

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE  
SAN FRANCISCO, CA 94102-3298



September 23, 2014

**Advice Letter 3490-G**

Meredith Allen  
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Pacific Gas and Electric Company  
77 Beale Street, Mail Code B10C  
P.O. Box 770000  
San Francisco, CA 94177

**Subject: Report on the Adequacy of PG&E's Backbone Transmission  
Capacity Holdings and Capacity Utilization in Compliance  
with D.06-09-039**

Dear Ms. Allen:

Advice Letter 3490-G is effective July 26, 2014.

Sincerely,

A handwritten signature in cursive script that reads "Edward F. Randolph".

Edward F. Randolph, Director  
Energy Division

June 26, 2014

**Advice 3490-G**

(Pacific Gas and Electric Company ID U 39 G)

Public Utilities Commission of the State of California

**Subject: Report on the Adequacy of Pacific Gas and Electric Company's  
Backbone Transmission Capacity Holdings and Capacity Utilization  
in Compliance With Decision 06-09-039**

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 OIR, Decision ("D.") 06-09-039.

**Purpose**

The purpose of this advice letter and the attached report is to comply with Ordering Paragraph 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. Ordering Paragraph 3 states:

3. 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 in 2008 that they hold adequate backbone transmission capacity and have slack capacity consistent with their proposals presented herein. The first filing is due July 1, 2008.

**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

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

their backbone capacity, the Commission required that the utility make biennial advice letter filings, starting in 2008, to demonstrate that they have adequate backbone capacity consistent with the showings made in Rulemaking 04-01-025. This advice letter is the fourth biennial filing.

### **Summary of Report**

Based on the information contained in the attached report, 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 2024.<sup>2</sup>

The adequacy of PG&E's backbone transmission capacity holdings to serve core and electric customers has historically been addressed in PG&E's Gas Transmission and Storage Rate Case Applications and Bundled Procurement Plan proceedings. PG&E believes that these are the appropriate forums in which to address this issue and, therefore, will limit comments in both the advice letter and the report to addressing the adequacy of system capacity relative to current and forecast demand.

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 July 16, 2014, 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

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 to PG&E 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:

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<sup>2</sup> In order to address the adequacy of PG&E's infrastructure to meet current and future demand, PG&E uses the demand forecasts based on the 2014 California Gas Report.

Brian K. Cherry  
Vice President, Regulatory Relations  
Pacific Gas and Electric Company  
77 Beale Street, Mail Code B10C  
P.O. Box 770000  
San Francisco, California 94177

Facsimile: (415) 973-7226  
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, 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 2 advice filing become effective on regular notice, July 26, 2014, which is 30 calendar days after the date of filing.

### **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 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 filings can also be accessed electronically at: <http://www.pge.com/tariffs/>.

Handwritten signature of Brian Cherry in cursive, with the initials 'KAC' written at the end.

Vice President, Regulatory Relations

cc: Service List R.04-01-025

Attachment: Compliance Report on the Adequacy of Pacific Gas and Electric Company's Backbone Transmission Capacity Holdings and Capacity Utilization

# CALIFORNIA PUBLIC UTILITIES COMMISSION

## ADVICE LETTER FILING SUMMARY ENERGY UTILITY

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

Company name/CPUC Utility No. **Pacific Gas and Electric Company (ID U39 G)**

Utility type:

ELC       GAS  
 PLC       HEAT       WATER

Contact Person: Kingsley Cheng

Phone #: (415) 973-5265

E-mail: k2c0@pge.com and PGETariffs@pge.com

EXPLANATION OF UTILITY TYPE

ELC = Electric      GAS = Gas  
PLC = Pipeline      HEAT = Heat      WATER = Water

(Date Filed/ Received Stamp by CPUC)

Advice Letter (AL) #: **3490-G**

Tier: **2**

Subject of AL: **Report on the Adequacy of Pacific Gas and Electric Company's Backbone Transmission Capacity Holdings and Capacity Utilization in Compliance With Decision 06-09-039**

Keywords (choose from CPUC listing): Compliance, Capacity

AL filing type:  Monthly  Quarterly  Annual  One-Time  Other \_\_\_\_\_

If AL filed in compliance with a Commission order, indicate relevant Decision/Resolution #: D.06-09-039

