

Pacific Gas and Electric Company



California Gas Transmission

OFO Report

Fourth Quarter 2005
(October–December, 2005)

OFO Report: Fourth Quarter 2005

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I. BACKGROUND

PG&E is providing this Operational Flow Order (OFO) Report (Report) as required by its OFO Settlement Agreement (OFO Settlement or Settlement)¹ and as part of its continued commitment to keep the California natural gas market participants informed. These Reports are provided quarterly. This Report covers the fourth quarter of 2005 – October 1 through December 31. The purpose of the OFO Report is to document “the number and causes of each customer-specific and system-wide OFO, EFO and ‘trimming’ occasion (‘Event’) within the prior three months.”²

The OFO Settlement has been in effect since April 1, 2000. As demonstrated in the previous quarterly reports, this Settlement has been successful in reducing the market impacts of OFOs. This, and future, quarterly reports will focus on providing the data specified in the Settlement. Background information and discussion on the OFO process is available from the Pipe Ranger web site, located on the Internet at http://www.pge.com/pipeline/library/foefodiv/fo_index.html.

II. OFO EVENTS DURING THE QUARTER

A. OFO Event Summary

During the quarter ending December 31, 2005, PG&E called a total of sixteen (16) OFO events. Twelve (12) of the events were system-wide OFOs and four (4) were customer-specific OFOs. Fifteen (15) of the OFO events were a result of high pipeline inventory and one (1) was a result of low pipeline inventory. There were no EFO events during this quarter. There were no “trimming”, or receipt point capacity allocation, events during the quarter. Table 1 provides a summary of each OFO event.

Table 1: OFO Event Summary

Date	Type	Cause / Comments
Thursday , October 20, 2005	<ul style="list-style-type: none">● System-Wide● <i>High Inventory</i>● Stage 2 at \$1.00/Dth● Tolerance Band: 5%	<ul style="list-style-type: none">● Projected ending inventory of 4,509 MMcf exceeded the upper pipeline operating limit of 4,500 MMcf.● Customer-Specific OFO not called because previous operating experience with Customer-Specific OFOs, under similar market conditions, did not result in improved pipeline system conditions.

¹ PG&E’s OFO Settlement was approved by the CPUC in Decision 00-02-050 on February 17, 2000. The Settlement tariffs were effective April 1, 2000.

² See Section C.1.f, page 5 of the OFO Settlement.

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Table 1: OFO Event Summary (continued)

Thursday, October 27, 2005	<ul style="list-style-type: none"> ● System-Wide ● <u>High Inventory</u> ● Stage 2 at \$1.00/Dth ● Tolerance Band: 5% 	<ul style="list-style-type: none"> ● Projected ending inventory of 4,556 MMcf exceeded the upper pipeline operating limit of 4,500 MMcf. ● Customer-Specific OFO not called because previous operating experience with Customer-Specific OFOs, under similar market conditions, did not result in improved pipeline system conditions.
Saturday, October 29, 2005	<ul style="list-style-type: none"> ● System-Wide ● <u>High Inventory</u> ● Stage 2 at \$1.00/Dth ● Tolerance Band: 5% 	<ul style="list-style-type: none"> ● Projected ending inventory of 4,533 MMcf exceeded the upper pipeline operating limit of 4,500 MMcf. ● Customer-Specific OFO not called because previous operating experience with Customer-Specific OFOs, under similar market conditions, did not result in improved pipeline system conditions.
Saturday November 5, 2005	<ul style="list-style-type: none"> ● System-Wide ● <u>High Inventory</u> ● Stage 2 at \$1.00/Dth ● Tolerance Band: 5% 	<ul style="list-style-type: none"> ● Projected ending inventory of 4,756 MMcf exceeded the upper pipeline operating limit of 4,500 MMcf. ● Customer-Specific OFO not called because previous operating experience with Customer-Specific OFOs, under similar market conditions, did not result in improved pipeline system conditions.
Wednesday November 9, 2005	<ul style="list-style-type: none"> ● System-Wide ● <u>High Inventory</u> ● Stage 2 at \$1.00/Dth ● Tolerance Band: 5% 	<ul style="list-style-type: none"> ● Projected ending inventory of 4,566 MMcf exceeded the upper pipeline operating limit of 4,500 MMcf. ● Customer-Specific OFO not called because previous operating experience with Customer-Specific OFOs, under similar market conditions, did not result in improved pipeline system conditions.
Thursday November 10, 2005	<ul style="list-style-type: none"> ● System-Wide ● <u>High Inventory</u> ● Stage 2 at \$1.00/Dth ● Tolerance Band: 5% 	<ul style="list-style-type: none"> ● Projected ending inventory of 4,561 MMcf exceeded the upper pipeline operating limit of 4,500 MMcf. ● Customer-Specific OFO not called because previous operating experience with Customer-Specific OFOs, under similar market conditions, did not result in improved pipeline system conditions.
Tuesday November 15, 2005	<ul style="list-style-type: none"> ● Customer-Specific ● <u>High Inventory</u> ● Stage 2 at \$1.00/Dth ● Tolerance Band: 5% ● No. Customers: 14 	<ul style="list-style-type: none"> ● Projected ending inventory of 4,833 MMcf exceeded the upper pipeline operating limit of 4,500 MMcf.
Wednesday November 16, 2005	<ul style="list-style-type: none"> ● System-Wide ● <u>High Inventory</u> ● Stage 3 at \$5.00/Dth ● Tolerance Band: 5% 	<ul style="list-style-type: none"> ● Projected ending inventory of 4,710 MMcf exceeded the upper pipeline operating limit of 4,500 MMcf. ● Customer-Specific OFO not called because previous operating experience with Customer-Specific OFOs, under similar market conditions, did not result in improved pipeline system conditions.
Friday November 18, 2005	<ul style="list-style-type: none"> ● Customer-Specific ● <u>High Inventory</u> ● Stage 3 at \$5.00/Dth ● Tolerance Band: 10% ● No. Customers: 11 	<ul style="list-style-type: none"> ● Projected ending inventory of 4,637 MMcf exceeded the upper pipeline operating limit of 4,500 MMcf.

