

PUBLIC UTILITIES COMMISSION  
505 Van Ness Avenue  
San Francisco CA 94102-3298



**Pacific Gas & Electric Company**  
**GAS (Corp ID 39)**  
**Status of Advice Letter 4667G**  
**As of November 22, 2022**

Subject: Compliance Report on the Adequacy of Backbone Transmission Capacity Holdings and Capacity Utilization

Division Assigned: Energy

Date Filed: 10-17-2022

Date to Calendar: 10-21-2022

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Authorizing Documents: D2207002

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<b>Effective Date:</b>	<b>11-17-2022</b>

Resolution Required: No

Resolution Number: None

Commission Meeting Date: None

CPUC Contact Information:

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**PUBLIC UTILITIES COMMISSION**  
505 Van Ness Avenue  
San Francisco CA 94102-3298



To: Energy Company Filing Advice Letter

From: Energy Division PAL Coordinator

Subject: Your Advice Letter Filing

The Energy Division of the California Public Utilities Commission has processed your recent Advice Letter (AL) filing and is returning an AL status certificate for your records.

The AL status certificate indicates:

- Advice Letter Number
- Name of Filer
- CPUC Corporate ID number of Filer
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- Effective Date of Filing
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The Energy Division has made no changes to your copy of the Advice Letter Filing; please review your Advice Letter Filing with the information contained in the AL status certificate, and update your Advice Letter and tariff records accordingly.

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Energy Division's Tariff Unit by e-mail to  
**[edtariffunit@cpuc.ca.gov](mailto:edtariffunit@cpuc.ca.gov)**

October 17, 2022

**Advice 4667-G**

(Pacific Gas and Electric Company ID U 39 G)

Public Utilities Commission of the State of California

**Subject: Compliance Report on the Adequacy of Backbone Transmission Capacity Holdings and Capacity Utilization**

Pacific Gas and Electric Company (“PG&E”) hereby submits for filing a compliance report on the adequacy of PG&E’s backbone transmission capacity holdings and slack capacity consistent with PG&E’s proposals in Phase II of the Gas Capacity Order Instituting Rulemaking (“OIR”), Decision (“D.”) 06-09-039 and required updates from the OIR to Establish Policies, Processes, and Rules to Ensure Safe and Reliable Gas Systems in California and perform Long-Term Gas System Planning (Track 1A and 1B), D.22-07-002.

**Purpose**

The purpose of this advice letter and the attached report is to comply with Ordering Paragraph (OP) 3 in D.06-09-039 and to provide the California Public Utilities Commission (“Commission”) with an update on PG&E’s backbone transmission capacity utilization outlook and (OP) 5 in D.22-07-002 to update the reporting schedule of these advice letters on slack capacity biannually rather than biennially.

**Background**

In 2004, the Commission issued Rulemaking (“R.”) 04-01-025 to investigate the adequacy of natural gas supplies and infrastructure to meet the long-term needs of the gas consumers in California. In D.06-09-039, the Commission determined that it was “comfortable with the total amount of firm backbone transmission capacity on both the PG&E and SoCal Gas systems.”<sup>1</sup> To ensure that the utilities monitor the adequacy of their backbone capacity, the Commission required that the utility make biennial advice letter submittals, starting in 2008, to demonstrate that they have adequate backbone capacity consistent with the showings made in Rulemaking 04-01-025. The eighth biennial report was submitted on July 1, 2022.

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<sup>1</sup> D.06-09-039, Finding of Fact 12.

On July 14, 2022, the Commission issued D.22-07-002 in R.20-01-007 which ordered SoCalGas and PG&E to file their advice letters on slack capacity biannually rather than biennially and include detailed information about their actual, rather than their nominal backbone transmission capacity, and whether that capacity is sufficient to meet the average day in a 1-in-10 cold-and-dry hydroelectric year backbone capacity standard.<sup>2</sup>

Specifically, (OP) 5 states:

*Pacific Gas and Electric Company and Southern California Gas Company shall report biannually (on April 15 and October 15) on any changes impacting their ability to meet the minimum design standard, specifying the actual operating capacities of the utilities' backbone transmission lines/zonal areas or paths not the nominal capacities as described in Appendix A, Attachment 1*

This Decision also directed that the advice letter should be served on the R.20-01-007 service list and must specify the actual—not the nominal— average Cycle 1 operating capacities of the utilities' backbone transmission pipelines by zonal area or path over the previous nine-month period in both million cubic feet per day (MMcfd) and dekatherms (Dth) according to the formulas described in Appendix A, Attachment 1<sup>3</sup>.

### **Summary of Report**

Based on the information contained in the attached report, as filed in Advice 4625-G, PG&E has adequate backbone transmission capacity to ensure that both current and forecast demand can be met based on the criteria adopted in D.06-09-039 through 2035. As such, the demand forecasts were based on the 2022 California Gas Report and certain analysis and information in these subsequent biannual reports will be updated after the 2024 CGR report is published.

PG&E has added information on the average Cycle1 operating capacities of the utilities' backbone transmission pipelines by zonal area or path over the previous nine-month period in both million cubic feet per day (MMcfd) and dekatherms(Dth) according to the formulas described in Appendix A, Attachment 1 in compliance with OP 5.

In conclusion, for the reporting period ending September 30, 2022, there were no significant changes impacting PG&E's ability to meet the minimum design standard, as shown in Section C, PG&E's actual operating capacities of the backbone transmission lines/paths compared to the 1-in-10 cold and dry year backbone capacity standard. PG&E's actual operating capacities were sufficient to meet the average day in a 1-in-10 cold-and-dry hydroelectric year backbone capacity standard.

