Application: 13-06-011
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Witness(es): Roy M. Kuga
John P. Armato
Mia Vu

PACIFIC GAS AND ELECTRIC COMPANY

CORE GAS CAPACITY PLANNING RANGE

SUPPLEMENTAL TESTIMONY

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Pacific Gas and Electric Company (PG&E) submits this supplemental testimony in accordance with the Administrative Law Judge's Scoping Memo and Ruling (Ruling), dated September 3, 2013. The supplemental testimony addresses the expanded issues identified in the Ruling that were not included in PG&E's initial testimony, submitted on June 13, 2013 as part of Application 13-06-011. In general, this supplemental testimony demonstrates that:

1) Contracting for firm interstate pipeline capacity is necessary to ensure long-term natural gas supply reliability and price stability for core customers.
2) PG&E's core capacity planning range must account for PG&E's total core demands, including both bundled core customers and core load served by Core Transport Agents (CTAs).
3) Existing California Public Utilities Commission (CPUC or Commission) policies and regulations concerning utility acquisition and allocation of interstate pipeline capacity appropriately serve all core customers, while providing effective regulatory oversight.

The supplemental testimony is organized as follows:

- Chapter 1 discusses the role interstate pipelines play in supporting reliability for core customers and reducing price volatility, and the continuing responsibility of the Commission to ensure long-term supply reliability for all core gas customers.
- Chapter 2 discusses the need for utilities to maintain a diverse interstate pipeline capacity portfolio.
- Chapter 3 discusses the rules and policies necessary to ensure reliability and price stability for core customers with specific reference to New York's gas marketing program.

Q 1 Why is interstate pipeline capacity important for maintaining core reliability and natural gas price stability in California?

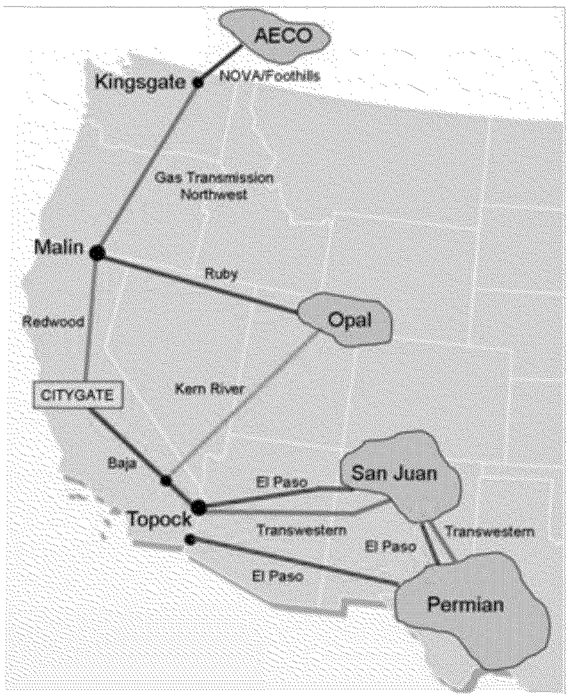
A 1 California relies on out-of-state sources for about 90 percent of its natural gas supplies. Consequently, securing capacity on Canadian and United States (U.S.) interstate pipelines, which serve as the collective conduits to the prolific western gas producing regions in Canada, the Rocky Mountains, and the U.S. Southwest, is vital for maintaining core reliability and natural gas price stability in California.

Q 2 On which interstate pipelines does PG&E currently hold capacity?

A 2 PG&E currently subscribes to capacity for its core customers on the pipelines depicted in Figure 1. These pipelines access supplies sourced in:

- Alberta and British Columbia, Canada, through pipelines owned and operated by TransCanada's NOVA Gas Transmission Ltd. (NOVA), Foothills Pipe Lines Ltd. (Foothills) and Gas Transmission Northwest, LLC.
- The Rocky Mountains, through pipelines owned and operated by Ruby Pipeline LLC and Kern River Gas Transmission (Kern).
- The San Juan Basin, through pipelines owned and operated by El Paso Natural Gas Company, L.L.C. (El Paso), and Transwestern Pipeline Company, LLC (Transwestern).

FIGURE 1
PACIFIC GAS AND ELECTRIC COMPANY
PIPELINE CAPACITY SERVING PG&E



Q 3 Does California's location contribute to its need to hold interstate pipeline capacity?

A 3 Yes. A significant rationale for holding firm interstate pipeline capacity is that the interstate pipelines serving California terminate at the California border, and California is the last market, among many, that these pipelines serve. For instance, before reaching California, El Paso delivers gas to Texas, New Mexico, Arizona, southern Nevada, and growing markets in Mexico. These other markets have placed a high value on El Paso's capacity and the U.S. Southwest supplies connected to El Paso. Unless California consumers are willing to make sufficient long-term firm pipeline and supply commitments, pipelines and marketers holding capacity may choose to divert the capacity and supplies to serve other, more lucrative markets. (Recent examples of proposals to re-direct pipeline capacity and connected gas supplies to other markets are discussed in Chapter 2.) Thus, it is necessary for all core providers in California to maintain diverse pipeline transportation and supply arrangements in order to continue to access directly the major supply areas.

Q 4 Were there occasions when reliability and price stability broke down in California?

A 4 Yes. During the California Energy Crisis of 2000-2001, a pipeline capacity shortage, high consumer demand, gas supply shortfalls, market manipulation by energy marketers, and a flawed electric market design combined to create a complete energy market meltdown, raising natural gas and electricity costs for all Californians, and threatening the viability of the electric utilities serving California.

Q 5 What action has the Commission taken to avert another California Energy Crisis?

A 5 In order to be assured of consistent, reliable natural gas supplies, the Commission established policies to preserve long-term pipeline capacity to meet the needs of all California consumers, including core customers. The Commission's overall policy objectives are guided by California's Energy Action Plan. As the Commission stated in its 2004 Decision addressing its Order Instituting Rulemaking to Establish Policies and Rules to Ensure Reliable, Long-Term Supplies of Natural Gas to California (R.04-01-025):

The OIR was opened to ensure that California does not face a natural gas shortage in the future. Through the OIR and today's decision, we further the stated goal of the Energy Action Plan to:

> Ensure that adequate, reliable and reasonably-priced electrical power and natural gas supplies, including prudent reserves, are achieved and provided through policies, strategies, and actions that are cost-effective and environmentally sound for California's consumers and taxpayers. (Energy Action Plan, p. 2.)[1]

Based on the California Energy Action Plan, and in response to the 2000-2001 Energy Crisis, the Commission established policy direction intended to ensure continued reliable access to gas supplies, in order to avert future energy crises. Specifically, the Commission took the following actions:

- In Rulemaking 02-06-041 (Order Instituting Rulemaking to Require California Natural Gas and Electric Utilities to Preserve Interstate Pipeline Capacity to California), the Commission acknowledged that unlike the utilities, marketers are not committed to hold pipeline capacity to serve California markets: "Marketers who plan to turn back California capacity on the El Paso system have no public service obligation to meet the needs of California consumers. Their willingness to turn back California capacity on the El Paso system is instead driven by profits and losses, including any potential short term financial losses without regard to potential long term profits. On the other hand, our Commission and the California utilities are responsible for ensuring that California consumers' natural gas and electric needs are met without risk of the substantial spike in natural gas prices and electric prices that occurred during winter 2000/2001. Consequently, we must ensure that California preserves as much as possible of the 3,290 MMcf/d of certificated firm capacity on El Paso to California."[2]
- In Decision 02-07-037, the Commission stated as follows: "In its reply comments, PG&E states that 'no party questions the correctness of the Commission's fundamental conclusion that interstate pipeline capacity holdings by the utilities can provide an important hedge against price spikes, as well as reliability benefits, for core customers. The experience

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[1] D.04- 09-022, p. 2 (internal footnote omitted).

[2] R. 02-06-041, pp. 4-5.

of 2000-2001 has shown that interstate capacity is cheap relative to the cost of a price spike to consumers.' We agree with these statements by PG&E, but we also find that, faced with a potential loss of a substantial amount of El Paso capacity that has historically served California, the preservation of this turned back capacity by California replacement shippers or California utilities would also provide an important hedge against price spikes, as well as reliability benefits, for noncore customers and electric ratepayers who were also the victims of price spikes in 2000-2001."[3]

- In Decision 04-09-022, the Commission required gas utilities serving core customers to contract for interstate pipeline capacity in compliance with utility specific, minimum capacity requirements.
- Finally, in Decision 08-11-032 (the Ruby Pipeline decision), the Commission reiterated its obligation to ensure reliability: "[A]s regulators, we have a responsibility for ensuring that California has access to adequate supplies of gas."[4]

Thus, the Commission has acknowledged its obligation to ensure that all California consumers have access to sufficient, reliable natural gas supplies. It has also expressed concern that pipeline capacity may be diverted to other upstream markets, or withheld from California natural gas and electric consumers.

Q 6 Are the Commission's policies and decisions still relevant, in light of abundant gas supplies and capacity additions since the Energy Crisis?

A 6 Yes. Since the Energy Crisis, California has added interstate pipeline connections, most notably the Ruby Pipeline, and third-party storage, bolstering California's ability to cope with market adversity. However, having operationally available interstate pipeline capacity to California is not the same as having supply security and reliability; to link the two, the capacity must be contractually committed to California consumers. Otherwise, pipeline capacity and gas supplies can be re-directed to serve upstream U.S. markets, or to export markets such as Mexico.

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[3] D.02-07-037, pp. 14-15.

[4] D.08- 11-032, p. 17.

The Commission has acknowledged this concern, noting that there are "…fundamental problems with the statistics concerning expansions of pipelines to California. First, many of the volumes listed will be used to serve markets other than California but are included in the total capacity identified to serve California."[5] Infrastructure additions alone do not guarantee sufficient capacity to meet future periods of extremely high demands, or to ensure that customers are adequately served under adverse conditions caused by malfunctions or accidents with pipeline and/or storage infrastructure, catastrophic events such as earthquakes, or market manipulation. Requiring utilities to subscribe to long-term firm and diverse pipeline commitments, however, may help mitigate these risks and avert another potential energy crisis.

Q 7 Does this conclude your testimony?

A 7 Yes, it does.

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[5] D .02-07-037, p. 9.

PACIFIC GAS AND ELECTRIC COMPANY

CORE GAS CAPACITY PLANNING RANGE PROCEEDING

CHAPTER 2

NECESSITY OF FIRM INTERSTATE PIPELINE CAPACITY

SUPPLEMENTAL TESTIMONY

PACIFIC GAS AND ELECTRIC COMPANY
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NECESSITY OF FIRM INTERSTATE PIPELINE CAPACITY
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This chapter addresses the need for utilities to maintain a diverse interstate pipeline capacity portfolio. Specifically, this chapter provides examples of proposals to potentially divert supplies and/or pipeline capacity away from California to serve upstream markets. This chapter also provides additional details about the California Energy Crisis. Finally, this chapter addresses several questions related to Pacific Gas and Electric Company's (PG&E) current core aggregation program.

Q 1 Have there been any recent proposals made by interstate pipeline companies to divert supplies and/or pipeline capacity away from California?

A 1 Yes. El Paso Natural Gas Company (El Paso) recently proposed to convert from gas to oil approximately 740 miles of its existing southern gas pipeline system, with a capacity to transport 277,000 barrels of oil per day from Texas to California.[1] Furthermore, El Paso and El Paso's parent company, Kinder Morgan, have recently pursued other opportunities, including expanding El Paso laterals, to increase gas exports from the United States (U.S.) Southwest to serve growing Mexican demand. These projects, many of which are complete, enable El Paso to deliver over 1 billion cubic feet per day (Bcf/d) of gas into Mexico.[2] Additional projects including the proposed Eagle Ford Shale pipeline expansion and the South Texas expansion are

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1 Kinder Morgan conducted two open seasons in 2013 for its "Freedom Pipeline" conversion project: http://www.4-traders.com/KINDER-MORGAN-INC-7331799/news/Kinder-Morgan-Inc--Kinder-Morgan-Energy-Partners-Announces-Open-Season-for-Proposed-Freedom-Crude-O-16601429/.

While Kinder Morgan announced that it was not proceeding with the project, it could be pursued in the future if there is sufficient customer interest: http://fuelfix.com/blog/2013/05/31/kinder-morgan-shelves-plans-for-texas-to-california-freedom-pipeline/.

2 See El Paso's Samalayuca Lateral expansion project (FERC Docket No. CP12-74), Norte Crossing application (FERC Docket No. CP12-96), Wilcox Lateral expansions (FERC Docket Nos. CP12-6, and CP13-112), and Kinder Morgan's Sierrita Gas Pipeline project (FERC Docket Nos. CP13-73 and CP13-74).

expected to more than double the U.S. export capacity to Mexico by the end of 2014.[3]

Q 2 Is it important for California utilities to subscribe to a diverse interstate pipeline transportation and supply portfolio?

