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Commissioner:  
Admin. Law Judge:



**OFFICE OF RATEPAYER ADVOCATES**  
**California Public Utilities Commission**

**MONITORING AND EVALUATION REPORT**  
November 1, 2015 through October 31, 2016

**Pacific Gas and Electric Company's  
Core Procurement Incentive Mechanism  
Performance Results  
(CPIM Year 23)**

**Application 96-08-043**

**San Francisco, California  
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Exhibits for CPIM Report

# CHAPTER 1

## SUMMARY AND RECOMMENDATIONS

### 1.1 Introduction and Summary

The Office of Ratepayer Advocates (ORA) performed an audit and evaluation of the data and documents submitted by Pacific Gas and Electric Company (PG&E) for its Core Procurement Incentive Mechanism (CPIM) Annual Performance Reports for the period November 1, 2015 through October 31, 2016 (Year 23). The details and results of ORA's review are presented in Chapter 2 of this ORA CPIM Monitoring and Evaluation Report. ORA's evaluation of PG&E's recorded natural gas costs confirms that PG&E's costs were below the benchmark for CPIM Year 23 which resulted in ratepayer savings.

For Year 23, PG&E submitted its CPIM Performance Report on July 14, 2017 which covered the period of November 1, 2015 through October 31, 2016. ORA's examination of PG&E's recorded costs for Year 23 shows that PG&E's costs were below the benchmark's lower tolerance band, which results in a reward of \$3,071,748<sup>1</sup> to PG&E's shareholders and a ratepayer benefit of \$16,556,476.<sup>2</sup>

### 1.2 Background

The objective of the CPIM is to provide PG&E an incentive to reduce natural gas procurement costs. These costs include fixed transportation costs for Canadian and U.S. interstate, intrastate, and reservation costs. Other procurement costs include pipeline volumetric transportation costs and natural gas storage. The incentive mechanism is used as a ratemaking tool and is designed to increase efficiency in administering regulatory controls.

The CPIM structure establishes procedures on performance evaluation and

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<sup>1</sup> ORA Monitoring and Evaluation Report CPIM Year 23, Table 1-1.

<sup>2</sup> Id.

reporting for PG&E's gas procurement costs. It sets forth guidelines for standard operating conditions and for special circumstances. The allowed monthly benchmark dollars are totaled over the annual CPIM period and compared to actual costs for the year to determine PG&E's performance. A tolerance band is constructed around the benchmark and defines a range of costs considered reasonable. If PG&E's actual gas costs, as measured against the CPIM benchmark, are between the upper and lower limit specifications for the tolerance band, there is no shareholder reward or penalty for the CPIM period. If actual costs fall outside the tolerance band, there will be sharing of the gains or losses that occur outside the tolerance band between ratepayers and PG&E shareholders. In Chapter 2 of this report, ORA presents detailed results of the tolerance band calculation.

The CPIM program was originally approved by the Commission in Decision (D.) 97-08-055 as set forth in the PG&E/ORA Post-1997 CPIM Agreement and PG&E's Supplemental Report describing the Post-1997 CPIM. This decision established the framework to recover core gas procurement and transportation costs through rates. Since then, numerous changes and extensions have been made to modify and refined the CPIM program structure and incentives.

In D.07-06-013, the Commission approved a settlement agreement between PG&E, ORA, The Utility Reform Network (TURN), and Aglet Consumer Alliance (Aglet). The settlement modified the CPIM to increase benefits to ratepayers in situations where natural gas purchases are less than the lower range of the tolerance band. The specific CPIM changes that resulted from the settlement agreement included:

- A 20/80 shareholder/ratepayer sharing of savings below the tolerance band, in contrast to the previous 25/75 shareholder/ratepayer sharing;
- The 2.5 Bcf of un-sequenced storage withdrawal adjustment was eliminated and is included proportionately to the storage withdrawal sequence;
- A change in the sequencing steps for San Juan Basin and AECO for natural gas purchases;

- Savings of five-percent (5%) from full tariff rates on pipeline or storage contracts in order to offset CPIM gas costs;
- A change in the index used to calculate the benchmark for daily swing from the NGI daily Topock index to the NGI daily PG&E CityGate index;
- For storage acquired via the Incremental Storage Capacity Request for Offers process, the daily benchmark will be adjusted to accommodate the incremental storage injection and withdrawal requirements to improve savings in gas costs.

In D.10-01-023, the Commission adopted a settlement agreement between PG&E, DRA (now ORA), and TURN which addressed the treatment of hedging costs for PG&E. The key provisions of the adopted settlement call for the following treatment of hedging transactions:

- 80% of net realized gains or losses and associated transaction costs will be included in the CPIM Benchmark;
- 100% of the net hedging realized gains or losses and associated transaction costs will be included in the cost side of the CPIM calculation. Any gains will be subtracted and losses will be added to CPIM costs;
- A modification to the CPIM sharing mechanism such that total shareholders earnings will be capped solely at 1.5 percent of annual gas commodity costs and a removal of the hard dollar cap of \$25 million on shareholder gains effective November 1, 2009.

### **1.3 Procurement and Sales**

PG&E's actual commodity costs (including commodity, transportation, hedging, and storage costs) for Year 23 totaled \$638,125,590 which was associated with a volume of 213,344,613 MMBtus.

PG&E utilizes gas sales to help manage its assets and reduce gas costs. It purchases and sells gas supplies to comply with daily pipeline balancing requirements, to respond to changes in core loads, and to capture price arbitrage opportunities. For

CPIM Year 23, PG&E reported total gas sales of \$213,453,383 in revenue with an associated sales volume of 82,778,599 MMBtus.

#### **1.4 Financial Hedging Activities**

Per D.07-06-013, before CPIM Year 18, all derivative gains, losses and related transaction costs associated with PG&E's winter hedging plan were excluded from CPIM costs. These costs flowed directly to PG&E's retail customers. D.07-06-013 authorized PG&E, under the terms of the settlement, to place financial hedges on a rolling three-year basis via an Annual Plan filing. PG&E was required to file five Annual Plans beginning with the 2007/2008 winter season that authorized a hedging plan for the current winter season and the subsequent two winter seasons. In addition, the settlement created a Core Hedging Advisory Group where ORA, Aglet, TURN and PG&E met quarterly to discuss PG&E's Annual Plan, and related hedging operations. By April 1 of each year, PG&E is required to report financial results of its Annual Plan including total funds spent on hedging instruments, total losses and gains for each category of hedging instrument, amount of monthly natural gas supplies hedged, and the impact of hedging results on customer rates.<sup>3</sup>

Pursuant to D.10-01-023, PG&E remains responsible for managing hedges proactively to ensure stability in customer rates. This includes implementing controls and selecting appropriate hedging instruments to mitigate derivative risks. PG&E is also required to take proactive steps by adjusting its hedging positions in response to changing market conditions.

On January 25, 2010, the Commission approved D.10-01-023 and the associated Settlement Agreement which requires eighty percent (80%) of winter hedging gains and losses and related transaction costs to be included in the CPIM benchmark. The Settlement Agreement also requires, one hundred percent (100%) of winter hedging gains and losses and related transaction costs be included in the CPIM

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<sup>3</sup> Settlement Agreement – Regarding PG&E Long-Term Core Hedge Program (A.06-05-007), the Core Procurement Incentive Mechanism (CPIM), and Transportation Capacity held on Behalf of Core Customers, December 15, 2006.

actual commodity costs. These CPIM changes would be incorporated starting in CPIM Year 18.

For the current CPIM Year 23, the total costs of winter hedges included in the CPIM were \$7,593,063, which was comprised of \$7,584,873 in option premiums, and \$8,190 in fees.

## **1.5 Natural Gas Storage**

Under the CPIM, PG&E has a daily injection and withdrawal schedule. For CPIM Year 23, beginning inventory excluding incremental storage was reported at 27,945,957 MMBtus, and ending inventory was 27,819,945 MMBtus.

Pursuant to D.06-07-010 and D.07-06-013, PG&E is authorized to acquire incremental storage to meet a 1-day-in-10-year peak-planning standard for its core customers. The incremental storage costs are included in the benchmark and inventory schedules are adjusted by the amount of daily injections and withdrawals on a daily basis. This enables PG&E to track costs for the benchmark and adjust the amount of daily actual incremental natural gas injection and withdrawals.

Pursuant to D.06-07-010, and modified by D.08-07-009, PG&E acquired additional incremental storage capacity for future winter season periods for 2011 through 2015. This capacity became effective in Year 18 for the purpose of injection activity.

On August 7, 2009, the Commission approved Advice Letter 3031-G, which authorized PG&E to acquire additional incremental storage capacity to improve its reliability during peak demand periods. These acquisition costs were reported in CPIM Years 18 through 22.

In a Memorandum of Understanding (MOU) between PG&E and ORA on October 19, 2009, the parties agreed to a change of firm storage injection and withdrawal requirements used to calculate the CPIM benchmark. These changes provided an updated storage profile beginning in Year 17 and are adjusted for

allocations to Core Transport Agents (CTAs) as detailed in Tariff G-CT. This MOU remains in effect until both parties agree to make changes.<sup>4</sup>

### **1.6 Core Intrastate Capacity**

Pursuant to D.04-12-050, the Commission allowed PG&E's Core Procurement Department to recover costs for firm reservation of intrastate backbone pipeline capacity. Effective July 1, 2016 to December 31, 2018, PG&E holds Redwood intrastate capacity providing approximately 605 MDth/d and Baja intrastate capacity providing 182 MDth/d with an additional seasonal capacity of 157 MDth/d during November 1 to March 31.<sup>5</sup>

### **1.7 Core Interstate Capacity**

PG&E holds interstate capacity for the core on NOVA Gas Transmission Ltd. (NGTL), Foothills Pipe Lines, Ltd. (Foothills), Gas Transmission Northwest (GTN), El Paso Natural Gas Company (EPNG), Transwestern Pipeline Company (TW), Ruby Pipeline, L.L.C. (Ruby), and Kern River Gas Transmission Company (Kern River).

For Year 23, core interstate capacity was reported at approximately 288 MDth/d for NOVA, 285 MDth/d on the Foothills, 280 MDth/d on GTN, 25 MDth/d on EPNG, 50 MDth/d on TW, and 250 MDth/d on Ruby.<sup>6</sup>

Pursuant to D.04-09-022, the Commission authorized PG&E to seek pre-approval and expedited advice letter treatment for interstate capacity contracts that meet specified criteria. Prior to seeking pre-approval, PG&E is required to consult with ORA, TURN, and the Energy Division (ED) to obtain agreement.

