

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE  
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July 19, 2010

**Advice Letter 3678-E**

Jane K. Yura  
Vice President, Regulation and Rates  
Pacific Gas and Electric Company  
77 Beale Street, Mail Code B10B  
P.O. Box 770000  
San Francisco, CA 94177

**Subject: Submission of the 14<sup>th</sup> Gas Supply Plan (GSP-14) for the  
California Department of Water Resources (CDWR)  
Tolling Agreements (11/1/10 through 10/31/11)**

Dear Ms. Yura:

Advice Letter 3678-E is effective November 1, 2010.

Sincerely,

A handwritten signature in blue ink that reads "Julie A. Fitch".

Julie A. Fitch, Director  
Energy Division



**Jane K. Yura**  
Vice President  
Regulation and Rates

Pacific Gas and Electric Company  
77 Beale St., Mail Code B10B  
P.O. Box 770000  
San Francisco, CA 94177

Fax: 415-973-6520

June 1, 2010

**Advice 3678-E**  
(Pacific Gas and Electric Company ID U 39 E)

Public Utilities Commission of the State of California

**Subject: Submission of the Fourteenth Gas Supply Plan (GSP-14) for the California Department of Water Resources (CDWR) Tolling Agreements (November 1, 2010, Through October 31, 2011)**

Pacific Gas and Electric Company ("PG&E") hereby submits to the California Public Utilities Commission ("Commission" or "CPUC") its fourteenth Gas Supply Plan ("GSP-14") for the California Department of Water Resources ("CDWR") Tolling Agreements for the period November 1, 2010, through October 31, 2011.

### **Background**

Decision ("D.") 02-12-069 and D.03-04-029 direct PG&E to consolidate fuel procurement strategies for the CDWR contracts and to submit them to CDWR and the Commission as a "Gas Supply Plan." These Gas Supply Plans for CDWR Tolling Agreements (GSPs) were originally submitted on a semi-annual basis. Starting with GSP-13, GSPs covered a period of one year from November through October of the following year, the traditional gas year. The move from a semi-annual to an annual GSP filing process was set forth in PG&E Advice Filing 3269-E and approved by the CPUC on June 11, 2008.

PG&E's GSP-14 follows a format similar to PG&E's previously approved plans and is consistent with PG&E's updated Electricity and Gas Hedging Plan. PG&E's Electricity and Gas Hedging Plan was last updated via Advice 3492-E, which was approved by the CPUC and made effective on October 29, 2009.

GSP-14 contains volume and cost forecasts, hedging implementation projections and fuel supply and hedging implementation details for the CDWR tolling agreements. Pursuant to Ordering Paragraph (O.P.) 5 of Resolution E-3845, PG&E continues to provide detailed information concerning its analyses, tools and decision-making process concerning gas price volatility and its risk management strategies.

**Confidential Material**

This advice filing contains CONFIDENTIAL PROTECTED material under D.06-06-066 Appendix 1. It is also being submitted under CPUC section 583. Concurrently with this Advice Filing and pursuant to the August 22, 2006, ALJ ruling clarifying interim procedures for complying with D.06-06-066, PG&E is providing the declaration of Michael Kowalewski to support confidential treatment for the confidential market-sensitive information in GSP-14 and to designate the specific protected material as required by O.P.s 2 and 3, as applicable, of D.06-06-066. The public version of GSP-14 contained in Attachment C has been partially redacted in accordance with D.06-06-066. Appendices 3A, 3B, 4A, 5A and 5B to GSP-14 are fully confidential per D.06-06-066 and therefore have been redacted in full.

**Protest Period**

Anyone wishing to protest this filing may do so by letter sent via U.S. mail, by facsimile or electronically, any of which must be received no later than **June 21, 2010**, which is **20** days after the date of this filing. Protests should be mailed to:

CPUC Energy Division  
Attention: Tariff Unit, 4<sup>th</sup> Floor  
505 Van Ness Avenue  
San Francisco, California 94102

Facsimile: (415) 703-2200  
E-mail: [jjn@cpuc.ca.gov](mailto:jjn@cpuc.ca.gov) and [mas@cpuc.ca.gov](mailto:mas@cpuc.ca.gov)

Copies of protests also should be mailed to the attention of the Director, Energy Division, Room 4004, at the address shown above.

The protest also should be sent via U.S. mail (and electronically or by facsimile, if possible) to PG&E at the address shown below on the same date it is mailed or delivered to the Commission:

Pacific Gas and Electric Company  
Attention: Jane Yura  
Vice President, Regulations and Rates  
77 Beale Street, Mail Code B10B  
P.O. Box 770000  
San Francisco, California 94177

Facsimile: (415) 973-6520  
E-mail: [PGETariffs@pge.com](mailto:PGETariffs@pge.com)

**Effective Date**

PG&E requests that this advice filing become effective on **November 1, 2010**. PG&E submits this as a Tier 2 advice filing.

**Notice**

In accordance with General Order 96-B, Section IV, a copy of this advice letter is being sent electronically and via U.S. mail to parties shown on the attached list and service lists Rulemaking ("R.") 06-02-013 and R.04-04-003. Address changes to the General Order 96-B service list should be directed to e-mail PGETariffs@pge.com. For changes to any other service list, please contact the Commission's Process Office at (415) 703-2021 or at Process\_Office@cpuc.ca.gov. Send all electronic approvals to PGETariffs@pge.com. A public version of this Advice Letter filing can also be accessed electronically at: <http://www.pge.com/tariffs>.



Vice President – Regulation and Rates

**Attachments:**

Attachment A – Declaration of Michael S. Kowalewski supporting the confidential treatment of confidential market-sensitive information

Attachment B – Confidentiality Matrix supporting confidential market-sensitive information

Confidential Attachment C – Gas Supply Plan (GSP-14) for CDWR Tolling Agreements (redacted copy provided in public version)

cc: Service Lists R.06-02-013 and R.04-04-003 (w/o confidential attachments)

# CALIFORNIA PUBLIC UTILITIES COMMISSION

## ADVICE LETTER FILING SUMMARY

### ENERGY UTILITY

MUST BE COMPLETED BY UTILITY (Attach additional pages as needed)

Company name/CPUC Utility No. **Pacific Gas and Electric Company (ID U39 M)**

Utility type:

- ELC       GAS  
 PLC       HEAT       WATER

Contact Person: Linda Tom-Martinez

Phone #: (415) 973-4612

E-mail: lmt1@pge.com

EXPLANATION OF UTILITY TYPE

ELC = Electric      GAS = Gas  
 PLC = Pipeline      HEAT = Heat      WATER = Water

(Date Filed/ Received Stamp by CPUC)

Advice Letter (AL) #: **3678-E**

**Tier: 2**

Subject of AL: **Submission of the Fourteenth Gas Supply Plan (GSP-14) for the California Department of Water Resources (CDWR) Tolling Agreements (November 1, 2010, Through October 31, 2011)**

Keywords (choose from CPUC listing): Procurement, Compliance

AL filing type:  Monthly  Quarterly  Annual  One-Time  Other \_\_\_\_\_

If AL filed in compliance with a Commission order, indicate relevant Decision/Resolution #: D.012-12-069, D.03-04-029

Does AL replace a withdrawn or rejected AL? If so, identify the prior AL: No

Summarize differences between the AL and the prior withdrawn or rejected AL<sup>1</sup>: \_\_\_\_\_

Is AL requesting confidential treatment? If so, what information is the utility seeking confidential treatment for: Yes. See the attached matrix that identifies all of the confidential information.

Confidential information will be made available to those who have executed a nondisclosure agreement:  Yes  No All members of PG&E Procurement Review Group who have signed a nondisclosure agreement will receive the confidential information

Name(s) and contact information of the person(s) who will provide the nondisclosure agreement and access to the confidential information: Michael Kowalewski (415) 972-5589

Resolution Required?  Yes  No

Requested effective date: **November 1, 2010**

No. of tariff sheets: N/A

Estimated system annual revenue effect (%): N/A

Estimated system average rate effect (%): N/A

When rates are affected by AL, include attachment in AL showing average rate effects on customer classes (residential, small commercial, large C/I, agricultural, lighting).

Tariff schedules affected: N/A

Service affected and changes proposed<sup>1</sup>: N/A

Pending advice letters that revise the same tariff sheets: N/A

Protests, dispositions, and all other correspondence regarding this AL are due no later than 20 days after the date of this filing, unless otherwise authorized by the Commission, and shall be sent to:

**CPUC, Energy Division**

**Tariff Files, Room 4005**

**DMS Branch**

**505 Van Ness Ave.,**

**San Francisco, CA 94102**

**jnj@cpuc.ca.gov and mas@cpuc.ca.gov**

**Pacific Gas and Electric Company**

**Attn: Jane K. Yura**

**Vice President, Regulation and Rates**

**77 Beale Street, Mail Code B10B**

**P.O. Box 770000**

**San Francisco, CA 94177**

**E-mail: PGETariffs@pge.com**

**Attachment A**

**Declaration of Michael S. Kowalewski**

**Supporting the Confidential Treatment of Confidential,  
Market-Sensitive Information**

BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA

DECLARATION OF MICHAEL KOWALEWSKI IN SUPPORT OF CONFIDENTIAL  
TREATMENT FOR INFORMATION IN GAS SUPPLY PLAN 14  
FOR CDWR TOLLING AGREEMENTS ALLOCATED TO PACIFIC GAS AND ELECTRIC  
COMPANY AS CDWR'S LIMITED AGENT

I, Michael Kowalewski, declare:

1. I am presently employed by Pacific Gas and Electric Company (PG&E) and have been an employee since 1992. My current title is senior gas trader. In this position, my responsibilities include planning and procuring gas supply in support of PG&E's electric generation needs. In carrying out these responsibilities, I have acquired knowledge of gas supplies and markets. I am responsible for the development of Gas Supply Plan 14.
2. Pursuant to the requirements in Decision 06-06-066 and the Administrative Law Judge Ruling issued August 22, 2006, Clarifying Interim Procedures for Complying with Decision 06-06-066, I have prepared this declaration to support confidential treatment of market-sensitive, confidential information contained in Gas Supply Plan 14 (GSP-14) (Protected Information). Based on my knowledge and experience with the contents of GSP-14 and the markets for physical and financial products for gas supply and hedging, I make this declaration seeking confidential treatment of the Protected Information contained in GSP-14. The Protected Information is material, market-sensitive, electric procurement related information within the scope of Public Utilities Code section 454.5(g) and is entitled to confidential treatment under the IOU Matrix, Appendix 1 (IOU Matrix) of Decision 06-06-066.

