with formulas intact, on which Witness Kikuyama relies on in his answer and explanation.

**ANSWER 001**

PG&E confirms that Witness Kikuyama reviewed the *Opening Testimony of Eric Little and Andrew Mills On Behalf Of The California Community Choice Association, and its Attachment C, California’s Constrained Resource Adequacy Market: Ratepayers Left Standing in a Game Of Musical Chairs* (Little-Mills Testimony). PG&E has no basis to disagree with the Little-Mills Testimony because PG&E has not conducted a stack analysis on the RA market for the period of DCP’s extended operations, as the determination of DCP’s extended operations is under the purview of the California Energy Commission pursuant to Public Resources Code 25233.2(c).

**PACIFIC GAS AND ELECTRIC COMPANY  
Diablo Canyon Power Plant Operations Extension OIR  
Rulemaking 23-01-007  
Data Response**

PG&E Data Request No.:	CalCCA_003-Q002		
PG&E File Name:	DiabloCanyonPowerPlantOperationsExtensionOIR_DR_CalCCA_003-Q002		
Request Date:	August 15, 2023	Requester DR No.:	003
Date Sent:	August 21, 2023	Requesting Party:	California Community Choice Association
PG&E Witness:	Rhett Kikuyama	Requester:	Nikhil Vijaykar

**QUESTION 002**

Refer to Administrative Law Judge Seybert’s June 2, 2023, Ruling, Attachment 2, incorporating a May 2023 Joint Agency Reliability Planning Assessment SB 846 Second Quarterly Report (Joint Agency Report) into the record: please confirm or deny Witness Kikuyama reviewed the Joint Agency Report. If confirmed, please identify any conclusion in the Joint Agency Report with which Witness Kikuyama disagrees and explain why he disagrees. Please provide all analyses, underlying data, and workpapers, in the original electronic format with formulas intact, on which Witness Kikuyama relies on in his answer and explanation.

**ANSWER 002**

PG&E confirms that Witness Kikuyama reviewed the Joint Agency Report. The Joint Agency Report only provided an update on “the status of demand and new supply for summer 2023 for the California Independent Operator (California ISO) territory and the resulting update to the summer 2023 reliability outlook analysis.”<sup>1</sup> Witness Kikuyama does not disagree with the methodology or conclusions presented therein.

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<sup>1</sup> Joint Agency Reliability Planning Assessment, SB 846 Second Quarterly Report, p. 1.

**PACIFIC GAS AND ELECTRIC COMPANY  
 Diablo Canyon Power Plant Operations Extension OIR  
 Rulemaking 23-01-007  
 Data Response**

PG&E Data Request No.:	CalCCA_003-Q003		
PG&E File Name:	DiabloCanyonPowerPlantOperationsExtensionOIR_DR_CalCCA_003-Q003		
Request Date:	August 15, 2023	Requester DR No.:	003
Date Sent:	August 21, 2023	Requesting Party:	California Community Choice Association
PG&E Witness:	Rhett Kikuyama	Requester:	Nikhil Vijaykar

**QUESTION 003**

Refer to PG&E’s Rebuttal Testimony at 2-19:28 to 2-20:1: Please confirm or deny that Witness Kikuyama’s statement that “Given the tight RA market, there is a possibility that PG&E will either be required to incur significant costs to purchase substitution capacity or not find sufficient substitution capacity at all” means there may be too much demand for RA capacity and too little supply of RA capacity available for PG&E to procure replacement capacity.

**ANSWER 003**

PG&E confirms that the quoted statement above means that there may be too much demand for Resource Adequacy (RA) capacity and/or too little supply of RA capacity available in certain months for PG&E to procure sufficient DCPD replacement capacity to meet its obligations as set forth in the California Independent System Operator Corporation Tariff.