In Year 23, pursuant to Advice Letter 3747-G-A, PG&E extended two contracts on Foothills for 284,810 Dth/d and 81,384 Dth/d, and a contract on NGTL for 287,745 Dth/d and the GTN contract for 279,968 Dth/d through October 31, 2030.

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<sup>4</sup> CPIM - ORA and PG&E Memorandum of Understanding, dated October 19, 2009.

<sup>5</sup> PG&E Annual Performance Report, Year 23, page 16.

<sup>6</sup> Id.



Pursuant to Advice Letter 3693-G, PG&E signed a contract on EPNG for 25,000 Dth/d from April 1, 2016 through March 31, 2018. In addition, Advice Letter 3692-G authorized PG&E to sign a seasonal contract on Transwestern for 50,000 Dth/d from April through October, and 190,000 Dth/d during November to March effective April 1, 2016 through March 31, 2018.

### 1.8 Review of CPIM Performance

Table 1-1 below compares benchmark gas costs to actual costs of natural gas (including commodity, transportation, reservation and storage costs) in total dollars. The variance between ORA's audited total savings and PG&E's reported savings was due to an adjustment of various financial fees as described in Section 2.8.

<p><b>Table 1-1</b>  <b>Pacific Gas &amp; Electric Company</b>  <b>CPIM Year 23</b>  <b>Gas Cost Comparison</b>  <b>November 1, 2015 - October 31, 2016</b></p>
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<b>Actual Gas Cost</b>	\$	638,125,590
<b>Benchmark Gas Cost</b>	\$	657,753,814
<b>ORA's Audited Total Savings</b>	\$	19,628,224
<b>PG&amp;E Reported Savings</b>	\$	19,618,225
<b>Variance</b>	\$	9,999
<b>Rounding</b>	\$	4
<b>Total Variance</b>	\$	10,003 *
<b>Savings and Reward</b>		
<b>Ratepayer Saving</b>	\$	16,556,476
<b>Shareholder Reward</b>	\$	3,071,748
	\$	19,628,224

\* See Section 2.8

### 1.9 Conclusion

Based on the foregoing, ORA recommends a shareholder reward in the amount of \$3,071,748 for CPIM Year 23 to be recovered through PG&E's Purchased Gas Account. ORA will continue monitoring and evaluating the CPIM and collaborate with

PG&E and other parties to identify any modifications needed to enhance CPIM effectiveness.

**CHAPTER 2**  
**MONITORING AND EVALUATION AUDIT**  
**YEAR 23**

**2.1 ORA's CPIM Reward Evaluation**

Pacific Gas and Electric Company (PG&E) filed its Core Procurement Incentive Mechanism (CPIM) Performance Report, Year 23 Application (A.96-08-043), which reports on natural gas procurement results for the period from November 1, 2015 through October 31, 2016. ORA conducted a review and evaluation of PG&E's accompanying performance report. The results from this evaluation include working papers from ORA's compilations, which are incorporated as exhibits in Appendix A. This report filing is in compliance with the Gas Accord Decision, D.97-08-055, dated August 1, 1997, which approved the CPIM method for PG&E's recovery of core gas procurement and transportation costs.<sup>7</sup> On August 22, 2002, the Commission issued D.02-08-070, (Gas Accord II Decision), extending the initial Gas Accord market structure including the CPIM, through 2003. On December 18, 2003, the Commission issued D.03-12-061, extending the CPIM through Year 2005, or until a revised CPIM is adopted by the Commission. Pursuant to D.07-06-013, the Commission adopted a Settlement Agreement that address long-term hedging for PG&E's core customers, as well as related CPIM modifications.

The CPIM summarizes gas costs, tolerance band limits, and performance results that compare actual costs to the benchmark. The CPIM benchmark consists of four components: a) variable costs which include commodity costs, Canadian and U.S. interstate, and California intrastate pipeline fuel and volumetric capacity costs; b) fixed transportation costs which include Canadian, U.S. interstate, and California intrastate reservation costs; c) storage costs for fixed reservation charges and variable costs; and d) Hedging costs which included 80% of net realized gains or losses and

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<sup>7</sup> In D.97-08-055, the Commission approved a CPIM mechanism for core gas costs incurred after December 31, 1997. In this decision, the Commission ordered PG&E to file quarterly and annual reports on core procurement operations starting after completion of one year of Gas Accord operations.

associated transaction costs of winter hedges. The total cost of these four components serve as the benchmark to compare to the actual costs.

The actual commodity costs of gas are measured on an annual basis against the benchmark and the calculated tolerance band. The benchmark commodity cost is based on the prevailing published natural gas price indices for gas delivered from the gas production areas, borders and PG&E's CityGate.

ORA's evaluation of PG&E's CPIM Year 23 performance in Table 2-1 shows benchmark costs of \$657,753,814 and PG&E's actual costs of \$638,125,590. The difference between the benchmark cost and PG&E's actual cost results in a total of \$19,628,224 in natural gas procurement savings. Results show the upper tolerance band benchmark (benchmark plus 2.0% of commodity benchmark plus reservation charges) is \$666,292,784, and the lower tolerance band benchmark (benchmark minus 1.0% of commodity benchmark plus reservation charges) is \$653,484,329.

The actual cost of \$638,125,590 is \$15,358,739 less than the lower tolerance band cost of \$653,484,329. This is below the CPIM benchmark, which reflects PG&E's gas savings performance. The lower limit of the tolerance band is used to calculate the ratepayers saving and shareholder reward. These results provide savings to be shared between PG&E customers and shareholders, as shown in Table 2-1.

ORA's review shows PG&E's CPIM Year 23 savings below the lower tolerance band resulting in a total savings of \$15,358,739. Based on the CPIM, \$12,286,991 of this savings is allocated to ratepayers and \$3,071,748 to PG&E shareholders. The total ratepayer savings is \$16,556,476.

**TABLE 2-1**  
**Pacific Gas & Electric Company**  
**Ratepayer Savings and Shareholder Award Calculation**  
**CPIM 23**  
**November 1, 2015 Through October 31, 2016**

**CPIM Reward Calculation**

Total Benchmark Costs	\$	657,753,814
Total Actual Costs		638,125,590
Under/(Over)		19,628,224
Upper Tolerance Band (Benchmark + 2% of Commodity Cost)		666,292,784
Lower Tolerance Band (Benchmark - 1% of Commodity Cost)		653,484,329
Lower Tolerance Band Less Actual Commodity Cost		15,358,739
Ratepayer Shared Savings (80%)		12,286,991
Shareholder Shared Savings (20%)		3,071,748
	\$	15,358,739
Total Ratepayer Savings	\$	16,556,476

**2.2 Summary of Benchmark and Actual Costs**

Table 2-2 shows the overall annual results of the actual commodity cost compared to the benchmark commodity cost of gas operation in CPIM Year 23.

ORA examined and reconciled all gas commodity costs, hedging costs, and transportation reservation charges that were reported in the CPIM Year 23 period. The natural gas sale and miscellaneous costs and revenues are included in the actual costs as costs or credits depending on the result of natural gas operation. ORA's examination of PG&E's records for miscellaneous costs, winter hedges, reservation and transportation costs, and regulatory balancing accounts is performed to highlight variances in the reporting of gas costs. The following sections in this chapter will provide a detailed review and breakdown of these related costs.

**Table 2-2**  
**Pacific Gas & Electric Company**  
**Summary of Benchmark and Actual Costs**  
**CPIM 23**  
**November 1, 2015 Through October 31, 2016**

	<b>Actual</b>	<b>Benchmark</b>	<b>Difference</b>
Purchased Natural Gas Cost	\$ 584,553,046	\$420,874,057 *	\$ (163,678,989)
Volumetric Transportation Costs	\$ 28,317,647	\$ -	\$ (28,317,647)
Natural Gas Sales	\$ (213,453,383)	\$ -	\$ 213,453,383
Other Costs and Revenues	\$ 3,080,897	\$ -	\$ (3,080,897)
Hedge Cost	\$ 7,593,063	\$ 6,074,450	\$ (1,518,613)
Reservation Charges	\$ 228,034,320	\$230,805,307	\$ 2,770,987
<b>Total Commodity Cost</b>	<b>\$ 638,125,590</b>	<b>\$657,753,814</b>	<b>\$ 19,628,224</b>

\* Included Volumetric Transportation Costs

### 2.3 Review of Benchmark Commodity and Reservation (Demand) Charges

The CPIM benchmark is based on published indices for natural gas commodity costs at PG&E's Citygate. This CPIM benchmark consists of three main components, the total gas purchase cost, 80% of winter hedging cost, and reservation charges. Table 2-3 provides a breakdown for each pipeline cost that represents PG&E's commodity costs for the period. For this period, total benchmark costs including purchased gas costs, winter hedging costs, reservation costs and other costs, totaled \$603,705,814. The benchmark commodity costs are \$420,874,057; the benchmark winter hedge costs are \$6,074,450 and benchmark pipeline reservation charges are \$176,757,307.

**TABLE 2-3**  
**Benchmark Commodity Costs and Reservation Charges**  
**CPIM Year 23**  
**November 1, 2015 Through October 31, 2016**

	<b>Market</b>
<b>Benchmark Purchased Gas Costs - by Pipelines:</b>	<b>Benchmark</b>
Ruby Rockies	\$ 111,441,028
AECO	\$ 178,990,502
San Juan	\$ 90,617,101
Kingsgate	\$ 432,981
Topock	\$ 24,382,169
PG&E Citygate	\$ 15,010,276
<b>Total Benchmark Gas Costs:</b>	<b>\$ 420,874,057</b>
<b>Hedging Cost</b>	
80% of Winter Hedging Cost	\$ 6,074,450
<b>Benchmark Reservation Charges:</b>	
Foothills Pipelines Ltd	\$ 7,626,207
Nova Gas Transmission Ltd	\$ 14,537,589
Gas Transmission Northwest Corp	\$ 33,993,064
El Paso Natural Gas Company	\$ 2,352,772
Ruby Pipeline	\$ 52,340,197
Transwestern Pipeline Company	\$ 10,614,559
California Gas Transmission	\$ 6,005,332
CGT Storage	\$ 49,287,587
<b>Total Benchmark Reservation Charges:</b>	<b>\$ 176,757,307</b>
<b>Total Benchmark Commodity Costs:</b>	<b>\$ 603,705,814</b>

## 2.4 Actual Natural Gas Costs

A review of actual costs for commodity purchases and reservation charges reported by PG&E is summarized in Table 2-4. On a monthly basis, PG&E will sell some of its un-used assets. The net sale is treated as a credit to the procurement costs. In addition to the calculation of actual commodity costs of CPIM Year 23, one hundred percent of winter hedging realized gain or losses and associated transaction costs are included in the actual. Reservation charges include intrastate and interstate charges for California Gas Transmission, El Paso Natural Gas Company, Ruby Pipeline LLC, Kern River Gas Transmission, Transwestern Pipeline Company, Nova

Gas Transmission, Ltd., Gas Transmission Northwest Corporation, and Transwestern Pipeline Company.<sup>8</sup>

PG&E's net total actual commodity costs are \$638,125,590, which include interstate and intrastate purchased gas costs of \$402,498,207, winter hedging costs of \$7,593,063, reservation charges for interstate and California intrastate capacity of \$228,034,320.