3. The following categories in the IOU Matrix apply to Protected Information in GSP-14:
  1. IOU Matrix category I. A. 4, “Long-term fuel (gas) buying and hedging plans”
  2. IOU Matrix category I. A. 5, “Monthly California Department of Water Resources gas position updates, including information about hedging activities”
  3. IOU Matrix category II. B. 2, “DWR contracts - variable cost of dispatchable resources”
  4. IOU Matrix category IV. G, “Forecast of DWR contracts”
  5. IOU Matrix category I.A. 2, “Utility gas price forecasts”
4. The IOU Matrix categories for the Protected Material in GSP-14 are detailed in the attached Identification of Confidential Information Matrix. GSP-14 Appendices 3A, 3B, 4A, 5A, and 5B are confidential in their entirety and are also noted in the attached Identification of Confidential Information Matrix.
5. GSP-14 and its confidential appendices, like the previous Gas Supply Plans 1 through 13 and their confidential appendices, go into great depth on PG&E’s planning, assumptions, strategies, analyses, and implementation for cost-effectively meeting the multi-year gas supply needs of the CDWR tolling agreements. The requirement to file gas supply plans and the scope of the gas supply plan activities and responsibilities for fuel management and hedging for the CDWR tolling agreements are described in the PG&E Operating Agreement with CDWR (Operating Agreement), Exhibit B, Fuel Management Protocols<sup>1</sup>. The gas supply plans are intended to give the Commission and CDWR a meaningful understanding of the fuel needs for CDWR’s tolling agreements, what procurement and hedging strategy should be followed to meet those needs, why that

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<sup>1</sup> Section IV, Exhibit B to the Operating Agreement requires PG&E to submit the fuel procurement strategies, including risk management, and submit them to the Commission as a “Utility Gas Supply Plan.”

strategy is best, what PG&E intends to do in the markets to execute the strategy, and when PG&E intends to be in the markets. Accordingly, the gas supply plans inherently include a large amount of confidential, market sensitive information. GSP-14 is no exception.

6. GSP-14 information is confidential and market sensitive because if other participants in the gas-related markets involved in the GSP were to obtain the information,<sup>2</sup> PG&E's ability to execute the strategy and obtain results cost-effectively could be impaired. If the detailed information in GSP-14 about PG&E's strategy and plans is not kept confidential, PG&E would be de-positioned relative to other market participants who would have PG&E's confidential, market sensitive data, when other market participants' comparable confidential, market sensitive data would not be in the public domain.
7. The Protected Information in GSP-14 is primarily for CDWR tolling agreements. PG&E's role under the Operating Fuel Management Protocols is as CDWR's limited agent. The confidential treatment of Protected Information also should be maintained to avoid adverse impact to CDWR's exposure for transactions undertaken pursuant to GSP-14.
8. The Protected Information in GSP-14 should remain confidential for more than three years. The analysis, strategies, assumptions and planning in the gas supply plans are part of a continuum that stretches over multiple years. In addition, the hedging strategy that is effective for CDWR tolling contracts may not change radically from one gas supply plan to the next. Therefore, releasing the Protected Information in GSP-14 or past gas supply

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<sup>2</sup> The markets include natural gas, gas-derivative financial contracts, gas transportation, storage, and energy.

plans may amount to releasing the same information as contained in the current gas supply plan. Therefore, Protected Information contained in GSP-14 should continue to be accorded confidential treatment for three years beyond the point in time when PG&E ceases to manage gas supply for the CDWR tolling agreements.

9. I am not aware of any instances where the Protected Information identified in this declaration has been disclosed to the public. The Protected Information cannot be provided in a more aggregated, partially redacted, or summarized form.

10. Attached to my declaration are both a confidential copy of GSP-14 with Protected Information unredacted and a non-confidential copy of GSP-14 with Protected Information removed.

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

Executed this twenty-eighth day of May 2010, at San Francisco, California.

/S/ MICHAEL KOWALEWSKI

**Attachment B**  
**Confidentiality Matrix Supporting Confidential,**  
**Market-Sensitive Information**

1	PACIFIC GAS AND ELECTRIC COMPANY							
2	Document: Gas Supply Plan 14 for CDWR Tolling Agreements							
3	IDENTIFICATION OF CONFIDENTIAL INFORMATION PER DECISION 06-06-066							
4	Date: June 1, 2010							
5		1) The material submitted constitutes a particular type of data listed in the Matrix, appended as Appendix 1 to D.06-06-066 (Y/N)	2) Which category or categories in the Matrix the data correspond to:	3) That it is complying with the limitations on confidentiality specified in the Matrix for that type of data (Y/N)	4) That the information is not already public (Y/N)	5) The data cannot be aggregated, redacted, summarized, masked or otherwise protected in a way that allows partial disclosure (Y/N)	PG&E's Justification for Confidential Treatment	Length of Time
6	Redaction Reference							
7	Document: Gas Supply Plan 14 for CDWR Tolling Agreements							
9	pages 1-3	Y	I.A.4	Y	Y	Y	Long-term fuel (gas) buying and hedging plans	3 years after PG&E ceases to manage gas supply for the CDWR tolling agreements.
10	page 4	Y	I.A.4	Y	Y	Y	Long-term fuel (gas) buying and hedging plans	3 years after PG&E ceases to manage gas supply for the CDWR tolling agreements.
11	page 4	Y	I.A.4	Y	Y	Y	Monthly California Department of Water Resources gas position updates, including information about hedging activities	3 years after PG&E ceases to manage gas supply for the CDWR tolling agreements.
12	Table 3-1	Y	IV.G	Y	Y	Y	Forecast of DWR contracts	3 years after PG&E ceases to manage gas supply for the CDWR tolling agreements.
13	Table 3-1	Y	II.B.2	Y	Y	Y	DWR contracts - variable cost of dispatchable resources.	3 years after PG&E ceases to manage gas supply for the CDWR tolling agreements.
14	Table 3-2	Y	I.A.4	Y	Y	Y	Long-term fuel (gas) buying and hedging plans	3 years after PG&E ceases to manage gas supply for the CDWR tolling agreements.
15	Figure 3-1	Y	I.A.5	Y	Y	Y	Monthly California Department of Water Resources gas position updates, including information about hedging activities	3 years after PG&E ceases to manage gas supply for the CDWR tolling agreements.
16	Figure 3-1	Y	I.A.4	Y	Y	Y	Long-term fuel (gas) buying and hedging plans	3 years after PG&E ceases to manage gas supply for the CDWR tolling agreements.
17	page 7-9	Y	I.A.5	Y	Y	Y	Monthly California Department of Water Resources gas position updates, including information about hedging activities	3 years after PG&E ceases to manage gas supply for the CDWR tolling agreements.
18	page 7-9	Y	IV.G	Y	Y	Y	Forecast of DWR contracts	3 years after PG&E ceases to manage gas supply for the CDWR tolling agreements.
19	page 7-9	Y	I.A.4	Y	Y	Y	Long-term fuel (gas) buying and hedging plans	3 years after PG&E ceases to manage gas supply for the CDWR tolling agreements.
20	Tables 3A-1a, 3A-1b, 3A-2a, 3A-2b, 3A-3a, 3A-3b	Y	I.A.4	Y	Y	Y	Long-term fuel (gas) buying and hedging plans	3 years after PG&E ceases to manage gas supply for the CDWR tolling agreements.
21	Tables 3A-1a, 3A-1b, 3A-2a, 3A-2b, 3A-3a, 3A-3b	Y	I.A.5	Y	Y	Y	Monthly California Department of Water Resources gas position updates, including information about hedging activities	3 years after PG&E ceases to manage gas supply for the CDWR tolling agreements.