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<sup>2</sup> D.22-07-002, Conclusion of Law 10

<sup>3</sup> D.22-07-002 p. 17

The submittal 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 submittal may do so by letter sent electronically via E-mail, no later than November 7, 2022, which is 21 days after the date of this submittal.<sup>4</sup> Protests must be submitted to:

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

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

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

Any person (including individuals, groups, or organizations) may protest or respond to an advice letter (General Order 96-B, Section 7.4). The protest shall contain the following information: specification of the advice letter protested; grounds for the protest; supporting factual information or legal argument; name and e-mail address of the protestant; and statement that the protest was sent to the utility no later than the day on which the protest was submitted to the reviewing Industry Division (General Order 96-B, Section 3.11).

### **Effective Date**

PG&E requests that this Tier 2 advice letter become effective on regular notice, November 17, 2022, which is 30 calendar days after the date of submittal.

### **Notice**

In accordance with General Order 96-B, Section IV, a copy of this advice letter is being sent electronically to parties shown on the attached list and the parties on the service list for R.04-01-025. Address changes to the General Order 96-B service list should be directed to PG&E at email address PGETariffs@pge.com. For changes to any other service list, please contact the Commission's Process Office at (415) 703-2021 or at Process\_Office@cpuc.ca.gov. Send all electronic approvals to PGETariffs@pge.com. Advice letter submittals can also be accessed electronically at: <http://www.pge.com/tariffs/>.

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<sup>4</sup> PG&E is moving this date to the following business day because the 20-day protest period concludes on a weekend.

/S/            
Sidney Bob Dietz II  
Director, Regulatory Relations

Attachment 1: Compliance Report on the Adequacy of Backbone Transmission Capacity  
Holdings and Capacity Utilization

cc: Service Lists R.04-01-025 and R.20-01-007



# 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 (U 39 G)

Utility type:

- ELC       GAS       WATER  
 PLC       HEAT

Contact Person: Stuart Rubio

Phone #: (415) 973-4587

E-mail: PGETariffs@pge.com

E-mail Disposition Notice to: SHR8@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) #: 4667-G

Tier Designation: 2

Subject of AL: Compliance Report on the Adequacy of Backbone Transmission Capacity Holdings and Capacity Utilization

Keywords (choose from CPUC listing): Compliance, Capacity

AL Type:  Monthly  Quarterly  Annual  One-Time  Other: Biannual

If AL submitted in compliance with a Commission order, indicate relevant Decision/Resolution #: D.06-09-039 and D.22-07-002

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: N/A

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: 11/17/22

No. of tariff sheets: 0

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

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

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

Tariff schedules affected: N/A

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

California Public Utilities Commission  
Energy Division Tariff Unit Email:  
[EDTariffUnit@cpuc.ca.gov](mailto:EDTariffUnit@cpuc.ca.gov)

Contact Name: Sidnev Bob Dietz II. c/o Megan Lawson  
Title: Director, Regulatory Relations  
Utility/Entity Name: Pacific Gas and Electric Company  
  
Telephone (xxx) xxx-xxxx: (415)973-2093  
Facsimile (xxx) xxx-xxxx:  
Email: PGETariffs@pge.com

Contact Name:  
Title:  
Utility/Entity Name:  
  
Telephone (xxx) xxx-xxxx:  
Facsimile (xxx) xxx-xxxx:  
Email:

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

Clear Form

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**PACIFIC GAS AND ELECTRIC COMPANY**

**ATTACHMENT 1**

**COMPLIANCE REPORT ON THE ADEQUACY OF  
BACKBONE TRANSMISSION CAPACITY HOLDINGS AND  
CAPACITY UTILIZATION**

**SUBMITTED OCTOBER 17, 2022**

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PACIFIC GAS AND ELECTRIC COMPANY  
ATTACHMENT 1  
COMPLIANCE REPORT ON THE ADEQUACY OF  
BACKBONE TRANSMISSION CAPACITY HOLDINGS AND  
CAPACITY UTILIZATION

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**PACIFIC GAS AND ELECTRIC COMPANY**  
**ATTACHMENT 1**  
**COMPLIANCE REPORT ON THE ADEQUACY OF**  
**BACKBONE TRANSMISSION CAPACITY HOLDINGS AND**  
**CAPACITY UTILIZATION**

**A. Introduction**

In Decision 06-09-039, the California Public Utilities Commission (Commission) adopted a natural gas transportation backbone capacity utilization guideline for Pacific Gas and Electric Company (PG&E) and Southern California Gas Company (SoCalGas). This guideline states that if annual utilization of intrastate backbone transmission capacity exceeds 80-90 percent on a forecast basis, an expansion of capacity may be needed. This guideline is set as a range to provide the utilities with the flexibility to manage how and when to make new infrastructure investments.

D.06-09-039 required that:

The Pacific Gas and Electric Company and the Southern California Gas Company shall demonstrate in biennial advice letter filings to the Commission's Energy Division starting 2008 that they hold adequate backbone transmission capacity and have slack capacity consistent with their proposals presented herein.<sup>1</sup>

In compliance with the Commission's direction, PG&E's July 1, 2022 filing (Advice 4625-G) updated the analysis PG&E performed in Phase II of Gas Capacity Order Instituting Rulemaking (OIR) (R.04-01-025) and PG&E's previous compliance filings.<sup>2</sup> This updated assessment further addresses PG&E's holding of backbone and storage capacity to service bundled core customers and PG&E's electric generation requirements (Section B), adequacy of the backbone transmission system (Section E), and adequacy of the local transmission capacity (Section F).

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<sup>1</sup> See D.06-09-039, Ordering Paragraph 3, at p. 184.

<sup>2</sup> PG&E previously submitted compliance filings in 2008, 2010, 2012, 2014, 2016, 2018, 2020, and 2022.

The 2022 California Gas Report referenced was filed with the California Public Utilities Commission (CPUC) on August 1, 2022.