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: \_\_\_\_\_

Is AL requesting confidential treatment? If so, what information is the utility seeking confidential treatment for: No

Confidential information will be made available to those who have executed a nondisclosure agreement: N/A

Name(s) and contact information of the person(s) who will provide the nondisclosure agreement and access to the confidential information: \_\_\_\_\_

Resolution Required?  Yes  No

Requested effective date: **July 26, 2014**

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: N/A

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

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

**California Public Utilities Commission**  
**Energy Division**  
**EDTariffUnit**  
**505 Van Ness Ave., 4<sup>th</sup> Flr.**  
**San Francisco, CA 94102**  
**E-mail: EDTariffUnit@cpuc.ca.gov**

**Pacific Gas and Electric Company**  
**Attn: Brian K. Cherry**  
**Vice President, Regulatory Relations**  
**77 Beale Street, Mail Code B10C**  
**P.O. Box 770000**  
**San Francisco, CA 94177**  
**E-mail: PGETariffs@pge.com**

**Attachment 1:**  
**Compliance Report on the Adequacy of Pacific Gas and Electric  
Company's Backbone Transmission Capacity Holdings and Capacity  
Utilization**

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**PACIFIC GAS AND ELECTRIC COMPANY**

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

**SUBMITTED June 26, 2014**

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PACIFIC GAS AND ELECTRIC COMPANY  
ADEQUACY OF BACKBONE TRANSMISSION CAPACITY HOLDINGS AND CAPACITY  
UTILIZATION

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1                                   **PACIFIC GAS AND ELECTRIC COMPANY**  
2                                   **ADEQUACY OF BACKBONE TRANSMISSION CAPACITY**  
3                                   **HOLDINGS AND CAPACITY UTILIZATION**

4   **A. Introduction**

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

13                 Decision 06-09-039 required that “the Pacific Gas and Electric Company  
14                 and the Southern California Gas Company shall demonstrate in biennial advice  
15                 letter filings to the Commission’s Energy Division starting 2008 that they hold  
16                 adequate backbone transmission capacity and have slack capacity consistent  
17                 with their proposals presented herein. The first filing is due July 1, 2008.”<sup>1</sup>

18                 In compliance with the Commission’s direction, this filing updates the  
19                 analysis PG&E made in Phase II of Gas Capacity OIR (R.04-01-025) and in the  
20                 previous compliance filings. This updated assessment contains PG&E’s analysis  
21                 of backbone transmission capacity covering the period 2015-2024. As  
22                 explained below, the analysis finds that backbone capacity is adequate over that  
23                 period.

24   **B. Adequacy of PG&E’s Backbone Transmission Capacity Holdings**

25                 Since 1996, PG&E’s intrastate backbone transmission capacity holdings to  
26                 serve core customers have been determined through PG&E’s Gas Transmission  
27                 and Storage Rate Case Applications, sometimes referred to as PG&E’s Gas

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<sup>1</sup> See D.06-09-039 at p. 26.

1 Accord. The Gas Accord has provided stability in gas transmission and storage  
2 services, while providing, among other things, the opportunity for all participating  
3 parties to evaluate and update PG&E's core backbone transmission and storage  
4 holdings. PG&E is also compliant with the Commission's Opinion Regarding the  
5 Proposal for Incremental Core Gas Storage, which adopted PG&E's core  
6 planning standard of a 1-day-in-10-year peak day and authorized acquisition of  
7 incremental storage capacity, firm intrastate and interstate pipeline capacity,  
8 and/or firm peaking supply arrangements to meet the standard.<sup>2</sup> PG&E  
9 successfully acquired incremental storage capacity to meet the standard through  
10 the 2014-2015 winter periods and will evaluate alternatives for subsequent  
11 winter periods.

12 For bundled electric customers, PG&E arranges intrastate backbone  
13 transmission capacity according to its Electric Portfolio Gas Supply Plan (GSP).  
14 This GSP was approved in PG&E's Bundled Procurement Plan (BPP) by the  
15 Commission in Decision (D.) 12-01-033 on January 12, 2012. In Rulemaking 08-  
16 02-007, the Commission consolidated "the vast body of procurement-related  
17 policies and procedures into one, single, comprehensive, and authoritative  
18 document—the 2006 Long-Term Procurement Plans." PG&E's Bundled  
19 Procurement Plan is filed as a distinct phase of the biennial Long-Term  
20 Procurement Plan proceedings, and each BPP supersedes all previous long-  
21 term procurement plans.