1	<b>PACIFIC GAS AND ELECTRIC COMPANY</b>							
2	<b>Document: Gas Supply Plan 14 for CDWR Tolling Agreements</b>							
3	<b>IDENTIFICATION OF CONFIDENTIAL INFORMATION PER DECISION 06-06-066</b>							
4	<b>Date: June 1, 2010</b>							
5								
6	<b>Redaction Reference</b>	<b>1) The material submitted constitutes a particular type of data listed in the Matrix, appended as Appendix 1 to D.06-06066 (Y/N)</b>	<b>2) Which category or categories in the Matrix the data correspond to:</b>	<b>3) That it is complying with the limitations on confidentiality specified in the Matrix for that type of data (Y/N)</b>	<b>4) That the information is not already public (Y/N)</b>	<b>5) The data cannot be aggregated, redacted, summarized, masked or otherwise protected in a way that allows partial disclosure (Y/N)</b>	<b>PG&amp;E's Justification for Confidential Treatment</b>	<b>Length of Time</b>
22	Tables 3A-1a, 3A-1b, 3A-2a, 3A-2b, 3A-3a, 3A-3b	Y	IV.G	Y	Y	Y	Forecast of DWR contracts	3 years after PG&E ceases to manage gas supply for the CDWR tolling agreements.
23	Tables 3B-1a, 3B-1b, 3B-2a, 3B-2b	Y	I.A.4	Y	Y	Y	Long-term fuel (gas) buying and hedging plans	3 years after PG&E ceases to manage gas supply for the CDWR tolling agreements.
24	Tables 3B-1a, 3B-1b, 3B-2a, 3B-2b	Y	I.A.5	Y	Y	Y	Monthly California Department of Water Resources gas position updates, including information about hedging activities	3 years after PG&E ceases to manage gas supply for the CDWR tolling agreements.
25	Tables 3B-1a, 3B-1b, 3B-2a, 3B-2b	Y	IV.G	Y	Y	Y	Forecast of DWR contracts	3 years after PG&E ceases to manage gas supply for the CDWR tolling agreements.
26	page 22, section 4.a	Y	I.A.4	Y	Y	Y	Long-term fuel (gas) buying and hedging plans	3 years after PG&E ceases to manage gas supply for the CDWR tolling agreements.
27	page 22-23, section 4.b	Y	I.A.2	Y	Y	Y	Utility gas price forecasts	3 years after PG&E ceases to manage gas supply for the CDWR tolling agreements.
28	Figures 4A-1, 4A-2, 4A-3, and 4A-4	Y	I.A.2	Y	Y	Y	Utility gas price forecasts	3 years after PG&E ceases to manage gas supply for the CDWR tolling agreements.
29	pages 29 - 38, including Figures 5-1, 5-2, and Tables 5-1, 5-2, and 6-1	Y	I.A.4	Y	Y	Y	Long-term fuel (gas) buying and hedging plans	3 years after PG&E ceases to manage gas supply for the CDWR tolling agreements.
30	pages 36-38, including Table 6-1	Y	IV.G	Y	Y	Y	Forecast of DWR contracts	3 years after PG&E ceases to manage gas supply for the CDWR tolling agreements.
31	Table 5A-1	Y	I.A.4	Y	Y	Y	Long-term fuel (gas) buying and hedging plans	3 years after PG&E ceases to manage gas supply for the CDWR tolling agreements.
32	Table 5A-1	Y	I.A.2	Y	Y	Y	Utility gas price forecasts	3 years after PG&E ceases to manage gas supply for the CDWR tolling agreements.
33	Tables 5B-1a and 5B-1b	Y	I.A.4	Y	Y	Y	Long-term fuel (gas) buying and hedging plans	3 years after PG&E ceases to manage gas supply for the CDWR tolling agreements.
34	Tables 5B-1a and 5B-1b	Y	I.A.5	Y	Y	Y	Monthly California Department of Water Resources gas position updates, including information about hedging activities	3 years after PG&E ceases to manage gas supply for the CDWR tolling agreements.
35	Tables 5B-1a and 5B-1b	Y	IV.G	Y	Y	Y	Forecast of DWR contracts	3 years after PG&E ceases to manage gas supply for the CDWR tolling agreements.

**Attachment C**  
**Gas Supply Plan (GSP-14) for CDWR Tolling Agreements**  
**(redacted copy provided in public version)**

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**Gas Supply Plan 14**  
**for**  
**CDWR Tolling Agreements**

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**November 1, 2010**

**through**

**October 31, 2011**



***Pacific Gas and  
Electric Company***<sup>®</sup>

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**June 1, 2010**

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## 1. Executive Summary

This document represents Pacific Gas and Electric Company's (PG&E) annual Gas Supply Plan for California Department of Water Resources (CDWR) Tolling Agreements (GSP-14), covering the period November 1, 2010 through October 31, 2011. This GSP is consistent with PG&E's experience managing these tolling agreements since January 1, 2003, and with PG&E's currently approved 2006 Long-Term Procurement Plan (LTPP).<sup>1</sup> PG&E will adhere to the CDWR Fuels Protocols, which were issued in completed form on December 8, 2003, and modified in August 2004. PG&E requests that the California Public Utilities Commission (CPUC or Commission) approve this GSP effective November 1, 2010.

PG&E's goals for the term of GSP-14 include building a flexible gas portfolio to manage the fluctuating gas loads from the tolling agreements. To manage price risk, PG&E will continue to manage the gas open position of the CDWR portfolio according to the gas hedging framework described in prior GSPs and consistent with PG&E's Electric Portfolio Gas Hedging Plan, as updated. The current Plan's framework includes a four-year moving hedging horizon, operating targets to guide hedge percentages, product mix targets, and execution strategy.

The last update to PG&E's Electric Portfolio Gas Hedging Plan came on October 29, 2009, when the CPUC approved the updates to PG&E's conformed 2006 LTPP filed in Advice Letter 3492-E. Accordingly, PG&E began implementation of this hedging plan in November 2009 and included this new hedging plan in Revised GSP-13, filed October 1, 2009. PG&E will seek to retain a consistent Hedging Plan for PG&E's electric portfolio, which includes the CDWR contracts allocated to PG&E for administrative purposes, by updating the CDWR GSPs to include any revisions to its Gas Hedging Plan.

As in previous gas supply plans, PG&E has concluded that it is more cost-effective for PG&E (acting as CDWR's limited agent) to supply fuel under all its gas tolling agreements than for the generators to supply their own fuel with the exception of the Coral agreement at this time (see Section 6.a). In addition, PG&E concluded that it is cost-effective and appropriate for PG&E in its role as CDWR's limited agent to take on Fuel Manager responsibilities for several of these agreements, as allowed by the contracts.

To manage physical supply for the Iberdrola (formerly PPM Energy) contract, PG&E will continue to contract for a moderate amount of baseload gas, based on expected dispatch, at floating monthly index pricing. PG&E will continue to explore cost-minimizing supply options for CDWR's Coral agreement. The remainder of the contracts will be supplied by monthly and daily fixed-price and floating-priced agreements. Parking and lending services may be used to manage daily and monthly imbalances. This GSP assumes the GWF and Calpine tolling agreements

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<sup>1</sup> 2006 Long-Term Procurement Plan (conformed), Resolution E-4177, June 27, 2008.

will be novated to PG&E during 2010, removing their volumes from forecasts for CDWR.

## 2. Introduction

On June 27, 2008, the CPUC approved PG&E's conformed 2006 LTPP (Resolution E-4177).<sup>2</sup> PG&E's 2006 LTPP explicitly discusses the contribution of fuel (natural gas) to the value and price sensitivity of PG&E's open market position. Fuel management for the CDWR contracts is a part of the strategies discussed in PG&E's procurement plans.

On April 3, 2003, the Commission approved the Operating Agreement between CDWR and PG&E (D.03-04-029). The Operating Agreement was subsequently modified on October 28, 2004, in D.04-10-020. The Operating Agreement enables PG&E to perform the operational, dispatch, and administrative functions for CDWR's Long-Term Power Purchase Contracts as CDWR's limited agent. The Operating Agreement requires PG&E to submit an annual<sup>3</sup> gas supply plan for these gas-tolling arrangements to CDWR and the Commission for review and approval. These gas supply plans cover the annual period beginning November 1, and are filed June 1 of each year.

This document, GSP-14, covers the period November 1, 2010 through October 30, 2011. PG&E submitted a draft GSP-14 to its Procurement Review Group (PRG) and CDWR on May 6, 2010.<sup>4</sup>

Of the twelve CDWR contracts allocated to PG&E and active during the period of this plan, eleven, representing seven different counterparties, have unexpired provisions for gas tolling. The seven counterparties include Calpine, CalPeak, Coral, GWF, Kings River, Iberdrola and Wellhead. These contracts represent 1,653 megawatts (MW) of dispatchable contract capacity. Contract expirations and novations, discussed in Section 3c of this plan, will impact the CDWR portfolio during the term of GSP-14. The project under CDWR's contract with the City and County of San Francisco (CCSF) will not be developed as CCSF has sold the turbines.

The CDWR tolling agreements have a variety of options for CDWR including the options to supply fuel (tolling) and to manage deliveries to the plants. Currently, PG&E, as CDWR's limited agent, is providing fuel for all of its allocated CDWR tolling agreements except Coral. If CDWR does not elect to supply fuel, the

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<sup>2</sup> The CPUC did not approve PG&E's proposed gas supply plan as part of the conformed 2006 LTPP.

<sup>3</sup> Prior to GSP-12, GSPs were submitted on a semiannual basis. Following PG&E and CDWR's letter agreement modifying the Operating Agreement dated April 11, 2008, and Energy Division's June 11, 2008, approval of Advice 3269-E, GSPs are now submitted on an annual rather than semiannual basis.

<sup>4</sup> PG&E's submittal of a draft GSP-14 allows CDWR and PG&E's PRG the required two weeks to review the draft plan prior to the filing date established by the Commission in Resolution E-3845.

generators in most cases will supply and manage fuel under the terms of each contract and under the terms of a CDWR-reviewed fuel plan.

### 3. Needs Assessment

The purpose of this section is to provide a brief description of the CDWR tolling agreements and the fuel supply options available to CDWR; to present PG&E's forecast of the gas required to supply the CDWR tolling agreements allocated to PG&E; and to present a forecast of the cost of supplying physical gas under those agreements whether that gas is supplied by the generators under the provisions of the tolling agreements or if supplied by CDWR with PG&E acting as CDWR's limited agent.

#### a. CDWR Tolling Agreements Allocated to PG&E

Table 3-1 lists the CDWR tolling agreements allocated to PG&E. CDWR's contract with the CCSF is no longer listed because this project will not be developed.

Pacific Gas and Electric Company Table 3-1 CDWR Tolling Agreements Allocated to PG&E					
Counterparty	Agreement	Type	Capacity (MW)*	Heat Rate (MMBtu/MWh)*	Contract End Date
Calpine	Calpine 2	Unit – Peaking	180	10.5	12/31/2012
Calpine	Calpine 3	System – Peaking	495	10.5	7/31/2011
Coral (Shell)	Coral	System – Must Take	Var.	7.25	6/30/2012
Calpeak	Panoche	Unit – Peaking	52		
Calpeak	Vaca Dixon	Unit – Peaking		10.3	
GWF	Hanford/Henrietta	Unit – Peaking			12/31/2011
GWF	Tracy	Unit – Peaking			10/31/2012
Iberdrola	Klamath Falls	Unit – Dispatchable	300	7.2	6/30/2011
Kings River	Kings River	Unit – Peaking	96		
Wellhead	Gates	Unit – Peaking	46	10.0	10/31/2011
Wellhead	Fresno	Unit – Peaking	21	13.5	10/31/2011
Wellhead	Panoche	Unit – Peaking	50	13.5	10/31/2011

\* Capacities and Heat Rates are contracted quantities. Some contracted quantities reflect the results of annual performance tests.