In July 2022, the Commission issued D.22-07-002 in R.20-01-007, which ordered SoCalGas and PG&E to file their advice letters on slack capacity bi-annually rather than biennially and include detailed information about their actual, rather than their nominal backbone transmission capacity, and whether that capacity is sufficient to meet the average day in a 1-in-10 cold-and-dry hydroelectric year backbone capacity standard. Specifically, Ordering Paragraph (OP) 5, Pacific Gas and Electric Company and Southern California Gas Company shall report biannually (on April 15 and October 15) on any changes impacting their ability to meet the minimum design standard, specifying the actual operating capacities of the utilities' backbone transmission lines/zonal areas or paths not the nominal capacities as described in Appendix A, Attachment 1. The D.22-07-002 also directed that the advice letter should be served on the service list for R.20-01-007.

Although the reporting requirement schedule changed from biennially to biannually, the California Gas Report's reporting requirement remains at a biennial schedule. For this first biannual report, PG&E added "Previous Nine-Month Operating Backbone Capacity" to Section C detailing the actual average Cycle 1 operating capacities of PG&E's backbone transmission paths.

## **B. Adequacy of PG&E's Backbone Transmission Capacity Holdings**

Since 1998, PG&E's intrastate backbone transmission capacity holdings to serve core customers have been determined through PG&E's Gas Transmission and Storage (GT&S)<sup>3</sup> and Cost Allocation and Rate Design (CARD) Rate Case<sup>4</sup> Applications, some of which are also referred to as PG&E's Gas Accords. This Application structure has provided core customers access to PG&E gas transmission and storage services, while also providing, among other things, the opportunity for all participating parties to evaluate PG&E's core backbone

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<sup>3</sup> See A.21-06-021

<sup>4</sup> See A.21-09-018

transmission and storage holdings. In PG&E's 2019 GT&S Rate Case, the Commission approved the proposed core backbone transmission holdings and a firm core storage holding for 2019-2022 in conjunction with the approval of PG&E's Natural Gas Storage Strategy. The Commission authorized acquisition of storage capacity from the Independent Storage Providers (ISP), firm intrastate and interstate pipeline capacity, and/or firm peaking supply arrangements to meet the core planning standard<sup>5</sup>. In PG&E's 2023 GT&S CARD Rate Case, PG&E Core Gas Supply has proposed core backbone transmission holdings and firm storage holdings for 2023-2026, as well as modification to the Interstate Capacity Planning Range to reliably serve core customers. For bundled electric customers, PG&E arranges intrastate backbone transmission capacity according to its Natural Gas Procurement Limits, filed as part of Appendix C: Procurement Limits and Ratable Rates of PG&E's Bundled Procurement Plan (BPP). PG&E's 2014 BPP was approved in D.15-10-031 on October 22, 2015<sup>6</sup>. PG&E's BPP was filed as a distinct phase of the biennial Long-Term Procurement Plan (LTPP) proceedings, and each BPP superseded those in previous LTPPs.

PG&E believes that the combined General Rate Case (GRC) proceedings and the BPP are the appropriate forums in which to address the adequacy of PG&E's intrastate contractual holdings for the core and bundled-electric portfolios, respectively.

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<sup>5</sup> See D.06-07-010, Ordering Paragraph 1, at p. 36

<sup>6</sup> See D.06-07-010, Ordering Paragraph 1, at p. 36

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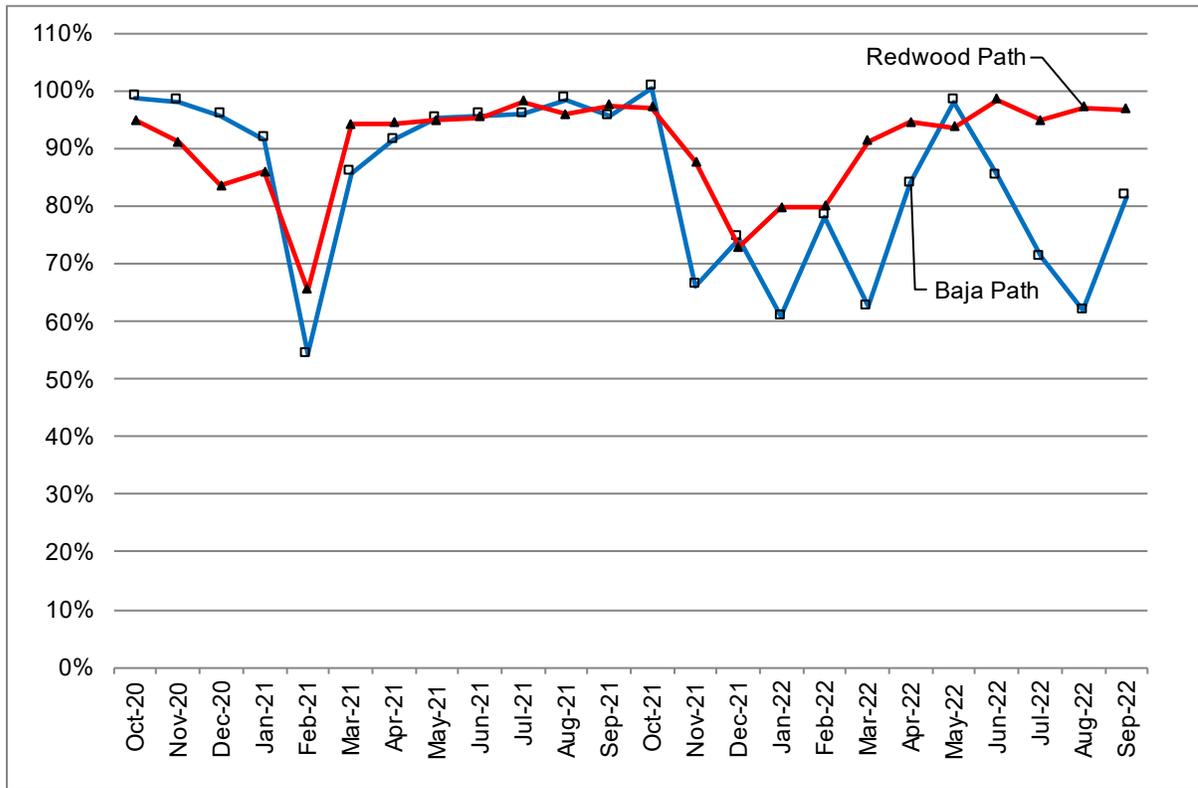
### **C. Backbone Capacity Utilization**

Additional pipeline capacity over and above average demand levels provides significant value to customers even in years without pipeline maintenance outages, supply disruptions, or increased demand. Additional pipeline capacity allows the market flexibility to move purchases between receipt points, which results in more gas-on-gas competition at the PG&E Citygate. Additional pipeline capacity, when combined with storage, also provides significant flexibility for customers to time their gas purchases throughout the year.