22 PG&E believes that the Gas Transmission and Storage rate case  
23 proceedings and the Bundled Procurement Plan are the appropriate forums in  
24 which to address the adequacy of PG&E's intrastate contractual holdings for the  
25 core and bundled electric portfolios, respectively.

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

27 Available capacity provides significant value to customers even in years  
28 without pipeline maintenance outages, supply disruptions or increased demand.

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<sup>2</sup> See D. 06-07-010, Ordering Paragraph 1, at p. 36.

1 Additional pipeline capacity allows the market flexibility to move purchases  
 2 between receipt points, which results in more gas-on-gas competition at the  
 3 PG&E Citygate. Additional pipeline capacity, when combined with storage, also  
 4 provides significant flexibility for customers to time their gas purchases  
 5 throughout the year.

6 Figure 1 shows that the Redwood Path had fairly high utilization, at times at  
 7 or near 100% during the traditional injection season (April through October),  
 8 since 2012. Both Figure 1 and Figure 2 show that the Redwood Path continues  
 9 to be preferred as shippers transported gas from the Rockies on the Ruby  
 10 Pipeline and from Canada on Gas Transmission Northwest to PG&E's system.  
 11 Baja Path remains the marginal supply path, showing lower utilization rates than  
 12 the Redwood path. At times, Baja utilization is lower than 40%, although  
 13 utilization at other times also swings above 80%.