#### b. Fuel Supply Options Under CDWR's Tolling Agreements

Most of the tolling agreements allow CDWR to become the Fuel Supplier, the Fuel Manager, or both. The Fuel Supplier purchases gas and delivers it to the Fuel Manager. CDWR has captured the benefits of managing a large portfolio by becoming the Fuel Supplier for all of its tolling agreements allocated to PG&E except for its Coral contract. Taking such a role for the Coral contract is

not recommended at this time because appreciable savings are not yet evident, as discussed in GSP-7.

The Fuel Manager schedules deliveries to the plant and manages monthly and daily balancing. CDWR can also capture the benefits of balancing a large portfolio by becoming the Fuel Manager, as allowed by the terms of most of the tolling agreements.

PG&E as CDWR's Limited Agent took over full Fuel Manager responsibilities for CalPeak (as ordered by the Commission in Resolution E-3825) with execution of a fuel management agreement between CDWR and CalPeak on April 1, 2010. PG&E as CDWR's Limited Agent now serves as Fuel Manager for both CalPeak facilities, GWF's three facilities, Kings River, and Calpine 2 (Los Esteros).

**Fuel Supplier:** Purchases gas and delivers it to the Fuel Manager at the PG&E Citygate or a pre-determined location.

**Fuel Manager:** Receives gas from the Fuel Supplier and manages daily and monthly deliveries from the Citygate (or other point) to the plant.

Table 3-2 summarizes PG&E's role (as CDWR's Limited Agent) as Fuel Manager and Supplier:

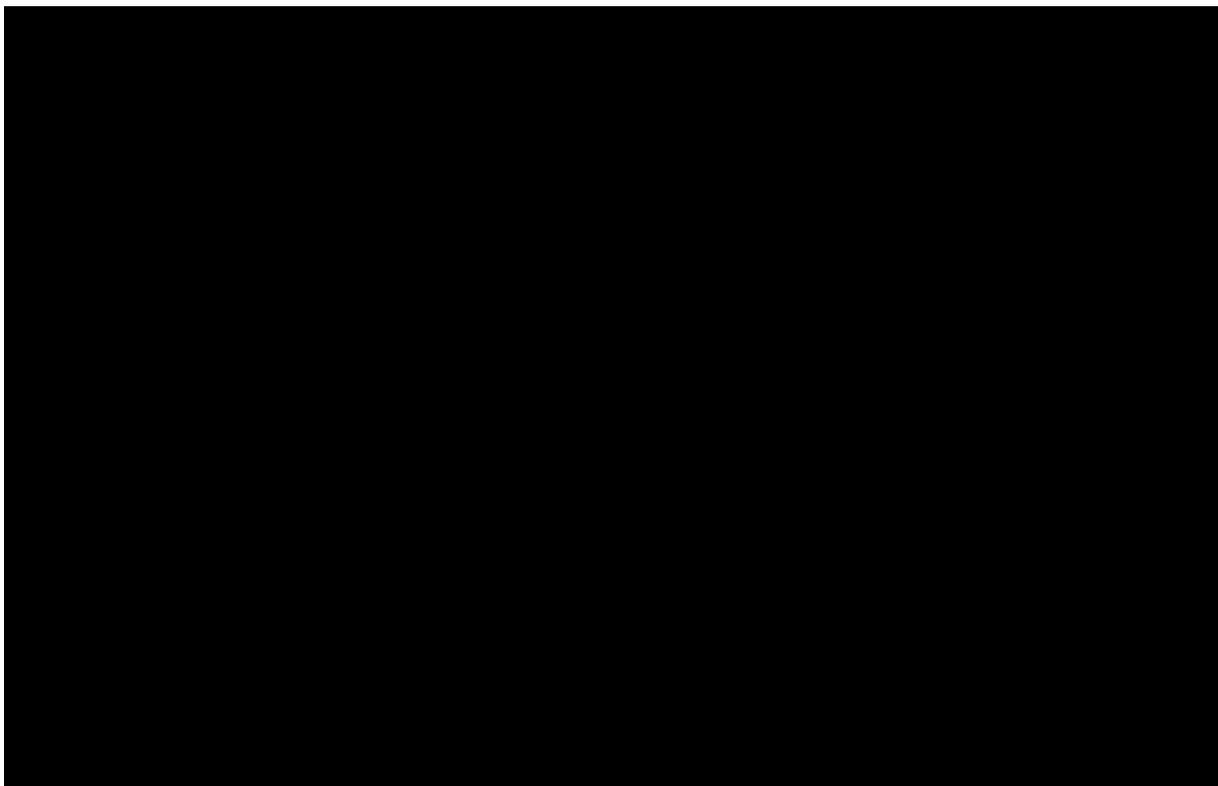
Pacific Gas and Electric Company Table 3-2 PG&E as CDWR's Limited Agent Role Elections		
Generator	Fuel Supplier	Fuel Manager
Calpine 2 (Los Esteros)	Yes	Yes
Calpine 3		
Coral		
CalPeak	Yes	
GWF		
Iberdrola	Yes	No (not allowed by contract)
Kings River	Yes	Yes
Wellhead		

Table 3-3 summarizes the general fuel supply arrangements offered by each generator under its tolling agreement with CDWR. Most of the tolling agreements require the generator to provide a Fuel Plan to CDWR for its review and approval on a regular basis. Per the Operating Agreement, when CDWR receives a fuel plan proposal from a generator it provides a copy to PG&E for its review. PG&E reviews the proposed plan and recommends to CDWR whether to accept or reject the plan and whether to elect to self-supply fuel under the tolling agreement.

Pacific Gas and Electric Company Table 3-3 Generator Fuel Cost Arrangements	
Generator	Pricing Mechanism Approach
Calpine 2 (Los Esteros)	No generator fuel option
Calpine 3	PG&E Citygate: Daily and intraday indexes, adders for market risk (fixed) and LDC transport
Coral	Starting 1/1/06, Topock into SoCalGas: Monthly NGI bidweek index only, no adders
CalPeak	PG&E Citygate: Monthly, daily, and intraday indexes, adders for market risk (variable), LDC transport, fuel management and the option of risk management
GWF	PG&E or SoCalGas Citygate: Monthly and daily indexes, adders for market risk (fixed daily, variable monthly), LDC transport, fuel management, taxes and fees
Iberdrola	Alberta (AECO 'C'): Monthly and daily indexes (C\$), adders for pipeline variable charges and shrinkage, and heat rate (based on dispatch levels)
Kings River	No generator fuel option
Wellhead	PG&E or SoCalGas Citygate: Monthly, daily and intraday indexes, adders for fuel management, the option of risk management, LDC transport, mainline extension, taxes & fees

Figure 3-1 illustrates CDWR's deadlines to notify generators that CDWR will elect to supply gas for a particular tolling agreement. Black lines indicate contracts for which PG&E as CDWR's Limited Agent currently supplies gas. Cross-hatches indicate the gas is supplied per a generator fuel plan.

Pacific Gas and Electric Company  
Figure 3-1  
CDWR Fuel Supply Timeline



**c. Expiring Contracts and Novations**

On October 12, 2009, CDWR exercised its option to extend the Calpine 2 (Los Esteros) tolling agreement three years to December 31, 2012.

In Applications 09-10-022 and 09-10-034, PG&E proposed electricity procurement transactions that include the novation of CDWR tolling agreements with generators GWF and Calpine from CDWR to PG&E. On April 20, 2010, the CPUC issued a Proposed Decision denying both applications in part; however, the CPUC directed PG&E to work with CDWR to novate and submit the novated agreements as soon as possible for Commission approval using the Tier 3 advice letter process. The CPUC has not acted on the applications, but whether the primary transactions are approved or not, novation is expected to occur by the time GSP-14 is effective. Upon novation, PG&E and not CDWR will be the counterparty to these contracts. PG&E, in its own name and using its own accounts, would then supply physical gas and execute financial hedges for its tolling agreements with GWF and Calpine. The forecasts in GSP-14 assume CPUC approval and effectiveness of the novations prior to November 1, 2010.

During the term of GSP-14, the Iberdrola and Wellhead tolling agreements will expire. With these expirations, the novations mentioned above, and the Calpeak contracts expiring January 1, 2012, only the Kings River Conservation District and Coral agreements will remain active into 2012. The Coral tolling agreement will expire mid-2012, leaving Kings River Conservation District the only CDWR tolling agreement assigned to PG&E for administrative purposes.

#### **d. Forecast of Gas Demand by Tolling Agreement**

##### **i. Projected Monthly and Daily Gas Volume**

PG&E forecasted gas volumes for each of the CDWR contracts using FEA @ENERGY/PowerGeneration, a software tool for power generation asset optimization produced by Financial Engineering Associates of Berkeley, California. @ENERGY/PowerGeneration simulates optimal dispatch of all PG&E resources, including the CDWR contracts, based on each resource's specific operating constraints, flexibility and market prices. @ENERGY/PowerGeneration assists PG&E in minimizing generation costs and maximizing the value of generation assets, including CDWR contracts, utility-owned generation and market purchases. PG&E's production simulation currently uses 10,000 trials and represents the expected case outcome.

The key assumptions underlying the forecast include:

- Current electric and gas forward curves.
- Operating characteristics of utility-owned generation including hydro and pumped storage.
- Operating characteristics and contract terms of the CDWR contracts.
- Operating characteristics and contract terms of PG&E contracts.

The forecast results are presented in Tables 3A-1 to 3A-3 in the appendix to this chapter. This forecast volume is the same whether the gas is provided by the generators or by PG&E as CDWR's limited agent.

Tables 3A-1a and 3A-1b include the total gas volumes for all dispatch of CDWR generation, Tables 3A-2a and 3A-2b include only CDWR gas volumes required for current obligations,<sup>5</sup> and Tables 3A-3a and 3A-3b include only gas volumes required for economic surplus.<sup>6</sup> Note that PG&E

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<sup>5</sup> Current obligations include generation to support forecasted native loads and contracted forward power sales.

<sup>6</sup> Economic surplus includes generation not needed for current obligations but is in-the-money, that is, the incremental cost of generation is lower than the current market price of power.

uses delta-equivalent gas volumes because they represent a more realistic forecast of actual burns than intrinsic volumes.<sup>7</sup> Delta-equivalent volumes represent expected-case values.

