



Pacific Gas and Electric Company Securitization

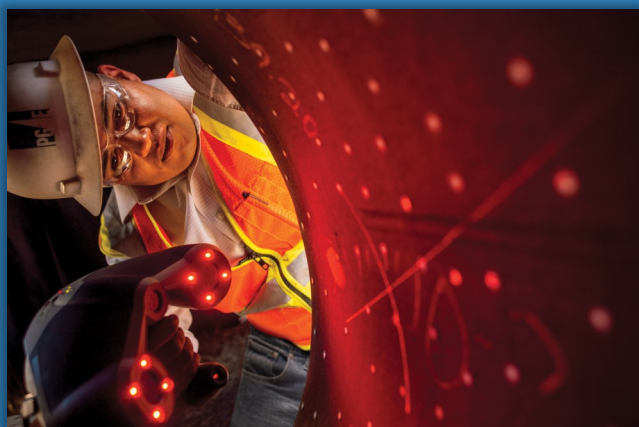
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TURN HEARING EXHIBIT

TURN-34

2020 California Gas Report Prepared by the California Gas and Electric Utilities in
compliance with D.95-01-039 (Excerpt)

2020 California Gas Report



— Prepared by the California Gas and Electric Utilities —

Prepared in Compliance with California Public Utilities Commission Decision
D.95-01-039

2020 CALIFORNIA GAS REPORT

PREPARED BY THE CALIFORNIA GAS AND ELECTRIC UTILITIES

**Southern California Gas Company
Pacific Gas and Electric Company
San Diego Gas and Electric Company
Southwest Gas Corporation
City of Long Beach Energy Resources Department
Southern California Edison Company**

2020 CALIFORNIA GAS REPORT

NORTHERN CALIFORNIA

INTRODUCTION

PG&E owns and operates an integrated natural gas transmission, underground storage, and distribution system across most of Northern and Central California. As of December 31, 2019, PG&E's natural gas system consists of approximately 42,800 miles of distribution pipelines, over 6,400 miles of backbone and local transmission pipelines, and three underground storage facilities. PG&E uses its backbone transmission system, composed primarily of Lines 300A, 300B, 400, and 401, to transport gas from its interconnection with interstate pipelines, other local distribution companies, and California gas fields to PG&E's local transmission and distribution systems.

PG&E provides natural gas procurement, transportation, and storage services to approximately 4.3 million residential customers and over 200,000 commercial and industrial customers. PG&E also provides gas transportation and storage services to a variety of gas-fired EG plants in its service area and serves multiple NGV fleets, including utility owned facilities, with its publicly-accessible fueling stations throughout California. Other wholesale distribution systems, which receive gas transportation service from PG&E, serve a small portion of the gas customers in the region. PG&E's customers are located in 37 counties from south of Bakersfield to north of Redding, with high concentrations in the San Francisco Bay Area and the Sacramento and San Joaquin valleys. In addition, some customers, including other regulated utilities, also utilize the PG&E system to meet their gas needs in Southern California.

The Northern California section of this report includes PG&E's gas demand forecast and discussions on gas supply, pipeline capacity, storage, and related policies, as well as the natural gas regulatory environment, including legislative developments and regulatory proceedings. Finally, the report includes PG&E's forecast of supply and demand for an Abnormal Peak Day (APD).

What follows is a summary of key takeaways from the Northern California sections of this report.