FIGURE 1  
 PACIFIC GAS AND ELECTRIC COMPANY  
 CAPACITY UTILIZATION BY PATH

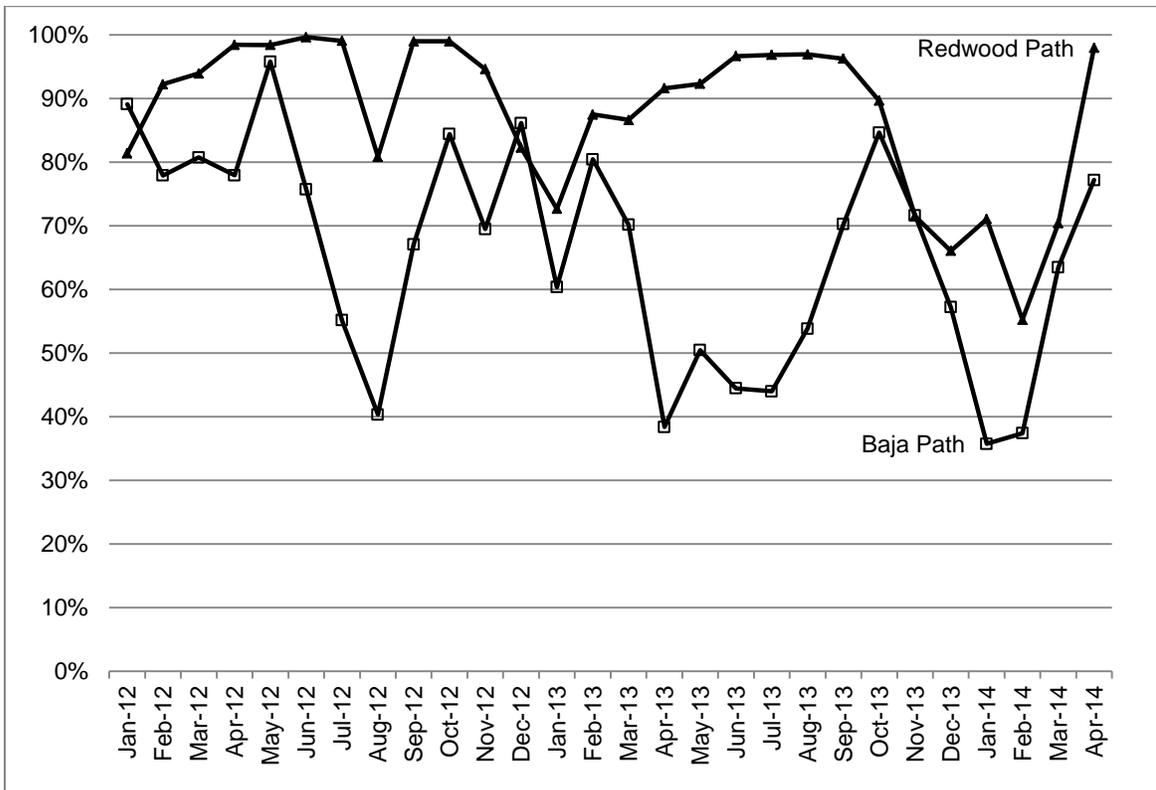
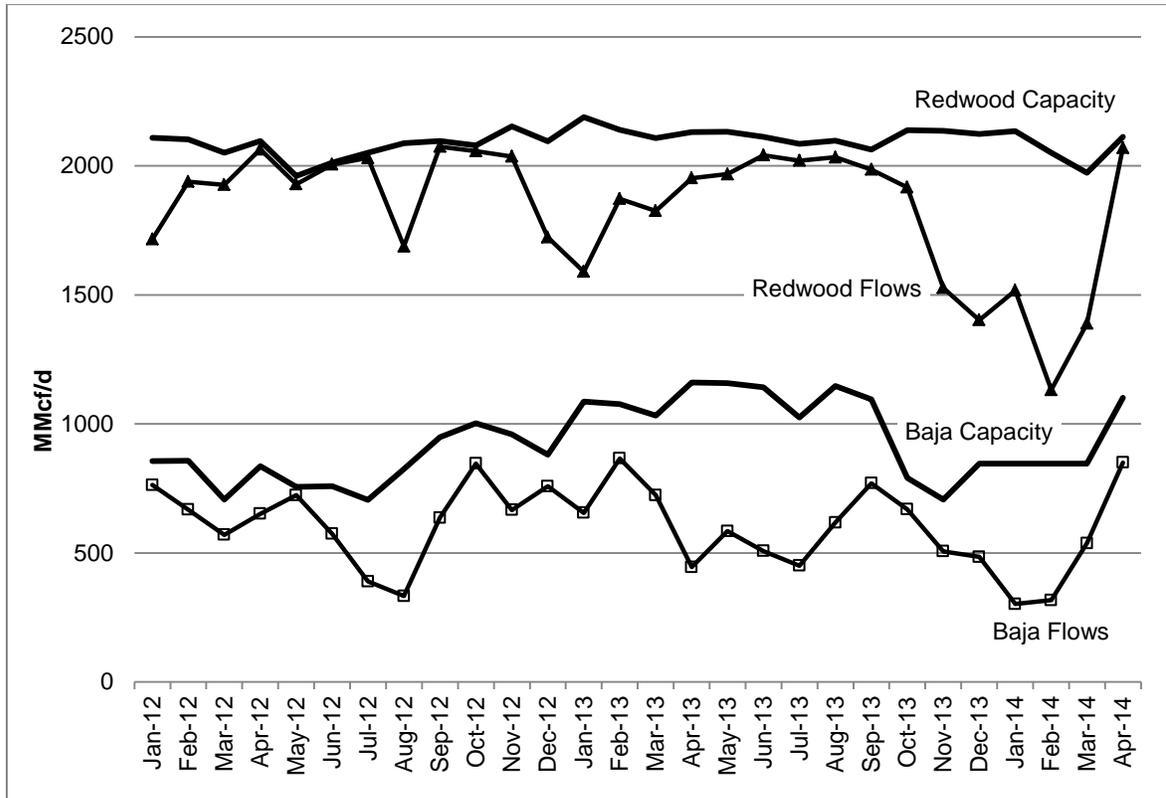
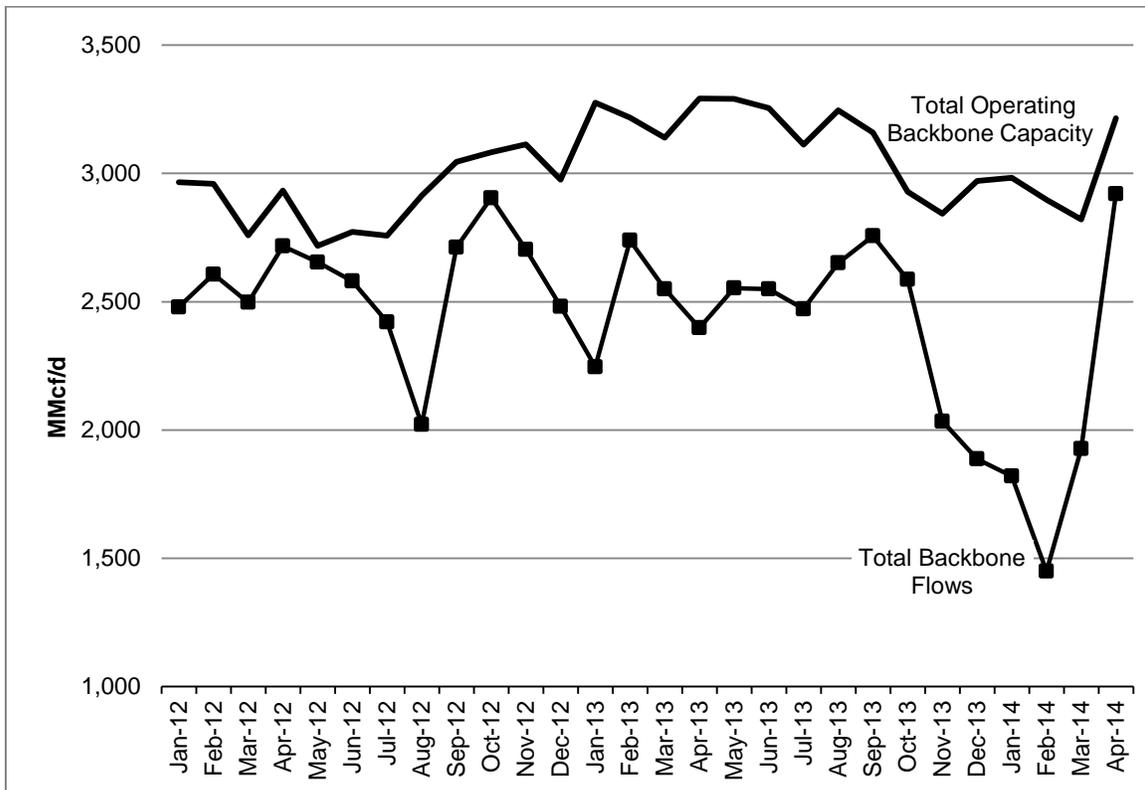