**PACIFIC GAS AND ELECTRIC COMPANY  
Diablo Canyon Power Plant Operations Extension OIR  
Rulemaking 23-01-007  
Data Response**

PG&E Data Request No.:	CalCCA_003-Q004		
PG&E File Name:	DiabloCanyonPowerPlantOperationsExtensionOIR_DR_CalCCA_003-Q004		
Request Date:	August 15, 2023	Requester DR No.:	003
Date Sent:	August 21, 2023	Requesting Party:	California Community Choice Association
PG&E Witness:	Rhett Kikuyama	Requester:	Nikhil Vijaykar

**QUESTION 004**

Refer to PG&E’s Rebuttal Testimony at 2-19:28 to 2-20:1, regarding Witness Kikuyama’s statement that

“Given the tight RA market, there is a possibility that PG&E will either be required to incur significant costs to purchase substitution capacity or not find sufficient substitution capacity at all.”

Please explain the extent to which Witness Kikuyama agrees that there is currently a “tight RA market” regardless of whether DCPD is on outage.

**ANSWER 004**

PG&E agrees that there is currently a tightening of the system Resource Adequacy (RA) market. With that said, for 2023, the “ISO’s assessment of resource development demonstrates sound progress towards meeting the conventional “one day every 10 years” (1-in-10) Loss of Load Expectation (LOLE) planning target”, especially relative to 2022.<sup>1</sup> Figure ES-1, included in the CAISO’s 2023 Summer Loads and Resources Assessment, demonstrates an improving reserve margin for meeting operating reserve requirements over peak load periods.

It is important to note that while the California Independent System Operator Corporation’s 2023 stack analysis results may offer an indication of decreasing tightness in the RA market, it does not necessarily address the system’s ability to meet loads outside of the current RA program planning standard which are associated with load volatility and extreme weather events such as those experienced in the summers of 2020 and 2022.

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<sup>1</sup> 2023 Summer Loads and Resources Assessment, p. 2.

**PACIFIC GAS AND ELECTRIC COMPANY  
Diablo Canyon Power Plant Operations Extension OIR  
Rulemaking 23-01-007  
Data Response**

PG&E Data Request No.:	CalCCA_003-Q006		
PG&E File Name:	DiabloCanyonPowerPlantOperationsExtensionOIR_DR_CalCCA_003-Q006		
Request Date:	August 15, 2023	Requester DR No.:	003
Date Sent:	August 21, 2023	Requesting Party:	California Community Choice Association
PG&E Witness:	Rhett Kikuyama	Requester:	Nikhil Vijaykar

**QUESTION 006**

Refer to PG&E’s Rebuttal Testimony at 2-25:11-12, where Witness Kikuyama states that

“PG&E has significant concerns that an allocation of RA capacity will not provide an incentive to retain existing resources online.”

Please provide all analyses, underlying data, and workpapers, in the original electronic format with formulas intact, on which Witness Kikuyama relies in making this statement.

**ANSWER 006**

PG&E notes that all CPUC-jurisdictional LSEs are required to meet California’s RA program requirements. This can be achieved by a “combination of allocations and direct procurement” such as contracting with existing and/or new (e.g., incremental) generation resources. In support of its concerns, PG&E refers to comments submitted by the CalCCA in Rulemaking (R.) 21-10-002.<sup>1</sup>

In R.21-10-002, CalCCA argued for the need for LSEs to understand their allocation amounts on a timely manner so that LSEs can plan effectively to avoid “overprocurement and subsequent ratepayer costs.” PG&E understands CalCCA’s comments to indicate that LSEs rely upon allocation amounts to meet their RA compliance requirements and subsequently have no incentive to overprocure because, in doing so, it will lead to additional ratepayer costs with no commensurate benefit. PG&E notes that this is consistent with market dynamics – where the quantity of demand (e.g., RA compliance requirements) and supply (e.g., RA capacity) will seek to balance to achieve equilibrium.

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<sup>1</sup> See, California Community Choice Association’s Phase 1 Proposals in Response to the Assigned Commissioner’s Ruling and Scoping Memo, filed on December 13, 2021 (R.21-10-002); *see also*, California Community Choice Association’s Emergency Petition for Modification of D.22-03-034 to Modify Resource Adequacy Procurement Timeline and Adopt Interim System Resource Adequacy Waiver Process, filed on September 10, 2022 (R.21-10-002).

An allocation of DCP's 2,280 MW of capacity would effectively displace the need for LSEs to procure other resources that would have been needed had an allocation not occurred. Thus, the level of LSE contracting with existing resources can decrease and influence the number of resources retiring and the state could be faced with another reliability crunch upon DCP's retirement.