Tables 3A-2a and 3A-2b display current obligations on a delta-equivalent basis. This is an important representation of the CDWR gas positions because the emphasis of PG&E's Gas Hedging Plan is to cover specific percentages of the gas positions required to serve current obligations.

#### **e. Forecast of Fuel Cost Under Generator Fuel Plans**

PG&E forecasted the cost of fuel under each of CDWR's tolling agreements by applying the fuel supply arrangements in each contract and the latest Generator Fuel Plan provisions to the volumes presented in the previous section. The results of these forecasts are presented in Tables 3B-1a through 3B-1b in Appendix 3B. Detailed supporting calculations for the figures in the tables are available upon request in PG&E's confidential workpapers for GSP-14.

The estimated total gas cost under the generator fuel plans for the term of GSP-14 is presented in the last column of Line 13 in Table 3B-1a and represents a decrease of 47% from GSP-13. This decrease is driven by slightly lower forecast gas prices and significantly reduced volumes. The average PG&E Citygate gas price from GSP-13 was \$ 6.24/Millions of British Thermal Units (MMBtu), compared with \$ 5.54/MMBtu for GSP-14.

#### **f. Forecast of Fuel Cost Under PG&E Fuel Plan**

PG&E forecasted the cost of fuel provided by PG&E as CDWR's Limited Agent under GSP-14 and using the same forecast period and pricing date as Section 3d, above. GSP-14 assumes that PG&E recommends and that CDWR elects to supply fuel under all of the tolling agreements allocated to PG&E, except Coral. The remainder of GSP-14 is devoted to presenting the details of how this gas supply portfolio would be constructed and managed. The results of these forecasts are presented in Tables 3B-2a through 3B-2b in Appendix 3B. Detailed supporting calculations for the figures in the tables are available upon request in PG&E's confidential workpapers for GSP-14.

The estimated total gas cost under the PG&E's fuel plan<sup>8</sup> for the term of this plan is presented in the last column of Line 13 of Table 3B-2a and represents a

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<sup>7</sup> Each tolling agreement represents a spark spread option, and for each such spread option the gas delta may be calculated. The delta-equivalent volumes of a spark spread option (tolling agreement) is the amount of gas that, if hedged, makes the value of the option insensitive to small changes in gas prices.

<sup>8</sup> Note: this cost does not include PG&E's administrative cost for procuring fuel for the CDWR contracts. Administrative costs are included in PG&E's General Rate Case.

decrease of 47% from the GSP-13 forecast. This decrease is driven by slightly lower forecast gas prices and significantly reduced volumes.

**g. Comparison of Cost Under PG&E's Fuel Plan With Cost Under Generators Fuel Plans**

The total cost under the PG&E Gas Supply Plan is \$ 2.2 million less than under the combined Generator Fuel Plans for the term of GSP-14. These projected savings are based on forward prices as of May 7, 2010, and the actual will be different because market conditions change. The savings result from PG&E as CDWR's Limited Agent taking on the role of Fuel Supplier and Fuel Manager, where applicable. Specifically, the savings result from elimination of the add-on fees charged by the generators and capturing the value of firm pipeline capacity under the Iberdrola contract when the plant is not dispatched.<sup>9</sup> For example, Calpine's fuel plan included day-ahead gas prices of average daily index plus \$ 0.05/MMBtu and the absolute high price reported for index plus \$ 0.15/MMBtu for same-day gas. Nearly all the total projected savings in GSP-14 relates to the Iberdrola contract. Over 90% of the Iberdrola savings derives from extracting the value of pipeline capacity when the plant is not dispatched, while the remainder is due to avoiding add-on fees. The projected savings are smaller than those forecasted under past GSPs, and more focused on the Iberdrola contract, because of the expiration and novation of many of the contracts during the term of GSP-14.

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<sup>9</sup> The availability of this capacity was confirmed by a letter agreement between CDWR and Iberdrola on November 10, 2003. On May 14, 2010, CDWR renewed its election to supply fuel under the Iberdrola Power Purchase Agreement for the term July 1, 2010 to June 30, 2011. PG&E recommended such renewal to CDWR.

## **APPENDIX 3A**

Appendix 3A has been redacted because it contains confidential, protected material.

## **APPENDIX 3B**

Appendix 3B has been redacted because it contains confidential, protected material.

## 4. Market Assessment

This section provides an update on market conditions for the term of this plan.

### a. Gas Forward Prices

Rather than use a forecast of gas prices based on econometric models, PG&E prefers to use forward price quotes from financial markets. These prices reflect market conditions as of the end of the trading day, May 7, 2010. PG&E's Utility Risk Management department updates these prices on a daily basis. The prices from this date were used for all of the analysis presented in this plan.

The forward gas prices presented in Figures 4A-1 through 4A-4 are based on financial market quotes on the observation dates indicated.

### b. Gas Supply Outlook

#### i. Production Outlook for Gas Basins

Driven by horizontal drilling in unconventional plays such as shales and tight sands, the U.S. gas drilling rig count has risen from below 700 mid-2009 to nearly 1,000 as of mid-April 2010. Shifts in drilling will impact supplies by region. Wood Mackenzie's April 2010 long-term forecast continues to show growth in Rockies production from 8.9 billions of cubic feet per day (Bcf/d) in 2008 to 10.9 Bcf/d in 2013. Mature regions such as the San Juan and the Western Canadian Sedimentary Basin (WCSB) basins are expected to continue their gradual declines.

Rockies gas traded at a \$ 4.13 and \$ 2.92/MMBtu discount to the New York Mercantile Exchange (NYMEX) Henry Hub contract last summer (April 2009 through October 2009) and winter (November 2009 through March 2010), respectively. Looking forward, Rockies gas is currently trading at a \$ 0.41/MMBtu discount to the NYMEX for next summer (June 2010 through October 2010) and at a \$ 0.39 discount for this winter (November 2010 through March 2011).

San Juan production is expected to decline 13% between 2008 and 2013.<sup>10</sup> San Juan gas traded at a \$ 3.96 /MMBtu discount to NYMEX for summer 2009 and a \$ 2.87/MMBtu discount last winter. San Juan gas is currently trading at a \$ 0.31/MMBtu discount to NYMEX for the remainder of summer 2010 and at a \$ 0.32/MMBtu discount for winter 2010/2011.

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<sup>10</sup> Wood Mackenzie, North American Gas Long-Term Outlook, April 2010.

## Permian Basin

Permian gas traded at a \$ 3.83/MMBtu discount to NYMEX last summer and a \$ 2.84/MMBtu discount last winter. The Permian basin is currently trading at a \$ 0.20/MMBtu discount to NYMEX for the summer 2010 and at a \$ 0.27/MMBtu discount for winter 2010/2011. Permian supplies are expected to remain a limited source of California supply.

## California Production

California's very mature gas production is expected at a rate of approximately 480,000 MMBtu/d in 2008 and is expected to remain at that level through 2030.<sup>11</sup>

## Alberta and British Columbia

Western Canada is seeing a decline in conventional gas production as older fields become less productive.<sup>12</sup> Natural gas production from the WCSB is expected to decline from approximately 16.2 Bcf/d in 2007 to approximately 12.5 Bcf/d by 2015.<sup>13</sup> Exacerbating these declines, exports are expected to decline further as a result of local demand, especially from oil sands production. Baker Hughes reports 248 Canadian natural gas rigs in operations during January 2010, down from 352 in January 2008.<sup>14</sup> In 2009, Canadian exports averaged roughly 8.9 Bcf/d, down from 9.8 Bcf/d in 2008.<sup>15</sup>

WCSB gas at the AECO 'C' hub gas traded at a \$ 3.89/MMBtu discount to NYMEX last summer and a \$ 2.82/MMBtu discount last winter. AECO gas is now trading at a \$ 0.50/MMBtu discount to Henry Hub for summer 2010 and at a \$ 0.50/MMBtu discount for winter 2010/2011.

### ii. Potential Supply Concerns

PG&E has no supply shortage concerns for the term of GSP-14.

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<sup>11</sup> 2008 Cal Gas Report, p. 15.

<sup>12</sup> *Canada's Energy Future*, National Energy Board <http://www.neb-one.gc.ca/clf-nsi/rthnb/nwsrls/2007/fctsh38ntrlgs-eng.html>.

<sup>13</sup> Wood Mackenzie analysis, Pacific Gas and Electric Company Request for Approval of Ruby Pipeline Transportation Arrangements, A.07-12-021, pages 2-3, and Wood Mackenzie, North American Gas Long-Term Outlook, April 2010.

<sup>14</sup> Baker Hughes Canadian Oil & Gas Split, April 16, 2010, [http://files.shareholder.com/downloads/BHI/897570379x0x366719/76A1F9AB-2A9F-4840-A48C-5A496256BA22/US\\_Rig\\_Report\\_041610.xls](http://files.shareholder.com/downloads/BHI/897570379x0x366719/76A1F9AB-2A9F-4840-A48C-5A496256BA22/US_Rig_Report_041610.xls).

<sup>15</sup> U.S. Department of Energy, Energy Information Administration Website, <http://tonto.eia.doe.gov/dnav/ng/hist/n9102cn2m.htm>.

iii. Anticipated Pipeline Outages

PG&E regularly monitors the pipelines' Web sites for scheduled outages. Monitoring these and other pipeline notices is part of PG&E's gas scheduler's duties.

## **APPENDIX 4A**

Appendix 4A has been redacted because it contains confidential, protected material.

## 5. Procurement Strategy Overview

The purpose of this section is to provide the overarching strategy guiding PG&E's management of gas supply, transportation, storage and price risk management on behalf of CDWR.

### a. Management of Physical Supply and Financial Price Risk

PG&E manages physical gas supply separate from gas price risk because the market for both types of products are robust and because the objectives for managing physical supply and gas price risk are different. PG&E's objectives for physical supply management are reliability and flexibility. PG&E's objectives for gas price risk management are to reduce the exposure of its electric portfolio to gas prices, to manage TeVaR<sup>16</sup> within Commission-approved customer risk tolerance levels, and to stabilize electric rates.

### b. Physical Supply and Asset Strategy

Beginning with GSP-11, PG&E included six physical operating targets for PG&E's overall electric procurement (EP) gas supply portfolio<sup>17</sup>—PG&E expects to update these targets in a future (non-CDWR) GSP.

