Pacific Gas and Electric Company 2027 GRC

A.25-05-009

TURN HEARING EXHIBIT

TURN Ex-303

Ryan Weber

Excerpt from PG&E Testimony in Gas Cost Allocation and Rate Design Proceeding
(A.25-11-006) re: Electric Generation Gas Demand and Throughput

Application: 25-11-
(U 39 G)
Exhibit No.: (PG&E-2)
Date: November 21, 2025
Witness(es): Various

PACIFIC GAS AND ELECTRIC COMPANY

2027 GAS COST ALLOCATION AND RATE DESIGN (CARD)

PREPARED TESTIMONY

EXHIBIT (PG&E-2)

FORECAST AND COST OF SERVICE STUDIES

PACIFIC GAS AND ELECTRIC COMPANY
2027 GAS COST ALLOCATION AND RATE DESIGN (CARD)
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CHAPTER 1
ELECTRIC GENERATION GAS DEMAND AND THROUGHPUT

A. Introduction

This chapter presents Pacific Gas and Electric Company's (PG&E) forecast of on-system electric generation gas demand for the 2027 Gas Cost Allocation and Rate Design (CARD) proceeding, for the period 2027-2030.[1] Details on the modeling methodology, assumptions, results, and key findings are presented in the following sections.[2]

1. Summary and Forecast Presentation

PG&E's gas system transports and delivers natural gas to on-system electric generation (EG) customers. While annual throughput to serve the EG class is forecasted to decline, it remains a major component of total system throughput. Several factors related to natural gas and electric market conditions cause high throughput variation in EG demand and are discussed in detail later in this chapter.

PG&E divides electric generators into two groups based on the generator's responsiveness to electric market prices. The non-market-responsive group consists primarily of gas-fired co-generators whose output is generally not sensitive to prices in the electricity and gas markets. This class's generation is primarily driven by onsite loads rather than electric wholesale prices. The market-responsive group consists of gas-fired electric generators whose output varies in response to prices in the wholesale electricity and gas markets. The market-responsive group is further divided by the level of service provided by PG&E. Local Transmission (LT) customers on PG&E's transmission or distribution systems pay different transportation charges compared to those connected directly to the high-pressure Backbone (BB) system. Below, Table 1-1

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1 PG&E presents its 2027-2030 non-EG gas demand forecasts in Chapter 2 of this Exhibit.

2 In Application (A.) 21-09-018, PG&E's 2023 Gas Transmission and Storage (GT&S) CARD, PG&E presented testimony for its then current proposal for Electric Generation Gas Demand and Throughput as Exhibit (PG&E-1), Chapter 2A.

service off the BB system. LT transportation charges include additional costs to transport gas further out on the gas system. Finally, the market-responsive group also includes gas deliveries to the Sacramento Municipal Utility District (SMUD) power plants in excess of SMUD's 85 MDth/d equity share of pipeline capacity. Gas deliveries to SMUD in excess of its equity share are subject to PG&E transportation rates and are therefore included in PG&E's forecasts for rate-setting purposes.

Table 1-3 summarizes PG&E's forecast for gas deliveries to market-responsive power plants on both LT and BB systems. PG&E's forecast of gas deliveries to market-responsive power plants is 572 MDth/d in 2027, 550 MDth/d in 2028, 536 MDth/d in 2029, and 552 in 2030. Recorded data for 2023 and 2024 and a forecast of 2025 through 2026 are provided for reference.

TABLE 1-3
ELECTRIC GENERATION FORECAST, MARKET-RESPONSIVE GAS DEMAND (MDTH/D)

Line No.	MDth/d	2023	2024	2025	2026	2027	2028	2029	2030
1	Local Transmission	348	293	340	338	135	122	122	138
2	Backbone-Only	379	390	314	297	437	428	414	414
3	Total	726	684	654	635	572	550	536	552

1. Key Forecast Drivers

Recorded market-responsive power plant gas demand in PG&E's service territory declined from 2023 to 2024 due to a higher level of renewable and storage additions within CAISO, offsetting the need for generation from natural gas plants. PG&E expects to continue to see a trend of decreasing market-responsive EG in 2025 and through the 2030 forecast period. Key drivers of this trend include:

- Electric Load: PG&E expects to see a substantial increase in load growth by 2030, largely due to the increased demand from data centers. PG&E's data center forecast aligns with the California Public Utilities Commission's (CPUC or Commission) 2024 Integrated Energy and Policy Report (IEPR) "Planning" scenario. A more detailed description of data center load growth and building electrification are described below.