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Saturday November 19, 2005	<ul style="list-style-type: none"> ● System-Wide ● <u>High Inventory</u> ● Stage 3 at \$5.00/Dth ● Tolerance Band: 10% 	<ul style="list-style-type: none"> ● Projected ending inventory of 4,620 MMcf exceeded the upper pipeline operating limit of 4,500 MMcf. ● Customer-Specific OFO not called because previous operating experience with Customer-Specific OFOs, under similar market conditions, did not result in improved pipeline system conditions.
Tuesday November 22, 2005	<ul style="list-style-type: none"> ● Customer-Specific ● <u>High Inventory</u> ● Stage 2 at \$1.00/Dth ● Tolerance Band: 5% ● No. Customers: 10 	<ul style="list-style-type: none"> ● Projected ending inventory of 4,655 MMcf exceeded the upper pipeline operating limit of 4,500 MMcf.
Wednesday November 23, 2005	<ul style="list-style-type: none"> ● System-Wide ● <u>High Inventory</u> ● Stage 2 at \$1.00/Dth ● Tolerance Band: 5% 	<ul style="list-style-type: none"> ● Projected ending inventory of 4,672 MMcf exceeded the upper pipeline operating limit of 4,500 MMcf. ● Customer-Specific OFO not called because previous operating experience with Customer-Specific OFOs, under similar market conditions, did not result in improved pipeline system conditions.
Thursday November 24, 2005	<ul style="list-style-type: none"> ● System-Wide ● <u>High Inventory</u> ● Stage 3 at \$5.00/Dth ● Tolerance Band: 5% 	<ul style="list-style-type: none"> ● Projected ending inventory of 4,537 MMcf exceeded the upper pipeline operating limit of 4,500 MMcf. ● Customer-Specific OFO not called because previous operating experience with Customer-Specific OFOs, under similar market conditions, did not result in improved pipeline system conditions.
Friday December 9, 2005	<ul style="list-style-type: none"> ● Customer-Specific ● <u>Low Inventory</u> ● Stage 3 at \$5.00/Dth ● Tolerance Band: 5% ● No. Customers: 10 	<ul style="list-style-type: none"> ● Projected ending inventory of 3,832 MMcf was below the lower pipeline operating limit of 4,000 MMcf.
Saturday December 24, 2005	<ul style="list-style-type: none"> ● System-Wide ● <u>High Inventory</u> ● Stage 3 at \$5.00/Dth ● Tolerance Band: 5% 	<ul style="list-style-type: none"> ● Projected ending inventory of 4,581 MMcf exceeded the upper pipeline operating limit of 4,500 MMcf. ● Customer-Specific OFO not called because previous operating experience with Customer-Specific OFOs, under similar market conditions, did not result in improved pipeline system conditions.
Thursday December 29, 2005	<ul style="list-style-type: none"> ● System-Wide ● <u>High Inventory</u> ● Stage 2 at \$1.00/Dth ● Tolerance Band: 5% 	<ul style="list-style-type: none"> ● Projected ending inventory of 4,540 MMcf exceeded the upper pipeline operating limit of 4,500 MMcf. ● Customer-Specific OFO not called because previous operating experience with Customer-Specific OFOs, under similar market conditions, did not result in improved pipeline system conditions.