**TABLE 2-4**  
**Summary of Actual Commodity Costs & Reservation Charges**  
**CPIM Year 23**  
**November 1, 2015 Through October 31, 2016**

<b>Actual Purchased Gas Costs - by Pipeline:</b>	<b>Actual Costs</b>
CGT - Citygate	\$ 12,435,247
CGT - El Paso	\$ 110,290,844
El Paso	\$ 36,077,146
GTN	\$ 11,978,951
Kern	\$ -
Nova	\$ 174,380,731
Ruby	\$ 160,891,806
TW	\$ 78,498,321
Volumetric Transportation Cost	\$ 28,317,647
Gas Sale	\$ (213,453,383)
Miscellaneous Costs & Revenues	\$ 3,080,897
<b>Total Purchased Gas Costs:</b>	<b>\$ 402,498,207</b>
<b>Hedging Costs</b>	
100% Winter Hedging Cost	\$ 7,593,063
<b>Actual Reservation Charges:</b>	
Foothills Pipelines Ltd	\$ 7,626,207
Nova Gas Transmission Ltd	\$ 14,537,589
Gas Transmission Northwest Corp	\$ 33,993,064
El Paso Natural Gas Company	\$ 2,352,772
Ruby Pipeline	\$ 52,340,197
Transwestern Pipeline Company	\$ 10,614,559
California Gas Transmission	\$ 60,053,332
Storage Costs	\$ 49,287,587
Discount Demand Charges	\$ (417,877)
Capacity Release Revenue	\$ (2,353,110)
<b>Total Reservation Charges:</b>	<b>\$ 228,034,320</b>
<b>Net Actual Commodity Costs:</b>	<b>\$ 638,125,590</b>

<sup>8</sup> PG&E Annual Performance Report, CPIM Year 23, dated July 14, 2017.



## 2.5 Natural Gas Storage Costs

In accordance with D.06-07-010, PG&E uses a monthly distribution of winter storage withdrawals and summer storage injections in the calculation of the monthly benchmark purchase volumes. PG&E reports on its managed storage so that impacts to CPIM metrics can be attained while ensuring adequate capacity is available for reliability. PG&E also uses a schedule to establish daily benchmark allocations of injections and withdrawals and to ensure distributions are allocated evenly throughout the period. When it becomes necessary to balance portfolio supplies with core loads, PG&E will generally make exceptions from its planned schedules in order to meet interstate and intrastate pipeline tolerances, balancing rules, and most importantly, conservation of gas for storage and peak requirements.<sup>9</sup>

For the benchmark, the storage cost component includes volumetric storage charges as well as storage reservation costs at the as-billed rate for a) 33.5 MMdth of annual inventory, b) 115 to 207 Mdth per day of summer injection, and c) 720 to 1,375 Mdth per day of winter withdrawal capacity, which is adjusted for core aggregation elections.<sup>10</sup>

In Table 2-5, a summary of storage inventory shows the status of physical inventories (measured in MMBtus) for beginning and ending balances as of October 31, 2016. PG&E reported beginning storage inventory levels as of November 1, 2015 at 27,945,957 MMBtus and ending inventory as of October 31, 2016 at 27,819,945 MMBtus.

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<sup>9</sup> PG&E Annual Performance Report, CPIM Year 23, dated July 14, 2017.

<sup>10</sup> The actual ratemaking treatment of the core storage reservation provides for a fully bundled cost with no variable charge. However, for CPIM calculation purposes, a variable storage cost has been assumed in order to provide an appropriate economic incentive to use storage services efficiently.

<b>TABLE 2-5</b> <b>Pacific Gas and Electric Company</b> <b>Summary of Storage Inventory Injections and Withdrawals</b> <b>CPIM Year 23</b> <b>November 1, 2015 through October 31, 2016</b>		
<b>Gas Storage Providers</b>	<b>Beginning Inventory 11/01/15 (MMBtus)</b>	<b>Ending Inventory 10/31/16 (MMBtus)</b>
Firm Storage CGT	27,945,957	27,819,945
Incremental Storage	1,000,000	1,000,000
<b>Total Storage Inventory</b>	<b>28,945,957</b>	<b>28,819,945</b>

## 2.6 Review of Purchase Gas Account (PGA)

PG&E submitted its reconciliation of its regulatory balancing account, the Purchase Gas Account (PGA). For the reporting period, PG&E's accounting entries represent amounts expected to be received from, or refunded to PG&E's customers through authorized adjustments within a twelve-month period. The PGA shows the tracking of gas related costs and revenues for recovery. The under-or-over collected position of this account is dependent upon the seasonality and volatility in gas volumes. Table 2-6 below shows net commodity costs, which shows immaterial timing difference with supporting documentation presented in PG&E's Performance Report, for actual natural gas purchases.

As part of the PGA audit, ORA randomly selected samples of purchase invoices. PG&E provided copies of supporting documents and purchase invoices for the purpose of the verification. ORA traced the costs of these purchase invoices to the monthly statement and then to the annual report and determined that the selected purchase invoices reconciled with recorded amounts in the annual report.

**TABLE 2-6**  
**Pacific Gas and Electric Company**  
**Purchase Gas Account Review**  
**CPIM Year 23**

**November 1, 2015 through October 31, 2016**

<b>CPIM Purchase Costs</b>	<b>Commodity Purchases</b>	<b>Volumetric Transportation</b>	<b>Subtract True-up</b>	<b>Add True-up</b>	<b>Total CPIM</b>
CPIM Costs:					
Purchases and Sales:					
EPNG, Kern River, and Transwes	\$ 103,811,471	\$ 1,094,537			\$ 104,906,008
CGT	\$ 26,970,524	\$ 22,202,496			\$ 49,173,020
GTNC and NGTL	\$ 179,725,448	\$ 1,229,676			\$ 180,955,124
Ruby Pipeline	\$ 158,902,499	\$ 3,790,820			\$ 162,693,319
Citygate (Mission Path)	\$ (98,308,321)	\$ -			\$ (98,308,321)
<b>SubTotal</b>	<b>\$ 371,101,621</b>	<b>\$ 28,317,529</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 399,419,150</b>
Misc. Revenues and Expenses	\$ (1,997,504)				\$ (1,997,504)
<b>Total</b>	<b>\$ 369,104,117</b>	<b>\$ 28,317,529</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 397,421,646</b>
SAP Journal Entries:					
SAP Total	\$ 368,929,580	\$ 29,543,446	\$ (51,432,427)	\$ 51,315,793	\$ 398,356,392
Prior Period Adjustment	\$ (167)				\$ (167)
Costs included in CPDCA	\$ (1,134,548)	\$ 1,250			\$ (1,133,298)
Manual Adjustment Error	\$ 100	\$ (28)			\$ 72
Custom Border Patrol Fee(Year	\$ 150,582				\$ 150,582
Timing difference financial tra	\$ 48,072				\$ 48,072
<b>Total PGA</b>	<b>\$ 367,993,619</b>	<b>\$ 29,544,668</b>	<b>\$ (51,432,427)</b>	<b>\$ 51,315,793</b>	<b>\$ 397,421,653</b>
<b>Timing Diffrence</b>	<b>\$ 1,110,498</b>	<b>\$ (1,227,139)</b>	<b>\$ 51,432,427</b>	<b>\$ (51,315,793)</b>	<b>\$ (7)</b>

## 2.7 Review of Core Pipeline Demand Charge Account (CPDCA)

As part of the CPIM Year 23 filing, PG&E submitted its reconciliation for regulatory balancing account Core Pipeline Demand Charge Account (CPDCA). This account is used to record costs associated with backbone transmission, interstate capacity, and Canadian capacity for core procurement. ORA reviewed PG&E's documentation, which shows total charges by pipeline for the period to be \$228,034,861 (see Table 2-7).

ORA's audit showed the CPIM demand costs was \$228,034,870 which included demand charges, discount demand charges, capacity release revenue and release revenue charges. When ORA compared the reported CPIM demand costs to the SAP journal entries, the total difference was \$9.

**TABLE 2-7**  
**Pacific Gas and Electric Company**  
**CPDCA and CFSA Accounts Review**  
**CPIM Year 23**  
**November 1, 2015 through October 31, 2016**

CPIM Demand Costs	Demand Charges	Subtract True-up	Add True-up	Total CPIM
Foothills Pipe Lines Ltd	\$ 7,626,207			\$ 7,626,207
California Gas Transmission	\$ 57,700,222			\$ 57,700,222
El Paso Natural Gas	\$ 2,087,072			\$ 2,087,072
Ruby Pipeline	\$ 52,340,197			\$ 52,340,197
NOVA Gas Transmission	\$ 14,538,130			\$ 14,538,130
Gas Transmission N.W.	\$ 33,993,064			\$ 33,993,064
Transwestern Pipeline Company	\$ 10,462,382			\$ 10,462,382
Third Party Gas Storage	\$ 1,433,338			\$ 1,433,338
Firm Storage Costs	\$ 47,854,249			\$ 47,854,249
<b>Total Demand Charges:</b>	<b>\$ 228,034,861</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 228,034,861</b>
SAP Journal Entries				
SAP Total	\$ 230,155,185	\$(23,089,141)	\$ 20,103,184	\$ 227,169,228
EPNG, TW & Kern Reservation Discount	\$ (417,874)			\$ (417,874)
Exchange Rate Variance	\$ (1,643)			\$ (1,643)
Prior Period Adjustments	\$ (755,966)			\$ (755,966)
Capacity Release Correction	\$ 1,133,299			\$ 1,133,299
Timing Difference	\$ (210,680)			\$ (210,680)
CTA Mid-Year Storage Adj	\$ 1,118,506			\$ 1,118,506
<b>Total CPDCA:</b>	<b>\$ 231,020,827</b>	<b>\$(23,089,141)</b>	<b>\$ 20,103,184</b>	<b>\$ 228,034,870</b>
<b>Timing Difference:</b>	<b>\$ (2,985,966)</b>	<b>\$ 23,089,141</b>	<b>\$(20,103,184)</b>	<b>\$ (9)</b>

## 2.8 Review of Miscellaneous Costs and Revenues

Table 2-8 shows a summary of miscellaneous costs and credits from PG&E's Annual Performance Report for the period. These revenues in this section also offset reported procurement costs and assist management in managing net costs that impact CPIM performance. Results show total annual miscellaneous costs and revenues at \$3,080,897. This amount consists of Cochrane Extraction Revenue of \$2,560,732, Non-Winter Hedge Cost and Revenues of \$5,034,159, Miscellaneous Costs and Revenues of \$617,473, and an adjustment of Financial Fee of \$10,003. The adjustment of Financial Fees caused a variance between PG&E's reported total and ORA's audited total.