**Diversity:** PG&E will develop a portfolio of gas transportation contracts from at least two supply basins.

**Term Pipe Percentage:** PG&E will secure firm interstate transportation, through a mix of annual and multi-year contracts, covering at least 55% of its average daily volume forecast for the following full gas year.

**Winter Storage Reliability:** PG&E will examine winter reliability and, if necessary, obtain storage services to protect EP's gas supply during a natural gas diversion by planning for cold winter day conditions up to what may be expected once in 40 years.

**Summer Storage Balancing:** PG&E will obtain storage services such that summer injection and withdrawal are available for balancing to cover at least 50% of EP's forecast daily swings in demand.

**Temporal Trading Target:** To diversify execution risks, PG&E also proposes temporal, or seasonal, operating targets for purchase of physical supply. As price risk is managed financially, according to the Gas Hedging Plan, physical

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<sup>16</sup> To-expiration Value at Risk (TeVaR) is a statistical measure of the variation in cost for PG&E's electric portfolio.

<sup>17</sup> Proposed in PG&E's 2006 LTTP (filed December 11, 2006). The gas supply plan portion of this plan was not approved in D.07-12-052.

forward purchases of gas are at index-based prices. To avoid impacting liquidity in prompt-month markets for index-based gas, however, PG&E proposes a temporal operating target of 50%. This target states that PG&E will purchase at least 50% of its seasonal (winter and summer) baseload supply requirements prior to the prompt month.

Although the CPUC has not approved these targets, PG&E uses them as a general guideline for management of PG&E's overall EP gas supply portfolio, which includes CDWR tolling agreements, utility-owned generation and PG&E tolling agreements. This implementation on an EP-wide portfolio basis need not significantly alter the physical supply strategies currently in place under CDWR GSPs.

As an example, consider the Diversity and Term Pipe Percentage targets. Current CDWR physical supply strategies will complement these overall portfolio targets. The CDWR gas supply portfolio now requires a significant volume of basin purchases at AECO for the Iberdrola contract and these volumes are delivered from the basin via firm interstate transportation. These AECO volumes appropriately add both basin supply and interstate transportation to PG&E's overall EP gas supply portfolio.

Applying these LTPP GSP operating targets to CDWR's portfolio itself would not be appropriate. For the relatively small and peaking volumes remaining (units besides Iberdrola and Coral), adding another basin and firm pipeline capacity would be impractical. As discussed above and in past GSPs, the peaking units are best supplied on a daily basis.

Similarly, the LTPP storage targets and temporal trading target will be applied to PG&E's overall EP gas portfolio. Any CDWR Storage and term supply arrangements will count towards achieving overall EP portfolio physical operating targets, but those operating targets will not be applied specifically to the CDWR portfolio.

Based on CDWR's goals of reducing its role in energy procurement and its assessment of the value of natural gas storage, CDWR has indicated that PG&E should not pursue storage on CDWR's behalf. Therefore, PG&E will not enter into firm storage contracts on behalf of CDWR during the term of this Gas Supply Plan.

### **c. Gas Hedging Strategy**

#### **i. Electricity and Gas Hedging Operating Targets**

PG&E's revised operating targets, applicable for both electricity and gas hedging, are included here. These targets were filed for CPUC approval on July 10, 2009, as Advice Letter 3492-E, updating PG&E's electricity and gas hedging plan. These updated operating targets represent the lower

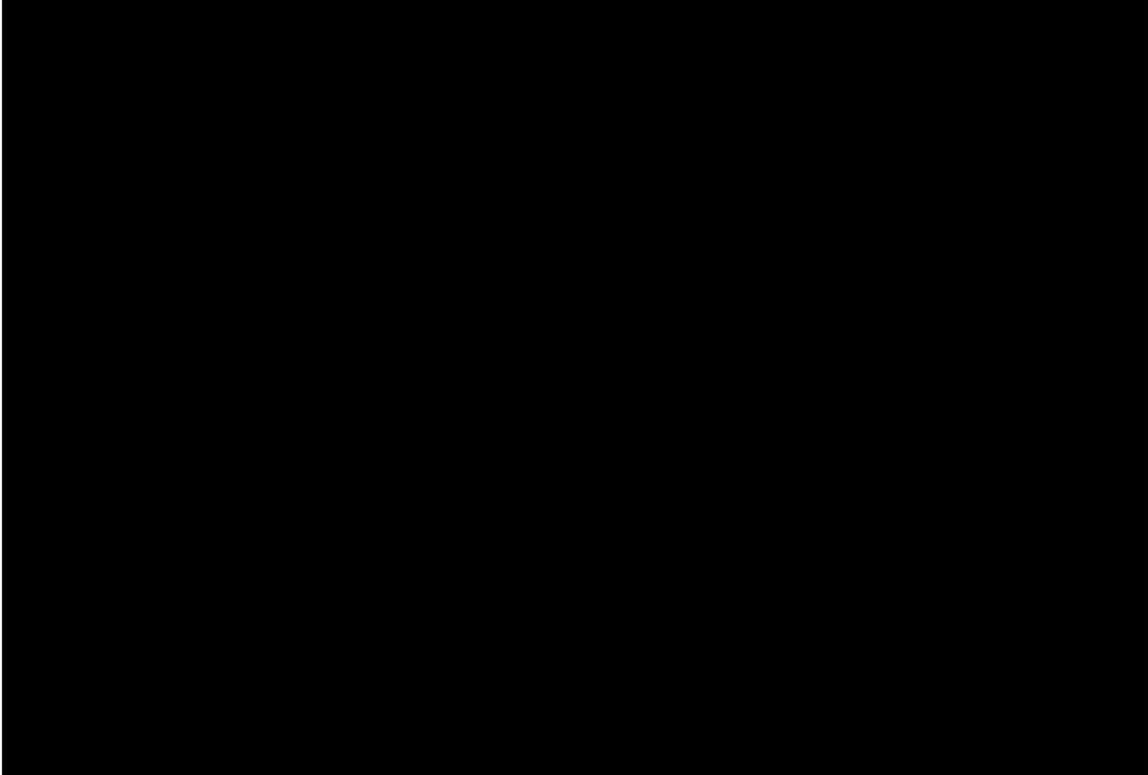
bound for the desired hedge positions. If the hedged positions fall below these targets, PG&E will execute hedges to bring the hedged positions above the lower operating targets. The upper operating targets set the upper bound for the desired hedge positions. If the hedged positions exceed the upper operating targets, PG&E will unwind hedges to bring the hedged positions below the upper operating targets.

PG&E will hold its current hedges while the hedge positions are between the lower and upper operating targets. PG&E's financial hedging strategies are aimed at moving the portfolio hedge position to within 5 percentage points above the lower operating targets. PG&E will only execute financial hedges to move the electricity or gas hedge positions from below the lower operating targets up to the lower operating targets.

However, PG&E may execute electricity transactions to manage other aspects of its electric portfolio, such as unit tolls to manage the need for operational flexibility. Such transactions also serve to hedge the electricity position. PG&E will not unwind any financial hedges as a result of such transactions unless the electricity hedge position is above the operating target range. The upper operating targets thus serve as a threshold for unwinding hedges should non-hedging events push the portfolio hedge position above the upper operating targets. Figure 5-1 and Table 5-1 show the electricity and gas operating targets.

PG&E's updated hedging plan includes a liquidity management structure. However, this liquidity management program does not apply to hedging for CDWR, because PG&E does not manage the credit and collateral for CDWR. CDWR will continue to manage the collateral and credit required to hedge the gas price risk associated with CDWR tolling agreements. CDWR will continue to communicate to PG&E any restrictions on hedging required by credit or collateral constraints CDWR may face. In the extreme case where PG&E might be driven by liquidity concerns to unwind hedges, the CDWR portfolio would continue to be hedged to within the appropriate operating targets discussed in this GSP.

Pacific Gas and Electric Company  
Figure 5-1  
Revised Electric Portfolio Operating Targets for Electricity  
and Gas Hedging for Years 1 to 4 (Percent)



Pacific Gas and Electric Company  
Table 5-1  
Revised Electric Portfolio Operating Targets for Electricity  
and Gas Hedging for Years 1 to 5 (Percent Hedged)



PG&E derived the lower operating targets through an iterative process using a TeVaR model. PG&E calculated its projected 1-12 month and 13-24 month TeVaR using a range of operating targets for years 1 through 3. PG&E continued this process until it found a set of operating targets that would maintain 1-12 month TeVaR below or near the Customer Risk Tolerance for months 1 through 12 at the 95% confidence interval. PG&E set the operating targets year 4 to maintain the same progressive steps (*i.e.*, operating targets are greater for periods closer to delivery than for periods that are further in the future).

The electricity position is well hedged in the near-term as a consequence of the need to contract for operationally flexible, dispatchable resources and reserve capacity, combined with the must-take resources in the portfolio. In fact, even when in balance over an annual period, the electricity position can be long during certain delivery periods depending on the make-up of the resources in the portfolio. Often times the electricity position may change due to variable hydro or temperature conditions going forward. In such cases it may be prudent to be slightly long going into the period of uncertainty to avoid having to procure additional quantities should unfavorable circumstances arise. Because the electric portfolio can be long in this manner, it is necessary to adopt operating targets for the long side as well as the short side of the open position. The dual-sided (both short and long) nature of the electricity position creates the need for an operating target range to manage the electricity price risk. On the gas side, considering position fluctuations, it is conceivable that the gas position could be long also. If such a position fluctuation was transitory, it may be desirable to not unwind a hedge and thus a temporary long position above 100% could be acceptable.

To deal with the possibility of the hedge positions becoming long, PG&E's hedging plan uses a 105% upper operating target to manage the long side of the position through the prompt year. This provides flexibility to manage position fluctuations in the near-term. Beyond 12 months, however, where it is even more difficult to anticipate changes to the electric portfolio position, from either the load side (returning load) or the resource side (contract defaults, extended outages, dry hydro years, etc.), the upper operating target of 105% is extended through year 2. PG&E will review these operating targets as market conditions warrant and at least annually. PG&E will present its annual review of its operating targets to its PRG in the fall of each year. Upon adoption, the operating targets are set for the following year; that is they roll forward year-by-year. This is consistent with the seasonal nature of the gas and electricity hedging products.