**PACIFIC GAS AND ELECTRIC COMPANY  
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Data Response**

PG&E Data Request No.:	CalCCA_003-Q007		
PG&E File Name:	DiabloCanyonPowerPlantOperationsExtensionOIR_DR_CalCCA_003-Q007		
Request Date:	August 15, 2023	Requester DR No.:	003
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PG&E Witness:	Rhett Kikuyama	Requester:	Nikhil Vijaykar

**QUESTION 007**

Refer to PG&E’s Rebuttal Testimony at 2-25:11-12: Please confirm or deny that Witness Kikuyama’s statement that “PG&E has significant concerns that an allocation of RA capacity will not provide an incentive to retain existing resources online” only holds true if there currently is a surplus of RA capacity in the current RA market such that there would no longer be demand for “existing resources”. If deny, please explain.

**ANSWER 007**

In this response, PG&E interprets “a surplus of RA capacity” to mean capacity that is in excess of the Commission’s Resource Adequacy (RA) compliance requirements and CAISO’s reliability requirements. If that is the case, PG&E confirms that the quoted statement above only holds true if there is a surplus of RA capacity available in the market.

**PACIFIC GAS AND ELECTRIC COMPANY  
Diablo Canyon Power Plant Operations Extension OIR  
Rulemaking 23-01-007  
Data Response**

PG&E Data Request No.:	CalCCA_003-Q009		
PG&E File Name:	DiabloCanyonPowerPlantOperationsExtensionOIR_DR_CalCCA_003-Q009		
Request Date:	August 15, 2023	Requester DR No.:	003
Date Sent:	August 21, 2023	Requesting Party:	California Community Choice Association
PG&E Witness:	Brian Ketelsen	Requester:	Nikhil Vijaykar

**QUESTION 009**

Refer to PG&E’s Rebuttal Testimony at 2-26:2-24, and PG&E response to CalCCA 2.02, during what months does PG&E typically schedule known and/or foreseeable outages at DCPD?

**ANSWER 009**

In general, PG&E schedules known and/or foreseeable outages at Diablo Canyon Power Plant (DCPD), including refueling outages, during times that the electrical grid is less likely to be constrained in its ability to meet system reliability needs. The long-range plan for DCPD’s refueling outages has Spring (April/May) and Fall (October/November) timeframes.

PG&E notes that, depending on the work to be performed, an outage at DCPD could span across multiple months. Additionally, outages at DCPD, including refueling outages, typically require specialized staffing and labor. Typical refueling outage preparations begin approximately two years prior to the outage start date. Some scopes can require additional time due to the long-lead engineering and procurement efforts associated with the scopes. Shorter outages to address the need for water intake tunnel cleanings are scheduled between the Fall and Spring timeframes.

**PACIFIC GAS AND ELECTRIC COMPANY  
Diablo Canyon Power Plant Operations Extension OIR  
Rulemaking 23-01-007  
Data Response**

PG&E Data Request No.:	CalCCA_003-Q010		
PG&E File Name:	DiabloCanyonPowerPlantOperationsExtensionOIR_DR_CalCCA_003-Q010		
Request Date:	August 15, 2023	Requester DR No.:	003
Date Sent:	August 21, 2023	Requesting Party:	California Community Choice Association
PG&E Witness:	Brian Ketelsen	Requester:	Nikhil Vijaykar

**QUESTION 010**

Refer to PG&E's Rebuttal Testimony at 2-17:24 to 2-26:30, and PG&E response to CalCCA 2.02, during what months does PG&E typically schedule fueling outages at DCPD?

**ANSWER 010**

See PG&E's response to Question 9.

**PACIFIC GAS AND ELECTRIC COMPANY  
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PG&E Data Request No.:	CalCCA_003-Q011		
PG&E File Name:	DiabloCanyonPowerPlantOperationsExtensionOIR_DR_CalCCA_003-Q011		
Request Date:	August 15, 2023	Requester DR No.:	003
Date Sent:	August 21, 2023	Requesting Party:	California Community Choice Association
PG&E Witness:	Rhett Kikuyama	Requester:	Nikhil Vijaykar

**QUESTION 011**

Refer to PG&E's Rebuttal Testimony at 2-20:35, please confirm or deny that PG&E currently uses its existing portfolio to perform outage substitution for DCPD's capacity. If deny, please explain.