- Data Center Growth: PG&E's internal 2025 Annual Load Forecast (ALF) represents PG&E's load growth due to data center development that is expected to occur over the next five years, with the highest levels of load growth expected in 2028-2030. The ALF is informed by prospective data centers who have requested to interconnect to PG&E's transmission and distribution (T&D) system. The data center forecast methodology is aligned with the California Energy Commission's (CEC) 2024 IEPR forecast, which includes roughly 14,000 gigawatt-hour of incremental load by 2030.[5]
- Building Electrification: PG&E's building electrification forecast is its best estimate of what may occur over the forecast period and beyond. A notable difference from CEC's 2024 IEPR forecast is that, while CEC assumes regional and statewide Zero Emission Appliance Standards have an immediate and fully intended impact, PG&E incorporated uncertainty around the timing and effectiveness of such policies.[6]

- Existing Resources: Data on existing power plants was obtained from the Western Electricity Coordinating Council (WECC) Zonal 2024 database provided by the PLEXOS software vendor (Energy Exemplar), and incremental resource additions were sourced from CPUC's Resource Tracking Data (February 2025).[7] This report lists capacity under contract by Load Serving Entities through 2028.
- Renewable Generation and Storage: In addition to planned projects reported by the CPUC mentioned above, PG&E included incremental

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5 For additional details on the data center forecast, please refer to materials from the CEC, Data Center Forecast (Dec. 23, 2024) available at: https://www.energy.ca.gov/sites/default/files/2024-12/Data_Center_Forecast_Update_ada.pdf (accessed Oct. 22, 2025).

6 PG&E forecasts building electrification using a Delphi method where internal subject-matter experts use their best judgement to account for factors that may result in less than full compliance with policies including, but not limited to: (1) customers choosing to extend the lifetime of their gas appliances, (2) emergency replacements not allowing sufficient time for fuel switching due to habitability concerns, (3) legal challenges and changes to federal policy, and (4) customers choosing not to comply due to the financial burden.

7 CPUC, Resource Tracking Data, Data current as of February 2025, available at: resource-tracking-data-february-2025-release.pdf (accessed Oct. 22, 2025).

resources to meet a build rate of ~5 GW/year (average build rate published in CAISO 2022-2024, calculated from the CAISO's Key Statistics Report).[8] Resource additions included solar, wind, geothermal and battery storage.

- Diablo Canyon Power Plant Extended Operations: In accordance with D.23-12-036,[9] DCPP is assumed online until November 1, 2029 (Reactor 1) and November 1, 2030 (Reactor 2).
- Natural Gas Burnertip Prices and Greenhouse Gas Emission Allowance Costs: The gas commodity price and greenhouse gas emission allowance cost forecasts were obtained from PG&E's internal Market Data System (effective date of March 13, 2025). For 2025-2026, PG&E utilized G-EG backbone transportation rates from PG&E's published tariff schedule.[10] G-EG LT rates were derived from the backtest and are roughly $0.10/MMBtu higher than BB rates on average. Transportation rates for the forecast period 2027-2030 are consistent with what is presented in Exhibit (PG&E-3), Chapter 1: Cost Allocation and Rate Design for Gas Transmission and Storage.
- CAISO Import Availability: PG&E used a 5-year average of historical net import data to capture recent trends in import availability. Recorded imports into CAISO in 2020-2024 were used to help calibrate the EG model during the "backtest", described in the section below, to simulate gas demand within +/-1 percent of PG&E's actual gas demand over 2023- 2024.

C. Market-Responsive Electric Generation Modeling Methodology

PG&E's market-responsive power plant gas demand forecast is based on results from power system simulations conducted using the PLEXOS production cost modeling tool. PLEXOS provides estimates of consumption of all fuels

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8 CAISO, Key Statistics, available at: https://www.caiso.com/library/key-statistics (accessed Oct. 22, 2025): All published reports from January 2022 to February 2025 were used to calculate an average rate of new resource additions.

9 D.23-12-036, Decision Conditionally Approving Extended Operations at Diablo Canyon Nuclear Power Plant Pursuant to Senate Bill 846.

10 PG&E Gas Rates, G-EG (Jan 2022 – Present), available at: https://www.pge.com/tariffs/en/rate-information/gas-rates.html#accordion-80734fc416-item-7b5a11869a (accessed Nov. 4, 2025).