**TABLE 2-8**  
**Pacific Gas and Electric Company**  
**Miscellaneous Costs and Revenues**  
**CPIM Year 23**  
**November 1, 2015 through October 31, 2016**

Month	Cochrane Extraction Revenue	Non-Winter Hedge Cost and Revenues	Miscellaneous Costs and Revenues	Audited Adjustment in Financial Fees*	Total
Nov-15	\$ (188,305)	\$ 149,250	\$ 29,301	\$ -	\$ (9,754)
Dec-15	\$ (142,355)	\$ (133,936)	\$ 67,852	\$ -	\$ (208,439)
Jan-16	\$ (81,734)	\$ 207,897	\$ 133,492	\$ -	\$ 259,655
Feb-16	\$ (146,977)	\$ -	\$ 109,166	\$ -	\$ (37,811)
Mar-16	\$ (253,512)	\$ 1,544	\$ 47,011	\$ -	\$ (204,957)
Apr-16	\$ (269,265)	\$ (400,538)	\$ 37,814	\$ -	\$ (631,989)
May-16	\$ (316,096)	\$ (307,714)	\$ 31,035	\$ (1,819)	\$ (594,594)
Jun-16	\$ (252,994)	\$ (230,787)	\$ 31,887	\$ (2,293)	\$ (454,187)
Jul-16	\$ (197,461)	\$ 308,644	\$ 36,800	\$ (1,800)	\$ 146,183
Aug-16	\$ (220,179)	\$ 385,136	\$ 37,981	\$ (1,350)	\$ 201,588
Sep-16	\$ (204,716)	\$ 2,852,035	\$ 27,976	\$ (1,134)	\$ 2,674,161
Oct-16	\$ (287,138)	\$ 2,202,628	\$ 27,158	\$ (1,607)	\$ 1,941,041
<b>Total</b>	<b>\$ (2,560,732)</b>	<b>\$ 5,034,159</b>	<b>\$ 617,473</b>	<b>\$ (10,003)</b>	<b>\$ 3,080,897</b>

\* Reallocation of financial fees.

## 2.9 Examination of Financial Derivatives

Pursuant to D.07-06-013, the Commission authorized PG&E's Annual Core Hedge Implementation Plan for 2008 for long term hedging for purchases of call options and swaps for a three-year period. This decision provided guidelines for the long-term core hedging program as well as reporting requirements.

In D.10-01-023, the Commission approved a policy incorporating winter hedging transactions into the CPIM. The winter hedging transactions executed on or after November 1, 2009 would be included in PG&E's CPIM calculation beginning on or after November 1, 2010. CPIM Year 18 was the first year to include the winter hedging costs and this change was adopted for future CPIM calculations. The financial results for the current CPIM Year 23, winter 2015-2016 are summarized in Table 2-9.

PG&E reported \$7,593,063 in CPIM Year 23 for actual winter hedging costs. The total Option Premiums costs are \$7,584,873 and Commission and Fees are \$8,190.

<p><b>Table 2-9</b>  <b>Pacific Gas and Electric Company</b>  <b>Winter Hedge Costs</b>  <b>CPIM Year 23</b>  <b>November 1, 2015 - October 31, 2016</b></p>
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	Option Premiums		Commissions and Fees		Winter Hedge Cost Total
	A		B		C=A+B
<b>Nov-15</b>	\$ -		\$ -	▶	\$ -
<b>Dec-15</b>	\$ 2,583,858		\$ 2,790	▶	\$ 2,586,648
<b>Jan-16</b>	\$ 2,583,858		\$ 2,790	▶	\$ 2,586,648
<b>Feb-16</b>	\$ 2,417,157		\$ 2,610	▶	\$ 2,419,767
<b>Mar-16</b>	\$ -		\$ -	▶	\$ -
<b>Apr-16</b>	\$ -		\$ -	▶	\$ -
<b>May-16</b>	\$ -		\$ -	▶	\$ -
<b>Jun-16</b>	\$ -		\$ -	▶	\$ -
<b>Jul-16</b>	\$ -		\$ -	▶	\$ -
<b>Aug-16</b>	\$ -		\$ -	▶	\$ -
<b>Sep-16</b>	\$ -		\$ -	▶	\$ -
<b>Oct-16</b>	\$ -		\$ -	▶	\$ -
<b>Total</b>	<u>\$ 7,584,873</u>		<u>\$ 8,190</u>		<u>\$ 7,593,063</u>

## 2.10 Review of Sales and Volume Transactions

Table 2-10 shows PG&E's total sales of \$213,459,383, and total reported volume of 82,778,599 MMBtus. A breakdown by pipeline shows sales for CGT CityGate of \$192,466,397, CGT-All of \$1,570,017, EPNG-Basin of \$2,215,131, GTN-All of \$4,682,657, Kern River of \$16,560, Nova of \$1,974,077, Ruby of \$7,666,417, and Transwestern of \$2,862,127.

The same period shows sales volumes for CGT CityGate of 73,454,536 MMBtus, CGT-All of 659,446, EPNG-Basin of 855,789 MMBtus, GTN-All of 1,943,424 MMBtus, Kern River of 9,000 MMBtus, Nova of 1,415,849 MMBtus, Ruby of 3,355,170 MMBtus, and Transwestern of 1,085,385 MMBtus.

**Table 2-10**  
**Pacific Gas and Electric Company**  
**Gas Sales and Volumes**  
**CPIM Year 23**  
**November 1, 2015 through October 31, 2016**

<b>Sale by Pipeline:</b>	<b>Volume (MMBtus)</b>	<b>Dollars</b>
CGT CityGate	(73,454,536)	(192,466,397)
CGT - All	(659,446)	(1,570,017)
EPNG	(855,789)	(2,215,131)
GTN All	(1,943,424)	(4,682,657)
Kern	(9,000)	(16,560)
Nova	(1,415,849)	(1,974,077)
Ruby	(3,355,170)	(7,666,417)
TW	(1,085,385)	(2,862,127)
<b>Total:</b>	<b>(82,778,599)</b>	<b>\$ (213,453,383)</b>

## 2.11 Review of Volumetric Transport Costs

Table 2-11 provides a summary of PG&E's reported volumetric transportation costs by pipeline. It shows that trends in transport activity are consistent with purchase and sales transactions.

The total volumetric transport costs were \$28,317,647. In addition, costs were broken down by pipeline to identify changes: PG&E CGT \$22,202,504, EPNG-Basin \$543,964, GTN-All \$1,229,245, Ruby Pipeline \$3,700,388, Transwestern-Basin \$550,573, Transcanada \$541 and Williams Field \$90,432. These costs are included in the CPIM and are part of the reconciliation of the PGA balancing account.

**TABLE 2-11**  
**Pacific Gas and Electric Company**  
**Commodity Volumetric Transport Costs**  
**CPIM Year 23**  
**November 1, 2015 through October 31, 2016**

Pipeline		Costs
PG&E CGT	\$	22,202,504
EPNG	\$	543,964
GTN-ALL	\$	1,229,245
Ruby Pipeline	\$	3,700,388
Transwestern	\$	550,573
Transcanada	\$	541
Williams Field	\$	90,432
<b>Total Volumetric Transport Costs:</b>		<b>\$ 28,317,647</b>

## 2.12 Review of Reservation Charges

To identify any variances, ORA completed a reconciliation of the benchmark to the actual reservation charges reported in PG&E's Annual Performance Report for the subject period. Table 2-12 provides a summary of adjustments that were offset against the benchmark. The results show no discrepancies. The reconciliation accounts for actual reservation charges was \$228,034,320 which included demand charges of \$181,517,720, adjustments of discounted demand charges of \$417,877, capacity release revenue of \$2,353,110, and storage cost of \$49,287,587.



**TABLE 2-12**  
**Pacific Gas and Electric Company**  
**Reconciliation of Reservation Charges**  
**CPIM Year 23**  
**November 1, 2015 through October 31, 2016**

<b>Actual Demand Charges by Pipeline System:</b>	<b>Benchmark Demand Charges:</b>	
<u>Canadian</u>		<b>\$ 23,805,307</b>
Foothills Pipelines Ltd.	7,626,207	
Nova Gas Transmission Ltd.	14,537,589	
Canadian Subtotal	\$ 22,163,796	
<u>Interstate</u>		
Gas Transmission Northwest Corporation	33,993,064	
El Paso Natural Gas Company	2,352,772	
Kern River Gas Transmission	-	
Ruby Pipeline	52,340,197	
Transwestern Pipeline Company	10,614,559	
Interstate Subtotal	\$ 99,300,592	
<u>Intrastate</u>		
California Gas Transmission	60,053,332	
Intrastate Subtotal	\$ 60,053,332	
<b>Total Actual Demand Charges:</b>	<b>\$ 181,517,720</b>	<b>\$ 230,805,307</b>
 <b>Discount Demand Charges:</b>		
El Paso Natural Gas Company	(265,700)	
Transwestern Pipeline Company	(152,177)	
Kern River Gas Transmission	0	
<b>Demand Charge Discount Subtotal:</b>	<b>\$ (417,877)</b>	<b>\$ -</b>
 <b>Capacity Release Revenue:</b>		
Canadian Pipeline	0	
Interstate Pipeline	0	
Intrastate	(2,353,110)	
<b>Total Capacity Release Revenue:</b>	<b>\$ (2,353,110)</b>	<b>\$ -</b>
 <b>Storage Cost:</b>		
California Gas Transmission Firm Storage	49,287,587	
Incremental Storage Costs	-	
<b>Storage Cost Subtotal:</b>	<b>\$ 49,287,587</b>	<b>\$ 49,287,587</b>
<b>Reconciliation of Reservation Charges:</b>	<b>\$ 228,034,320</b>	<b>\$ 280,092,894</b>

### 2.13 Review of Benchmark Commodity Indices

The benchmark gas price indices are published by various natural gas publications. Each index is then adjusted with fuel costs from supplying regions to

PG&E's Citygate and the adjusted gas indices are used to calculate the monthly commodity costs benchmark.