- Gradual Decline in Forecasted Gas Demand:** PG&E’s Average Demand⁷ is projected to decline at an annual average rate of 1.0 percent between 2020 and 2035. The decline in forecasted gas demand is in response to the state’s decarbonization policies and reflects reduced demand due to energy efficiency, building electrification resulting from fuel switching from natural gas appliances to electric, climate change, and an increase in GHG-free EG resources.
- There Is High Uncertainty in Gas Demand Due to Building Electrification:** PG&E’s Average Demand forecast reflects the impact of California’s current policies for energy efficiency and the impact of existing and anticipated future policies around building decarbonization. Uncertainty around building electrification, especially retrofits, drives uncertainty in gas demand. In a high electrification scenario,⁸ PG&E projects on-system gas demand to decline at an annual average rate of 1.3 percent between 2020 and 2035. In a low electrification scenario, PG&E projects gas on-system demand to decline at an annual average rate of 0.8 percent between 2020 and 2035. The rate of decrease for both scenarios is non-linear, with larger rates of decrease in the later years of the forecast.
- Current Forecast Does Not Reflect Impact From COVID-19 pandemic on Gas Throughput:** When PG&E was preparing the gas throughput forecast for this report, economic shocks associated with the COVID-19 pandemic suddenly appeared. The lasting economic impacts from the COVID-19 pandemic are highly uncertain. As a result, this report does not attempt to forecast COVID-19 pandemic impacts on gas demand. As events unfold and reliable economic and policy forecasts become available, PG&E will consider such information.
- Without Policy Solutions and a Managed Transition from Fossil Fuel to Other Energy Forms, Lower Forecasted Gas Demand Could Put Upward Pressure on Customer Gas Costs and Rates:** PG&E is committed to working with the regulators and other stakeholders to support the statewide GHG reduction policies and develop options to minimize rate increases. PG&E is doing this by safely reducing costs and maximizing utilization of existing infrastructure. To reduce costs, PG&E is pursuing opportunities to systematically retire infrastructure (where possible) and reduce capital and operating

⁷ Gas demand projection for an average temperature year and normal hydroelectric generation (hydro) year representing on-system demand.

⁸ See “Gas Demand, Future Gas Demand Trends and Policy,” section for details.

expenses through PG&E's Integrated Investment Planning. To increase utilization, PG&E is implementing programs to decarbonize existing gas throughput, supporting Renewable Gas (RG) adoption across new industries with existing gas system infrastructure, and adapting to utilize the gas system as a large-scale and long-duration storage mechanism for Green H₂. There are broad opportunities for load growth that can help decarbonize the economy, such as marine, rail, and surface-transportation applications.

Regulatory bodies and investor-owned utilities (IOU) should work together to ensure that Californians continue to have access to clean, reliable, and affordable energy. In support of these important goals, PG&E is actively participating in the Biomethane Order Instituting Rulemaking (OIR) (Rulemaking (R.) 13-02-008) and the Gas System Planning OIR (R.20-01-007). Both OIRs address crucial topics that will impact the future of the California gas system. In addition to the efforts currently underway, additional steps need to be taken to adequately address:

- The possible impacts of climate change policies and laws on gas throughput and the cost structure of existing and future gas assets; and
- The barriers to Renewable Gas Standard⁹ (RGS).¹⁰

The current investment and incentives for RG principally favor the transportation sector resulting in little RG available to establish a consistent RGS. If this is to change, California will have to balance the funding mechanisms between the transportation sector and a potential RGS so that RG project developers have opportunities to supply RG towards an RGS or the transportation sector.

⁹ A carbon-based standard for California's gas supply.

¹⁰ An RGS does not currently exist. However, with implementation of SB 1440 through Phase IV of the Biomethane OIR and legislation that was proposed earlier this year (SB 1352), it is clear that there is some momentum to establishing an RGS that would require the utility to procure a certain percentage of RG for core gas customers (similar to the RPS on the electric side).