**ANSWER 011**

To the extent that PG&E has sufficient resources within its existing portfolio, PG&E confirms it uses resources within its existing portfolio to meet its substitution capacity obligations for outages at DCPD as set forth in the California Independent System Operator Corporation Tariff.

**PACIFIC GAS AND ELECTRIC COMPANY  
Diablo Canyon Power Plant Operations Extension OIR  
Rulemaking 23-01-007  
Data Response**

PG&E Data Request No.:	CalCCA_003-Q012		
PG&E File Name:	DiabloCanyonPowerPlantOperationsExtensionOIR_DR_CalCCA_003-Q012		
Request Date:	August 15, 2023	Requester DR No.:	003
Date Sent:	August 21, 2023	Requesting Party:	California Community Choice Association
PG&E Witness:	Rhett Kikuyama	Requester:	Nikhil Vijaykar

**QUESTION 012**

Refer to 2-19:22 to 2-20:7, and PG&E's response to CalCCA 2.02- 2.09, please confirm or deny that, if PG&E is unable to reserve RA capacity from its existing portfolio in order to provide substitution capacity, it currently makes purchases in the RA bilateral market as needed to provide substitution capacity. If deny, please explain.

**ANSWER 012**

To the extent that PG&E has insufficient resources within its existing portfolio, PG&E confirms it makes purchases to meet its substitution capacity obligations for outages at DCCP as set forth in the California Independent System Operator Corporation Tariff.

**PACIFIC GAS AND ELECTRIC COMPANY  
Diablo Canyon Power Plant Operations Extension OIR  
Rulemaking 23-01-007  
Data Response**

PG&E Data Request No.:	CalCCA_003-Q013		
PG&E File Name:	DiabloCanyonPowerPlantOperationsExtensionOIR_DR_CalCCA_003-Q013		
Request Date:	August 15, 2023	Requester DR No.:	003
Date Sent:	August 21, 2023	Requesting Party:	California Community Choice Association
PG&E Witness:	Rhett Kikuyama	Requester:	Nikhil Vijaykar

**QUESTION 013**

Refer to 2-19:22 to 2-20:7, and PG&E’s response to CalCCA 2.02- 2.09, please confirm or deny that PG&E is already required to provide substitution capacity for the CAM eligible resources in its portfolio. If deny, please explain.

**ANSWER 013**

PG&E confirms that it is required to provide substitution capacity for certain Cost Allocation Mechanism (CAM)-eligible resources within its portfolio in order to meet its substitution capacity obligation as set forth in the California Independent System Operator Corporation (CAISO) Tariff.

The CAISO Tariff places its substitution capacity obligation upon the scheduling coordinator of the generation resource. Accordingly, since PG&E is either not the scheduling coordinator or not contractually obligated to provide substitution capacity for every CAM-eligible resource in its portfolio, the capacity volumes for which PG&E is required to provide substitution capacity is lower than the total CAM-eligible capacity volumes.

**PACIFIC GAS AND ELECTRIC COMPANY  
Diablo Canyon Power Plant Operations Extension OIR  
Rulemaking 23-01-007  
Data Response**

PG&E Data Request No.:	CalCCA_003-Q014		
PG&E File Name:	DiabloCanyonPowerPlantOperationsExtensionOIR_DR_CalCCA_003-Q014		
Request Date:	August 15, 2023	Requester DR No.:	003
Date Sent:	August 21, 2023	Requesting Party:	California Community Choice Association
PG&E Witness:	Rhett Kikuyama	Requester:	Nikhil Vijaykar

**QUESTION 014**

Refer to 2-19:22 to 2-20:7, and PG&E's response to CalCCA 2.02- 2.09, please confirm or deny PG&E follows the same process to provide substitution capacity for CAM resources as it does for other resources in its portfolio, i.e., it reserves RA capacity from existing resources and/or makes purchases in the RA bilateral market as needed. If deny, please explain.