The Canadian benchmark commodity indices are established using the exchange rates in effect when the indices are issued prior to the availability of closing currency exchange rates. However, the final indices, which determine the actual gas supply prices, reflect closing exchange rates.

For the reporting period, PG&E's gas operations applied a pipeline sequencing methodology for purposes of purchasing gas at the lowest cost. PG&E however has the discretion to change the sequence to select a pipeline at any time in order to meet reliability requirements.

#### **2.14 Examination of Benchmark Storage Charges and Transportation Costs**

PG&E reported its benchmark reservation (demand) and fixed storage charges. Based on this report, ORA reviewed the costs and identified changes in activity from the prior year's report. The total transportation and storage costs are \$230,805,307, which consisted of the Canadian pipeline demand charges of \$22,163,796, U.S. interstate pipeline reservation costs of \$99,300,592, California intrastate pipeline costs of \$60,053,332, and storage costs of \$49,287,587. Table 2-14 provides a summary of these costs.

**TABLE 2-14**  
**Pacific Gas and Electric Company**  
**Summary of Fixed Transport and Storage Costs**  
**CPIM Year 23**  
**November 1, 2015 through October 31, 2016**

<b>Benchmark Demand Charges</b>	
<u>Canadian</u>	
Foothills Pipelines Ltd.	7,626,207
Nova Gas Transmission Ltd.	14,537,589
Canadian Subtotal	<u>\$ 22,163,796</u>
<u>Interstate</u>	
Gas Transmission Northwest Corporation	33,993,064
El Paso Natural Gas Company	2,352,772
Kern River Gas Transmission	-
Ruby Pipeline	52,340,197
Transwestern Pipeline Company	10,614,559
Interstate Subtotal	<u>99,300,592</u>
<u>Intrastate</u>	
California Gas Transmission	60,053,332
Intrastate Subtotal	<u>\$ 60,053,332</u>
Total Demand Charges	<u>\$ 181,517,720</u>
 <b>CA Intrastate Storage Costs:</b>	
California Gas Transmission Firm Storage	49,287,587
Incremental Storage Costs	-
Total Storage Costs	<u>\$ 49,287,587</u>
<b>Total Transportation &amp; Storage Costs:</b>	<u>\$ 230,805,307</u>

## 2.15 Utilization of Firm Interstate and Intrastate Pipeline Assets

PG&E has short and long term contracts to meet core gas demand for purchases of natural gas resources transported from Canadian, U.S. interstate and California intrastate pipeline systems. During CPIM Year 23, PG&E transported natural gas resources using firm transportation contracts. PG&E estimates utilization proportionally based on capacity available to transport supplies and/or releases to other parties. The summary in Table 2-15 below shows PG&E's estimated utilization for the period and noted changes in contract activity from prior years.

Pursuant to D.04-09-022, PG&E is authorized to recover the costs associated with its Canadian and U.S. interstate capacity, allocate firm intrastate capacity and recover associated costs. Pursuant to D.07-07-002, PG&E can also allocate firm

intrastate capacity and recover associated costs. In CPIM Year 19, PG&E added the Ruby pipeline to PG&E's core supply portfolio effective November 1, 2011. The Ruby pipeline provides contracted quantities of 250,000 Dth/d.<sup>11</sup>

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<sup>11</sup> PG&E Annual Performance Report, CPIM Year 21, dated May 21, 2015.

**Table 2-15**  
**Pacific Gas and Electric Company**  
**Core Gas Supply - Utilization of Interstate, Intrastate and Canadian Pipeline Assets**  
**CPIM Year 23**  
**November 1, 2015 through October 31, 2016**

<b>Pipeline Capacity:</b>	<b>Quantity (Dth/d)</b>	<b>Contract Expiration Date</b>	<b>Utilization Rate</b>
<b>TransCanada Pipelines:</b>			
NGTL	287,745	10/31/20	
	82,223	10/31/20	
<b>Total NOVA:</b>	369,968		99%
<b>Foothills-BC System</b>			
	284,810	10/31/20	
	81,384	10/31/20	
<b>Total Foothills-BC System:</b>	366,194		99%
<b>Interstate Pipelines:</b>			
Gas Transmission Northwest	279,968	10/31/20	
	80,000	10/31/20	
<b>Total Gas Transmission Northwest:</b>	359,968		99%
El Paso Natural Gas	25,000	03/31/18	
<b>Total El Paso Natural Gas:</b>	25,000		96%
Transwestern Pipeline Co.	50,000	3/31/2018	
	190,000	3/31/2018	
<b>Total TW:</b>	Varies		98%
Ruby			
<b>Total Ruby:</b>	250,000	10/31/26	94%
<b>PG&amp;E Core Gas Supply- Intrastate Pipelines:</b>			
	Nov. 2015-Jun. 2016	Jul. 2016-Oct. 2016	
Redwood Path	608,766	605,088	99%
<b>Total Redwood:</b>	608,766	605,088	
Baja Path	348,000	18,200	
Seasonal (Nov.-Mar.)	321,000	339,000	
<b>Total Baja:</b>	Varies	Varies	97%

## **Exhibits**

2-1  
Pacific Gas and Electric Company  
CPIM Year 23  
November 1, 2015 - October 31, 2016  
CPIM Calculation

	Interstate and Intrastate Gas Purchase		Pipeline Reservation Charge		CPIM Performance					
	Actual Commodity	Benchmark Commodity	Actual Reservation Charge	Benchmark Reservation Charges	Total Actual Costs	Total Benchmark Costs	Benchmark Less Actuals	Upper Limit (2%)	Lower Limit (1%)	(Over)/Under Tolerance Band
Nov-15	\$ 51,283,182	\$ 55,132,854	\$ 18,908,311	\$ 18,923,989	\$ 70,191,493	\$ 74,056,843	\$ 3,865,350	\$ 75,159,500	\$ 73,505,514	\$ 3,314,021
Dec-15	\$ 72,377,878	\$ 65,106,599	\$ 21,236,583	\$ 21,301,611	\$ 93,614,461	\$ 86,408,210	\$ (7,206,251)	\$ 87,710,342	\$ 85,757,144	\$ (7,857,317)
Jan-16	\$ 62,730,880	\$ 50,291,165	\$ 20,891,339	\$ 20,956,367	\$ 83,622,219	\$ 71,247,532	\$ (12,374,687)	\$ 72,253,355	\$ 70,744,620	\$ (12,877,599)
Feb-16	\$ 44,249,411	\$ 37,961,155	\$ 20,663,234	\$ 20,727,217	\$ 64,912,645	\$ 58,688,372	\$ (6,224,273)	\$ 59,447,595	\$ 58,308,760	\$ (6,603,885)
Mar-16	\$ 28,097,851	\$ 27,718,972	\$ 19,002,280	\$ 19,067,409	\$ 47,100,131	\$ 46,786,381	\$ (313,750)	\$ 47,340,760	\$ 46,509,191	\$ (590,940)
Apr-16	\$ 23,378,396	\$ 25,685,781	\$ 16,806,201	\$ 17,490,331	\$ 40,184,597	\$ 43,176,112	\$ 2,991,515	\$ 43,689,828	\$ 42,919,254	\$ 2,734,657
May-16	\$ 15,560,875	\$ 22,552,718	\$ 16,819,832	\$ 17,526,397	\$ 32,380,707	\$ 40,079,115	\$ 7,698,408	\$ 40,530,169	\$ 39,853,588	\$ 7,472,881
Jun-16	\$ 16,073,508	\$ 19,780,874	\$ 16,912,519	\$ 17,596,649	\$ 32,986,027	\$ 37,377,523	\$ 4,391,496	\$ 37,773,140	\$ 37,179,714	\$ 4,193,687
Jul-16	\$ 24,171,325	\$ 27,088,444	\$ 16,233,561	\$ 16,598,206	\$ 40,404,886	\$ 43,686,650	\$ 3,281,764	\$ 44,228,419	\$ 43,415,766	\$ 3,010,880
Aug-16	\$ 24,615,530	\$ 29,792,140	\$ 20,295,194	\$ 20,314,189	\$ 44,910,724	\$ 50,106,329	\$ 5,195,605	\$ 50,702,172	\$ 49,808,408	\$ 4,897,684
Sep-16	\$ 17,665,499	\$ 28,223,120	\$ 20,098,061	\$ 20,116,742	\$ 37,763,560	\$ 48,339,862	\$ 10,576,302	\$ 48,904,324	\$ 48,057,631	\$ 10,294,071
Oct-16	\$ 29,886,935	\$ 37,614,685	\$ 20,167,205	\$ 20,186,200	\$ 50,054,140	\$ 57,800,885	\$ 7,746,745	\$ 58,553,179	\$ 57,424,738	\$ 7,370,598
<b>Total</b>	<b>\$ 410,091,270</b>	<b>\$ 426,948,507</b>	<b>\$ 228,034,320</b>	<b>\$ 230,805,307</b>	<b>\$ 638,125,590</b>	<b>\$ 657,753,814</b>	<b>\$ 19,628,224</b>	<b>\$ 666,292,784</b>	<b>\$ 653,484,329</b>	<b>\$ 15,358,739</b>

2-2

Pacific Gas and Electric Company  
 CPIM Year 23  
 November 1, 2015 - October 31, 2016  
 CPIM Performance