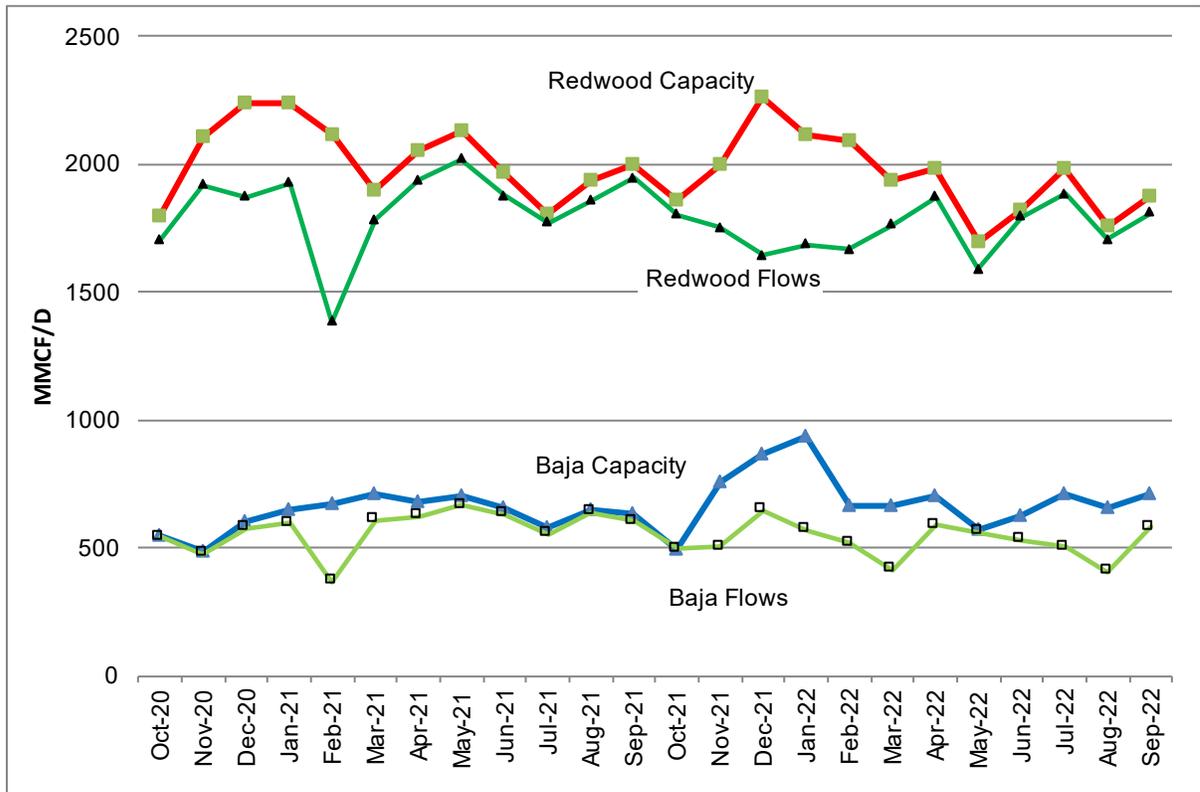
Figures 1, 2, and 3 below show backbone capacity utilization during the 24-month period ending September 30, 2022. The Redwood Path continued to be the preferred supply path as shippers used it to transport gas from the Rocky Mountains on the Ruby Pipeline and from Canada on Gas Transmission Northwest to PG&E's system. The Redwood Path had high utilization, between 87% and 98% percent during the traditional storage injection season (April through October).

The Baja Path, which shippers used to transport gas from Texas and the U.S. Southwest on the El Paso Natural Gas and Transwestern pipelines, had slightly lower utilization rates than the Redwood Path during the past 24 months. Baja utilization of 84% on average has been lower compared to the previous 24-month period average of 86%. The lower utilization during the 2021-2022 winter period is the result of decreased Baja throughput during the very mild winter.