A 2 Yes. Holding firm interstate pipeline capacity is critical because the mere availability of pipeline capacity to California without firm commitments is insufficient to safeguard supply reliability and price stability. In its order accepting a settlement of the California Public Utilities Commission's (CPUC or Commission) complaint against El Paso relating to the California Energy Crisis, the Federal Energy Regulatory Commission (FERC) stated that the availability of El Paso capacity to serve California does not mean that capacity is reserved for the exclusive use of California markets. FERC elaborated, stating that as contracts expire, the service obligation changes, and the capacity subject to an expiring contract becomes available to any shipper, unless the contract holder exercises a right of first refusal.[4] As the pipeline projects described in answer to Q 1 demonstrate, pipelines such as El Paso will re-market uncommitted capacity to other shippers or markets that are willing to make commitments. In addition, because supply disruptions or adverse market events such as the Energy Crisis described in Chapter 1 cannot be anticipated, it is prudent to subscribe to a diverse portfolio of pipeline transportation, storage and supply arrangements to ensure uninterrupted gas flows and availability of supplies at reasonable market prices to California end use consumers. Subscribing to interstate pipeline capacity with firm contracts containing renewal rights will guarantee access to production basins in the future.

Q 3 What happened to California spot gas prices during the California Energy Crisis of 2000-2001.

A 3 During the Energy Crisis, the basis price differentials between California and the U.S. Southwest, Rockies and Canadian supply areas far exceeded the cost of pipeline transportation to California. In FERC Staff's Final Report on

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[3] U.S. Energy Information Administration, March 13, 2013, "U.S. Natural Gas Exports to Mexico Reach Record High in 2012," http://www.eia.gov/todayinenergy/detail.cfm?id=10351 .

[4] FERC Docket No. RP00-241-000, et al., Order on Contested Settlement, November 14, 2003 , p. 47.

Price Manipulation in Western Markets, FERC reported that while the upstream AECO Canadian price averaged $4.79 per Million British Thermal Units (MMBtu) during the crisis period, the PG&E Citygate price averaged $10.10 per MMBtu, and reached a high on December 8, 2000, of $50.79 per MMBtu.[5] Similar abnormally high gas prices occurred in southern California.

Q 4 What was the impact of the California Energy Crisis on PG&E's bundled core gas customers?

A 4 To some extent, PG&E was able to insulate its bundled core gas customers from the effects of high California gas prices by fully utilizing its pipeline capacity to the producing areas, and by withdrawing from storage supplies purchased and injected before the price run-ups. PG&E's weighted average commodity cost of gas for PG&E's bundled core customers during the one-year period November 2000–October 2001 was $6.78 per MMBtu.[6] As a comparison, replacement gas purchased at PG&E Citygate would have resulted in an average cost of $9.90 per MMBtu, which would have increased core commodity costs by over $990,000,000.[7] Therefore, holding interstate pipeline capacity to the producing basins was shown to be an effective means of stabilizing prices for core customers during California's Energy Crisis.

Q 5 During the Energy Crisis, were Core Transport Agents (CTAs) required to hold interstate pipeline capacity?

A 5 No, they were not required to hold interstate pipeline capacity, but CTAs were offered their proportionate share of PG&E's capacity on PG&E-

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5 FERC Staff's Final Report on Price Manipulation in Western Markets, Docket No. PA02-2-000, p. IV-8. http://www.ferc.gov/legal/maj-ord-reg/land-docs/PART-I-3-26-03.pdf.

6 Office of Ratepayer Advocates Monitoring and Evaluation Report, CPIM Year 8, December 17, 2002, p. 2-5. This cost of gas includes $57,601,758 of one-time financial swaps and termination costs resulting from PG&E's own credit crisis. Excluding these costs would lower PG&E's core commodity cost during the crisis period to $6.60 per MMBtu.

7 The $9.90 per MMBtu replacement gas price was derived using a weighted average of monthly PG&E bundled core demands and the monthly Natural Gas Intelligence PG&E Citygate index prices. The difference in commodity cost ($9.90 - $6.78), multiplied by PG&E's core demands during the period is $990,212,015.

Northwest[8] (predecessor to TransCanada's Gas Transmission Northwest) on a monthly basis. From January 2000 through July 2000, CTAs took no capacity on PG&E-Northwest. However, at the onset of the Energy Crisis in August 2000, CTAs began to accept at least a portion of the PG&E-Northwest capacity offered to them. PG&E's Core Aggregation Transportation Program Status Report, submitted August 7, 2002 (CTA Report), provided a description of the history of the CTA program to date, and various related statistics through April 2002. Appendix 4 from the CTA Report shows that from August 2000 through January 2002, CTA monthly acceptance of PG&E-Northwest capacity varied widely from a high of 87 percent to a low of 1 percent, but the average monthly acceptance was 37 percent.[9]

Q 6 How do the Commission's existing policies and rules protect core customers from potential lapses in service?

A 6 PG&E's core customers are currently protected because the Commission requires PG&E to maintain sufficient pipeline capacity, with rights-of-first-refusal or other renewal rights on most contracts, to preserve reliability for all core customers, including CTA customers. Consequently, if a CTA decides to exit the market, PG&E, as the default supplier, can provide immediate commodity service, without lapse or interruption.[10]

Q 7 Should PG&E's core capacity planning range include total core demand (i.e., include both bundled core and the core load served by CTAs), as required by current Commission rules and policies?

A 7 Yes. The Commission should continue to require PG&E to hold interstate pipeline capacity for its bundled core customers and for core customers served by CTAs. Prior to the 2010 CTA-PG&E Settlement Agreement (CTA

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[8] During the Energy Crisis, PG& E did not hold El Paso capacity. PG&E's Transwestern capacity was a 100 percent shareholder held asset until 2002, and was not available to CTAs. As specified by the CTA program and as adopted by Decision 97-12-032, PG&E's Canadian pipeline capacity was not available to CTAs until they served a threshold market size of approximately 80 Millions of Decatherms per day.

[9] PG&E's Core Aggregation Transportation Program Status Report, Appendix 4, Average Capacity Accepted on Core Interstate and Intrastate Paths, p. A.4-2, provided in Appendix B.

[10] Public Utilities Code (Pub. Util. Code) § 328.2 directs the Commission to require each gas corporation to provide bundled basic gas service to all core customers in its service territory unless the customer chooses or contracts to have natural gas purchased and supplied by another entity.

Settlement),[11] which requires CTA acceptance of an increasing share of capacity costs, CTAs typically rejected pipeline capacity offered to them (unless the gas commodity price differentials between the pipeline's receipt and delivery points, i.e., the spread, exceeded the pipeline reservation costs at the time of the offering). If given a choice, CTAs will most likely not hold pipeline capacity in the future. However, CTAs on PG&E's system currently serve over 18 percent of total core demand, with over 350,000 accounts. Allowing CTAs to opt out of the requirement to hold interstate pipeline capacity will undermine reliability for all core customers because supplies and capacity now serving California may otherwise be utilized to serve upstream consumers that are willing to make firm commitments. Furthermore, the risk of losing supplies and capacity may increase, commensurate with future CTA market growth.

Q 8 Should the Commission require CTAs to acquire and hold interstate pipeline capacity on their own?

A 8 No. This alternative does not address long term reliability needs of core customers effectively. It does not address reliability because even if CTAs were required to hold their own capacity, there is no guarantee that the capacity would remain dedicated to core customers, or even to California markets. CTAs could elect to use the capacity to serve other markets, rather than their California core customers. In addition, if a CTA holding pipeline capacity exits the core market, the pipelines will have no obligation to ensure that the former CTA capacity is made available to any replacement CTA or to PG&E. Instead, the capacity could be permanently lost to other shippers willing to make long-term commitments. In this way, a subclass of core customers could be created that receive an inferior priority of service. Current Commission policy does not allow for such an outcome since the Commission made no distinction between interstate pipeline capacity held for CTA customers and capacity held for bundled core customers when it established the capacity ranges for the utilities in Decision 04-09-022. This is entirely appropriate since there should be no

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[11] The CTA Settlement Agreement resolved issues in Application 09-09-013 and was adopted by the Commission in Decision 11-04-031. A copy of the Settlement Agreement is provided in Appendix A.

distinction between the reliability requirements of CTA core customers and utility core customers.

The New York Public Service Commission (NYPSC) grappled with this same question of whether to allow gas marketers to acquire and hold their own pipeline capacity. The NYPSC allowed marketers providing core commodity services (similar to CTAs) to utilize their own interstate pipeline capacity. Subsequently, however, the NYPSC reversed its prior decision, and now requires marketers to utilize interstate pipeline capacity held by the New York utilities, in order to promote reliability and to eliminate duplication of pipeline assets.[12] (More details of the New York program are discussed in Chapter 3).

Q 9 If the Commission were to contemplate a change to the existing interstate pipeline capacity obligations, what decision(s) and settlement(s) should be considered?

A 9 The Commission would need to re-consider Decision 03-12-061, which requires CTAs to accept a pro rata share of core transmission and storage capacity once the CTA program serves ten percent of peak core loads.[13] The Commission would also need to re-consider Decision 04-09-022, which set the current rules for PG&E's interstate pipeline capacity procurement program, as well as Decision 11-04-031, which approved the Gas Accord V Settlement and the current cost allocation rules as between PG&E and CTAs. However, PG&E does not believe a reconsideration of these decisions is appropriate. The existing process of CPUC review and approval of pipeline contracts established by Decision 04-09-022 provides for necessary regulatory oversight to ensure adequate pipeline capacity is acquired at reasonable costs, that a diverse portfolio of transportation assets is maintained, and that for at least a portion of the capacity, renewal rights are available.

Changing the rules to relieve CTAs from having to hold and pay for pipeline capacity would contradict the Commission's policies to protect California from another Energy Crisis, and would violate the gradual,

[12] State of New York Public Service Commission, CASE 07-G-0299, Order Approving Tariffs Establishing Mandatory Capacity Release Programs, March 28, 2008.

[13] D.03- 12-061, December 18, 2003, COL 97, p. 482.

phased-in assignment of PG&E's interstate pipeline capacity that CTAs agreed to in the CTA Settlement.

Q 10 Should the Commission's ruling in this application include a caveat about not prejudging whether CTAs should pay their pro rata share of pipeline capacity costs, or otherwise reserve cost issues for PG&E's 2014 gas transmission and storage application?

A 10 No. It is premature to suggest that PG&E's gas transmission and storage rate case will be the venue for determining such cost responsibility. PG&E has not yet filed its rate case application, and the Commission, therefore, has not ruled on which issues are to be included in that rate case.

More importantly, the determination of who should hold interstate pipeline capacity, and who should bear the costs of that capacity, are not separate issues. The Commission should determine in this proceeding whether PG&E should continue to acquire interstate pipeline capacity on behalf of all core customers in its service area, and who should pay for the capacity acquired by PG&E. The Commission's decision should take into account the following:

1. Core customers are a homogenous class, and there is no distinction between the priority of service and the reliability needs of PG&E or CTA core customers.
2. If the Commission relieves CTAs of their obligation to hold and pay for interstate capacity, PG&E should not be required to hold interstate capacity on behalf of CTA customers.
3. Distributing CTA pipeline capacity costs to PG& E's remaining bundled core procurement customers would violate the fundamental ratemaking principle of cost causation. This principle requires that costs be apportioned such that customers pay the costs they cause the utility to incur.[14]
4. The California Public Utilities Code prohibits cross subsidies: "No public utility shall establish or maintain any unreasonable difference as to

[14] Gas Rate Fundamentals, Fourth Edition, American Gas Association, 1987, p. 132.

> rates, charges, service, facilities, or in any other respect, either as between localities or as between classes of service."[15]

Q 11 Does this conclude your testimony?

A 11 Yes, it does.

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15 Pub. Util. Code § 453(c).

PACIFIC GAS AND ELECTRIC COMPANY

CHAPTER 3

ENSURING RELIABILITY AND PRICE STABILITY

SUPPLEMENTAL TESTIMO NY

PACIFIC GAS AND ELECTRIC COMPANY
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Chapter 3 examines key elements that the California Public Utilities Commission (CPUC or Commission) should consider in order to ensure that interstate pipeline capacity for core customers is preserved and remains dedicated to core customers in the future. This chapter also describes existing Commission policies and rules governing interstate pipeline capacity acquisition and approval for core customers, and describes New York's gas choice program which has many parallels to Pacific Gas and Electric Company's (PG&E) Core Aggregation program.

Q 1 What key elements should the Commission consider in regulating interstate pipeline capacity holdings for the core market?

A 1 There are four key elements that should drive the Commission's policies and rules governing interstate pipeline capacity holdings for core customers:

1. The Commission should maintain sufficient and sustainable interstate pipeline capacity to California.

The Commission should take steps to ensure the long-term availability and sustainability of interstate pipeline capacity to reliably serve the entire core market. The most critical element of any reliability policy is requiring firm interstate pipeline capacity contracts. Such contracts are necessary to maintain long-term access to natural gas supply sources and also to provide a measure of price stability for core customers. As explained in Chapter 1, approximately ninety percent (90%) of gas supplies consumed in California must be imported from gas producing regions outside of California. If interstate and Canadian pipelines are not supported by firm capacity contracts, supplies could be diverted to upstream markets, and connecting pipelines could take steps to reduce or displace capacity connected to California.