## ii. Gas Basis Operating Targets

This plan extends PG&E's basis hedging time horizon from four seasons forward<sup>18</sup> to six seasons forward. In order to maintain basis hedges for delivery periods at least 24-months forward and with the execution strategy discussed in Section E, PG&E must execute basis hedges for delivery 36-months forward. This is because basis hedges for the first 12 months of delivery periods will settle between hedging plan updates. Based on recent trading experience, PG&E is confident that the market for basis products is sufficiently liquid for trading up to 3-years forward.

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<sup>18</sup> AL 2775-E, PG&E Electric Portfolio Gas Hedging Plan Update 2006-1, p. 9.

PG&E's basis hedging operating targets are shown in Table 5-2.

Pacific Gas and Electric Company  
Table 5-2  
Revised Gas Basis Operating Targets for Years 1 to 4  
(Percent Hedged)



iii. Incremental Product Mix

PG&E's product mix strategy will use a mix of fixed-for-floating swaps and call options subject to an annual limit on option premiums of \$20 million.

Gas financial options will have option deltas ranging from 30% to 40%.

Option premiums will be allocated by calendar year delivery periods. Once the option premiums have been allocated, PG&E will calculate the size of the position covered by the options. If the option allocation leaves any delivery period short of the lower operating target, PG&E will use fixed-for-floating swaps to bring those positions up to that target.

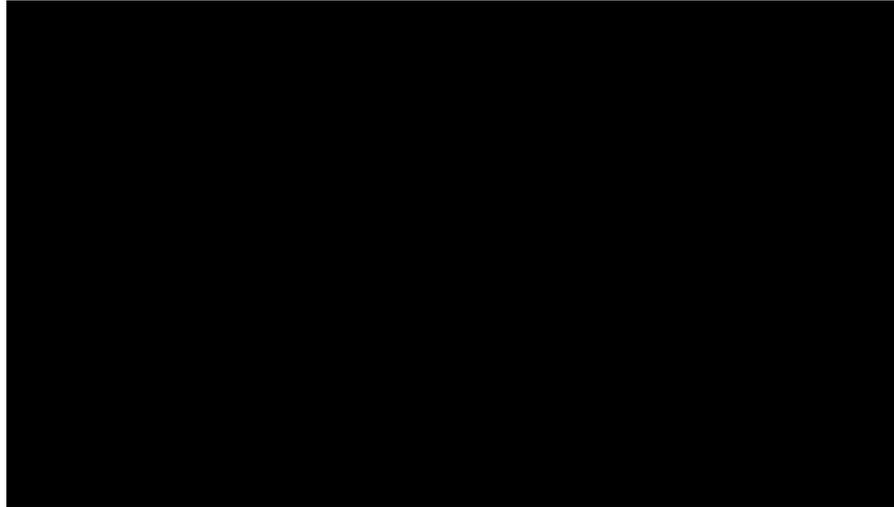
Normally PG&E will use fixed-for-floating swaps that require collateral or margin postings. If PG&E determines that customer costs would be no higher by using margin-free swaps than by financing the electric portfolio's collateral and/or margin requirements through short-term financing, then PG&E would use margin-free swaps.

iv. Execution Strategy

PG&E's execution strategy continues to be a single-phase execution strategy where the proposed operating targets and product mix described above will be implemented ratably over a calendar year or remainder of calendar year (for mid-year plan updates). The hedges for near-term delivery periods will be executed first. For example: 2011 trades for delivery periods in the second quarter of that year will be spread from January to March 2010 whereas 2010 trades for delivery periods in 2012 and beyond will be spread from January to December 2010. The benefit of this execution strategy is reduced market timing risk by applying a strategy

similar to “dollar-cost averaging.”<sup>19</sup> The execution and delivery periods are illustrated in Figure 5-2.

Pacific Gas and Electric Company  
Figure 5-2  
Revised Gas Hedge Execution Timeline and Delivery Periods to Be Hedged



v. Contribution of Coral Contract to Hedging Volumes

On January 28, 2009, the CPUC approved Advice Letter 3384-E, jointly filed by PG&E, Southern California Edison (SCE) and San Diego Gas & Electric Company (SDG&E). This approval means that Edison and San Diego’s contributions towards the fixed cost of the Coral contract are now fixed. PG&E need not make any adjustments to its hedging in order to hedge Coral costs according to its current hedging plan.

vi. Operating Outside of the Operating Targets

As with the electricity position, there can be events that either cause the gas open positions to go beyond operating targets immediately, or have the potential to quickly cause large deviations from the operating targets. Examples of such events are addition of non-gas resources to the portfolio, major market disruptions, and above normal hydro conditions. In such cases, PG&E may temporarily manage the portfolio outside the established operating targets until corrective action is taken to minimize the impact on

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<sup>19</sup> Dollar cost averaging is “investing equal amounts of money at regular intervals. The money deducted from your paycheck if you participate in your company’s 401(k) program is an example of dollar cost averaging. Theoretically, you will buy more shares when the price of your investment has declined and fewer shares when the price has risen. This may lead to an overall cost basis that is lower than the average price per share.” See *The Motley Fool Glossary*, <http://www.fool.com/school/Glossary/glossarya.htm>.

the portfolio.<sup>20</sup> In addition, it may be necessary for the gas position to be outside its operating targets because an offsetting electric position is balancing the portfolio.

vii. Electricity and Gas Hedging in the Long Term

Beyond four years, PG&E is not proposing any formal gas and electricity financial hedging strategy. This does not imply that risks are not hedged beyond four years. There may be circumstances where non-portfolio risk issues govern (such as contracting for specific units to ensure longer-term planning reserve margins) and may lead to some level of price risk hedging for such delivery periods. PG&E will make advice letter filings with the Commission if there is a need for strategies to financially hedge the electric portfolio further out than four years.

viii. Electricity and Gas Hedging Plan Implementation

Because the electricity and gas hedging plan involves a number of elements and transactions, PG&E will not be able to immediately, upon Commission and CDWR approval, achieve all of the targets specified in the plan. PG&E will implement the electricity and gas hedging plan in a manner that ensures the proposed targets are met within an appropriate period of time.

ix. Hedging Gas Associated With Economic Surplus

PG&E will lock in 100% of the gas short position created by economic surplus forward sales. PG&E will fix the gas price for the underlying gas associated with a forward electric position only when that position has been sold forward simultaneously.

## 6. Implementation Plan

This section describes, in detail, the portfolio that PG&E as CDWR's Limited Agent proposes to build to supply fuel for the CDWR contracts.

### a. Recommended Gas Supply Portfolio

i. Physical Gas Supply

PG&E as CDWR's Limited Agent will build its supply portfolio for the term of GSP-14 to match the generation forecast shown in Section 3.c. Table 6-1

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<sup>20</sup> The decision to unwind a gas long position will be based on the size of the position relative to operating targets, the overall portfolio position, the length of time the position has been outside the target, and anticipated changes in the portfolio that may correct the position. PG&E's will normally unwind such a position over time.

provides a brief description of each contract and its typical contribution to the supply portfolio.

Pacific Gas and Electric Company Table 6-1 PG&E as CDWR's Limited Agent Supply Portfolio				
Supplier	Term	Volume (MMBtu/day)	Location	Pricing
Calpine 3				
Calpine Los Esteros				
Iberdrola				
Coral				
Kings River				
Wellhead Gates and Panoche				
Wellhead Fresno				
CalPeak Panoche and Vaca-Dixon				
GWF Tracy				
GWF Hanford and Henrietta				
Balancing				

PG&E as CDWR's Limited Agent will procure seasonal or monthly gas supply for the Iberdrola tolling agreement as required by the contract. It will buy physical gas at index and fix prices financially as part of its risk management function, discussed in Section 5. PG&E as CDWR's Limited Agent may also buy prompt-month fixed price gas for PPM's baseload needs the following month.

The peaking plants (Calpine 3, Calpine 2 (Los Esteros), GWF, Wellhead, CalPeak, and Kings River) will be supplied on a daily basis from unused Iberdrola supplies, spot purchases, and parking and lending services. Since these plants are dispatched based on spot gas prices, PG&E as CDWR's Limited Agent's purchases gas for these plants to match the dispatch price to insulate the transaction from short-term price risk.

The Coral PPA is a must-take agreement providing Coral the option to select the delivery location and quantity of megawatt-hour (MWh) delivered within specified limits. The default fuel supply under the PPA is from Coral and priced at the *Natural Gas Intelligence* (NGI), SoCal Topock, bidweek index with no adders. CDWR has the option to supply fuel for Coral by

providing Coral 60-days written notice. Coral is currently supplying the fuel for this contract under this default arrangement. Until alternatives with lower prices or other benefits compared to the Coral default supply are available, PG&E recommends that Coral continue to supply the gas for the Coral PPA.

ii. Supply Basin Mix

PG&E forecasts that PG&E as CDWR's Limited Agent will procure supply during the term of GSP-14 from the following market points:

- SoCal Citygate: 0.0 Million MMBtu 0%
- PG&E Citygate: 2.2 Million MMBtu 10%
- AECO 'C': 19.5 Million MMBtu 90%

iii. Interstate Pipeline Mix

PG&E's recommended pipeline capacity choices are based upon market valuation and portfolio fit.

PG&E reviewed the market value of interstate and intrastate capacity for the year beginning November 1, 2010. As shown in Table 5A-1 in Appendix 5A, holding pipeline capacity at full reservation charges may yield positive value on at least some pipeline paths. Pipeline capacity on some of the paths shown is not readily available in the marketplace.