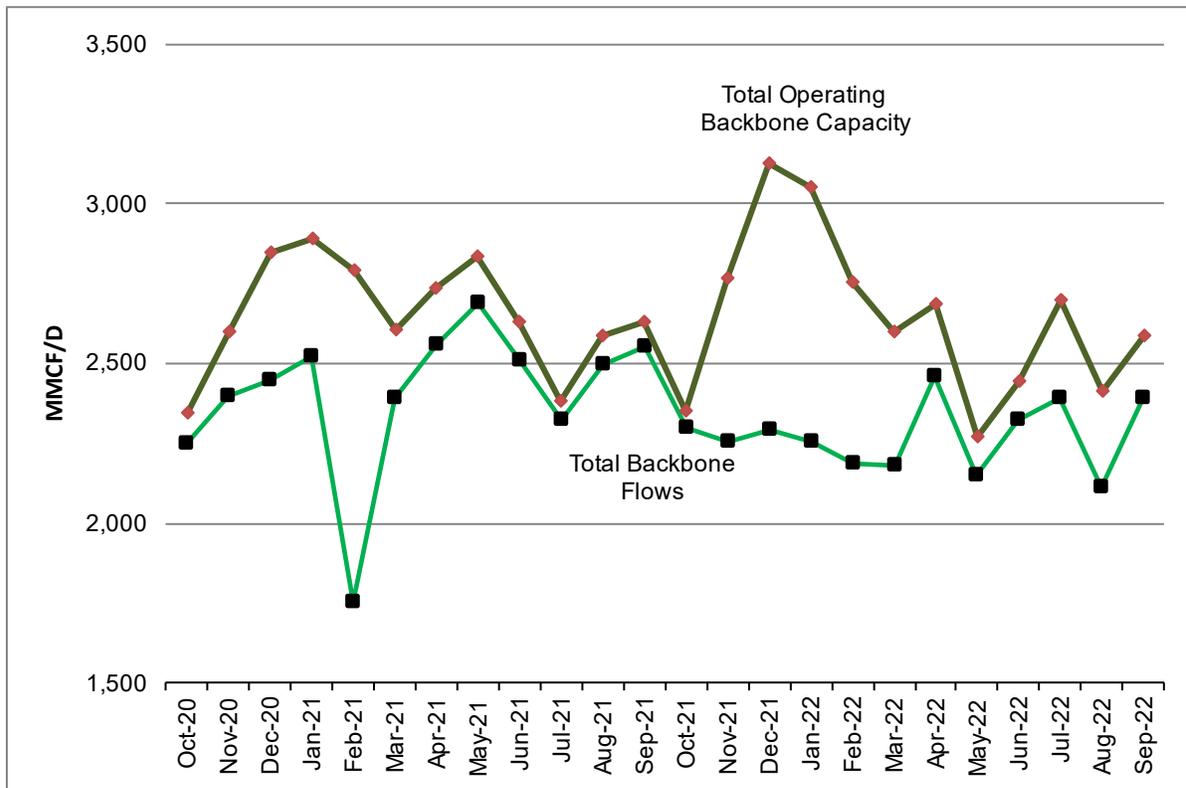
**FIGURE 1**  
**PERCENT BACKBONE CAPACITY UTILIZATION BY PATH**  
**OCTOBER 2020 – SEPTEMBER 2022**



**FIGURE 2**  
**BACKBONE CAPACITY AND FLOW BY PATH (MMCF/D)**  
**OCTOBER 2020 – SEPTEMBER 2022**



**FIGURE 3  
TOTAL BACKBONE CAPACITY AND FLOWS (MMCF/D)  
OCTOBER 2020 – SEPTEMBER 2022**



A sufficient backbone capacity margin ensures that the marginal supply source at the California border is available to compete against any other supply source that might otherwise drive a higher price. A margin of capacity also facilitates the injection of gas into storage. This storage injection occurs in addition to end-use demand for gas on the backbone system, resulting in high pipeline utilization at certain times of the year.

The market takes advantage of the extra backbone capacity to time the injection and withdrawal of gas to and from the storage fields. Gas is typically bought for injection at times when its current price is lower than its anticipated future value, when it will be withdrawn. Without the extra backbone capacity on PG&E’s system, customers would be significantly constrained in their ability to time the injection of gas into storage fields. The price of natural gas can vary substantially from month to month and the lowest prices are usually seen in the spring and fall months. It is important to maintain sufficient backbone

capacity for the market to make large injections in months when natural gas prices are lower.

### **Previous Nine-Month Operating Backbone Capacity**

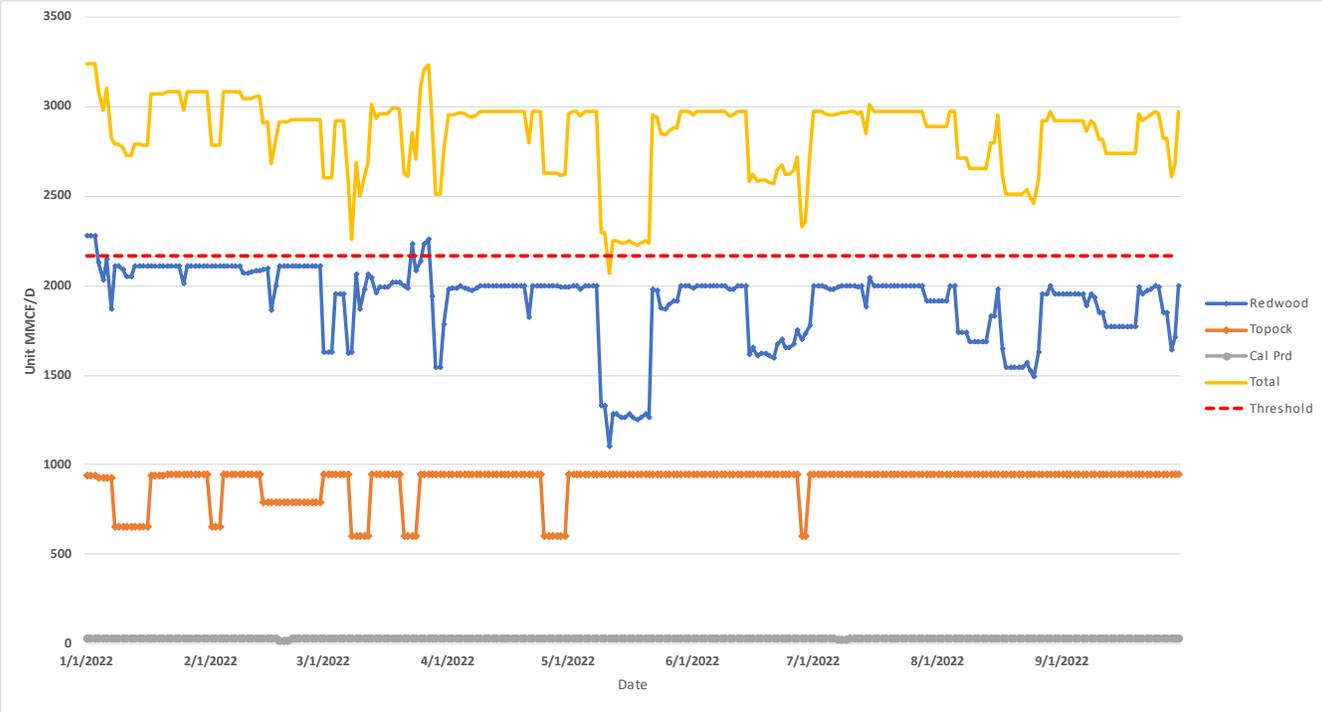
Figures 4 and 5 below represent daily actual operating capacities for the Redwood and Baja-Topock paths, plus California production gas scheduled volumes in MMCF/day and Dth/day. For the period from January 1, 2022 through, September 30, 2022, the calculation<sup>7</sup> for the Redwood Path averaged 1,912 MMCF/d or 1,996,605 Dth/d, the Baja Path averaged 901 MMCF/d or 923,170 Dth/d, and California Production averaged 26 MMCF/d or 26,879 Dth/d. Combined total available backbone capacity averaged 2,839 MMCF/d or 2,946,655 Dth/d and was above the required threshold to maintain adequate backbone capacity to meet the average day in a 1-in-10 cold-and-dry hydroelectric year backbone capacity standard established by D.06-09-039. For 2022, this daily threshold is 2,165 MMCF/d<sup>8</sup> or 2,240,775 Dth/d (2165 MMcf\*1035 BTU Conversion (Dth/MMcf)).