2. The Commission should require all core gas suppliers to hold interstate and Canadian pipeline capacity in proportion to the loads they serve.

The Commission should impose uniform interstate pipeline capacity requirements for all core suppliers. Interstate capacity is held for the reliability of all core customers, and therefore, all load serving entities, (i.e., the Local Distribution Companies (LDC) and Core Transport Agents (CTAs)) should be obligated to hold capacity to serve their customers.

3. Acquisition of interstate and Canadian pipeline capacity, and commission oversight of procurement activities should be effective and efficient.

4. Capacity costs should be equitably allocated to all core customers.

Interstate capacity benefits all core customers, and all core suppliers should therefore be responsible for paying the capacity costs associated with serving their customers reliably.

Q 2 Given these key elements as described, should the current Commission rules and policies continue to apply to all core market participants?

A 2 Yes. T he current Commission rules reflect all four key elements described above:

1) The existing rules and policies require firm pipeline capacity contracts on behalf of all core customers and thus sustain access to supplies.

2) The existing rules and policies require utilities to hold capacity for all core customers, including CTA customers.

3) The current capacity acquisition and allocation process works efficiently, whereby PG&E allocates capacity acquired on behalf of all core customers to CTAs in proportion to their loads. Under the 2010 CTA-PG&E Settlement (CTA Settlement),[1] PG&E's core capacity is allocated to CTAs three times a year, which reflects individual CTA load variations throughout the year. Furthermore, existing Commission polices and rules ensure that PG&E subscribes to a diverse portfolio of

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[1] See Appendix A.

interstate and Canadian pipeline capacity, and California storage, for the benefit of all core customers.

In addition, the existing rules and policies provide for effective administration of capacity acquisition. The current pipeline contract approval procedures, established by Decision 04-09-022, provide for regulatory review of capacity quantities and for regulatory oversight and approval of each contract. This application will establish a revised core interstate pipeline capacity range and a process to adjust the range over time based on forecast total core demand. Thus, the capacity levels will be closely reviewed by Commission staff, and publicly reviewed through the advice letter process.

4) Finally, the existing rules and policies, including the CTA Settlement, allocate capacity and the associated costs equitably and fairly among all core customers. The CTA Settlement minimizes "rate shock" for CTA customers by apportioning costs gradually, until April 2015, when the phase-in is complete and CTAs are responsible for 100 percent of their share of core capacity costs. No further action by the Commission, other than to uphold the CTA Settlement, is required in order to allocate core capacity and storage costs fairly and equitably.

Q 3 If PG&E's core capacity planning range does not include CTA customers, how can the Commission ensure (and should the Commission be concerned) that CTAs will be able to plan for and serve their customers' gas needs by securing sufficient interstate and intrastate capacity?

A 3 It is vital for the Commission to ensure that California has access to adequate supplies of gas and that all core customers are reliably served. Therefore, PG&E's core capacity planning range should include CTA customers.

However, if the Commission determines that PG&E's core capacity planning range should not include CTA customers, then the Commission will need to ensure that CTAs plan for and serve their customers' gas needs by securing sufficient interstate capacity. To that end, the Commission should: (1) direct CTAs to procure and maintain capacity for their customers; (2) set requirements for CTA interstate pipeline capacity similar to utility requirements; (3) verify that individual CTAs have contracted for the appropriate capacity quantities; (4) ensure CTA capacity holdings include long-term firm contracts, or contracts with renewal rights, such as the right-of-first-refusal (ROFR), to ensure sustainable core reliability; (5) consider how to transfer CTA-procured capacity between CTAs and/or PG&E, to account for customer movement among CTAs, or back to PG&E, if necessary; and (6) the Commission should monitor or review CTA capacity holdings periodically, to ensure preservation of capacity dedicated to core customers.

The Commission should also consider how it would ensure a cohesive and diversified long-term CTA capacity policy, in light of potential issues such as fluctuating loads as between individual CTAs, and compliance with Federal Energy Regulatory Commission (FERC) rules regarding capacity release and assignment, and market manipulation.[2]

Note that CTA requirements to hold intrastate capacity are not addressed in this testimony. However, the CTA Settlement provides for allocation of all pipeline capacity, including interstate and intrastate pipelines, as well as storage.

Q 4 What is the estimated financial impact on bundled core customers if capacity requirements are set for customers served by both bundled service and CTAs as compared to if capacity requirements are set only for bundled core customers?

A 4 If capacity requirements are set for customers served by both bundled service and by CTAs (as under current rules), then using PG&E's current annual interstate and Canadian pipeline costs of approximately $165 million,[3] the capacity cost to bundled customers would be $132 million, while CTAs would incur $33 million in capacity costs (assuming CTA's 20 percent aggregate share and 100 percent capacity cost responsibility).

Pursuant to the phased-in schedule established in the CTA Settlement, as of October 2013, CTAs are responsible for paying approximately 60 percent of their aggregate share of capacity costs. However, as noted in

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[2] Capacity assignments are subject to FERC rules, which prohibit transfers of interstate pipeline capacity between shippers. Capacity releases must be made in accordance with pipeline posting and bidding requirements. See FERC Orders 712, 712-A and 712-B.

[3] Based on PG&E's existing pipeline contract costs, not including any potential offset for PG&E or CTAs resulting from capacity release during periods of lower core demand.

answer to Question 2, the CTA Settlement also provides that by April 2015, CTAs will be responsible for 100 percent of their aggregate share of capacity costs.

If capacity requirements are set only for bundled core customers, then the direct capacity cost for bundled customers would remain approximately $132 million. However, bundled customers may incur reliability risk if CTA customers return to bundled service. This reliability risk is difficult to quantify since it depends on many factors, such as market conditions and the number of customers that return to bundled service.

Q 5 In other states that have retail gas choice programs, how do state regulators ensure pipeline capacity is maintained to serve core customers reliably?

A 5 In most cases, the utilities remain the default commodity suppliers, in addition to providing distribution and delivery services. New York, for example, has an active gas choice program and is similarly situated to California in that the pipelines serving New York also serve other markets. Both California and New York rely on out-of-state gas supplies and interstate pipeline capacity to serve their markets, and both states have experienced pipeline capacity constraints and price run-ups. However, New York's program has a higher percentage of residential and commercial customers served by marketers (which are similar to CTAs in California) compared to the local gas utilities. In 2012, marketers served approximately 49 percent of New York's core customers.[4]

As noted in Chapter 2, after allowing marketers to procure their own pipeline capacity, the New York Public Service Commission (NYPSC) implemented a mandatory capacity release program in 2008, in which the utilities acquire pipeline capacity on behalf of all core customers, and then release a pro-rata share of the capacity to marketers serving core customers. Marketers serving core customers are required to utilize interstate pipeline capacity held by the utilities to ensure the reliability of the state's gas system, and to avoid duplicative capacity assets.[5]

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4 http://www3.dps.ny.gov/W/PSCWeb.nsf/96f0fec0b45a3c6485257688006a701a/441d4686df065c5585257687006f396d/$FILE/Gas Migration Report 4.12.pdf.

5 New York Public Service Commission, Order Approving tariffs Establishing Mandatory Capacity Release Programs, issued March 28, 2008. http://www.energymarketers.com/documents/171_07g0299.Revised.pdf.

The NYPSC explained the rationale for its policy as follows:

> A mandatory capacity release program preserves system reliability because marketers are guaranteed to own firm, primary point capacity to the Citygate. The LDCs would continue to plan for and procure capacity, resulting in the retention of ROFR rights and delivery point flexibility. Stranded capacity costs may be avoided under a mandatory system. There is no need for LDCs to hold capacity to backstop marketers, thus reducing costs. LDCs may be encouraged to enter into longer-term contracts since there would be no potentially stranded capacity costs.[6]

It is important to note that in spite of the requirement to hold and pay for their share of utility pipeline capacity, the marketers serve almost one-half of New York's core customer load.

Q 6 If PG&E continues to procure pipeline capacity for both its bundled core customers and for CTA core customers, should the CTAs have some input into:

1) Deciding what the capacity range should be?

2) Where the interstate capacity is coming from?

3) Whether the CTAs should be involved in the contract renewal process for the volumes associated with the capacity range?

A 6 The CTAs already provide considerable input regarding the above-listed items, and further involvement is unwarranted and unnecessary. This proceeding provides CTAs with ample opportunity to influence PG&E's core interstate pipeline capacity range.

In addition, as discussed previously, the existing process, whereby PG&E procures pipeline capacity for all core customers, includes a Commission review to ensure that PG&E maintains a diverse portfolio of pipeline capacity and gas supplies. The Office of Ratepayer Advocates and The Utility Reform Network adequately represent the interests of both PG&E's bundled customers and CTA core customers in the existing process. Furthermore, under the existing advice letter approval process, CTAs are able to review PG&E's capacity requests and can obtain associated confidential information, if any. CTAs have actively participated in the review process by filing comments and protests to PG&E's advice

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6 NYPSC's While Paper on Capacity Planning and Reliability, issued March 14, 2007, Attachment C, p. 4 (filing p. 91). http://www.energymarketers.com/Documents/07G0299_GasCapacityNoticeFinal.pdf.

letters. This process contains both transparency, and a means for CTA input. It should be noted that New York has adopted a similar approach whereby the NYPSC and the LDCs work closely together to ensure the transparency of the LDCs' capacity planning, procurement and allocation process.

Q 7 Does this conclude your testimony?

A 7 Yes, it does.

PACIFIC GAS AND ELECTRIC COMPANY

APPENDIX A

CORE TRANSPORT AGENT SETTLEMENT AGREEMENT

AUGUST 20, 2010

(APPENDIX B OF D.11- 04-031)

Pacific Gas & Electric Company
2011 Gas Transmission & Storage Rate Case
A.09-09-013

Core Transport Agent (CTA) Settlement Agreement

August 20, 2010

A.09-09-013

CTA Settlement Agreement

August 20, 2010

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A.09-09-013
CTA Settlement Agreement
August 20, 2010

A) CTA Transmission and Storage Capacity Elections

1) These new procedures will become effective April 1, 2012. The CTA capacity structure as defined in this settlement will succeed the Gas Accord V Settlement unless changed by the CPUC in a future decision or settlement. No party to this settlement will petition for changes to these terms to be effective any time prior to April 2016, except as noted in A.9.

2) The provisions in this agreement apply to all long-term capacity held for the core customers by PG&E which the Commission approved. While these long-term capacity commitments may change in the future, PG&E's Core Gas Supply currently holds the following:
   - Gas Transmission Northwest - 609,968 Dth/day[1]
   - Foothills Pipe Line (BC System) - 611,054 Dth/day[1]
   - NOVA Gas Transmission - 619,369 Dth/day[1]
   - El Paso Natural Gas - 201,775 Dth/day
   - Transwestern Pipeline - 150,000 Dth/day
   - Ruby Pipeline - 250,000 Dth/day expected to start 11/1/2011
   - PG&E Firm Backbone Transmission as negotiated in the latest Gas Accord
   - PG&E Core Firm Storage as negotiated in the latest Gas Accord

3) CTAs will be given an annual election on long-term storage capacity (based on Winter Season gas usage) and a three-times-a-year election on long-term transmission capacity (based on the January Capacity Factor.)

4) Annual storage elections, for the upcoming April-March period, will be made each February. A mid-year storage true-up election will occur each August. Both of these storage elections will be done under procedures similar to that in the current G-CT tariff. CTAs will submit their storage capacity elections within ten (10) business days from the date PG&E initiates the election process.

5) CTA elections for pipeline capacity will be made on the following schedule:

Election Date	Election Period
Mid-January	March - June
Mid-May	July - October
Mid-September	November – February

   CTAs will submit their pipeline capacity elections within ten (10) business days from the date PG&E initiates the election process.

6) CTAs will be able to choose different election quantities for pipeline capacity for each month and for each pipeline segment. Capacity elected by a CTA will be assigned to the CTA for the period(s) elected. CTAs will be responsible for the billed costs of the pipeline capacity they elect to use (at

[1] PG&E expects to reduce these contract quantities by approximately 250,000 Dth/day on 11/1/2011 with the start of the Ruby Pipeline contract.

the rate billed under the contract terms) and will be billed directly by the pipelines for those charges.

7) A three year transition period will be used to move to CTAs taking full cost responsibility for the capacity that is offered to them but is not elected. During the transition, PG&E's Core Portfolio will utilize, and take cost responsibility for, up to a set amount of the aggregate capacity rejected by all CTAs for each asset and for each month. The maximum aggregate amount (as a percentage of the total Core capacity holding) of the rejected capacity eligible for utilization by PG&E's Core Portfolio is shown in the table below:

Transition Time Period	Percentage
April 2012 to March 2013	12%
April 2013 to March 2014	7%
April 2014 to March 2015	4%

Any capacity rejected by the CTAs in aggregate in excess of these amounts will remain the aggregate cost responsibility of the CTAs. Examples of how the capacity costs will be allocated between the CTAs and PG&E's Core Portfolio are shown in Attachment A.

a) April 2015 onward is designated the Post-Transition Period, whereby CTAs will assume full cost responsibility in aggregate for all capacity not elected.