FIGURE 2  
PACIFIC GAS AND ELECTRIC COMPANY  
CAPACITY AND FLOW BY PATH



1            Figure 3 compares the average total backbone throughput by month for the  
 2            period January 2012 through April 2014 to total operating backbone capacity.  
 3            The combined throughput of the Redwood and Baja paths was similar to recent  
 4            historical levels, indicating that PG&E's backbone capacity continued to meet  
 5            demand. Slack operating backbone capacity was limited during the first half of  
 6            2012 due to Baja Path backbone pressure reductions; however, the data show  
 7            that there was sufficient slack operating backbone capacity during injection  
 8            season, and even more during the winter months due to reduced backbone  
 9            flows, especially from November 2013 through March 2014.

FIGURE 3  
 PACIFIC GAS AND ELECTRIC COMPANY  
 TOTAL BACKBONE FLOWS AND TOTAL OPERATING BACKBONE CAPACITY



1           Sufficient backbone capacity ensures that the marginal supply source at  
 2           the California border is available to compete against any other supply source  
 3           that might otherwise drive a higher price. A margin of capacity also facilitates  
 4           the injection of gas into storage. That storage injection occurs in addition to end-  
 5           use demand for gas on the backbone system, resulting in high pipeline utilization  
 6           at certain times of the year. The recent addition of new storage capacity in  
 7           northern California may increase backbone capacity transportation needs if all  
 8           that storage inventory capacity is to be completely emptied and fully refilled  
 9           during the storage year.

10           The market takes advantage of the extra backbone capacity to time the  
 11           injection and withdrawal of gas to and from the storage fields. Gas is typically  
 12           bought for injection at times when its current price is lower than its future value,  
 13           when it will be withdrawn. Without the extra backbone capacity on PG&E's

1 system, customers would be constrained significantly in their ability to time the  
2 injection of gas into these storage fields. The price of natural gas can vary  
3 substantially from month-to-month and the lowest prices are usually seen in the  
4 spring and fall months. It is important to maintain sufficient backbone capacity  
5 for the market to make large injections in months when natural gas prices are  
6 lower.