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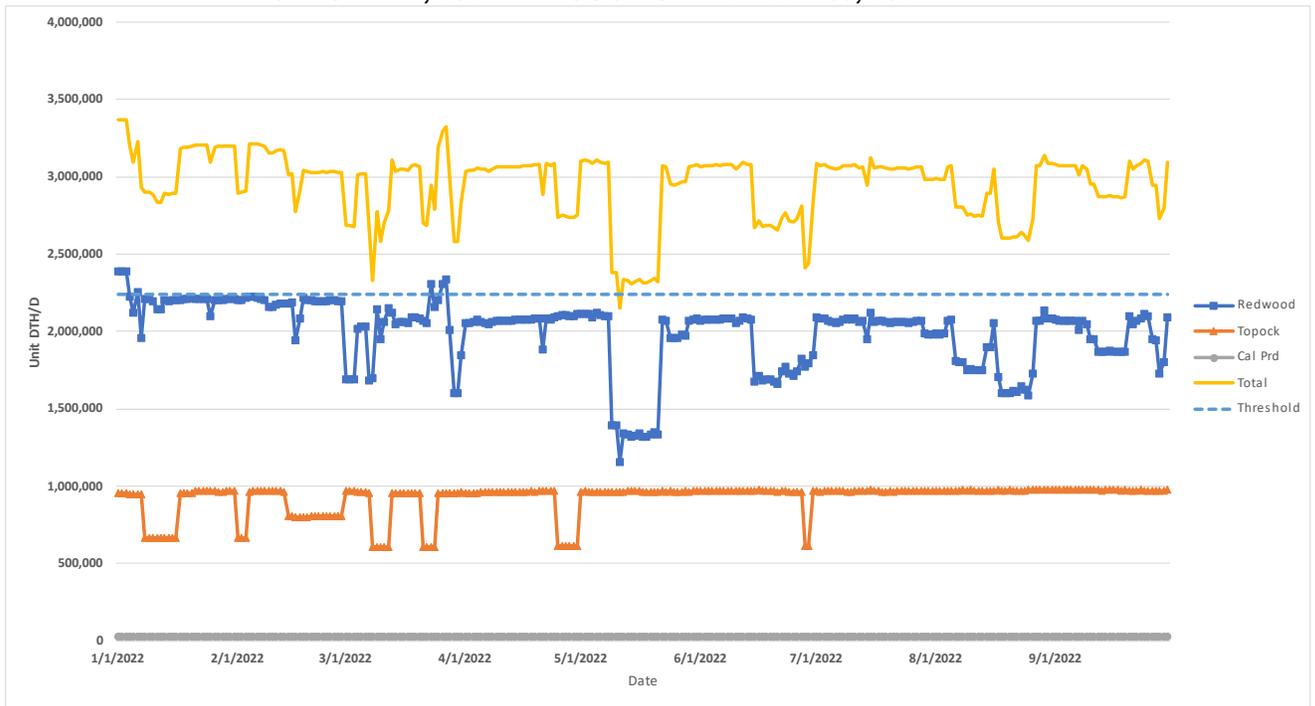
<sup>7</sup> D.22-07-002, Appendix A, Attachment 1 Sample Calculations of Total Available

<sup>8</sup> 2022 California Gas Report, Table 25 ANNUAL GAS SUPPLY FORECAST– 2022, Line 25, p. 106

**FIGURE 4**  
**TOTAL AVAILABLE CAPACITY FOR REDWOOD, BAJA-TOPOCK AND CA PRODUCTION**  
**(MMCF/D)**  
January 1, 2022 through September 30, 2022



**FIGURE 5**  
**TOTAL AVAILABLE CAPACITY FOR REDWOOD, BAJA-TOPOCK AND CA PRODUCTION**  
**(DTH/D)**  
**JANUARY 1, 2022 THROUGH SEPTEMBER 30, 2022**



Although the average combined total available backbone capacity for the period from January 1, 2022, through September 30, 2022, was above the capacity standard; however, during that period, it did fall below the standard on one occasion, as referenced in Figure 6.