8) Except as detailed in A.7 for the capacity utilized by PG&E's Core Portfolio during the transition period, PG&E will manage the aggregate rejected capacity in the following manner: PG&E will release the rejected CTA capacity to the marketplace through auction, bulletin board listing, or similar process. CTAs understand that PG&E will have very little discretion in how this rejected capacity is resold, and therefore, CTAs agree not to protest the results of that process. The net cost (or benefit) of the rejected capacity, after including release revenue, will be applied to each CTA that rejected the capacity ratably by pipeline and month based on the amount of capacity rejected by the CTA on that pipeline. These charges (or credits) will be made directly to each CTA. An illustrative example of how these costs will be allocated between CTAs is shown in Attachment B.

9) One or more settlement parties may wish to file a petition or application seeking to modify Commission decisions setting storage and pipeline capacity holding levels for core customers on the PG&E system. Notwithstanding any other provision of this settlement, the parties agree that seeking such relief by a party, and granting such relief by the Commission, will not violate this settlement.

B) New Consumer Protection Rules

1) New rules will be developed in collaboration with the CTAs and the CPUC, but the CPUC's level of participation will be at its own discretion.

2) PG&E proposes to implement the new consumer protection rules, developed in collaboration with the CTAs and the CPUC, based on the following guiding principles, by no later than April 1, 2011:

   a) The new rules will be added to the Core Gas Aggregation Service Agreement and all applicable PG&E tariffs;

   b) The new rules will be submitted to the CPUC for approval through the Advice Filing process;

   c) CTAs agree not to oppose PG&E's advice filing of the consumer protection rules agreed upon in the collaborative effort;

   d) CTAs will provide PG&E with proof of a customer's authorized enrollment, within a specified timeframe, in response to customer complaints of unauthorized enrollments;

   e) The new rules will give CTAs the first opportunity to resolve a customer's complaint within a specified timeframe;

   f) The new rules will include monetary penalties assessed to CTAs if: 1) CTAs do not resolve complaints related to improper enrollments or provide proof of a customer's authorized enrollment within a specified timeframe; or 2) CTAs engage in fraudulent, deceptive, or abusive marketing activities;

   g) The new rules will allow PG&E to suspend CTAs from enrolling new customers for a specified timeframe, and allow PG&E to terminate a CTA's Core Gas Aggregation Service Agreement under specified conditions as agreed upon in the collaborative effort.

C) PG&E System Enhancements

1) PG&E agrees to implement the following system enhancements within the Gas Accord V period but no later than the date noted below:

   a) PG&E agrees to re-tune the Core Load Forecast model by October 1, 2011;

   b) PG&E proposes to evaluate the effectiveness of re-tuning the Core Load Forecast Model twelve months following its initial use, and in collaboration with the CTAs, determine whether a rebuild will be needed while incorporating the SmartMeter usage data by April 1, 2013;

   c) PG&E agrees to make the Preliminary Operating Imbalance data available to CTAs thirty days before the final Operating Imbalance Statement is issued by December 31, 2011;

   d) PG&E agrees to make CTA Operating Imbalance Adjustment File data available in an electronic format by October 31, 2012;

   e) PG&E agrees to implement an EDI 248 PG&E Consolidated Billing Report to replace the Daily Billing Reports currently sent to CTAs via e-mail within the Gas Accord V period;

f) PG&E agrees to make Gas Balancing Reports available online by April 1, 2013;

g) PG&E agrees to add a properly populated ESP Rate Code column to the Consolidated Billing Snapshot Report by April 1, 2013;

h) PG&E agrees to add the "Customer SA ID" data to the CTAs' payment report for CTAs utilizing PG&E Consolidated Billing by April 1, 2013.

D) Other CTA Issues

1) PG&E agrees to file a Summer distribution shrinkage rate and a Winter distribution shrinkage rate to reduce the monthly bias in the Core Load Forecast model.

2) PG&E agrees to consider CTAs' non-binding input regarding the adjustment factor for their specific load forecast prior to each month.

3) PG&E proposes to hold an annual meeting to address and receive feedback on CTA issues and concerns with the Core Gas Aggregation Program.

4) PG&E agrees to work through and adjust accounts manually if those accounts have a credit on the PG&E portion of the bill and a past due balance on the CTA portion to prevent inadvertent past due notices from being sent to the customer by PG&E.

5) PG&E agrees to provide the CTA Customer Snapshot Report by the 5th of each month, or the next business day if the 5th falls on a weekend or holiday.

6) PG&E agrees to provide the PG&E Consolidated Billing Snapshot Report by the 5th of each month, or the next business day if the 5th falls on a weekend or holiday.

7) PG&E will implement a change to the OFO exemption from $1,000 to 1,000 Dth per day per OFO occurrence.

8) PG&E agrees to implement a DASR Error Code rejection notification to CTAs who submit "Connect DASRs" with an incorrect customer rate code.

9) PG&E agrees to modify the Closing Bill collection process under PG&E Consolidated Billing to notify CTA customers when PG&E reverses any unpaid CTA charges to the CTA for collection.

10) PG&E agrees to make reasonable efforts to notify CTAs prior to activating a CTA customer for SmartMeter Interval Billing.

E) Complete Agreement

1) The CTA Settlement Agreement represents the complete agreement between PG&E and CTA Settlement Parties, and all parties acknowledge that PG&E no longer has an obligation to promote CTAs and the Core Gas Aggregation Program.

Attachment A

CTA Capacity Election Transition Period Hypothetical Examples

Example Parameters:

Total core contract for Pipe A: 100,000 Dth/day annual contract quantity
Pipeline allocations based on January Capacity Factor.

Example 1

Timeframe: Election made in mid-September 2012 for the month of November 2012
CTA Aggregate Market Share (based on January Capacity Factor): 15%

	Percentage of Total Core	Quantity Dth/day
Aggregate CTA market share / offering quantity	15%	15,000
Aggregate CTA acceptance quantity (assigned to and paid for by CTAs)	8%	8,000
Aggregate amount rejected by CTAs	7%	7,000
Rejected capacity utilized by PG&E Core Portfolio (maximum 12% in 1st year)	7%	7,000
Rejected capacity released/resold by PG&E (cost responsibility of CTAs)	0%	0

Example 2

Timeframe: Elections made in mid-May 2013 for the month of July 2013
CTA Aggregate Market Share (based on January Capacity Factor): 15%

	Percentage of Total Core	Quantity Dth/day
Aggregate CTA market share / offering quantity	15%	15,000
Aggregate CTA acceptance quantity (assigned to and paid for by CTAs)	2%	2,000
Aggregate amount rejected by CTAs	13%	13,000
Rejected capacity utilized by PG&E Core Portfolio (maximum 7% in 2nd year)	7%	7,000
Rejected capacity released/resold by PG&E (cost responsibility of CTAs)	6%	6,000

Example 3

Timeframe: Elections made in mid-January 2014 for month of May 2014
CTA Aggregate Market Share (based on January Capacity Factor): 9%

	Percentage of Total Core	Quantity Dth/day
Aggregate CTA market share / offering quantity	9%	9,000
Aggregate CTA acceptance quantity (assigned to and paid for by CTAs)	3%	3,000
Aggregate amount rejected by CTAs	6%	6,000
Rejected capacity utilized by PG&E Core Portfolio (maximum 4% in 3rd year)	4%	4,000
Rejected capacity released/resold by PG&E (cost responsibility of CTAs)	2%	2,000

Example 4

Timeframe: Elections made in mid-January 2015 for month of April 2015
CTA Aggregate Market Share (based on January Capacity Factor): 11%

	Percentage of Total Core	Quantity Dth/day
Aggregate CTA market share / offering quantity	11%	11,000
Aggregate CTA acceptance quantity (assigned to and paid for by CTAs)	8%	8,000
Aggregate amount rejected by CTAs	3%	3,000
Rejected capacity utilized by PG&E Core Portfolio (0% from April 2015 on)	N.A.	N.A.
Rejected capacity released/resold by PG&E (cost responsibility of CTAs)	3%	3,000

Attachment B

CTA Rejected Capacity Cost Allocation Hypothetical Example

Assumptions (Based on Example 2, Attachment A)	Cost ($)/Dth/Day	Percent	Dth/d
Month: July 2013			
Total Pipeline Contract Quantity:		100%	100,000
Daily Core Pipeline Reservation Rate	$0.15		
Total CTA Market Share and Capacity Offered:		15%	15,000
Aggregate CTA Acceptance:		2%	2,000
Aggregate CTA Rejection:		13%	13,000
Rejected capacity utilized by PG&E Core (max 7% in 2nd year):		7%	7,000
Rejected capacity released by PG&E (cost responsibility of CTAs):		6%	6,000
Assume 3 CTAs:			
CTA A has 1.5% market share, accepts all capacity offered		1.5%	
CTA B has 10.5% market share, rejects all capacity offered		10.5%	
CTA C has 3.0% market share, accepts a portion of capacity offered		3.0%	
Total CTA Market Share		15.0%	
Assume PG&E receives 75% of reservation rate for all capacity released to market			
Net cost responsibility (100%-75%) x $0.15/Dth/day	$0.0375		

Illustrative Example of Cost Allocation Methodology

Offering			CTA Accepted Capacity		CTA Rejected Capacity				CTA Obligation			PG&E CP Obligation	
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)
CTAs	% Core Market Share	Quantity Offered / Allocation (Dth/d)	Quantity Accepted (Dth/d)	Charge by Pipeline to CTA ($/day)	Quantity Rejected (Dth/d)	% Share of Rejected Capacity (%)	Released Capacity Responsibility (Dth/d)	Cost Per Day ($/day)	Direct Charge by Pipeline ($/day)	Share of Rejected Capacity ($/day)	Total Cost Obligation ($/day)	Transition Utilization Quantity (Dth/day)	Allocation + Transition (Dth/day)
		(b*100,000)		(d*$0.15)		(f/sum of f)	(g*6,000)	(h*$0.0375)	(e)	(i)	(j+k)		(c+m)
CTA A	1.5%	1,500	1,500	225.00	0	0.00%	0.00	0.00	225.00	0.00	225.00		
CTA B	10.5%	10,500	0	0.00	10,500	80.77%	4,846.15	181.73	0.00	181.73	181.73		
CTA C	3.0%	3,000	500	75.00	2,500	19.23%	1,153.85	43.27	75.00	43.27	118.27		
PG&E CP	85.0%	85,000										7,000	92,000
	100.0%	100,000	2,000		13,000	100.00%	6,000.00						

The above calculation will be done individually for each month and each pipeline.

PACIFIC GAS AND ELECTRIC COMPANY

APPENDIX B

CORE AGGREGATION TRANSPORTATION

PROGRAM STATUS REPORT

AUGUST 20, 2010

PACIFIC GAS AND ELECTRIC COMPANY
CORE AGGREGATION TRANSPORTATION
PROGRAM STATUS REPORT

August 2002

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PACIFIC GAS AND ELECTRIC COMPANY
CORE AGGREGATION TRANSPORTATION
PROGRAM STATUS REPORT

A. Introduction

1. Genesis of Report

Pacific Gas and Electric Company (PG&E) is providing this report to fulfill an element of the Core Procurement Advisory Group (CPAG) Recommendations, as set forth in the Gas Accord.[1]

The Gas Accord Settlement Agreement contains the following passage:

> After three years, PG&E will file a core transport program status report with the CPUC, and PG&E will hold a workshop to address any difficulties that have arisen with respect to PG&E's core gas transportation program.[2]

The "core transport program" referred to in this quote is also known as the Core Aggregation Transportation (CAT) Program and as core gas aggregation service. This is the program, with various rule changes, under which competitive gas commodity service—gas direct access—has been available as an alternative to utility procurement for core gas customers since 1991. The competitive gas procurement service providers are known as core transport agents (CTAs) and more recently as gas Energy Service Providers (gas ESPs).

During the Gas Accord period, significant changes have occurred in the numbers and types of core transport customers and gas ESPs. The CAT program rules have also been modified over this time, and state law now mandates a continued role for the utility in procurement and revenue cycle services.[3]

The CPAG has continued to meet and provide a forum for discussion, development, and training for the CAT program. Many of the changes in the program during the Gas Accord period have arisen in this forum.

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[1] PG&E's Gas Accord was approved by the CPUC in Decision 97-08-055.
[2] Gas Accord, Appendix 1, p. 55.
[3] PUC Section 328, first formulated as AB 1421.

2. Outline of this Report

The following section of this report provides a regulatory history of the CAT program. The program is traced from its beginnings in 1991 as a pilot program, through four settlements and several other drivers of program change.

The next section provides relevant data on the evolution and current status of the program. The history of customer populations and loads is summarized and a detailed snapshot of the current customer population is presented and compared to the overall core customer population.