	Actual	Benchmark	Under/Over
Commodity Costs	\$ 584,553,046	\$ 420,874,057	\$ (163,678,989)
Volumetric Transportation Costs	\$ 28,317,647	\$ -	\$ (28,317,647)
Commodity Sales	\$ (213,453,383)	\$ -	\$ 213,453,383
Total Gas Purchase Costs	\$ 399,417,310	\$ 420,874,057	\$ 21,456,747
Other Costs and Revenues	\$ 3,080,897	\$ -	\$ (3,080,897)
Winter Hedging Costs	\$ 7,593,063	\$ 6,074,450	\$ (1,518,613)
Total Commodity Costs	\$ 410,091,270	\$ 426,948,507	\$ 16,857,237
Demand Charges	\$ 181,517,720	\$ 181,517,720	\$ -
Discount Demand Charges	\$ (417,877)	\$ -	\$ 417,877
Capacity Release Revenues	\$ (2,353,110)	\$ -	\$ 2,353,110
Firm Storage Costs	\$ 49,287,587	\$ 49,287,587	\$ -
Total Reservation Costs	\$ 228,034,320	\$ 230,805,307	\$ 2,770,987
Total	\$ 638,125,590	\$ 657,753,814	\$ 19,628,224



Pacific Gas and Electric Company  
CPIM Year 23  
November 1, 2015 - October 31, 2016  
Monthly Actual Cost

	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Total
Commodity Costs	\$ 57,009,551	\$ 73,988,911	\$ 72,302,089	\$ 60,987,108	\$ 37,952,753	\$ 28,248,333	\$ 30,265,718	\$ 33,521,794	\$ 44,460,103	\$ 46,653,350	\$ 48,212,886	\$ 50,950,450	\$ 584,553,046
Volumetric Transportation Costs	\$ 2,439,936	\$ 3,392,550	\$ 3,584,796	\$ 3,331,200	\$ 2,722,528	\$ 2,008,662	\$ 880,584	\$ 1,908,412	\$ 1,756,695	\$ 2,064,630	\$ 2,043,584	\$ 2,184,070	\$ 28,317,647
Commodity Sales	\$ (8,156,551)	\$ (7,381,792)	\$ (16,002,308)	\$ (22,450,853)	\$ (12,372,473)	\$ (6,246,610)	\$ (14,990,833)	\$ (18,902,511)	\$ (22,191,656)	\$ (24,304,038)	\$ (35,265,132)	\$ (25,188,626)	\$ (213,453,383)
Total Gas Purchase Costs	\$ 51,292,936	\$ 69,999,669	\$ 59,884,577	\$ 41,867,455	\$ 28,302,808	\$ 24,010,385	\$ 16,155,469	\$ 16,527,695	\$ 24,025,142	\$ 24,413,942	\$ 14,991,338	\$ 27,945,894	\$ 399,417,310
Other Costs and Revenues	\$ (9,754)	\$ (208,439)	\$ 259,655	\$ (37,811)	\$ (204,957)	\$ (631,989)	\$ (594,594)	\$ (454,187)	\$ 146,183	\$ 201,588	\$ 2,674,161	\$ 1,941,041	\$ 3,080,897
100% Winter Hedging Costs*	\$ -	\$ 2,586,648	\$ 2,586,648	\$ 2,419,767	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 7,593,063
Total Commodity Costs	\$ 51,283,182	\$ 72,377,878	\$ 62,730,880	\$ 44,249,411	\$ 28,097,851	\$ 23,378,396	\$ 15,560,875	\$ 16,073,508	\$ 24,171,325	\$ 24,615,530	\$ 17,665,499	\$ 29,886,935	\$ 410,091,270
Demand Charges	\$ 15,157,546	\$ 17,535,168	\$ 17,189,924	\$ 16,960,774	\$ 15,450,966	\$ 13,862,241	\$ 13,898,307	\$ 13,801,892	\$ 12,803,449	\$ 15,008,904	\$ 14,889,547	\$ 14,959,002	\$ 181,517,720
Discount Demand Charges	\$ (15,678)	\$ (65,028)	\$ (65,028)	\$ (63,983)	\$ (65,129)	\$ (22,330)	\$ (22,705)	\$ (22,330)	\$ (18,995)	\$ (18,995)	\$ (18,681)	\$ (18,995)	\$ (417,877)
Capacity Release Revenues	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (661,800)	\$ (683,860)	\$ (661,800)	\$ (345,650)	\$ -	\$ -	\$ -	\$ (2,353,110)
Firm Storage Costs	\$ 3,766,443	\$ 3,766,443	\$ 3,766,443	\$ 3,766,443	\$ 3,616,443	\$ 3,628,090	\$ 3,628,090	\$ 3,794,757	\$ 3,794,757	\$ 5,305,285	\$ 5,227,195	\$ 5,227,198	\$ 49,287,587
Total Reservation Costs	\$ 18,908,311	\$ 21,236,583	\$ 20,891,339	\$ 20,663,234	\$ 19,002,280	\$ 16,806,201	\$ 16,819,832	\$ 16,912,519	\$ 16,233,561	\$ 20,295,194	\$ 20,098,061	\$ 20,167,205	\$ 228,034,320
Actual Costs	\$ 70,191,493	\$ 93,614,461	\$ 83,622,219	\$ 64,912,645	\$ 47,100,131	\$ 40,184,597	\$ 32,380,707	\$ 32,986,027	\$ 40,404,886	\$ 44,910,724	\$ 37,763,560	\$ 50,054,140	\$ 638,125,590

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Pacific Gas and Electric Company  
CPIM Year 23  
November 1, 2015 - October 31, 2016

	Monthly Benchmark Cost												
	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Total
Commodity Cost	\$ 55,132,854	\$ 63,037,281	\$ 48,221,847	\$ 36,025,341	\$ 27,718,972	\$ 25,685,781	\$ 22,552,718	\$ 19,780,874	\$ 27,088,444	\$ 29,792,140	\$ 28,223,120	\$ 37,614,685	\$ 420,874,057
Volumetric Transportation Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Commodity Sales	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Gas Purchase Cost	\$ 55,132,854	\$ 63,037,281	\$ 48,221,847	\$ 36,025,341	\$ 27,718,972	\$ 25,685,781	\$ 22,552,718	\$ 19,780,874	\$ 27,088,444	\$ 29,792,140	\$ 28,223,120	\$ 37,614,685	\$ 420,874,057
Other Costs and Revenues	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
100% Winter Hedging Cost	\$ -	\$ 2,069,318	\$ 2,069,318	\$ 1,935,814	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 6,074,450
Total Commodity Cost	\$ 55,132,854	\$ 65,106,599	\$ 50,291,165	\$ 37,961,155	\$ 27,718,972	\$ 25,685,781	\$ 22,552,718	\$ 19,780,874	\$ 27,088,444	\$ 29,792,140	\$ 28,223,120	\$ 37,614,685	\$ 426,948,507
Demand Charge	\$ 15,157,546	\$ 17,535,168	\$ 17,189,924	\$ 16,960,774	\$ 15,450,966	\$ 13,862,241	\$ 13,898,307	\$ 13,801,892	\$ 12,803,449	\$ 15,008,904	\$ 14,889,547	\$ 14,959,002	\$ 181,517,720
Discount Demand Charges	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Capacity Release Revenue	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Firm Storage Cost	\$ 3,766,443	\$ 3,766,443	\$ 3,766,443	\$ 3,766,443	\$ 3,616,443	\$ 3,628,090	\$ 3,628,090	\$ 3,794,757	\$ 3,794,757	\$ 5,305,285	\$ 5,227,195	\$ 5,227,198	\$ 49,287,587
Total Reservation Cost	\$ 18,923,989	\$ 21,301,611	\$ 20,956,367	\$ 20,727,217	\$ 19,067,409	\$ 17,490,331	\$ 17,526,397	\$ 17,596,649	\$ 16,598,206	\$ 20,314,189	\$ 20,116,742	\$ 20,186,200	\$ 230,805,307
Benchmark CPIM Commodity Cost	\$ 74,056,843	\$ 86,408,210	\$ 71,247,532	\$ 58,688,372	\$ 46,786,381	\$ 43,176,112	\$ 40,079,115	\$ 37,377,523	\$ 43,686,650	\$ 50,106,329	\$ 48,339,862	\$ 57,800,885	\$ 657,753,814

Pacific Gas and Electric Company  
 CPIM Year 23  
 November 1, 2015 - October 31, 2016  
 Actual Commodity Purchases Summary

	CGT-											
	PGE Citygate	CGT	El Paso	GTN	Kern	Nova	Ruby	TW	Total			
Nov-15	\$ 6,446,900	\$ 8,921,429	\$ -	\$ 425,739	\$ -	\$ 18,113,696	\$ 13,160,796	\$ 9,940,991	\$ 57,009,551			
Dec-15	\$ 2,409,045	\$ 19,269,600	\$ 7,032,698	\$ 353,857	\$ -	\$ 17,603,812	\$ 16,140,228	\$ 11,179,671	\$ 73,988,911			
Jan-16	\$ -	\$ 22,706,860	\$ 6,481,942	\$ 387,092	\$ -	\$ 16,007,790	\$ 16,191,099	\$ 10,527,306	\$ 72,302,089			
Feb-16	\$ 351,492	\$ 16,268,716	\$ 6,037,105	\$ 393,489	\$ -	\$ 15,727,834	\$ 12,454,051	\$ 9,754,421	\$ 60,987,108			
Mar-16	\$ 682,646	\$ 1,847,531	\$ 4,783,960	\$ 390,164	\$ -	\$ 12,362,490	\$ 10,094,099	\$ 7,791,863	\$ 37,952,753			
Apr-16	\$ 612,814	\$ 4,122,923	\$ 1,148,126	\$ 574,457	\$ -	\$ 9,659,093	\$ 9,774,992	\$ 2,355,928	\$ 28,248,333			
May-16	\$ 347,166	\$ 4,284,031	\$ 1,361,396	\$ 1,931,889	\$ -	\$ 8,166,073	\$ 11,352,849	\$ 2,822,314	\$ 30,265,718			
Jun-16	\$ 30,250	\$ 4,874,379	\$ 1,782,438	\$ 2,536,805	\$ -	\$ 9,840,390	\$ 10,824,298	\$ 3,633,234	\$ 33,521,794			
Jul-16	\$ 1,024,078	\$ 3,249,862	\$ 1,749,916	\$ 2,597,677	\$ -	\$ 14,339,404	\$ 18,168,672	\$ 3,330,494	\$ 44,460,103			
Aug-16	\$ 92,700	\$ 7,928,938	\$ 1,619,899	\$ 946,616	\$ -	\$ 17,210,379	\$ 15,399,727	\$ 3,455,091	\$ 46,653,350			
Sep-16	\$ 35,300	\$ 8,221,203	\$ 2,475,082	\$ 555,051	\$ -	\$ 16,590,668	\$ 14,934,363	\$ 5,401,219	\$ 48,212,886			
Oct-16	\$ 402,856	\$ 8,595,372	\$ 1,604,584	\$ 886,115	\$ -	\$ 18,759,102	\$ 12,396,632	\$ 8,305,789	\$ 50,950,450			
Total	\$ 12,435,247	\$ 110,290,844	\$ 36,077,146	\$ 11,978,951	\$ -	\$ 174,380,731	\$ 160,891,806	\$ 78,498,321	\$ 584,553,046			