**FIGURE 6**  
**DAILY TOTAL AVAILABLE BACKBONE SLACK CAPACITY**

	(a)	(b)	(c)	(d)	(e)	(f=d-e)
<b>May 11, 2022</b>	<b>Redwood Path</b>	<b>Baja - Topock</b>	<b>California Production</b>	<b>Total Available Capacity</b>	<b>1 in 10 Cold &amp; Dry Year</b>	<b>Slack Capacity</b>
<b>Available Receipt Point Capacity (MMcf/d)</b>	1,100	945	26	2,071	2,165	(94)
<b>Available Receipt Point Capacity (Dth/d)</b>	1,138,500	978,075	26,910	2,143,485	2,240,775	(97,290)
<b>Comments</b>	Buckeye PLS Rebuild Station Maintenance on the Redwood Path					

## **D. Demand Forecasts**

To assess the adequacy of PG&E's infrastructure to meet current and future demand, PG&E used the demand forecasts in the 2022 California Gas Report (CGR). The CGR provides a comprehensive, long-term outlook for natural gas requirements for both core and noncore markets. Evaluating PG&E's infrastructure using the CGR forecasts provides a valid assessment of the adequacy of PG&E's infrastructure to meet current and future demand through 2031.

The off-system demand forecast presented in this analysis is the same as that presented in the 2022 CGR for the years 2020-2035. PG&E off-system demand averages 272 MMcf/d in 2022 and averages about 308 MMcf/d in the summer from 2023 through 2026. Afterwards, the off-system demand forecast is zero from 2027 through 2031. This forecast reflects PG&E's actual currently booked off-system contracts for 2023-2031. PG&E anticipates its future off-system contracts will be short-term and/or discounted contracts, as is the current practice. PG&E would expand backbone capacity to serve the off-system market only if it had additional customers willing to pay full tariff rates under long-term contracts.

PG&E developed the 1-in-10 year Cold and Dry Forecast by relying on cold temperature conditions combined with dry hydro conditions. This forecast assumes that winter temperatures over the time horizon will have a 1-in-10 likelihood of occurrence. The cold weather assumption increases electric load for space heating needs and impacts EG gas demand. This same methodology was used in the CGR for the high-demand forecasts. The next updates will be after the 2024 California Gas Report

## **E. Adequacy of PG&E's Backbone Transmission Capacity**

Table 1 below shows the transmission capacities of the PG&E backbone system. Table 2 compares the amount of backbone capacity to forecasted demand on the PG&E system from 2022 to 2031. Based on this demand forecast, PG&E expects average annual backbone capacity utilization to be 77 percent or less from 2022 through 2027, and 66 percent or less from 2027 through 2031, indicating compliance with the 80-90 percent annual utilization

standard established in D.06-09-039. Note that the higher annual utilization rates in the early years of the forecast period stem from the currently booked contracts for off-system service discussed above. While there is uncertainty in this forecast, the ten-year window provides sufficient lead-time for system enhancements to meet longer-term growth should the forecast of system use change over time.

Other than the increase in demand arising from currently booked off-system contracts, PG&E estimates that utilization of its backbone system through 2031 will be gradually decreasing.

**TABLE 1  
PG&E BACKBONE TRANSMISSION CAPACITY (MMCF/D)**

Line No.	Transmission Path	Firm Receipt Capacity <sup>(a)</sup>
1	Silverado Path <sup>(b)</sup>	56
2	Baja Path	935
3	Redwood Path	2,060
4	Total	3,051

**Notes:**

(a) Firm Receipt Capacities are those currently approved for use within PG&E

(b) Conventional California production and renewable natural gas

**TABLE 2  
PG&E BACKBONE CAPACITY UTILIZATION (MMCF/D)**

Line No.	Year	Average Demand <sup>(a)</sup>	1-in-10 Cold and Dry Year Demand <sup>(a)</sup>	Backbone Receipt Capacity <sup>(b)</sup>	Capacity Utilization Cold and Dry Year Demand
1	2022	2,105	2,165	3,051	71%
2	2023	2,110	2,205	3,051	72%
3	2024	2,099	2,200	3,051	72%
4	2025	2,094	2,197	2,954	74%
5	2026	2,119	2,233	2,906	77%
6	2027	1,805	1,932	2,906	66%
7	2028	1,794	1,919	2,906	66%
8	2029	1,778	1,900	2,906	65%
9	2030	1,754	1,877	2,906	65%
10	2031	1,740	1,865	2,906	64%

Notes:

(a) Average Demands and 1-in-10 Cold and Dry Year Demands are based on the 2022 California Gas Report with off-system contracts excluded entirely in 2027-2035 to reflect currently booked contracts.

(b) Backbone Receipt Capacity is taken from Table 1 above for Line numbers 1 – 3. Backbone Receipt Capacity for lines 4 – 10 is taken from Chapter 11 of 2023 GRC to factor in the reduction in Redwood Path Firm Receipt Capacity due to the proposed retirement of Tionesta Compressor Station.

Table 3 shows the forecast of peak day demands and available capacities and is the same as shown in the 2022 California Gas Report. The core demand is the forecast demand anticipated during a 1 day in 10-year peak day event. The noncore non-EG demand is the average forecast daily demand for December under 1-in-10 cold and dry hydro conditions. PG&E forecast the peak day demand for electric generation in Table 3 by taking the 90<sup>th</sup> percentile of December-February daily demand under 1-in-10 cold-and-dry conditions from the 2022 California Gas Report.

There is a very high level of uncertainty in forecasting peak day electric generation demand. Daily electric generation demand in PG&E's service area is not only dependent on conditions in Northern California, but also Southern California and throughout the West including availability of generation plants, local demand for gas in other sectors, hydroelectric generation conditions, additions to renewable generation resources, and natural gas prices. Taking the 90<sup>th</sup> percentile represents a reasonable balance between overplanning capacity, *i.e.* planning capacity based on the highest peak day demand, and not having adequate capacity to supply EG facilities that would be needed to ensure the reliability of the electric system.

Peak demand forecasts, existing pipeline and storage capacities, and new capacity investments are subject to ongoing litigation in PG&E's 2023 General Rate Case (A.21-06-021).