Various data regarding gas ESPs are also presented, including data on the capacity and billing options chosen by these core suppliers. Customer awareness of their choices in gas procurement is also discussed.

Detailed statistics are found in Appendices 1 through 5.

B. Regulatory History of Core Aggregation

This section provides a regulatory history of the CAT program and summarizes the current rules for core aggregation.

1. The Pilot Program

PG&E had procured all gas for its core customers until, with Decision 91-02-040, the Commission adopted a pilot core aggregation transportation program that began in August 1991. This pilot program provided small and medium-sized PG&E gas customers their first opportunity to purchase gas from competitive suppliers. Under this decision, all CPUC-regulated gas utilities began offering core aggregation service.

2. The Permanent CAT Program

In March 1994, several parties including PG&E, submitted a settlement that proposed changes to the pilot CAT program rules, including making the program a permanent feature of CPUC-regulated gas utility service.[4] The settlement proposed rules for aggregator access to interstate pipeline and storage capacity, and for aggregator credit requirements and payment

[4] Motion for Adoption of Settlement Agreement of Southern California Gas Company (U904G); Pacific Gas and Electric Company (U39M); San Diego Gas and Electric Company (U902M); Southwest Gas Corporation (U905G); Enron Access Corporation; and the Division of Ratepayer Advocates. March 30, 1994. (R.90-02-008).

terms. The settlement also stated operational rules for customers switching gas provider, minimum length of contract, imbalance management, and billing arrangements.

In April 1994, the Commission extended the existing pilot program rules, with minor modifications, pending its overall review of the pilot program and the proposed settlement. In July 1995, the Commission completed its review and issued Decision 95-07-048, adopting the March 1994 settlement and making the CAT program permanent. The decision also ordered subsequent unbundling of interstate capacity costs and brokerage costs from end-user transportation rates. These costs were now to be recovered through bundled customers' procurement rates. Gas utilities were also required to begin changing their rates for utility-provided procurement service every year, rather than every two years as had been the practice.

The Commission stated that the changes to the program were "...designed to simplify customer participation while providing greater protection against aggregator fraud."[5] Decision 95-07-048 also stated the following policy goals. It said, "...the CAT program should:

- Promote efficient use of the gas system;
- Provide core customers with service options to the extent feasible;
- Assure that core customers continue to receive highest quality service; and
- Assure a fair allocation of costs between customers and customer classes."[6]

3. Monthly Pricing

In November 1997, in compliance with Decision 97-10-065 (later amended by Decision 98-07-025), PG&E implemented monthly pricing of its utility procurement service. Thus, the price for utility supplies changed monthly, replacing annual changes in prices. Monthly advice filings of the prices are made at least five days before the effective date and generally become effective on the fifth business day of each month.

[5] 60 CPUC 2d, p. 519.
[6] 60 CPUC 2d, p. 523-4.

The utility core procurement rate consists of the following components, updated monthly as appropriate:

- Procurement Charges, reflecting payments for gas commodity at various trading points;
- Capacity Charges, reflecting payments for Canadian, interstate, and in-state transportation;
- Core Brokerage Fee, being a 2.4 cent per decatherm proxy for acquisition costs;
- Shrinkage, reflecting in-kind supply of gas to the PG&E system for transmission and distribution shrinkage pursuant to gas Rule 21; and
- Core Firm Storage, reflecting recovery of costs for core storage rights assigned to PG&E Core Procurement.
- Balancing Account Amortization, reflecting revenue adjustments made due to past over- or under-collections of gas-related commodity and capacity costs.
- Franchise and Uncollectibles, reflecting procurement-related revenue required to pay for rights of way and cover authorized Uncollectibles expense.

4. Interstate Unbundling

In 1997, under Decision 97-05-093, PG&E implemented an unbundling of its holdings of interstate pipelines for core service. This decision allowed gas ESPs to have monthly access to a pro rata share of PG&E Gas Transmission-Northwest (PG&E-Northwest or PG&E-NW) and El Paso Natural Gas capacity that was held for core customers through 1997.

Subsequently, Decision 97-12-032 extended the unbundling of PG&E-NW capacity. It also allowed gas ESPs potential access to Canadian capacity held for core customers on the ANG and NOVA systems, if the CAT program were to reach a size of about 80 MDth/day.

5. Gas Accord

In March 1998, under Decision 97-08-055 that approved the Gas Accord, PG&E implemented several changes to the CAT program. These included:

- The use of a daily core load forecast for each Core Procurement Group (CPG),[7] as the measure of usage during a pipeline flow order (Operational Flow Order (OFO) or Emergency Flow Order (EFO));
- The diversion of noncore supplies to CPGs if core supplies are short during EFOs;
- Monthly offerings of a pro rata share of the Redwood and Baja capacity held for core customers;
- A 2.4 cent per decatherm brokerage fee;
- Reducing the minimum size of a group served by a gas ESP to 120,000 therms per year; and
- Removing the 10 percent cap on total core load that could participate in gas choice, that had been established for the permanent program.

6. Electronic Sign-Up

In February 1998, under Decision 98-02-108, PG&E implemented changes to the requirements for a gas ESP to contract with a customer, and for a gas ESP to communicate the customer supply switch to PG&E. These included:

- Allowing a gas ESP to contract with a customer ("sign-up" the customer) without obtaining written confirmation;
- Creating consumer protection rules for the sign-up process that were comparable to those in place for electric direct access; and
- Allowing gas ESPs to use electronic means to notify the utility of customer switching requests.

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[7] Core Procurement Groups are groups of core customers for whom a gas supplier is identified. All gas ESP groups are Core Procurement Groups, as is the group of customers supplied by utility procurement.

7. AB 1421

During 1999, the California legislature passed AB 1421. This law[8] circumscribed certain roles for gas utilities and gas ESPs. In general, it required that:

- Gas utilities would continue to offer to all core customers a "basic" gas service, such service being defined to include procurement service;
- Gas utilities would be the exclusive provider of metering and billing for all core customers, except that gas ESPs could provide billing for customers for whom they supply gas.

8. OFO and Gas OII Settlements

The OFO and Gas OII settlements (D.00-02-050 and D.00-05-049, respectively), which arose out of the gas investigation (OII 99-07-003) initiated by the Commission in January 1998 (R.98-01-011), made several changes specific to core aggregation. The major provisions that affected CAT service were to:

- Unbundle core storage for gas ESPs;
- Allow operating imbalance and adjustment repayments to be spread over a period of a year, instead of a month;
- Require PG&E to offer gas-only Utility Distribution Company (UDC) Consolidated Billing in the near future;
- Make Self Balancing available to gas ESPs; and
- Institute billing credits for gas ESPs doing ESP Consolidated Billing.

In addition, as a result of Decision 00-05-049, the CPUC's Energy Division submitted to the legislature suggested language to implement various consumer protection measures for gas ESP service. These included requirements for gas ESP registration with the CPUC, price revelation, and other standards similar to those for electric direct access. The legislature has yet to act on this language.

[8] PUC Code, Section 328.

C. Trends and Current Statistics of Core Aggregation

This section of the report provides data on gas ESP customer populations and loads, as well as a snapshot of the current gas customer population that is receiving gas procurement service from a retail marketer. The gas ESP customers are compared to the overall core customer population. Various gas ESP statistics are also presented, including the capacity and billing options chosen by gas ESPs.

1. Customer Trends

When the pilot CAT program began in 1991, seven entities began service as core transport agents (gas ESPs or core aggregators), initially serving approximately 800 accounts. Within six months, nine gas ESPs were active and had formed aggregation groups that served approximately 3,000 accounts. PG&E's CAT program grew to a peak of about 8,500 accounts in mid-1993. Customer levels soon fell to about 6,500 accounts, however, and stayed at about this level through the end of 1995. The following Table 1 shows the amount of load served by core aggregators during each year of the pilot program period, and the share of the core market served by gas ESPs each year.

TABLE 1
PACIFIC GAS AND ELECTRIC COMPANY
LOADS SERVED BY GAS ESPS DURING PILOT PROGRAM
1991-1995

Line No.		Gas ESP Service (MDth)	Total Core Load (MDth)	Percent Served by Gas ESPs
1	1991	776	293,219	0.3%
2	1992	6,392	265,411	2.4%
3	1993	10,680	280,117	3.8%
4	1994	11,697	299,783	3.9%
5	1995	9,892	257,707	3.8%

As discussed above, Decision 95-07-048 modified and made core aggregation a permanent feature of PG&E service, and the program grew in 1996 and 1997 to a point at which almost 5 percent of core load was served by gas ESPs. In its Market Conditions Report of July 1998,[9] PG&E reported that 16 gas ESPs were serving about 2,100 residential and

[9] Market Conditions Report of Pacific Gas and Electric Company, July 15, 1998 (R.98-01-011).

9,300 commercial accounts. Five of these marketers had begun providing service in 1998.

Table 2 shows the amount and share of core gas load served by aggregators under the permanent CAT program through the year 2001.

TABLE 2
PACIFIC GAS AND ELECTRIC COMPANY
LOADS SERVED BY GAS ESPS DURING PERMANENT PROGRAM
1996-2001

Line No.		Gas ESP Service (MDth)	Total Core Load (MDth)	Percent Served by Gas ESPs
1	1996	10,924	267,980	4.1%
2	1997	13,695	276,486	5.0%
3	1998	14,693	310,655	4.7%
4	1999	15,708	319,738	4.9%
5	2000	14,654	298,081	4.9%
6	2001	11,249	283,376	4.0%

In its Market Conditions Report, PG&E also indicated that the penetration of core markets was much more significant in the commercial class than in the residential class. Table 3, shows that at that time, almost 17 percent of commercial core gas loads were served by ESPs, while ESPs served less than 1 percent of residential loads.[10]

TABLE 3
PACIFIC GAS AND ELECTRIC COMPANY
CORE GAS CUSTOMER CHOICE IN NORTHERN CALIFORNIA
AS OF JULY 1998

Line No.	Customer Class	Share of Core Gas Customer Accounts Served by Gas ESPs	Share of Core Gas Volume Served by Gas ESPs
1	Residential	0.1%	0.7%
2	Commercial	4.1%	16.6%
3	Total	0.3%	5.0%

The number of commercial and residential customers choosing competitive suppliers grew during the first two years of Gas Accord. The

[10] Tables 1 and 2 show the calculation of the percentage of load served by gas ESPs based on the ratio of actual billing data. Table 3 and subsequent tables show this percentage calculation based upon historical annual loads of gas ESP customers divided by the BCAP adopted forecasts of core loads in effect during the timeframe represented.

CAT program saw a peak in customer and gas ESP participation in April 2000. At that point, about 32,700 core customers were served by 15 gas ESPs. Substantial numbers of single-family residential customers were being served for the first time, primarily by the two aggregators that had recently begun service and had focused on single-family customers. Commercial penetration had grown somewhat during this time as well. Table 4 shows the status of gas ESP service in April 2000.

TABLE 4
PACIFIC GAS AND ELECTRIC COMPANY
CORE GAS CUSTOMER CHOICE IN NORTHERN CALIFORNIA
AS OF APRIL 2000

Line No.	Customer Class	Share of Core Gas Customer Accounts Served by Gas ESPs	Share of Core Gas Volume Served by Gas ESPs
1	Residential	0.6%	1.1%
2	Commercial	4.9%	19.6%
3	Total	0.9%	5.9%

Following April 2000, the CAT program went through a period of retrenchment. The number of gas ESPs fell to thirteen during the summer of 2001 (see Figure 2), and a significant number of customers, particularly single-family residential accounts, returned to utility procurement service during that year. This appears to have been due to a number of factors, principal among them being the volatile gas prices of the fall and winter of 2000, as well as the California electric energy crisis.

There were several connections between the electric energy crisis and the decline in competitive gas service. A primary factor was that two aggregators that provided both gas and electric commodity service had served the majority of single-family gas accounts. When the electric market became difficult for most electric providers during this crisis, both of the combined electric/gas ESPs that served single-family accounts withdrew from providing electric service. Subsequently one of those ESPs stopped providing gas service as well.

Table 5 shows the customer and load percentages served by gas aggregators, as of April 2001.

TABLE 5
PACIFIC GAS AND ELECTRIC COMPANY
CORE GAS CUSTOMER CHOICE IN NORTHERN CALIFORNIA
AS OF APRIL 2001

Line No.	Customer Class	Share of Core Gas Customer Accounts Served by Gas ESPs	Share of Core Gas Volume Served by Gas ESPs
1	Residential	0.3%	0.5%
2	Commercial	3.5%	15.4%
3	Total	0.4%	4.3%

In the past year, changes to the profile of customers served by gas ESPs have continued. The primary events have been the bankruptcy of one gas ESP that served about 1,100 commercial accounts, and the exit from the market of three other relatively long-standing gas ESPs that had served commercial customers. Two new gas ESPs that serve commercial markets have been added during this time, but they do not list themselves on the PG&E public list.

With respect to residential customers, there has been a resurgence in the number of customers served. As of January 2002, core aggregators served an all-time high of about 36,800 residential customers. As of April 2002, that number stood at about 27,800.