When considering interstate pipeline capacity and how it fits the CDWR portfolio, PG&E considered the capacity factor of the load it will serve. Since interstate pipelines use Straight-Fixed Variable rate structures (roughly 99% of their rates are composed of demand charges and only 1% are composed of usage charges), subscribing to interstate pipeline capacity is most complementary to high capacity-factor loads. All of the CDWR tolling agreements allocated to PG&E during the term of this plan, with the exception of the Iberdrola PPA and the Coral PPA, are for peaking or peak-period generation. The forecasted capacity factors for these contracts for the term of this plan range from 1% to 17% with a weighted average of only 8%. The Iberdrola contract already includes interstate pipeline capacity more than sufficient to cover the demands of this lower heat rate tolling agreement. At this time, PG&E judges further interstate pipeline capacity inappropriate for the CDWR portfolio alone.

The Iberdrola contract includes 51,840 MMBtu/day of firm capacity on TransCanada's Nova Gas Transmission (Alberta), TransCanada's Foothills BC (British Columbia) and Gas Transmission Northwest (GTN) pipelines. The full reservation charges for each pipeline are included in the fixed capacity charge under CDWR's Power Purchase Agreement with Iberdrola.

If Iberdrola supplies fuel under the contract, it has the benefit of the pipeline capacity when the plant is not dispatched. If CDWR supplies fuel, it has the option to receive the benefit of the capacity when the plant is not dispatched. This is the main benefit of supplying fuel under this contract. PG&E as CDWR's Limited Agent continues to capture the value of this pipeline capacity for CDWR by selling the gas (or supplying another CDWR contract) when the PPM plant is not running. Note that Iberdrola is the shipper of record on GTN and will not release the capacity to CDWR, per CDWR's letter agreement with Iberdrola. PPM delivers CDWR gas to the plant when it is dispatched or to CDWR at Malin when the plant is not dispatched.

iv. In-State Pipeline Capacity

In the case of in-state capacity on PG&E's California Gas Transmission System, PG&E as CDWR's Limited Agent will acquire in-state capacity to match any supply purchases at the California borders or with any interstate pipeline capacity for supply purchased in the basins. PG&E as CDWR's Limited Agent does not intend to purchase Firm Access Rights for the CDWR Tolling units served by SoCalGas because those units have high heat rates and are rarely dispatched. PG&E as CDWR's Limited Agent will purchase gas for those units at the SoCal Citygate.

v. Distribution Pipeline Capacity

Each of the facilities under contract with CDWR and allocated to PG&E has existing transportation contracts with their local distribution companies (LDC). The generators will continue to contract for distribution capacity with their LDC.

vi. Storage Capacity

CDWR currently holds no firm storage capacity for the benefit of PG&E's allocated CDWR contracts. Based on CDWR's goals of reducing its role in energy procurement and its assessment of the value of natural gas storage, CDWR has indicated that PG&E should not pursue storage on CDWR's behalf. Therefore, PG&E will not enter into firm storage contracts on behalf of CDWR during the term of this GSP.

**b. Proposed Hedge Transactions**

Based on the hedging strategies described in Section 4.B, PG&E proposes a set of representative transactions listed in Tables 5B-1a for the term of GSP-14. PG&E proposes hedge transactions for delivery periods beyond the term of GSP-14 in Table 5B-1b. Note that these representative transactions will be updated based on current market conditions prior to execution.

**c. CDWR Prior Review and Consent**

In the past, some of CDWR's counterparties for financial transactions have required CDWR to consent to and execute each transaction. If these counterparties maintain this requirement, PG&E will submit all financial transactions with these counterparties to CDWR for review, approval and execution, as described in CDWR's Fuels Protocols.

## **APPENDIX 5A**

Appendix 5A has been redacted because it contains confidential, protected material.

## **APPENDIX 5B**

Appendix 5B has been redacted because it contains confidential, protected material.

## 7. Miscellaneous Items

This section contains items not covered in any other section.

### a. CDWR-Approved Suppliers

The list of gas suppliers approved by CDWR for use by PG&E, SCE and SDG&E is now part of CDWR's Fuel Protocols. CDWR continues to add additional approved suppliers to the list.

PG&E will work closely with CDWR to ensure that CDWR remains within its credit limits and, if necessary, will request that CDWR increase credit limits.

PG&E will use CDWR-approved counterparties for financial trading per Resolution E-3825. In addition, CDWR is using NYMEX Over-the-Counter clearing services through a brokerage account to reduce counter-party credit risk and to reduce collateral requirements.

### b. Transactions for Use of Utility-Owned Facilities

PG&E will transact for utility-owned facilities or services subject to this presumption of reasonableness standard per Commission Resolution E-3825:

- i. In cases where an Request for Offer is issued and offers are received, it is presumed that a reasonable price is paid if PG&E's charge to CDWR for the use of the utility's facilities or services is the same as or lower than the bid(s) received.
- ii. In cases where there are no competitive alternatives for comparison, it is presumed that a reasonable price is paid if PG&E's charge to CDWR for the use of the utility's facilities or services is either: (1) the tariff recourse rate for the service; or (2) if the price is negotiated, no higher than the volume weighted average of the price the utility negotiated (except for CDWR) for each similar service in the same month and for the same period the service is provided. In addition, negotiated prices above this weighted average are not per se unreasonable, but require PG&E to show the Commission why they were reasonable.

### c. Transactions Outside the Scope of the Gas Supply Plan

As authorized by the Commission in Resolution E-3825, PG&E may pursue activities outside the scope of the approved GSP, subject to Commission reasonableness review, in the event extraordinary circumstances arise and it is necessary for PG&E to meet its administrative and operational responsibilities consistent with Commission decisions and with the CDWR Fuels Protocols. PG&E shall document and describe these occurrences including an explanation of resulting ratepayer benefits. Additionally, PG&E is required to notify CDWR

and the Commission's Energy Division when contemplating taking such actions via a letter and obtain CDWR's prior consent where such consent is required by CDWR's Fuels Protocols.

**d. Additional Information**

As directed by the Commission in Resolution E-3825, PG&E will provide additional information regarding this plan to CDWR upon CDWR's request. Also, as directed by the Commission in Resolution E-3845, PG&E will make available: "all pertinent information (e.g., prices, quantities, etc.) and supporting documentation concerning transactions as well as analyses, forecasts and related data used for decision making purposes pursuant to its approved GSPs to the Commission staff upon request."

**e. Physical Gas Trading Between PG&E and CDWR**

From time to time PG&E finds itself trading opposite positions for its own portfolio and the CDWR portfolio. That is, one portfolio is short and the other is long. Balancing both portfolios requires two physical trades in which each portfolio incurs the cost of the bid-ask spread.

To reduce such costs, PG&E, with CDWR's concurrence, requested in GSP-7 the authority to trade physical gas with CDWR under certain limited circumstances, such as the following:

- Trades are for portfolio balancing.
- Trades are limited to terms of one month or less, including imbalance gas.
- All trades will be priced at the Gas Daily index price for the date in question, with no adders.
- The CDWR side of the trade will be executed by an authorized CDWR employee.
- Trades will be executed under a North American Energy Standards Board (NAESB) Master Agreement between PG&E and CDWR.
- Such trades will be specifically identified in PG&E's quarterly Energy Resource Recovery Account transaction filings.

This request was approved with GSP-7. If PG&E and CDWR agree on a NAESB Master Agreement specifying the limitations of trading between the two parties, PG&E will file that Agreement for CPUC approval prior to implementing physical gas trading between PG&E and CDWR.

**f. Gas Operations Plan**

Should the substance of PG&E's operations change in the future, PG&E will include a revised Gas Operations Plan in future GSPs.

**8. Conclusion**

This GSP describes PG&E's plans to manage gas supply and gas price risk for the CDWR tolling agreements allocated to PG&E. PG&E requests the CPUC approve this Gas Plan effective November 1, 2010.

**PG&E Gas and Electric  
Advice Filing List  
General Order 96-B, Section IV**

Alcantar & Kahl	Defense Energy Support Center	North Coast SolarResources
Ameresco	Department of Water Resources	Northern California Power Association
Anderson & Poole	Department of the Army	Occidental Energy Marketing, Inc.
Arizona Public Service Company	Dept of General Services	OnGrid Solar
BART	Division of Business Advisory Services	Praxair
BP Energy Company	Douglass & Liddell	R. W. Beck & Associates
Barkovich & Yap, Inc.	Downey & Brand	RCS, Inc.
Bartle Wells Associates	Duke Energy	Recon Research
Bloomberg New Energy Finance	Dutcher, John	SCD Energy Solutions
Boston Properties	Economic Sciences Corporation	SCE
C & H Sugar Co.	Ellison Schneider & Harris LLP	SMUD
CA Bldg Industry Association	Foster Farms	SPURR
CAISO	G. A. Krause & Assoc.	Santa Fe Jets
CLECA Law Office	GLJ Publications	Seattle City Light
CSC Energy Services	Goodin, MacBride, Squeri, Schlotz & Ritchie	Sempra Utilities
California Cotton Ginners & Growers Assn	Green Power Institute	Sierra Pacific Power Company
California Energy Commission	Hanna & Morton	Silicon Valley Power
California League of Food Processors	Hitachi	Silo Energy LLC
California Public Utilities Commission	International Power Technology	Southern California Edison Company
Calpine	Intestate Gas Services, Inc.	Sunshine Design
Cameron McKenna	Los Angeles Dept of Water & Power	Sutherland, Asbill & Brennan
Cardinal Cogen	Luce, Forward, Hamilton & Scripps LLP	Tabors Caramanis & Associates
Casner, Steve	MAC Lighting Consulting	Tecogen, Inc.
Chris, King	MBMC, Inc.	Tiger Natural Gas, Inc.
City of Glendale	MRW & Associates	Tioga Energy
City of Palo Alto	Manatt Phelps Phillips	TransCanada
Clean Energy Fuels	McKenzie & Associates	Turlock Irrigation District
Coast Economic Consulting	Merced Irrigation District	U S Borax, Inc.
Commerce Energy	Mirant	United Cogen
Commercial Energy	Modesto Irrigation District	Utility Cost Management
Consumer Federation of California	Morgan Stanley	Utility Specialists
Crossborder Energy	Morrison & Foerster	Verizon
Davis Wright Tremaine LLP	NRG West	Wellhead Electric Company
Day Carter Murphy	New United Motor Mfg., Inc.	Western Manufactured Housing Communities Association (WMA)
	Norris & Wong Associates	eMeter Corporation