**TABLE 3**  
**FORECAST OF DEMANDS FOR CAPACITY AND THE AVAILABLE CAPACITY**

Line No.	Forecast	2022-2023	2023-2024	2024-2025
1	Core Peak Day Demand <sup>(a)</sup>	2,572	2,575	2,579
2	Noncore Non- EG Demand <sup>(b)</sup>	458	460	475
3	EG, Including SMUD <sup>(c)</sup>	897	908	929
4	Off System and Shrinkage <sup>(d)</sup>	123	123	123
5	Inventory Management	300	300	300
6	Reserve Capacity	250	250	250
7	<b>Total Demands</b>	<b>4,600</b>	<b>4,616</b>	<b>4,656</b>
8	Northern Supply Capacity	2,700	2,700	2,700
9	Southern Supply Capacity	1,056	1,072	1,088
10	PG&E McDonald Island and Los Medanos Storage <sup>(e)</sup>	1,054	1,006	913
11	California Production <sup>(f)</sup>	56	56	56
12	<b>Total Supply</b>	<b>4,866</b>	<b>4,834</b>	<b>4,757</b>
13	Short Fall ( ) or surplus	266	218	101

Notes:

(a) Core Demand calculated for 34.2 degrees Fahrenheit system composite temperature taken from the 2022 California Gas Report. These demand numbers include the adjustment for building electrification added in the 2022 California Gas Report

(b) Noncore Non-EG demand is the average daily winter (December) demand under 1-in-10 cold-and-dry conditions from the 2022 California Gas Report

(c) EG, including SMUD represents the 90th percentile of Dec-Feb daily demand under 1-in-10 Cold-and-Dry Conditions from the 2022 California Gas Report.

(d) Off system derived from the D.19-09-025, p. 24, section 5.3.1 table 1. Composition of Demand for System Supply Reliability Standard

(e) Forecasted PG&E storage capacities after investments. 2023 GRC PG&E Opening Testimony 7-47 Table 7-15

(f) Includes forecasted conventional production and renewable natural gas

The APD core forecast is developed using the observed relationship between historical daily weather and core usage data. This relationship is then used to forecast the core load under APD conditions. A 3-year forecast of APD demands is shown in Table 4. This table demonstrates the adequacy of existing supplies to meet core APD demands.

**TABLE 4**  
**FORECAST OF CORE GAS DEMAND AND FIRM SUPPLY**  
**ON AN ABNORMAL PEAK DAY**  
**(MMCF/D)**

Line No.	Description	2022- 2023	2023- 2024	2024- 2025
1	APD Core Demand <sup>(a)</sup>	3,057	3,062	3,070
2	PG&E Firm Storage withdrawal <sup>(b)</sup>	504	456	363
3	Maximum Firm Flowing Supply <sup>(c)</sup>	3,051	3,051	3,051
-	-			

**Notes:**

(a) Includes PG&E's Core Gas Supply Department and other Core Aggregator's core customer demands. APD core demand forecast is calculated for 28.3 degrees Fahrenheit system composite temperature, corresponding to a 1-in-90-year cold temperature event. PG&E uses a system composite based on six weather sites. This is a backbone core APD forecast.

(b) Forecasted PG&E storage capacities after investments without Inventory Management and Reserve Capacity. 2023 GRC PG&E Opening Testimony 7-47 Table 7-15.

(c) Backbone Receipt Capacity is taken from Table 1 above. The Maximum Firm Flowing Supply includes firm Redwood and Baja capacities, and nominal amounts of California Production. Additional pipeline capacity available for ISP flows is not included.

**F. Adequacy of Local Transmission Capacity and Design Criteria**

All of PG&E's local gas transmission systems are designed to provide adequate capacity under all weather conditions including extreme cold weather.

There are two cold weather design criteria: Cold Winter Day (CWD) and Abnormal Peak Day (APD). The CWD design criterion ensures adequate capacity to meet all core and noncore demands. The APD design criterion ensures adequate capacity to meet estimated peak core customer demands alone. PG&E is not proposing any changes to these standards.

The CWD design criterion is based on a cold event that has a recurrence interval of one day in two years. Each local planning area has its own specific CWD temperature. When analyzing each local transmission system for adequate capacity, all core and noncore customers are assumed to be at their CWD load.

The APD design criterion is based on an extremely cold weather event having a recurrence interval of one day in 90 years. Each local planning area has its own specific APD temperature.

PG&E would attempt to serve noncore demand during an APD, but only to the extent such service was compatible with maintaining uninterrupted service to the core load. If there is not enough capacity to serve all the demands, curtailments may be necessary.

All of PG&E's local transmission systems fully meet the APD and CWD design criteria. Most local transmission systems are constrained by the APD design criterion because they are sized to serve only core demand on an APD. On systems where noncore customers are predominant, CWD is the constraining design criterion rather than APD.

## **G. Conclusion**

In summary, for this reporting period ending September 30, 2022, there were no significant changes impacting PG&E's ability to meet the minimum design standard. PG&E's average actual operating capacities were sufficient to meet the average day in a 1-in-10 cold-and-dry hydroelectric year backbone capacity standard.

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

AT&T  
Albion Power Company

Alta Power Group, LLC  
Anderson & Poole

Atlas ReFuel  
BART

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

California Hub for Energy Efficiency  
Financing

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

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

Chevron Pipeline and Power  
City of Palo Alto

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

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

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

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

Intertie

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

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

Modesto Irrigation District  
NLine Energy, Inc.  
NRG Solar

OnGrid Solar  
Pacific Gas and Electric Company  
Peninsula Clean Energy

Pioneer Community Energy

Public Advocates Office

Redwood Coast Energy Authority  
Regulatory & Cogeneration Service, Inc.

Resource Innovations

SCD Energy Solutions  
San Diego Gas & Electric Company

SPURR

San Francisco Water Power and Sewer  
Sempra Utilities

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

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

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