B. Receipt Point Capacity Allocation Events

There were no receipt point capacity allocation events during the quarter.

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III. DETAILED IMBALANCE DATA

Appendix A shows the imbalance detail for each end-use balancing entity for each OFO day and the three days prior to the OFO.³ This includes the daily supply, usage and imbalance quantities based on billing data.⁴

Appendix A also indicates which entities were targeted during a customer-specific OFO event and which entities met the following four criteria for significant contributors to each OFO event:

- Total imbalance on 3-prior days exceeds 10 percent and 5,000 Dth. (This definition of significant contributor is specified in Section B.3.b of the OFO Settlement.)
- Total imbalance on 3-prior days exceeds 5,000 Dth.
- Total imbalance on 3-prior days exceeds 10 percent of usage.
- During a Customer-Specific OFO, both the imbalance and the supply increase during a high inventory OFO (or decrease during a low inventory OFO) by over 5,000 Dth on the OFO day.

The last three measures are added to provide more information for evaluating which entities may be contributing to an OFO event.

Appendix B contains detailed data for each OFO event for pipeline imbalances, net market center imbalances, pipeline balancing provided by allocated “balancing” storage, and pipeline inventory levels based on operating data.⁵ Also included is a description of each data element shown in the tables.

IV. DISCUSSION

This section of the OFO Report provides PG&E’s comments and observations of the data presented, and also offers PG&E’s recommendations for possible change.⁶

A. Effectiveness of Customer-Specific versus System-Wide OFOs

Previous experience with customer-specific OFOs under high inventory conditions did not result in satisfactory relief to pipeline inventory levels. Specifically, “targeted customers” traded their imbalances to “non-targeted customers”. The aggregate gas supply imbalance remained on the pipeline system and there was no relief from the high inventory conditions as a result of the customer-specific OFO.

During the spring of 2001, the ineffectiveness of the customer-specific OFOs required PG&E to implement receipt point capacity allocations on three occasions. As a result, since the end of May 2001, PG&E has generally elected

³ See Section C.1.f.(1), page 5, of the OFO Settlement.

⁴ The billing data for Core Procurement Groups (CPGs) is based on their “Determined Usage”, which is the forecast on the morning of flow day.

⁵ This data is required by Sections C.1.f.(2), (3), (4), and (5) of the OFO Settlement.

⁶ The OFO Settlement Agreement specified that the quarterly OFO report would contain “any proposed changes to any OFO and balancing procedures and/or methodology addressed in this Settlement.” See Section C.1.f.6, page 5.

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to call system-wide high-inventory OFOs even when the customer-specific OFO criteria were met.⁷ By calling system-wide OFOs, PG&E expects to avoid the disruptive market impacts associated with a receipt point capacity allocation. When pipeline inventory levels dictate the need for a high inventory OFO, PG&E plans to call system-wide OFOs. For low inventory OFOs, PG&E will continue to apply and use the customer-specific OFO criteria.

Beginning in October 2004, PG&E experimented with calling high inventory customer-specific OFOs after the usual OFO notification timeline under certain conditions. When the forecast level of gas supply unexpectedly increases after (and typically as a result of) the timely cycle nominations (and after the “normal” OFO notification time of 7:30 a.m.), PG&E elected to call customer-specific OFOs in an effort to reduce the pipeline inventory. The effectiveness of these later customer-specific OFOs was mixed. PG&E avoided implementing a receipt point capacity allocation, but another OFO event was called on the following day on several occurrences of the “later-notice” customer-specific OFOs.

Feedback from customers suggests a preference for these later customer-specific OFOs compared to other measures. During appropriate conditions, PG&E will continue using this tool to maintain safe pipeline inventory. The success of these later customer-specific OFOs does depend upon targeted balancing entities changing their supply, rather than simply trading their imbalance to a non-targeted entity.