Because of the large volumes associated with the declining number of commercial accounts in the last year, however, the total volume served by core aggregation is now approaching historic lows, at just over 3 percent of total core volumes.

Table 6 shows the customer and load percentages served by gas aggregators, as of April 2002.

TABLE 6
PACIFIC GAS AND ELECTRIC COMPANY
CORE GAS CUSTOMER CHOICE IN NORTHERN CALIFORNIA
AS OF APRIL 2002

Line No.	Customer Class	Share of Core Gas Customer Accounts Served by Gas ESPs	Share of Core Gas Volume Served by Gas ESPs
1	Residential	0.6%	0.6%
2	Commercial	2.5%	9.7%
3	Total	0.7%	3.1%

Monthly data, showing the numbers of customers and volumes served by gas ESPs, for the period January 2000 through April 2002, are found in Appendix 2 to this report.

2. Current Gas ESP Customer Profile

This section provides statistics regarding recent gas ESP customers in some detail. This examination is primarily intended to show the penetration of core aggregation for differing customer classes, sizes, and business-types.

3. Customers and Volumes by Customer Class

As of April 2002, 27,800 core accounts were served by gas ESPs. As shown in Table 7, about four-fifths of these customers were single-family residential.

TABLE 7
PACIFIC GAS AND ELECTRIC COMPANY
CORE CUSTOMERS SERVED BY GAS ESPs
AS OF APRIL 2002

Line No.	Customer Class	Number	Share of Class
1	Single-Family Residential	22,506	0.6%
2	Multi-Family Residential	150	0.2%
3	Commercial	5,161	2.5%
4	Total	27,817	0.7%

Examining this same segmentation of this population in terms of customer load by class yields the results shown in Table 8.

TABLE 8
PACIFIC GAS AND ELECTRIC COMPANY
CORE LOADS SERVED BY GAS ESPs
AS OF APRIL 2002

Line No.	Customer Class	Annual Load (MDth/y)	Share of Class
1	Single-Family Residential	1,095	0.7%
2	Multi-Family Residential	84	0.3%
3	Commercial	6,611	9.7%
4	Total	7,790	3.1%

The data above allows calculation of the average size of a core transport customer in each class, and comparison of the average size of each class of core transport customer with groups of all core customers. Table 9 provides the results of these calculations. As indicated, the average core transport customer is larger than the overall average of customers of the same class. This result is consistent with the expectation that gas ESPs will target customers with higher loads, in order to minimize their overall transaction costs.

TABLE 9
PACIFIC GAS AND ELECTRIC COMPANY
AVERAGE LOADS OF CUSTOMERS SERVED BY GAS ESPs
AS OF APRIL 2002

Line No.		Gas ESP Customers (MDth)	All Core Customers (MDth)
1	Single-Family Res	487	451
2	Multi-Family Res	5,604	2,851
3	Commercial	12,809	3,338
4	All Customers	2,800	657

4. Commercial Customers by Type

Virtually all types of core commercial customers are represented in the population of gas ESP customers. Appendix 3 illustrates, by Standard Industrial Classification (SIC) group, the distribution of core transport customers among commercial classifications.

Analysis of this data in Table 10 shows that, within SIC groups served by ESPs, the largest numbers of customers are in the "Educational Services", "Justice, Public Order and Safety", and "Executive, Legislative and General" sectors.

Among these customers, the greatest penetrations by gas ESPs, in terms of the percentage of load served, have occurred in the education, health service, food and various governmental sectors. In these sectors, the gas ESP shares include 44 percent for "Educational Services ", 39 percent for "Executive, Legislative and General", 25 percent for "Justice, Public Order and Safety", 18 percent for "Health Services" and 12 percent for "Food Stores."

TABLE 10
PACIFIC GAS AND ELECTRIC COMPANY
SIC GROUPS OF COMMERCIAL CUSTOMERS SERVED BY GAS ESPs - MORE THAN 150 CUSTOMERS IN A GROUP
AS OF APRIL 2001

Line No.	SIC Code	Description	Number of Gas ESP Customers	Load of Gas ESP Customers (therm/yr)	Share of Customers Served by Gas ESPs	Share of Load Served by Gas ESPs
1	82	Educational Services	2,082	2,312,602	33%	44%
2	58	Eating And Drinking Places	503	428,693	2%	4%
3	80	Health Services	365	596,522	3%	18%
4	54	Food Stores	245	293,041	3%	12%
5	65	Real Estate	234	125,508	2%	2%
6	79	Amusement And Recreation Services	222	199,235	5%	9%
7	92	Justice, Public Order And Safety	211	240,872	14%	25%
8	83	Social Services	166	119,996	4%	10%
10	91	Executive, Legislative And General	160	169,332	23%	39%
11	---	(Unassigned)	132	43,552	0%	1%

Table 11 shows the top 15 SIC groups in terms of energy use per account. It is interesting to note that few customers in these SIC groups have chosen to participate in core aggregation, considering that they use significant amounts of gas.

TABLE 11
PACIFIC GAS AND ELECTRIC COMPANY
SERVICE BY GAS ESPS TO
TOP 15 SIC GROUPS BY AVERAGE CUSTOMER SIZE -
AS OF APRIL 2002

Line No.	SIC Code	Description	Average Load of Customers in SIC Group (therm/yr)	Customers in Group Served by Gas ESPs	Share of Group Load Served by Gas ESPs
1	29	PETROLEUM AND COAL PRODUCTS	7,514	2%	1%
2	14	NONMETALLIC MINERALS	4,337	0%	0%
3	20	FOOD AND KINDERED PRODUCTS	3,852	1%	1%
4	28	CHEMICAL AND ALLIED PRODUCTS	3,201	1%	19%
5	46	PIPELINES, EXCEPT NATURAL GAS	3,009	0%	0%
6	33	PRIMARY METAL INDUTRIES	2,224	0%	0%
7	22	TEXTILE MILL PRODUCTS	1,788	0%	0%
8	30	RUBBER AND MISC.PLASTICS PRODUCTS	1,728	0%	0%
9	26	PAPER AND ALLIED PRODUCTS	1,668	0%	0%
10	36	ELECTRONIC AND OTHER ELECTRIC EQUIPMENT	1,628	0%	1%
11	32	STONE, CLAY AND GLASS PRODUCTS	1,460	1%	7%
12	49	ELECTRIC, GAS AND SANITARY SERVICES	1,431	8%	6%
13	1	AGRICULTURAL PRODUCTION CROPS	1,386	1%	0%
14	97	NATIONAL SECURITY INTERNATIONAL AFFAIR	1,300	1%	8%
15	2	AGRICULTURAL PRODUCTION LIVESTOCK	1,111	4%	4%

5. Comparative Load Shape of Gas ESP Customers

The portfolio served by gas ESPs has always consisted of a larger portion of load from commercial customers than from residential customers. Because loads of commercial customers as a group are less sensitive to temperature effects, the load shape of customers served by gas ESPs is somewhat flatter than that of the overall core population.

Figure 1 shows the annual load shape of gas ESP customers in comparison to that of the core group as a whole.

that most of them will only serve commercial customers of a significant size. The size threshold varies by ESP and as market conditions change, but is typically around a minimum of 10,000-therms per year.

The final grouping of gas ESPs are those that are willing to serve schools, colleges, cities, counties, special districts, and public agencies. There are four aggregators listed in this group. These suppliers generally do not have size minimums.

Table 12 illustrates the number of customers and the amount of load served by each of these three service groups of ESPs, as of April 2002.

TABLE 12
PACIFIC GAS AND ELECTRIC COMPANY
CUSTOMER GROUPS AND LOADS SERVED BY GAS ESPs
AS OF APRIL 2002

Line No.	Listed Market Segment for Gas ESP	Number of Customers Served	Customer Annual Loads Served (MDth)
1	Only Single-Family	23,049	1,480
2	All but Single-Family	1,343	2,236
3	School and governmental	3,769	3,974
4	Total	27,817	7,790

8. Billing Choices Made by Gas ESPs

Three billing options are available to gas ESPs. A gas ESP may bill for its own procurement-related charges only while PG&E bill for its transportation-related charges. This is referred to as "Dual Billing." A gas ESP may also choose instead to perform "Gas ESP Consolidated Billing," wherein PG&E will forward its charges to the gas ESP for collection. The third choice available to a gas ESP is "PG&E Consolidated Billing," wherein PG&E bills for both its own and the gas ESP's charges. This option is currently available only to a gas ESP that also provides the customer's electric commodity service, on the same account.[11]

In 1998, PG&E reported the statistics shown in Table 13[12] for the billing status of gas ESP customers.

[11] Under the terms of the Gas OII Settlement, PG&E currently anticipates providing gas-only PG&E Consolidated Billing in May of 2003.

[12] Market Conditions Report, Chapter 8.

TABLE 13
PACIFIC GAS AND ELECTRIC COMPANY
ACCOUNTS BILLED BY GAS ESPs
AS OF JUNE 1998 (PERCENT OF TOTAL CUSTOMERS)

Line No.		Gas ESP Sends Combined Bill	Dual Billing
1	Residential	9%	9%
2	Commercial	69%	13%
3	Total	78%	22%

PG&E Consolidated Billing was first used by a gas ESP in September 1998. One other aggregator has chosen this option since that time.

In April 2000, approximately 20,000 customers, or more than 60 percent of all gas ESP customers, were billed under the PG&E Consolidated Billing option. The remainder of gas ESP customers was split roughly in half between the Dual Billing and ESP Consolidated Billing options.

Table 14 shows the approximate distribution of the use of the three billing options as of April 2002. Note that PG&E Consolidated Billing is not currently being used.

TABLE 14
PACIFIC GAS AND ELECTRIC COMPANY
BILLING CHOICES FOR GAS ESP CUSTOMERS
AS OF APRIL 2002 (PERCENT OF TOTAL CUSTOMERS)

Line No.	[update]	Gas ESP sends combined bill	Dual billing
1	Residential	6%	73%
2	Commercial	16%	5%
3	Total	22%	78%

9. Billing Credits for Gas ESP Consolidated Billing

As a condition of the Gas OII Settlement (D. 00-05-049), gas ESPs performing gas ESP Consolidated Billing may qualify to receive a billing credit each month for each account billed. To qualify for this credit, a gas ESP must agree to and sign Attachment K to the Core Gas Aggregation Service contract between the gas ESP and PG&E. Attachment K outlines several Consolidated Billing requirements for gas ESPs. These requirements include: (1) exchange of billing data with PG&E via a standard electronic data interchange (EDI) protocol; and (2) provision of certain requisite information that PG&E would otherwise provide in an information-only billing statement to the customer.

As of April 2002, nine of the thirteen current gas ESPs were performing gas ESP Consolidated Billing for at least some of their accounts. However, only two of those ESPs had signed Attachment K making them eligible to receive a billing credit for their billed accounts.

10. The Core Load Forecast

A gas ESP nominates gas onto PG&E's system just as any other shipper would except that they use PG&E's Core Load Forecast and Load Determination Service as a "virtual meter" to determine the total daily usage of the current group of customers served by the gas ESP.

An Operating Imbalance is determined each month by comparing the daily forecast usage for a gas ESP's customers to its customers' actual metered usage, after meter reads become available. Daily usage is imputed once monthly meter readings are available. The size of the Operating Imbalance, expressed as a percentage of total usage, is a measure of the accuracy of the forecast. Appendix 5 illustrates the level of forecast error in the Operating Imbalance for gas ESPs during the twelve-month period ending with March 2002, inclusive.

In any individual month, the percentage accuracy for an individual gas ESP may vary within a broad range. Accuracy on a monthly level is complicated by a number of factors. Among these are the effects of: (1) incomplete historical data for individual customers within a gas ESP's customer group(s); (2) intra-month changes in a gas ESP's customer population; and (3) groups with small numbers of customers, causing inaccuracy in the statistical basis for PG&E's Core Load Forecast and Load Determination model. Errors or delays in billing can also contribute to inaccuracy.

The long-term trend in an individual group's Operating Imbalance error is important, because Operating Imbalances are generally repaid to the system over a period of a year. Five of the listed gas ESPs were within a seven percent average band over the past year. Another four, however, had biases of 11 to 12 percent over that period. The overall accuracy of the core load forecast for the past year for all gas ESPs together was within four (4) percent of predicted load.

PG&E continues to work to improve the accuracy of these forecasts.

11. Gas ESP Pipeline Choices

Gas ESPs are offered, on a monthly basis, a portion of the PG&E-Northwest interstate capacity that is reserved to serve PG&E's core customers. Gas ESPs are also offered intrastate pipeline capacity on the Redwood and Baja paths each month, from reservations set aside for core customers. Core aggregators are not obliged to take the pipeline capacity offered to them. However, during the first two years of providing CAT service, they are required to carry a certain amount of firm winter intrastate capacity.

There has been considerable variation in the ways gas ESPs have chosen to exercise their options each month. These variations are probably driven by differing perceptions of the gas market, as well as by the various portfolio choices the gas ESPs have made.