GAS DEMAND

OVERVIEW

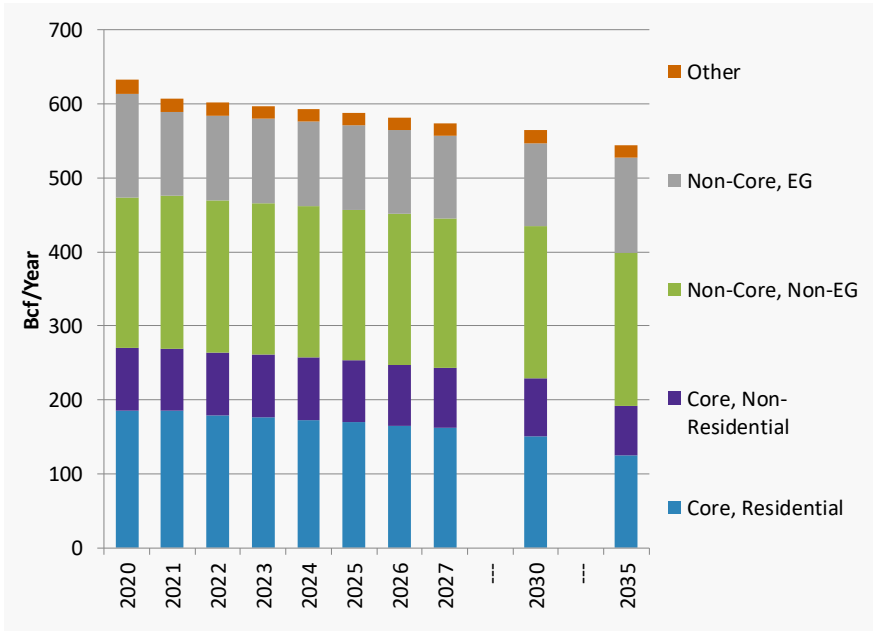
PG&E's 2020 CGR Average Demand forecast projects total on-system demand¹¹ to decline at annual average rate of 1.0 percent between 2020 and 2035. This is due to the combination of a projected annual decline of 2.3 percent in the core market and a projected annual decline of 0.2 percent in the noncore market.

Different factors drive the gas demand decline projection. This projected decline could result in gas system operating and maintenance costs spread over lower usage, causing customer gas rates to increase. Consequently, PG&E and statewide utility stakeholders will need to continue their involvement to mitigate customer rate increases. Additional gas throughput offsetting lower carbon intensive fuel uses could help spread costs more evenly.

This chapter includes PG&E's gas demand forecast and begins with a description of the forecast method, including assumptions driving the projection. After the methodology discussion, a sectorial forecast explanation follows for the Average Demand Year. To provide more robustness to the Average Demand Year forecast, scenarios show how demand looks under cold weather and dry hydroelectric conditions. The discussion finishes with gas demand policies, trends and impacts.

¹¹ Excludes off-system sales.

FIGURE 5 – PG&E AVERAGE DEMAND YEAR GAS FORECAST



As shown in the above chart, total on-system gas demand for PG&E’s gas system is projected to decline at an annual average rate of 1.0 percent between 2020 and 2035.¹² Core demand is projected to decline by an annual average rate of 2.3 percent over the 2020-2035 forecast horizon, driven by increasing energy efficiency, increasing building electrification, and a warming climate. Noncore non-EG demand is projected to remain relatively unchanged over the forecast horizon, as potential demand growth is offset by energy efficiency and increasing gas prices. Finally, the rate of growth of the noncore EG forecast decreases due to higher levels of renewable generation to meet the 60 percent requirement in 2030,¹³ more electric storage, and higher burner-tip gas prices for Northern California electric generators. In this projection, total gas demand by electric generators¹⁴ and cogenerators in Northern California¹⁵ decreases at 0.6 percent per year from 2020 through 2035. This projection assumes average hydrological conditions.

¹² With the inclusion of off-system demand, the projection declines at an annual average rate of 1.9 percent between 2020 and 2035.

¹³ <https://www.cpuc.ca.gov/rps/>.

¹⁴ This gas demand forecast excludes gas delivered by non-utility pipelines to electric generators and cogenerators in PG&E’s service area, such as deliveries by the Kern/Mojave pipelines to the La Paloma and Sunrise plants in Central California.

¹⁵ Northern California electric generation gas demand consists of the generation fleet north of Path 26.