7 In Figures 1 through 3 above, data for the start of this year's injection  
8 season in April 2014 show both Redwood and Baja paths at very high utilization  
9 rates (100% for Redwood and 80% for Baja). With these high backbone capacity  
10 utilization rates, there may be challenges in the 2014 injection season to refill  
11 storage to prior years' all-time high inventory levels.

#### 12 **D. Demand Forecasts**

13 To assess the adequacy of PG&E's infrastructure to meet current and  
14 future demand, PG&E uses the demand forecasts based on the 2014 California  
15 Gas Report (CGR). The CGR provides a comprehensive, long-term outlook for  
16 natural gas requirements for both core and non-core markets. Evaluating  
17 PG&E's infrastructure using the CGR forecasts provides a valid assessment of  
18 the adequacy of PG&E's infrastructure to meet current and future demand  
19 through 2024.

20 The off-system demand forecast in the 2014 CGR is higher than what is  
21 used in this analysis because the CGR off-system forecast included an outlook  
22 of short-term arrangements paying less than the full-tariff rate. In the analysis  
23 included in this report, PG&E constrained its off-system forecast to the current  
24 volumes under long-term, full-price contracts. Short-term off-system contracts  
25 were excluded because PG&E would increase backbone capacity to serve the  
26 off-system market only if it had additional customers willing to pay the full tariff  
27 rate under a long-term contract, such as PG&E's G-XF customers. This is  
28 consistent with the approach that PG&E used in its Phase II testimony in the  
29 Gas Capacity OIR (R. 04-01-025).

30 PG&E developed the one -in-10-year Cold and Dry Forecast using the

1 same “Weather Vintage” methodology described in PG&E’s analysis of  
2 backbone capacity adequacy in Phase II of R.04-01-025. This same  
3 methodology was also used in the CGR for the high-demand forecasts.

4 The “Weather Vintage” forecast approach was used because of the need to  
5 develop a representative year with both cold and dry conditions and a likelihood  
6 of occurrence of one year in 10. Cold and dry conditions are not closely  
7 correlated, making it difficult to estimate the probability of weather that is  
8 simultaneously a one-in-10 cold year and a one-in-10-year dry year. Combining  
9 the results of a one-in-10-year cold scenario for core demand with a one-in-10-  
10 year dry scenario for Electric Generation (EG) demand would produce an  
11 unrealistically high forecast of natural gas demand in PG&E’s service area, and  
12 the combined scenario is much less likely to occur than a one-in-10-year event.  
13 Using the Weather Vintage approach to develop the core and EG forecasts  
14 allows for a better measure of the effect on demand from simultaneous cold and  
15 dry conditions.

16 **E. Adequacy of PG&E’s Backbone Transmission Capacity**

17 Table 1 lists the transmission capacities of the PG&E backbone system.  
18 Table 2 compares the amount of backbone capacity to forecasted demand on  
19 the PG&E system between 2015 and 2024. Based on this demand forecast,  
20 PG&E expects average annual backbone capacity utilization rate to be under 80  
21 percent through 2024, indicating compliance with the 80-90 percent utilization  
22 criteria established in Decision 06-09-039 . While there is uncertainty in this  
23 forecast, the ten-year window provides sufficient lead-time for system  
24 enhancements to meet longer-term growth should the forecast of system use  
25 change over time.

TABLE 1  
PACIFIC GAS AND ELECTRIC COMPANY  
TRANSMISSION CAPACITY INPUTS

Line No.	Transmission Path	Firm Receipt Capacity (MMcf/d)
1	Silverado Path	82
2	Baja Path	1,010
3	Redwood Path	2,038
4	Total	3,130

TABLE 2  
PACIFIC GAS AND ELECTRIC COMPANY  
PG&E BACKBONE CAPACITY UTILIZATION 2015-2024

Line No.	Year	Average Demand (MMcf/d)	1-in-10 Cold and Dry Year Demand (MMcf/d)	Backbone Receipt Capacity (MMcf/d)	Capacity Utilization Cold and Dry Year Demand
1	2015	2,201	2,308	3,130	74%
2	2016	2,184	2,293	3,130	73%
3	2017	2,238	2,351	3,130	75%
4	2018	2,262	2,376	3,130	76%
5	2019	2,252	2,363	3,130	75%
6	2020	2,284	2,391	3,130	76%
7	2021	2,246	2,383	3,130	76%
8	2022	2,249	2,392	3,130	76%
9	2023	2,267	2,408	3,130	77%
10	2024	2,237	2,369	3,130	76%