**ANSWER 014**

PG&E confirms that it follows the same process to provide substitution capacity for Cost Allocation Mechanism (CAM)-eligible resources on outage as it does for other resources in its portfolio that are committed for RA capacity on a supply plan for which PG&E is the scheduling coordinator, i.e., it reserves capacity from existing resources in its portfolio and/or makes purchases, as needed.

**PACIFIC GAS AND ELECTRIC COMPANY**  
**Diablo Canyon Power Plant Operations Extension OIR**  
**Rulemaking 23-01-007**  
**Data Response**

PG&E Data Request No.:	CalCCA_003-Q015		
PG&E File Name:	DiabloCanyonPowerPlantOperationsExtensionOIR_DR_CalCCA_003-Q015		
Request Date:	August 15, 2023	Requester DR No.:	003
Date Sent:	August 22, 2023	Requesting Party:	California Community Choice Association
PG&E Witness:	Rhett Kikuyama	Requester:	Nikhil Vijaykar

**QUESTION 015**

Refer to 2-19:22 to 2-20:7, and PG&E’s response to CalCCA 2.02- 2.09, please identify and quantify any additional, incremental costs PG&E would incur related to substitute capacity if RA attributes are allocated compared to the *status quo*.

**ANSWER 015**

In this response, PG&E understands “status quo” to mean that RA attributes from DCP’s extended operations are managed outside of PG&E’s bundled service portfolio and not allocated out to CPUC-jurisdictional LSEs.

If that is the case, the Commission will first need to consider whether and how an allocation of RA attributes should change how other resources within PG&E’s portfolio will be used to manage PG&E’s bundled service customers’ needs. This is because PG&E’s bundled service portfolio is currently optimized to address PG&E’s bundled service needs. For example, if PG&E needs to retain RA capacity from its existing portfolio to meet any substitution capacity obligation, that capacity cannot be made available to the RA market to purchase. Depending on the month and availability of supply, this could further tighten the RA market and effectively increase prices.

With that said, PG&E continues to state that it cannot reasonably quantify the additional, incremental costs with certainty, especially given that it remains unclear on the conditions and work that could be placed upon the plant as part of its relicensing and the timing and duration in which that work would occur. For purposes of this response, PG&E provides additional, incremental costs that could potentially be incurred under a single scenario of dual refueling outages that spans across two consecutive months within a single calendar year.

In response to Question 9, PG&E indicated that the long-range plan for DCP’s refueling outages has Spring (April/May) and Fall (October/November) timeframes. PG&E’s estimated costs below are based on the applicable RA price for those months as published in the Commission’s 2021 RA Report.<sup>1</sup>

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<sup>1</sup> Commission’s 2021 RA Report, pp. 27-28.

As a result, the additional, incremental costs are approximately \$25.7 million and \$35.6 million using the weighted average and 85<sup>th</sup> percentile price, respectively, for this single scenario if RA attributes are allocated as compared to the *status quo*. These estimated costs represent the substitution capacity and/or opportunity (e.g., potential RA sales revenues) costs. If DCPD is used for RA and goes on outage, replacing this capacity will require PG&E to use resources that could otherwise be used by other LSEs in a tight RA market.

Month	Substitution Capacity for DCPD (MW)	Weighted Average (\$/kW-Month)	Weighted Average (\$000)	Total (\$000)
April	1,140 (Unit 1)	\$5.08	\$5,791.20	\$11,844.60
May		\$5.31	\$6,053.40	
October	1,140 (Unit 2)	\$6.59	\$7,512.60	\$13,885.20
November		\$5.59	\$6,372.60	

Month	Substitution Capacity for DCPD (MW)	85 <sup>th</sup> Percentile (\$/kW-Month)	85 <sup>th</sup> Percentile (\$000)	Total (\$000)
April	1,140 (Unit 1)	\$7.49	\$8,538.60	\$17,088.60
May		\$7.50	\$8,550.00	
October	1,140 (Unit 2)	\$8.75	\$9,975.00	\$18,525.00
November		\$7.50	\$8,550.00	

Importantly, if PG&E is unable to provide sufficient substitution capacity, CAISO has the authority to cancel the planned outage at DCPD. A cancelled outage could increase the operational risk of the plant and result in PG&E incurring additional costs to perform the work in the future. These costs cannot be reasonably quantified at this time.