## Pacific Gas and Electric Company

CPIM Year 23

November 1, 2015 - October 31, 2016

## Volumetric Transportation Costs

	El Paso Natural Gas Company, LLC	Gas Transmission Northwest LLC	Kern River Gas Transmission Company	PG&E California Gas Transmission	Ruby Pipeline, LLC	Transcanada- Foothills	Transcanada NOVA Gas Transmission Ltd	Gas	Transwestern Pipeline Company	Williams Field Services Complanly, LLC	Total
Nov-15	\$ -	\$ 102,297	\$ -	\$ 1,934,248	\$ 324,284	\$ -	\$ -	\$ -	\$ 79,107	\$ -	\$ 2,439,936
Dec-15	\$ 98,796	\$ 105,743	\$ -	\$ 2,773,590	\$ 337,004	\$ -	\$ -	\$ -	\$ 77,417	\$ -	\$ 3,392,550
Jan-16	\$ 102,264	\$ 105,027	\$ -	\$ 2,873,478	\$ 422,342	\$ -	\$ -	\$ -	\$ 81,685	\$ -	\$ 3,584,796
Feb-16	\$ 96,150	\$ 98,620	\$ -	\$ 2,661,141	\$ 390,414	\$ -	\$ 541	\$ -	\$ 76,376	\$ 7,958	\$ 3,331,200
Mar-16	\$ 102,910	\$ 105,537	\$ -	\$ 2,001,224	\$ 420,475	\$ -	\$ -	\$ -	\$ 81,871	\$ 10,511	\$ 2,722,528
Apr-16	\$ 24,070	\$ 101,851	\$ -	\$ 1,541,143	\$ 306,868	\$ -	\$ -	\$ -	\$ 23,780	\$ 10,950	\$ 2,008,662
May-16	\$ 23,027	\$ 101,742	\$ -	\$ 434,334	\$ 290,526	\$ -	\$ -	\$ -	\$ 24,158	\$ 6,797	\$ 880,584
Jun-16	\$ 23,100	\$ 100,357	\$ -	\$ 1,465,429	\$ 285,024	\$ -	\$ -	\$ -	\$ 24,452	\$ 10,050	\$ 1,908,412
Jul-16	\$ 18,513	\$ 103,509	\$ -	\$ 1,402,442	\$ 199,354	\$ -	\$ -	\$ -	\$ 19,956	\$ 12,921	\$ 1,756,695
Aug-16	\$ 18,556	\$ 102,491	\$ -	\$ 1,702,388	\$ 208,914	\$ -	\$ -	\$ -	\$ 21,267	\$ 11,014	\$ 2,064,630
Sep-16	\$ 17,388	\$ 100,095	\$ -	\$ 1,680,829	\$ 217,950	\$ -	\$ -	\$ -	\$ 19,726	\$ 7,596	\$ 2,043,584
Oct-16	\$ 19,190	\$ 101,976	\$ -	\$ 1,732,258	\$ 297,233	\$ -	\$ -	\$ -	\$ 20,778	\$ 12,635	\$ 2,184,070
Total	\$ 543,964	\$ 1,229,245	\$ -	\$ 22,202,504	\$ 3,700,388	\$ -	\$ 541	\$ -	\$ 550,573	\$ 90,432	\$ 28,317,647

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Pacific Gas and Electric Company  
CPIM Year 23  
November 1, 2015 - October 31, 2016  
Commodity Sales Revenue

	CGT-																	
	PG&E	Citygate	CGT -All	El Paso	GTN	Kern	Nova	Ruby	TW	Total								
Nov-15	\$	(8,066,671)	\$	(9,500)	\$	-	\$	-	\$	(80,380)	\$	-	\$	(8,156,551)				
Dec-15	\$	(4,544,754)	\$	(135,375)	\$	(453,546)	\$	(174,750)	\$	-	\$	(1,397,325)	\$	(676,042)	\$	(7,381,792)		
Jan-16	\$	(14,821,702)	\$	(18,011)	\$	-	\$	(9,344)	\$	-	\$	(72,111)	\$	(1,081,140)	\$	(16,002,308)		
Feb-16	\$	(22,308,523)	\$	(45,569)	\$	-	\$	-	\$	-	\$	(91,641)	\$	(5,120)	\$	(22,450,853)		
Mar-16	\$	(12,285,283)	\$	(3,672)	\$	-	\$	(19,902)	\$	-	\$	(1,016)	\$	(62,600)	\$	(12,372,473)		
Apr-16	\$	(5,621,606)	\$	(233,534)	\$	(25,470)	\$	-	\$	(47,828)	\$	(237,308)	\$	(80,864)	\$	(6,246,610)		
May-16	\$	(13,323,579)	\$	(67,238)	\$	(140,302)	\$	(70,031)	\$	(16,560)	\$	(442,916)	\$	(787,436)	\$	(14,990,833)		
Jun-16	\$	(16,080,176)	\$	(866,214)	\$	(106,083)	\$	(1,223,388)	\$	-	\$	(320,944)	\$	(276,282)	\$	(18,902,511)		
Jul-16	\$	(16,532,806)	\$	(38,665)	\$	(232,809)	\$	(1,524,958)	\$	-	\$	(636,924)	\$	(3,127,859)	\$	(22,191,656)		
Aug-16	\$	(22,879,663)	\$	-	\$	(143,328)	\$	(630,495)	\$	-	\$	(258,663)	\$	(391,889)	\$	(24,304,038)		
Sep-16	\$	(32,352,823)	\$	(90,847)	\$	(1,085,143)	\$	(615,973)	\$	-	\$	(63,635)	\$	(132,557)	\$	(35,265,132)		
Oct-16	\$	(23,648,811)	\$	(61,392)	\$	(28,450)	\$	(413,816)	\$	-	\$	(130,040)	\$	-	\$	(25,188,626)		
Total	\$	(192,466,397)	\$	(1,570,017)	\$	(2,215,131)	\$	(4,682,657)	\$	(16,560)	\$	(1,974,077)	\$	(7,666,417)	\$	(2,862,127)	\$	(213,453,383)

\$ (213,453,383)

\$ -

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Pacific Gas and Electric Company  
CPIM Year 23  
November 1, 2015 - October 31, 2016  
Demand Charges Summary

	El Paso Natural Gas Company LLC	Gas Transmission Northwest LLC	PG&E California Transmission	Ruby Pipeline, LLC	Transcanada-Foothills Pipelines Ltd	Transcanada Nova Gas Transmission Ltd	Transwestern Pipeline Company	Total
Nov-15	\$ -	\$ 3,054,675	\$ 4,271,994	\$ 4,375,972	\$ 639,327	\$ 1,199,488	\$ 1,616,090	\$ 15,157,546
Dec-15	\$ 394,997	\$ 3,156,498	\$ 6,168,415	\$ 4,376,465	\$ 614,995	\$ 1,153,838	\$ 1,669,960	\$ 17,535,168
Jan-16	\$ 394,997	\$ 2,835,205	\$ 6,168,415	\$ 4,376,453	\$ 599,168	\$ 1,145,726	\$ 1,669,960	\$ 17,189,924
Feb-16	\$ 394,997	\$ 2,652,289	\$ 6,168,415	\$ 4,375,761	\$ 620,526	\$ 1,186,565	\$ 1,562,221	\$ 16,960,774
Mar-16	\$ 395,610	\$ 2,839,504	\$ 4,278,513	\$ 4,383,178	\$ 646,126	\$ 1,235,510	\$ 1,672,525	\$ 15,450,966
Apr-16	\$ 121,668	\$ 2,747,908	\$ 4,278,513	\$ 4,382,759	\$ 671,797	\$ 1,284,596	\$ 375,000	\$ 13,862,241
May-16	\$ 121,668	\$ 2,839,504	\$ 4,278,514	\$ 4,382,833	\$ 648,411	\$ 1,239,877	\$ 387,500	\$ 13,898,307
Jun-16	\$ 121,668	\$ 2,747,908	\$ 4,278,513	\$ 4,382,752	\$ 651,076	\$ 1,244,975	\$ 375,000	\$ 13,801,892
Jul-16	\$ 101,787	\$ 2,802,494	\$ 3,399,651	\$ 4,326,201	\$ 634,958	\$ 1,214,168	\$ 324,190	\$ 12,803,449
Aug-16	\$ 101,787	\$ 2,802,494	\$ 5,587,463	\$ 4,326,090	\$ 641,054	\$ 1,225,826	\$ 324,190	\$ 15,008,904
Sep-16	\$ 101,806	\$ 2,712,091	\$ 5,587,463	\$ 4,325,643	\$ 634,850	\$ 1,213,961	\$ 313,733	\$ 14,889,547
Oct-16	\$ 101,787	\$ 2,802,494	\$ 5,587,463	\$ 4,326,090	\$ 623,919	\$ 1,193,059	\$ 324,190	\$ 14,959,002
Total	\$ 2,352,772	\$ 33,993,064	\$ 60,053,332	\$ 52,340,197	\$ 7,626,207	\$ 14,537,589	\$ 10,614,559	\$ 181,517,720

Demand charge are net of CTA stranded cost, CTA capacity release,

Pacific Gas and Electric Company  
CPIM Year 23  
November 1, 2015 - October 31, 2016  
Other Commodity Costs and Revenues

	Cochrane Extraction Revenue	Non-Winter Hedge Costs and Revenues	Miscellaneous Costs and Revenues	Financial Fee Allocate to Future Years	Total
Nov-15	\$ (188,305)	\$ 149,250	\$ 29,301	\$ -	\$ (9,754)
Dec-15	\$ (142,355)	\$ (133,936)	\$ 67,852	\$ -	\$ (208,439)
Jan-16	\$ (81,734)	\$ 207,897	\$ 133,492	\$ -	\$ 259,655
Feb-16	\$ (146,977)	\$ -	\$ 109,166	\$ -	\$ (37,811)
Mar-16	\$ (253,512)	\$ 1,544	\$ 47,011	\$ -	\$ (204,957)
Apr-16	\$ (269,265)	\$ (400,538)	\$ 37,814	\$ -	\$ (631,989)
May-16	\$ (316,096)	\$ (307,714)	\$ 31,035	\$ 1,819	\$ (594,594)
Jun-16	\$ (252,994)	\$ (230,787)	\$ 31,887	\$ 2,293	\$ (454,187)
Jul-16	\$ (197,461)	\$ 308,644	\$ 36,800	\$ 1,800	\$ 146,183
Aug-16	\$ (220,179)	\$ 385,136	\$ 37,981	\$ 1,350	\$ 201,588
Sep-16	\$ (204,716)	\$ 2,852,035	\$ 27,976	\$ 1,134	\$ 2,674,161
Oct-16	\$ (287,138)	\$ 2,202,628	\$ 27,158	\$ 1,607	\$ 1,941,041
Total	\$ (2,560,732)	\$ 5,034,159	\$ 617,473	\$ 10,003	\$ 3,080,897