1 PG&E estimates that capacity utilization of its backbone system through  
2 2024 will grow at less than one percent per year, which should allow for  
3 sufficient storage injections over this period. There has been 34 Bcf of new  
4 storage capacity constructed in recent years. Central Valley Storage Gas project  
5 added 9.0 Bcf in 2012 and will add another 2.0 Bcf by the end of 2014. The  
6 addition of more natural gas storage capacity may lead to increased usage of  
7 backbone capacity for storage injections. Such usage may lead to a need to  
8 modify the capacity utilization criteria to account for seasonal demands, rather  
9 than annual average demands.

10 While these data show that PG&E has adequate backbone capacity in  
11 aggregate, the Commission should recognize that there may be instances in  
12 which an expansion of one of PG&E's transportation paths will be beneficial to

1 PG&E’s customers, even when total backbone system flows are within the  
2 guidelines established by the Commission. For example, PG&E’s shippers may  
3 have an interest in the future to bring additional supplies into northern California  
4 on PG&E’s Redwood path. Should that occur, an expansion of PG&E’s  
5 Redwood path may be warranted, even at a time when PG&E’s total backbone  
6 flows are within the one-in-10-year guideline, to allow PG&E’s customers to gain  
7 the benefit of access to new gas supplies.

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

9 All of PG&E’s local gas transmission systems are designed to provide  
10 adequate capacity under all weather conditions including extreme cold weather.  
11 There are two cold weather design criteria: Cold Winter Day (CWD) and  
12 Abnormal Peak Day (APD). The CWD design criterion ensures adequate  
13 capacity to meet all estimated demands, including non-core demands. The APD  
14 design criterion ensures adequate capacity to meet estimated core customer  
15 demands alone. PG&E is not proposing any changes to these standards.

16 The CWD design criterion is based on a cold event that has a recurrence  
17 interval of one day in two years. Each local planning area has its own specific  
18 CWD temperature. Across the PG&E gas system, the average daily system-  
19 weighted mean CWD temperature is approximately 38 degrees Fahrenheit.  
20 When analyzing each local transmission system for adequate capacity, all core  
21 customers are assumed to be at their CWD load, while non- core customers are  
22 assumed to be at a reasonable, sustainable maximum load.

23 The APD design criterion is based on an extremely cold weather event  
24 having a recurrence interval of one day in 90 years. This corresponds to a  
25 system-weighted mean temperature of about 27 degrees Fahrenheit across the  
26 PG&E gas system. Each local planning area has its own specific APD  
27 temperature. When analyzing each local transmission system for adequate  
28 capacity, all non-core customers are assumed to be curtailed.

29 If core supplies are insufficient to meet core demand, PG&E can divert gas  
30 from noncore customers, including EG customers, to meet it. PG&E’s tariffs

1 contain diversion and Emergency Flow Order (EFO) noncompliance charges  
2 that are designed to induce the noncore market to either reduce or cease its use  
3 of gas, if required. During the cold weather event in December 2013, which was  
4 close to a one day in ten year event, total noncore demand reached 2.5 Bcf/d.  
5 However, some noncore customers were curtailed due to local capacity  
6 constraints. PG&E would attempt to serve similar levels of noncore demand  
7 during an APD only to the extent such service was compatible with maintaining  
8 uninterrupted service to the core load.

9 All of PG&E's local transmission systems fully meet the APD and CWD  
10 design criterion – however, some systems will need manual operations  
11 (LNG/CNG, manually throttling valves, set point changes, etc.) to support peak  
12 core demand on an APD. Local transmission capacity projects have been  
13 identified and proposed for the 2015 Gas Transmission and Storage Rate Case  
14 period to meet demand growth and to decrease the reliance on manual  
15 operations. Most local transmission systems are constrained by the APD design  
16 criterion because they are sized to serve only core demand on an APD. On  
17 systems where noncore customers are predominant, CWD is the constraining  
18 design criterion rather than APD.