Ninety-six percent of the capacity offered on the Redwood path has been accepted during the Gas Accord, through April 2002. Presumably, this option has been attractive because this path is offered at vintage rates reserved for core service. These rates are about half those paid by the rest of the market, for Redwood path capacity.

Only 33 percent of offered Baja capacity and 28 percent of offered PG&E-Northwest capacity was accepted during the same period. The total amount of capacity accepted on these paths has varied widely between months. The following chart, Figure 3, shows the percentages of offered capacity that was accepted by gas ESPs, as a whole, from March 1998, through April 2002.

To implement storage choice, PG&E has conducted three open seasons pursuant to the rules for core firm storage contained in Schedule G-CT-Core Gas Transportation Service. The first open season was conducted in October 2000 for storage capacity assignments from December 2000 through March 2001. For this period, 84 percent of offered storage capacity was accepted. The rejected storage amounted to about 267,000 Dth of inventory capacity, or about 0.8 percent of the total storage rights assigned to core customers. This rejected capacity was included in the storage capacity utilized by PG&E's Core Procurement department.

A second open season was conducted in February 2001, for storage capacity assignments from April 2001 through March 2002. For this period, only 39 percent of offered storage capacity was accepted. The rejected storage, about 836,000 Dth of inventory capacity or about 2.5 percent of total core storage, was an additional assignment to PG&E Core Procurement for this period.

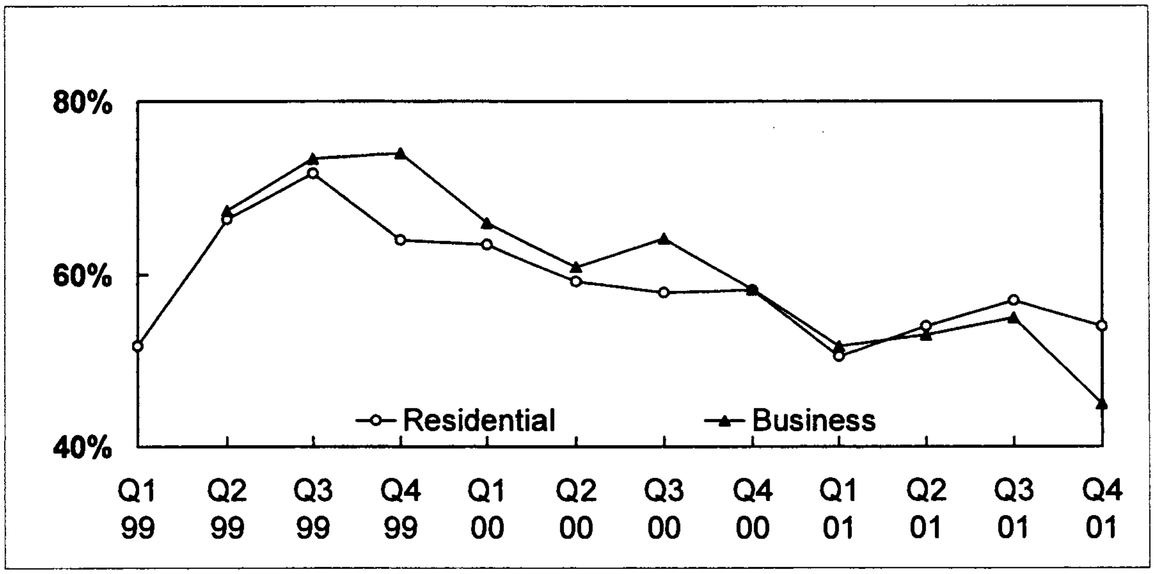
The third open season was conducted in February 2002, for storage capacity assignment from April 2002 through March 2003. For this period, 47 percent of offered storage capacity was accepted. The rejected storage, about 492,000 Dth of inventory capacity or about 1.5 percent of total core storage, was an additional assignment to PG&E Core Procurement for this period.

13. Customer Awareness of Gas Choice

PG&E has made efforts to determine the extent to which customers are aware of their gas procurement choices. As a part of its quarterly survey of residential and commercial customers, since early 1999, PG&E has asked the question: "Are you aware that you currently have the choice to buy gas from a company other than PG&E and have it delivered to you through PG&E pipelines?"

Figure 4 shows the results from this survey since 1999. (No results are shown for businesses for the first quarter of 1999 because of the small data set size.) Note that residential customer awareness tracks closely with small business customer awareness. Awareness of gas customer choice appears to have decreased steadily, since having peaked in late 1999 or early 2000.

FIGURE 4
PACIFIC GAS AND ELECTRIC COMPANY
CUSTOMER AWARENESS OF GAS SUPPLIER CHOICE
(PERCENT AWARE)



D. Conclusion

This report fulfills part of PG&E's commitment under the Gas Accord. As contemplated by the language of the Gas Accord Settlement, PG&E will hold a workshop to solicit comment on this report and to discuss any difficulties that have arisen with respect to PG&E's CAT program. PG&E intends to invite members of the Core Procurement Advisory Group, as well as the service list of PG&E's Gas Accord II application (A. 01-10-011) to participate in that workshop.

Appendix 1
Published List of Core Aggregators
As of April 2002

Pacific Gas and Electric Company
Core Gas Aggregation Service
Participating Core Transport Agents (CTAs)
As of April 10, 2002

These two CTAs serve: **All Customer Groups, including Single Family Residential**

ACN Energy, Inc. Customer Service Department (800) 348-6496	**The New Power Company** Customer Service (866) 677-4547	

These four CTAs serve: **All Customer Groups, except Single Family Residential**

Enron Energy Marketing Corp. Customer Relations (888) 367-6610	**PanCanadian Energy Services** Jay Cattermole (925) 831-6850	**Sempra Energy Solutions, LLC** Genny Borrego (619) 696-3198
TXU Energy Services Gerard Worster (510) 226-5777		

These four CTAs serve: **Schools, Colleges, Cities, Counties, Special Districts, and Public Agencies**

Association of Bay Area Governments (ABAG) Jerry Lahr (510) 464-7908	**California Utility Buyers, JPA (CUB)** Michael Rochman (925) 743-1292	**School Project for Utility Rate Reduction (SPURR)** Michael Rochman (925) 743-1292
State of California DGS Bill Knox (916) 322-9838		

Appendix 2
CAT Program Customers and Volumes
2000-2002 CTA Report Summary

	Numbers of Customers				Volumes of Gas ESP Customers (th/yr)			
	Commercial	*Single-Family*	*Multi-Family*	**Total Customers**	*Commercial*	*Single-Family*	*Multi-Family*	**Total Volumes**
Jan-00	9,627	16,845	1,015	27,487	144,682,752	10,158,492	12,205,116	167,046,360
Feb-00	9,657	17,971	1,006	28,634	143,414,088	10,722,660	11,835,228	165,971,976
Mar-00	9,652	19,994	1,001	30,647	139,332,072	11,676,564	11,237,796	162,246,432
Apr-00	9,943	21,771	1,032	32,746	138,843,576	12,431,760	10,412,988	161,688,324
May-00	9,977	21,403	1,027	32,407	138,084,228	12,059,196	10,024,536	160,167,960
Jun-00	9,712	20,762	957	31,431	131,259,144	11,326,548	8,991,432	151,577,124
Jul-00	9,790	20,316	943	31,049	131,521,032	10,869,192	8,542,092	150,932,316
Aug-00	9,781	19,832	930	30,543	131,701,536	10,596,468	8,150,412	150,448,416
Sep-00	10,096	19,320	894	30,310	135,560,196	10,349,220	7,896,312	153,805,728
Oct-00	9,438	18,450	650	28,538	125,163,300	9,879,780	6,369,132	141,412,212
Nov-00	9,289	17,838	621	27,748	123,056,508	9,561,684	5,218,104	137,836,296
Dec-00	7,749	16,631	459	24,839	116,124,828	8,887,788	4,932,804	129,945,420
Jan-01	7,667	13,336	457	21,460	116,271,792	7,263,240	4,939,944	128,474,976
Feb-01	7,329	11,014	443	18,786	111,928,176	6,148,704	4,889,148	122,966,028
Mar-01	7,013	9,109	398	16,520	108,596,136	5,143,680	4,702,752	118,442,568
Apr-01	6,936	8,835	394	16,165	108,750,084	5,058,480	4,654,152	118,462,716
May-01	6,992	8,466	323	15,781	111,870,492	4,757,868	5,519,712	122,148,072
Jun-01	6,768	8,064	314	15,146	108,631,332	4,524,644	5,065,500	118,221,476
Jul-01	6,772	8,034	310	15,116	113,843,556	4,565,796	4,959,168	123,368,520
Aug-01	6,037	9,385	252	15,674	108,734,580	5,204,364	4,032,384	117,971,328
Sep-01	5,995	10,910	247	17,152	100,340,976	6,022,776	4,060,008	110,423,760
Oct-01	6,068	10,997	252	17,317	100,729,740	6,155,424	3,921,288	110,806,452
Nov-01	7,062	28,311	436	35,809	105,003,600	15,091,824	4,512,360	124,607,784
Dec-01	6,986	29,227	442	36,655	107,502,420	15,608,088	4,504,248	127,614,756
Jan-02	5,616	30,967	247	36,830	72,371,532	16,040,484	1,310,592	89,722,608
Feb-02	5,544	29,007	239	34,790	69,068,700	14,463,120	1,210,884	84,742,704
Mar-02	5,486	27,453	223	33,162	68,792,148	13,544,520	1,115,544	83,452,212
Apr-02	5,161	22,506	150	27,817	66,106,848	10,951,320	840,588	77,898,756

Appendix 3
SIC DATA
As of April 2001

SIC Code	Description	Number of Gas ESP Customers	Load of Gas ESP Customers (therm/yr)	Share of Customers Served by Gas ESPs	Share of Load Served by Gas ESPs
0	RESIDENTIAL, TRAILER CRTS & MOBILE HM	10	21,045	1%	3%
1	AGRICULTURAL PRODUCTION CROPS	6	1,779	1%	0%
2	AGRICULTURAL PRODUCTION LIVESTOCK	7	8,037	4%	4%
7	AGRICULTURAL SERVICES	18	25,707	1%	2%
8	FORESTRY	1	191	14%	10%
9	FISHING, HUNTING AND TRAPPING	1	68	17%	4%
13	OIL AND GAS EXTRACTION	-	-	0%	0%
14	NONMETALLIC MINERALS, EXCEPT FUELS	-	-	0%	0%
15	GENERAL BUILDING CONTRACTORS	1	7	0%	0%
16	HEAVY CONSTRUCTIONS, EX.BUILDING	5	2,681	2%	3%
17	SPECIAL TRADE CONTRACTORS	5	133	0%	0%
20	FOOD AND KINDERED PRODUCTS	10	48,679	1%	1%
22	TEXTILE MILL PRODUCTS	-	-	0%	0%
23	APPAREL & OTHER TEXTILE PRODUCTS	1	22	1%	0%
24	LUMBER AND WOOD PRODUCT	-	-	0%	0%
25	FURNITURE AND FIXTURES	-	-	0%	0%
26	PAPER AND ALLIED PRODUCTS	-	-	0%	0%
27	PRINTING AND PUBLISHING	11	364	1%	0%
28	CHEMICAL AND ALLIED PRODUCTS	2	192,064	1%	19%
29	PETROLEUM AND COAL PRODUCTS	1	4,227	2%	1%
30	RUBBER AND MISC.PLASTICS PRODUCTS	-	-	0%	0%
31	LEATHER AND LEATHER PRODUCTS	-	-	0%	0%
32	STONE, CLAY AND GLASS PRODUCTS	3	30,573	1%	7%
33	PRIMARY METAL INDUTRIES	-	-	0%	0%
34	FABRICATED METAL PRODUCTS	1	13	0%	0%
35	INDUSTRIAL MACHINERY AND EQUIPMENT	11	41,008	1%	4%
36	ELECTRONIC AND OTHER ELECTRIC EQUIPMENT	4	18,928	0%	1%
37	TRANSPORTATION EQUIPMENT	-	-	0%	0%
38	INSTRUMENTS AND RELATED PRODUCTS	2	2,496	0%	1%
39	MISCELLLANEOUS MANUFACTURING INDUSTRIES	-	-	0%	0%
40	RAILROAD TRANSPORTATIONS	-	-	0%	0%
41	LOCAL AND INTERURBAN PASSENGER TRANSIT	34	29,619	10%	18%
42	TRUCKING AND WAREHOUSING	54	31,932	1%	3%
43	U.S POSTAL SERVICE	2	717	0%	0%
44	WATER TRANSPORTATION	1	402	1%	1%
45	TRANSPORTATION BY AIR	3	2,406	1%	1%
46	PIPELINES, EXCEPT NATURAL GAS	-	-	0%	0%
47	TRANSPORTATION SERVICES	3	2,743	1%	9%
48	COMMUNICATIONS	3	2,289	1%	1%
49	ELECTRIC, GAS AND SANITARY SERVICES	74	88,646	8%	6%
50	WHOLESALE TRADE-DURABLE GOODS	11	444	0%	0%
51	WHOLESALE TRADE-NON DURABLE GOODS	8	35,387	1%	6%
52	BUILDING MATERIALS AND GARDEN SUPPLIES	1	23	0%	0%

