

Pacific Gas and Electric Company



California Gas Transmission

OFO Report

Second Quarter 2011

(April -- June, 2011)

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I. BACKGROUND

PG&E is providing this Operational Flow Order (OFO) Report (Report) as specified in 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 second quarter of 2011 – April 1 through June 30. 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://pge.com/pipeline/library/>.

II. OFO EVENTS DURING THE QUARTER

A. OFO Event Summary

During the quarter ending June 30, 2011, PG&E called a total of twelve (12) OFO events. All twelve (12) events were system-wide OFOs. Ten (10) OFO events were a result of high pipeline inventory and two (2) were 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
Friday, April 1, 2011	<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 4,472 MMcf exceeded the upper pipeline operating limit of 4,400MMcf● Customer-Specific OFO not called because previous operating experience with Customer-Specific OFOs, under similar market conditions, did not relieve the high inventory 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)

Saturday, April 2, 2011	<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 4,434 MMcf exceeded the upper pipeline operating limit of 4,400 MMcf ● Customer-Specific OFO not called because previous operating experience with Customer-Specific OFOs, under similar market conditions, did not relieve the high inventory conditions.
Thursday, April 7, 2011	<ul style="list-style-type: none"> ● System-Wide ● <u>Low Inventory</u> ● Stage 2 at \$1.00/Dth ● Tolerance Band: 10% 	<ul style="list-style-type: none"> ● Projected ending inventory of 3,974 MMcf was below the pipeline operating limit of 4,000 MMcf ● Customer-Specific OFO not called because of PG&E gas pipeline operations' concern that a Customer-Specific OFO would not alleviate the low inventory pipeline condition.
Saturday, April 23, 2011	<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 4,501 MMcf exceeded the upper pipeline operating limit of 4,400 MMcf ● Customer-Specific OFO not called because previous operating experience with Customer-Specific OFOs, under similar market conditions, did not relieve the high inventory conditions.
Wednesday, May 4, 2011	<ul style="list-style-type: none"> ● System-Wide ● <u>Low Inventory</u> ● Stage 2 at \$1.00/Dth ● Tolerance Band: 5% 	<ul style="list-style-type: none"> ● Projected ending inventory of 3,836 MMcf was below the pipeline operating limit of 3,900 MMcf ● Customer-Specific OFO not called because of PG&E gas pipeline operations' concern that a Customer-Specific OFO would not alleviate the low inventory pipeline condition.
Friday May 6, 2011	<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 4,509 MMcf exceeded the upper pipeline operating limit of 4,400MMcf ● Customer-Specific OFO not called because previous operating experience with Customer-Specific OFOs, under similar market conditions, did not relieve the high inventory conditions.
Saturday May 7, 2011	<ul style="list-style-type: none"> ● System-Wide ● <u>High Inventory</u> ● Stage 2 at \$1.00/Dth ● Tolerance Band: 8% 	<ul style="list-style-type: none"> ● Projected ending inventory of 4,430 MMcf exceeded the upper pipeline operating limit of 4,400 MMcf ● Customer-Specific OFO not called because previous operating experience with Customer-Specific OFOs, under similar market conditions, did not relieve the high inventory conditions.
Thursday, May 12, 2011	<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 4,455 MMcf exceeded the upper pipeline operating limit of 4,400 MMcf ● Customer-Specific OFO not called because previous operating experience with Customer-Specific OFOs, under similar market conditions, did not relieve the high inventory conditions.
Friday, May 13, 2011	<ul style="list-style-type: none"> ● System-Wide ● <u>High Inventory</u> ● Stage 2 at \$1.00/Dth ● Tolerance Band: 13% 	<ul style="list-style-type: none"> ● Projected ending inventory of 4,436 MMcf exceeded the upper pipeline operating limit of 4,400 MMcf ● Customer-Specific OFO not called because previous operating experience with Customer-Specific OFOs, under similar market conditions, did not relieve the high inventory conditions.
Saturday, May 21, 2011	<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 4,712 MMcf exceeded the upper pipeline operating limit of 4,400 MMcf ● Customer-Specific OFO not called because previous operating experience with Customer-Specific OFOs, under similar market conditions, did not relieve the high inventory conditions.

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Sunday, May 29, 2011	<ul style="list-style-type: none"> ● System-Wide ● <u>High Inventory</u> ● Stage 2 at \$1.00/Dth ● Tolerance Band: 11% 	<ul style="list-style-type: none"> ● Projected ending inventory of 4,448 MMcf exceeded the upper pipeline operating limit of 4,400 MMcf ● Customer-Specific OFO not called because previous operating experience with Customer-Specific OFOs, under similar market conditions, did not relieve the high inventory conditions.
Sunday, June 19, 2011	<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 4,633 MMcf exceeded the upper pipeline operating limit of 4,400 MMcf ● Customer-Specific OFO not called because previous operating experience with Customer-Specific OFOs, under similar market conditions, did not relieve the high inventory conditions.

B. Receipt Point Capacity Allocation Events

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

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.

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.

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IV. DISCUSSION

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

A. Frequency of OFOs during Second Quarter of 2011

The twelve (12) OFO events called during the quarter is below the average frequency of OFO events experienced during a quarter under the Gas Accord market structure. Since 2003 PG&E has averaged just about fourteen (14) OFO events per quarter.

Table 2: Historic Frequency of OFOs per Quarter (Since 2003)

Time Period	# OFOs per Quarter
Jan 2003 – Mar 2008	12.2
Apr 2008 – June 2011	16.1
Total (2003 to present)	13.7

However, since April 2008 PG&E has averaged about sixteen (16) OFO events per quarter. In April 2008 PG&E began calling "early OFOs" – based on data available at 5:30 AM. This was in response to customer feedback desiring earlier notification of OFO events (when possible), expressed during a September 2007 OFO Forum. As anticipated, the earlier notification has led to an increase in the frequency of OFOs. This is primarily due to the reliance on the preliminary data available at 5:30 AM when assessing the OFO criteria. The actual experienced increase in the frequency of OFO events (by about three (2) OFOs per quarter) is consistent with PG&E's projections under the early notification protocol, shared with market participants prior to the April 2008 implementation.

The frequency of OFOs this quarter is lower compared to the occurrence of OFOs during the second quarter in the previous year. In 2010, we experienced sixteen (16) OFO events during the second quarter.

B. Recommendations Regarding OFOs

PG&E is not recommending any further changes to the existing OFO or balancing service procedures and methodologies in this quarterly report.

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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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' or "CTA Storage".

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. CTA Storage) the usage is equal to

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the Determined Usage⁷. 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.⁸ 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.

⁷ 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.

⁸ 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 75 MMcf of daily storage injection and 75 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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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 they jut page outrepret the impact of the GGMC on the pipeline system inventory on any given day.