19 The APD core forecast is developed using the observed relationship  
20 between historical daily weather and core usage data. This relationship is then  
21 used to forecast the core load under APD conditions. A three-year forecast of  
22 APD demands is shown in Table 3:

TABLE 3  
PACIFIC GAS AND ELECTRIC COMPANY  
FORECAST OF CORE GAS DEMAND AND SUPPLY ON AN APD  
(MMcf/DAY)

Line No.		2014-15	2015-16	2016-17
1	APD Core Demand	3,168	3,228	3,234
2	Firm Storage Withdrawal	1,071	1,071	1,071
3	Required Flowing Supply	2,097	2,157	2,163
4	Total APD Resources (to meet demands)	3,168	3,228	3,234

Notes:

- (1) Includes PG&E's Core Gas Supply Department's and other Core Aggregator's core customer demands. APD core demand forecast is calculated for 27 degrees Fahrenheit system composite temperature, corresponding to 1-in-90 year cold temperature event. PG&E now uses a system composite temperature based on six weather sites.
- (2) Core Firm Storage Withdrawal capacity includes 98 MMcf/d contracted with an on-system independent storage provider.
- (3) Includes supplies flowing under firm and as-available capacity, and capacity made available pursuant to supply diversion arrangements.

**1 G. Conclusion**

2 In accordance with the requirements set forth by Decision 06-09-039,  
3 PG&E has adequate backbone capacity to accommodate current and forecast  
4 demand on the PG&E system through 2024. While PG&E has adequate  
5 backbone capacity in aggregate, there may be instances in which an expansion  
6 of one of PG&E's transportation paths would be beneficial to some or all of  
7 PG&E's customers, even when total backbone system flows are within the  
8 guidelines established by the Commission. Lastly, as more storage capacity is  
9 developed in northern California, there may be a need to modify the capacity  
10 utilization guideline to account for seasonal, rather than annual, gas demands.  
11 PG&E will monitor the situation and notify the Commission if such a need arises.

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

AT&T	Douglass & Liddell	Occidental Energy Marketing, Inc.
Alcantar & Kahl LLP	Downey & Brand	OnGrid Solar
Anderson & Poole	Ellison Schneider & Harris LLP	Pacific Gas and Electric Company
BART	G. A. Krause & Assoc.	Praxair
Barkovich & Yap, Inc.	GenOn Energy Inc.	Regulatory & Cogeneration Service, Inc.
Bartle Wells Associates	GenOn Energy, Inc.	SCD Energy Solutions
Braun Blaising McLaughlin, P.C.	Goodin, MacBride, Squeri, Schlotz & Ritchie	SCE
California Cotton Ginners & Growers Assn	Green Power Institute	SDG&E and SoCalGas
California Energy Commission	Hanna & Morton	SPURR
California Public Utilities Commission	In House Energy	San Francisco Public Utilities Commission
California State Association of Counties	International Power Technology	Seattle City Light
Calpine	Intestate Gas Services, Inc.	Sempra Utilities
Casner, Steve	K&L Gates LLP	SoCalGas
Cenergy Power	Kelly Group	Southern California Edison Company
Center for Biological Diversity	Linde	Spark Energy
City of Palo Alto	Los Angeles County Integrated Waste Management Task Force	Sun Light & Power
City of San Jose	Los Angeles Dept of Water & Power	Sunshine Design
Clean Power	MRW & Associates	Tecogen, Inc.
Coast Economic Consulting	Manatt Phelps Phillips	Tiger Natural Gas, Inc.
Commercial Energy	Marin Energy Authority	TransCanada
Cool Earth Solar, Inc.	McKenna Long & Aldridge LLP	Utility Cost Management
County of Tehama - Department of Public Works	McKenzie & Associates	Utility Power Solutions
Crossborder Energy	Modesto Irrigation District	Utility Specialists
Davis Wright Tremaine LLP	Morgan Stanley	Verizon
Day Carter Murphy	NLine Energy, Inc.	Water and Energy Consulting
Defense Energy Support Center	NRG Solar	Wellhead Electric Company
Dept of General Services	Nexant, Inc.	Western Manufactured Housing Communities Association (WMA)
Division of Ratepayer Advocates	North America Power Partners	