B. Tolerance Band Level

Also beginning in October 2004, PG&E experimented with establishing a minimum tolerance band level of five percent (5%) during system-wide OFOs. This practice was designed to provide customers with additional flexibility towards meeting their OFO balancing requirements. While PG&E retains the right to reduce the tolerance band to zero percent (0%) if deemed necessary, the intent is to provide this minimum adder buffer to the tolerance band for system-wide OFOs whenever possible.

V. CONCLUSIONS

The number of OFO events during this quarter (16) is typical of the frequency of OFO events that historically occur during the fourth quarter of the year. This frequency of OFOs is also consistent with the range that has been typical on the PG&E system since the implementation of the OFO Settlement in April 2000.

All the system-wide OFO events during the quarter were the result of high inventory. The previous ineffectiveness of customer-specific OFOs has led PG&E to call system-wide OFOs under high inventory conditions, even when the customer-specific criteria were met. PG&E believes that calling the system-wide OFO is necessary to

⁷ The operational flexibility to call system-wide OFOs is provided in Section C.3.b.9 of the OFO Settlement.

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avoid the more disruptive receipt point capacity allocation that can occur under high inventory conditions. However, PG&E will utilize the “later notice” customer-specific OFO during certain operating conditions, as discussed above.

Appendix A: Detailed OFO Imbalance Report by Balancing Entity

1. Definition of End-Use Balancing Entity Types

There are three types of end-use customer Balancing Entities on the PG&E system. The first type is a Core Procurement Group (CPG), which includes PG&E's Core Procurement Department and all Core Transport Agents (CTAs) – also called Gas Energy Service Providers. These are indicated as 'CTARGAS'.

The second type is an agent or gas marketer managing a Noncore Balancing Aggregation Agreement (NBAA). These are indicated as "NBAA." An NBAA aggregates a group of noncore end-use customers into one entity for balancing purposes. An NBAA group can range from several customers up to over one hundred individual end-use customers. The NBAA agent is financially responsible for all imbalance charges, including OFO noncompliance charges.

The third type is an individual noncore end-use customer. These individual customers maintain an imbalance account under their Natural Gas Service Agreement, indicated as "NGSA." Sometimes the balancing for these NGSAs is managed by the end-use customer, and sometimes by an agent or marketer; however, each is required to balance individually during an OFO event.

2. Imbalance Data Elements

The data in this Appendix is organized by each of the OFO events during the quarter. This includes the daily supply, usage and imbalance quantities for the OFO Day and 3-days-prior for each balancing entity. Also, targeted entities during customer-specific OFOs and various calculations of significant contributor are included, along with a summary of these by balancing entity for all OFOs combined.

The following describes the data elements in the Appendix A tables:

Balancing Entity ID #: Each balancing entity is identified by a numerical identifier and the type of balancing entity, and not by name. If a customer operates two separate balancing entity accounts (e.g. an NBAA and a CPG (or CTARGAS)), the same numerical identifier is used for each entity.

Balancing Entity Type: (See discussion above.)

Supply Scheduled Volume: The quantity of gas supply, in decatherms (Dths), received into the PG&E system for delivery to the end-use customer(s) for that balancing entity. This quantity is the result of the gas supply nomination process. This process is the same for all types of balancing entities.

Usage: The quantity of gas, in decatherms (Dths), that is delivered off the PG&E system to the end-use customer(s) for that balancing entity. This is the demand deemed to be used, in order to determine the daily imbalance. For noncore customers (i.e., NBAA or NGSA), the usage is equal to the actual daily meter reading quantities. For core customers (i.e. CTARGAS) the usage is equal to the

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Appendix A – Detailed OFO Imbalance Report by Balancing Entity

Determined Usage⁸. It is important to note that both the Determined Usage and the 24-Hour Forecast are forecasts that are made 24-hours and 48-hours prior to the end of the gas day, respectively.

Daily Imbalance: This is simply the *Supply Scheduled Volume* minus the *Usage*. A positive number indicates an over-delivery of supply (more supply than demand) and a negative number indicates an under-delivery of supply (less supply than demand).

3-Day Prior Net Imbalance: The sum of the *Daily Imbalances* for the three days prior to the OFO Day.

3-Day Prior Percentage Imbalance: The *3-Day Prior Net Imbalance* divided by the total *Usage* for the three days prior to the OFO Day. This represents the average percentage imbalance for these three days.

Targeted under Customer-Specific OFO: This column indicates those balancing entities that were targeted under each customer-specific OFO.