SIC Code	Description	Number of Gas ESP Customers	Load of Gas ESP Customers (therm/yr)	Share of Customers Served by Gas ESPs	Share of Load Served by Gas ESPs
53	GENERAL MERCHANDISE STORES	1	21	0%	0%
54	FOOD STORES	245	293,041	3%	12%
55	AUTOMOTIVE DEALERS AND SERVICE STATIONS	29	18,218	1%	1%
56	APPAREL AND ACCESSORY STORES	5	171	0%	0%
57	FURNITURE AND HOME FURNISHING STORES	16	616	0%	0%
58	EATING AND DRINKING PLACES	503	428,693	2%	4%
59	MISCELLANEOUS RETAIL	47	1,528	1%	0%
60	DEPOSITORY INSTITUTIONS	2	8	0%	0%
61	NONDEPOSITORY INSTITUTIONS	2	40	0%	0%
62	SECURITY AND COMMODITY BROKERS	2	48	1%	0%
63	INSURANCE CARRIERS	1	5	0%	0%
64	INSURANCE AGENTS, BROKERS AND SERVICE	5	122	0%	0%
65	REAL ESTATE	234	125,508	2%	2%
66	COMBINED REAL ESTATE, CONTRACTOR,ETC	-	-	0%	0%
67	HOLDING AND OTHER INVESTMENT OFFICES	-	-	0%	0%
70	HOTELS AND OTHER LODGING PLACES	28	59,394	1%	2%
72	PERSONAL SERVICES	90	48,818	1%	1%
73	BUSINESS SERVICES	9	592	0%	0%
75	AUTO REPAIR, SERVICES AND PARKING	95	33,491	2%	5%
76	MISCELLANEOUS REPAIR SERVICES	5	129	0%	0%
78	MOTION PICTURES	6	887	1%	1%
79	AMUSEMENT AND RECREATION SERVICES	222	199,235	5%	9%
80	HEALTH SERVICES	365	596,522	3%	18%
81	LEGAL SERVICES	3	67	0%	0%
82	EDUCATIONAL SERVICES	2,082	2,312,602	33%	44%
83	SOCIAL SERVICES	166	119,996	4%	10%
84	MUSEUMS, BOTANICAL, ZOOLOGICAL GARDENS	18	25,798	9%	26%
86	MEMBERSHIP ORGANIZATIONS	36	6,435	0%	0%
87	ENGINEERING AND MANAGEMENT SERVICES	13	111,570	0%	10%
89	SERVICES, NEC	5	41	2%	0%
91	EXECUTIVE, LEGISLATIVE AND GENERAL	160	169,332	23%	39%
92	JUSTICE, PUBLIC ORDER AND SAFETY	211	240,872	14%	25%
93	FINANCE, TAXATION AND MONETARY POLICY	2	305	8%	2%
94	ADMINISTRATION OF HUMAN RESOURCES	40	27,752	9%	14%
95	ENVIRONMENTAL QUALITY AND HOUSING	10	1,417	3%	2%
96	ADMINISTRATION OF ECONOMIC PROGRAMS	65	14,191	19%	12%
97	NATIONAL SECURITY INTERNATIONAL AFFAIR	3	26,713	1%	8%
99	NONCLASSIFIABLE ESTABLISHMENTS	26	8,416	3%	4%
.	(UNASSIGNED)	132	43,552	0%	1%

Appendix 4
PACIFIC GAS AND ELECTRIC COMPANY
AVERAGE CAPACITY ACCEPTED ON CORE INTERSTATE AND INTRASTATE PATHS

	PGE-NW	Baja Path	Redwood Path
Mar-98	63%	10%	100%
Apr-98	54%	12%	100%
May-98	66%	9%	88%
Jun-98	95%	9%	100%
Jul-98	68%	9%	100%
Aug-98	68%	9%	100%
Sep-98	94%	9%	100%
Oct-98	70%	1%	100%
Nov-98	43%	9%	100%
Dec-98	55%	76%	100%
Jan-99	33%	78%	100%
Feb-99	33%	78%	100%
Mar-99	26%	47%	100%
Apr-99	27%	48%	89%
May-99	0%	38%	89%
Jun-99	27%	37%	90%
Jul-99	0%	37%	89%
Aug-99	28%	36%	99%
Sep-99	0%	35%	100%
Oct-99	3%	36%	100%
Nov-99	0%	26%	100%
Dec-99	0%	41%	100%
Jan-00	0%	36%	100%
Feb-00	0%	19%	90%
Mar-00	0%	7%	98%
Apr-00	0%	8%	100%
May-00	0%	8%	100%

Appendix 4
PACIFIC GAS AND ELECTRIC COMPANY
AVERAGE CAPACITY ACCEPTED ON CORE INTERSTATE AND INTRASTATE PATHS

	PGE-NW	Baja Path	Redwood Path
Jun-00	0%	8%	100%
Jul-00	0%	8%	99%
Aug-00	42%	7%	100%
Sep-00	65%	7%	100%
Oct-00	70%	16%	100%
Nov-00	11%	60%	100%
Dec-00	7%	59%	98%
Jan-01	7%	12%	66%
Feb-01	2%	6%	75%
Mar-01	16%	6%	84%
Apr-01	15%	50%	98%
May-01	68%	35%	100%
Jun-01	63%	17%	100%
Jul-01	64%	11%	100%
Aug-01	87%	89%	100%
Sep-01	84%	32%	100%
Oct-01	27%	30%	96%
Nov-01	38%	17%	95%
Dec-01	1%	17%	95%
Jan-02	3%	25%	93%
Feb-02	0%	24%	93%
Mar-02	0%	19%	89%
Apr-02	0%	0%	52%
Average	28%	33%	96%

Appendix 5

Pacific Gas and Electric company

Recent Operating Imbalances for Active Gas ESPS[13]
Percent of Monthly Determined Usage

Gas ESP	Apr-01	May-01	Jun-01	Jul-01	Aug-01	Sep-01	Oct-01	Nov-01	Dec-01	Jan-02	Feb-02	Mar-02	Average
1	-36%	-22%	-7%	-9%	-11%	-9%	-14%	-13%	-9%	-7%	-3%	-6%	-12%
2	-15%	-2%	-12%	-28%	-20%	-5%	5%	10%	7%	8%	15%	5%	-3%
3	-4%	-5%	16%	15%	-4%	-8%	-10%	-7%	0%	3%	6%	-1%	0%
4	-1%	-5%	-3%	-12%	-5%	-2%	-6%	1%	9%	9%	11%	12%	1%
5	0%	-2%	45%	-28%	-13%	-16%	-18%	18%	-4%	70%	2%	-22%	3%
6	-4%	1%	5%	7%	-1%	-1%	15%	13%	13%	12%	11%	12%	7%
7	-2%	13%	18%	11%	12%	13%	29%	24%	13%	-1%	-4%	-1%	11%
8	17%	1%	27%	16%	2%	8%	16%	14%	12%	7%	11%	6%	11%
9	4%	14%	32%	25%	22%	14%	25%	10%	-4%	-7%	5%	7%	12%
10	-2%	5%	18%	0%	27%	14%	16%	19%	21%	54%	46%	56%	23%
All	-6%	-2%	5%	3%	9%	3%	7%	9%	9%	7%	5%	4%	4%

[13] Gas ESPs listed are those that were active for the latest 12-month period for which Operating Imbalances are available. One ESP was excluded due to substantial reduction in group size, which skewed the Operating Imbalance accuracy. This group averaged a 23 percent Operating Imbalance over the 12-month period. Gas ESPs are sorted in order of average monthly imbalance, and numbered for reference.

CERTIFICATE OF SERVICE

I, the undersigned, state that I am a citizen of the United States and am employed in the City and County of San Francisco; that I am over the age of eighteen (18) years and not a party to the within cause; and that my business address is 77 Beale Street, San Francisco, California 94105. I am readily familiar with the business practice of Pacific Gas and Electric Company for collection and processing of correspondence for mailing with the United States Postal Service. In the ordinary course of business, correspondence is deposited with the United States Postal Service the same day it is submitted for mailing.

On August 7, 2002, I served a true and correct copy of the **PACIFIC GAS AND ELECTRIC COMPANY CORE AGGREGATION TRANSPORTATION PROGRAM STATUS REPORT** on all parties identified on the Service List for the California Public Utilities Commission Docket No. A.01-10-011. Service was effected by serving said document by electronic mail to all parties.

I certify and declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed in San Francisco, California on August 7, 2002.

John C. Stewart

CALIFORNIA PUBLIC UTILITIES COMMISSION
Service Lists

Proceeding: A0110011 - PG&E - MARKET STRUCT
Filer: PACIFIC GAS AND ELECTRIC COMPANY
List Name: LIST
Last changed: June 19, 2002

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PACIFIC GAS AND ELECTRIC COMPANY

APPENDIX C

STATEMENTS OF QUALIFICATIONS

PACIFIC GAS AND ELECTRIC COMPANY
STATEMENT OF QUALIFICATIONS OF ROY M. KUGA

Q 1 Please state your name and business address.

A 1 My name is Roy M. Kuga, and my business address is Pacific Gas and Electric Company, 77 Beale Street, San Francisco, California.

Q 2 Briefly describe your responsibilities at Pacific Gas and Electric Company (PG&E).

A 2 I am the Vice President of the Energy Supply Management Department. I currently oversee the daily and long-term gas and electric procurement functions. I joined PG&E over 30 years ago and have held a number of engineering, contracting and planning related positions.

Q 3 Please summarize your educational and professional background.

A 3 In addition to my 30 plus years with PG&E, I have served as an operations research analyst at both GTE and Chevron. I am a registered professional engineer in the state of California. I have a master of science degree in operations research from Stanford University, a bachelor of science degree in electrical engineering from the University of Hawaii, and a bachelor of arts degree in mathematics from the University of Hawaii.

Q 4 What is the purpose of your testimony?

A 4 I am sponsoring the following chapter in PG&E's Core Gas Capacity Planning Range Supplemental Testimony:

- Chapter 1, "Policy."

Q 5 Does this conclude your statement of qualifications?

A 5 Yes, it does.

PACIFIC GAS AND ELECTRIC COMPANY
STATEMENT OF QUALIFICATIONS OF JOHN P. ARMATO

Q 1 Please state your name and business address.

A 1 My name is John P. Armato, and my business address is Pacific Gas and Electric Company, 77 Beale Street, San Francisco, California.

Q 2 Briefly describe your responsibilities at Pacific Gas and Electric Company (PG&E).

A 2 I am the manager of Regulatory and Contract Services in the Core Gas Supply Department. I currently oversee regulatory contract functions pertaining to Core Gas Supply.

Q 3 Please summarize your educational and professional background.

A 3 I received a bachelor of science degree in geology from Sonoma State University. I joined PG&E 25 years ago and have held a number of natural gas regulatory, commercial, and planning related positions. Prior to PG&E, I served as an analyst at Chevron's Natural Gas Supply group, and as a geochemical expert at Chevron Overseas Petroleum.

Q 4 What is the purpose of your testimony?

A 4 I am sponsoring the following chapter in PG&E's Core Gas Capacity Planning Range Supplemental Testimony:

- Chapter 2, "Necessity of Firm Interstate Pipeline Capacity."

Q 5 Does this conclude your statement of qualifications?

A 5 Yes, it does.

PACIFIC GAS AND ELECTRIC COMPANY
STATEMENT OF QUALIFICATIONS OF MIA VU

Q 1 Please state your name and business address.

A 1 My name is Mia Vu, and my business address is Pacific Gas and Electric Company, 245 Market Street, San Francisco, California.

Q 2 Briefly describe your responsibilities at Pacific Gas and Electric Company (PG&E).

A 2 I am currently the manager of Natural Gas Policy, Planning and Strategy in PG&E's Integrated Resource Planning Department under the Energy Procurement organization.

Q 3 Please summarize your educational and professional background.

A 3 I received a bachelor of science degree in economics and mathematics from the University of Wisconsin-Stevens Point in 1973. I received a master of science degree in economics and mathematics and a Ph.D. in economics from Southern Illinois University-Carbondale in 1975 and 1978, respectively. I joined PG&E in 2010. Prior to PG&E, I was in various leadership positions in energy risk management, deal structuring and competitive electricity product offerings at Coral Energy (Shell) and Reliant Energy in Houston, Texas.

My prior position at PG&E was in Quantitative Analysis in the Energy Procurement organization. I assumed the current position in August 2011.

Q 4 What is the purpose of your testimony?

A 4 I am sponsoring the following chapter in PG&E's Core Gas Capacity Planning Range Supplemental Testimony:

- Chapter 3, "Ensuring Reliability and Price Stability."

Q 5 Does this conclude your statement of qualifications?

A 5 Yes, it does.