Significant Contributor: Two significant contributor columns are shown. The first indicates those balancing entities with total imbalances greater than 5,000 Dth and 10 percent of its usage in the three days leading up to each system-wide or customer-specific OFO, as defined in the OFO Settlement.⁹ The second significant contributor column identifies those balancing entities which increased both their supply and imbalance by more than 5,000 Dth on the OFO day, during a customer-specific OFO.

⁸ Effective January 1, 2004, the Determined Usage is used on all days, including use to measure compliance with OFO orders. Prior to this date, the 24-Hour Forecast was used to determine core customer usage on OFO days and the Determined Usage was used on non-OFO days.

⁹ OFO Settlement, Section B.3.b, page 3.

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Appendix B: Detailed Pipeline Operating Data

1. Data Background:

All data in this Appendix related to gas volumes are expressed in thousands of decatherms (Mdt) and are for the gas day, which begins at 7:00 AM on the date and ends at 7:00 AM on the following day. This is operating data that is compiled approximately 4 hours after the end of the gas day and represents the best information about flows, volumes, and inventories available at that time.

The ending inventory on the OFO day will often not exceed the criteria for an OFO. OFOs are called using the forecast of the ending inventory on the OFO day, and for this reason, the actual ending inventory will likely be different than the forecast ending inventory if the OFO has been effective.

The following sign convention has been employed in the spreadsheet. Any activity that decreases the pipeline system inventory such as a negative customer imbalance or a storage injection is shown with a (-) sign. Activities that increase the pipeline system inventory are positive and are shown without a sign.

2. Data Elements

Beginning Inventory: The calculated volume of gas in the PG&E pipeline system at the beginning of the gas day.

Ending Inventory: The calculated volume of gas in the PG&E pipeline system at the end of the gas day. This forecast of ending inventory is used to determine whether an OFO is called, and is forecast and reported on the Pipe Ranger 5 times each day.

Pipeline Storage Balancing: The PG&E storage that was used to reduce the affect of imbalances on changes in the pipeline system inventory. This value is calculated by subtracting the scheduled storage activity including core, noncore, and GGMC Park/Lend activity from the net PG&E storage activity. There is 50 MMcf of daily storage injection and 70 MMcf of daily storage withdrawal assigned to the pipeline storage balancing activity.

Total Customer Imbalance: The total customer imbalance is the total supply scheduled for on-system customers minus the total on-system customer usage. The usage for noncore customers is based on operational meters. The usage for core customers is based on the Determined Usage. The Core Determined Usage is derived from the core load forecast prepared at approximately 7:30 AM at the beginning of the gas day.

Pipeline Imbalance Detail: This calculation is provided to show the contribution of core load forecast error on the day of gas flow to the total pipeline imbalance.

Due to Core Forecast Differences: This is the difference between the Core Determined Usage which is forecast at the beginning of the gas day and the Core calculated usage. The Core usage is calculated approximately four hours after the end of the gas day using daily data on interconnect and storage volumes, noncore

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Appendix B – Detailed Pipeline Operating Data

daily usage volumes from the Automatic Meter Reading (AMR) system, and the change in the pipeline system inventory.

All Other Causes: This represents the sum of all the other contributors to pipeline imbalances including imbalances with interconnecting pipelines and storage facilities (other than PG&E), imbalance in California Gas Well production, shrinkage over or under collection.

GGMC Net Scheduled Pack Draft: This value is the net sum of the scheduled nominations for PG&E storage activity for scheduled GGMC Parks, Repays, Lends, and Unparks for the gas day. When the value is a negative (-) it means that storage injection is required to offset a net Pack (Park or Repay) position.

GGMC Net Pack Allocated: This is the PG&E storage injection capacity available to GGMC to facilitate their daily parking (Parks and Repays) activity. The amount of daily parking is limited to this quantity so that this activity does not adversely increase the pipeline system inventory and represents one of the measures to determine whether there was an imbalance created by the GGMC on any given day.

GGMC Net Draft Allocated: This is the PG&E storage withdrawal capacity available to GGMC to facilitate their daily lending activity. The amount of daily lending is limited to this quantity so that this activity does not adversely decrease the pipeline system inventory and represents one of the measures to determine whether there was an imbalance created by the GGMC on any given day.

GGMC Imbalance: This is determined by calculating the amount the *GGMC Scheduled Pack Draft* is outside the *Allocated Pack-Draft* range. These values represent the impact of the GGMC on the pipeline system inventory on any given day.