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Pacific Gas and Electric Company  
CPIM Year 23  
November 1, 2015 - October 31, 2016

Winter Hedge Transaction

	Reported Option Premiums	Reported Commision and Fees	Adjustment	Audited Winter Hedge Costs Total
Nov-15	\$ -	\$ -	\$ -	\$ -
Dec-15	\$ 2,583,858	\$ 2,790	\$ -	\$ 2,586,648
Jan-16	\$ 2,583,858	\$ 2,790	\$ -	\$ 2,586,648
Feb-16	\$ 2,417,157	\$ 2,610	\$ -	\$ 2,419,767
Mar-16	\$ -	\$ -	\$ -	\$ -
Apr-16	\$ -	\$ -	\$ -	\$ -
May-16	\$ -	\$ -	\$ -	\$ -
Jun-16	\$ -	\$ -	\$ -	\$ -
Jul-16	\$ -	\$ -	\$ -	\$ -
Aug-16	\$ -	\$ -	\$ -	\$ -
Sep-16	\$ -	\$ -	\$ -	\$ -
Oct-16	\$ -	\$ -	\$ -	\$ -
Total	\$ 7,584,873	\$ 8,190	\$ -	\$ 7,593,063



Pacific Gas and Electric Company  
 CPIM Year 23  
 November 1, 2015 - October 31, 2016  
 Demand Charge Discounts Summary

	El Paso Natural Gas Company LLC	Kern River Gas Transmission Company	Transwestern Pipeline Company	Total
Nov-15	\$ -	\$ -	\$ (15,678)	\$ (15,678)
Dec-15	\$ (48,827)	\$ -	\$ (16,201)	\$ (65,028)
Jan-16	\$ (48,827)	\$ -	\$ (16,201)	\$ (65,028)
Feb-16	\$ (48,827)	\$ -	\$ (15,156)	\$ (63,983)
Mar-16	\$ (48,903)	\$ -	\$ (16,226)	\$ (65,129)
Apr-16	\$ (11,080)	\$ -	\$ (11,250)	\$ (22,330)
May-16	\$ (11,080)	\$ -	\$ (11,625)	\$ (22,705)
Jun-16	\$ (11,080)	\$ -	\$ (11,250)	\$ (22,330)
Jul-16	\$ (9,269)	\$ -	\$ (9,726)	\$ (18,995)
Aug-16	\$ (9,269)	\$ -	\$ (9,726)	\$ (18,995)
Sep-16	\$ (9,269)	\$ -	\$ (9,412)	\$ (18,681)
Oct-16	\$ (9,269)	\$ -	\$ (9,726)	\$ (18,995)
Total	\$ (265,700)	\$ -	\$ (152,177)	\$ (417,877)

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Pacific Gas and Electric Company  
CPIM Year 23  
November 1, 2015 - October 31, 2016  
Capacity Release Revenue

	El Paso Natural Gas Company LLC	Gas Transmission Northwest LLC	Kern River Gas Transmission Company	PG&E California Gas Transmission	Ruby Pipeline LLC	Transcanada - Foothills Pipelines Ltd	Transcanada Nova Gas Transmission Ltd	Transwestern Pipeline Company	Total
Nov-15	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Dec-15	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Jan-16	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Feb-16	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Mar-16	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Apr-16	\$ -	\$ -	\$ -	\$ (661,800)	\$ -	\$ -	\$ -	\$ -	\$ (661,800)
May-16	\$ -	\$ -	\$ -	\$ (683,860)	\$ -	\$ -	\$ -	\$ -	\$ (683,860)
Jun-16	\$ -	\$ -	\$ -	\$ (661,800)	\$ -	\$ -	\$ -	\$ -	\$ (661,800)
Jul-16	\$ -	\$ -	\$ -	\$ (345,650)	\$ -	\$ -	\$ -	\$ -	\$ (345,650)
Aug-16	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Sep-16	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Oct-16	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Total</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ (2,353,110)</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ (2,353,110)</b>

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Pacific Gas and Electric Company  
CPIM Year 23  
November 1, 2015 - October 31, 2016  
Capacity Release Revenue Volume

	El Paso Natural Gas Company LLC	Gas Transmission Northwest LLC	Kern River Gas Transmission Company	PG&E California Gas Transmission	Ruby Pipeline LLC	Transcanada - Foothills Pipelines Ltd	Transcanada Nova Gas Transmission Ltd	Transwestern Pipeline Company	Total
Nov-15	-	-	-	-	-	-	-	-	-
Dec-15	-	-	-	-	-	-	-	-	-
Jan-16	-	-	-	-	-	-	-	-	-
Feb-16	-	-	-	-	-	-	-	-	-
Mar-16	-	-	-	-	-	-	-	-	-
Apr-16	-	-	-	(4,200,000)	-	-	-	-	(4,200,000)
May-16	-	-	-	(4,340,000)	-	-	-	-	(4,340,000)
Jun-16	-	-	-	(4,200,000)	-	-	-	-	(4,200,000)
Jul-16	-	-	-	(1,550,000)	-	-	-	-	(1,550,000)
Aug-16	-	-	-	-	-	-	-	-	-
Sep-16	-	-	-	-	-	-	-	-	-
Oct-16	-	-	-	-	-	-	-	-	-
Total	-	-	-	(14,290,000)	-	-	-	-	(14,290,000)

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Pacific Gas and Electric Company  
CPIM Year 23  
November 1, 2015 - October 31, 2016  
Firm Incremental Storage

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PG&E California					
Transmission-					
	CTA#10001	Gas Storage-003	Gas Storage-002	Total	
Nov-15	\$ 3,616,443	\$ 75,000	\$ 75,000	\$	3,766,443
Dec-15	\$ 3,616,443	\$ 75,000	\$ 75,000	\$	3,766,443
Jan-16	\$ 3,616,443	\$ 75,000	\$ 75,000	\$	3,766,443
Feb-16	\$ 3,616,443	\$ 75,000	\$ 75,000	\$	3,766,443
Mar-16	\$ 3,616,443	\$ -	\$ -	\$	3,616,443
Apr-16	\$ 3,628,090	\$ -	\$ -	\$	3,628,090
May-16	\$ 3,628,090	\$ -	\$ -	\$	3,628,090
Jun-16	\$ 3,628,090	\$ 166,667	\$ -	\$	3,794,757
Jul-16	\$ 3,628,090	\$ 166,667	\$ -	\$	3,794,757
Aug-16	\$ 5,138,618	\$ 166,667	\$ -	\$	5,305,285
Sep-16	\$ 5,060,528	\$ 166,667	\$ -	\$	5,227,195
Oct-16	\$ 5,060,528	\$ 166,670	\$ -	\$	5,227,198
Total	\$ 47,854,249	\$ 1,133,338	\$ 300,000	\$	49,287,587

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Pacific Gas and Electric Company  
CPIM Year 23  
November 1, 2015 - October 31, 2016  
Benchmark Commodity Cost

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	Ruby Opal	NOVA Aeco	TW San Juan	GTN Kingsgate	Topock-Baja	Citygate	Total
Nov-15	\$ 12,947,688	\$ 18,574,058	\$ 8,827,537	\$ 3,275	\$ 4,952,390	\$ 9,827,906	\$ 55,132,854
Dec-15	\$ 13,376,158	\$ 18,379,728	\$ 17,452,755	\$ 3,198	\$ 9,733,864	\$ 4,091,578	\$ 63,037,281
Jan-16	\$ 13,184,913	\$ 16,691,562	\$ 13,411,753	\$ 50,036	\$ 4,175,118	\$ 708,465	\$ 48,221,847
Feb-16	\$ 7,306,728	\$ 15,722,236	\$ 9,808,539	\$ 37,506	\$ 2,856,810	\$ 293,522	\$ 36,025,341
Mar-16	\$ 7,509,742	\$ 12,963,913	\$ 6,989,512	\$ 21,511	\$ 145,489	\$ 88,805	\$ 27,718,972
Apr-16	\$ 9,344,068	\$ 10,421,871	\$ 3,798,380	\$ -	\$ 2,121,462	\$ -	\$ 25,685,781
May-16	\$ 9,032,304	\$ 8,948,591	\$ 4,463,246	\$ 22,731	\$ 85,846	\$ -	\$ 22,552,718
Jun-16	\$ 5,207,550	\$ 10,258,756	\$ 4,314,568	\$ -	\$ -	\$ -	\$ 19,780,874
Jul-16	\$ 7,720,486	\$ 13,984,686	\$ 5,383,272	\$ -	\$ -	\$ -	\$ 27,088,444
Aug-16	\$ 6,800,329	\$ 17,636,340	\$ 5,301,815	\$ 53,656	\$ -	\$ -	\$ 29,792,140
Sep-16	\$ 6,763,623	\$ 16,099,342	\$ 5,259,114	\$ 101,041	\$ -	\$ -	\$ 28,223,120
Oct-16	\$ 12,247,439	\$ 19,309,419	\$ 5,606,610	\$ 140,027	\$ 311,190	\$ -	\$ 37,614,685
Total	\$ 111,441,028	\$ 178,990,502	\$ 90,617,101	\$ 432,981	\$ 24,382,169	\$ 15,010,276	\$ 420,874,057

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Pacific Gas and Electric Company  
CPIM Year 23  
November 1, 2015 - October 31, 2016  
Benchmark Winter Hedge Costs

	Option	Commision	Adjustment for	
	Premiums	and Fees	Reallocation	Total
Nov-15	\$ -	\$ -	\$ -	\$ -
Dec-15	\$ 2,067,086	\$ 2,232	\$ -	\$ 2,069,318
Jan-16	\$ 2,067,086	\$ 2,232	\$ -	\$ 2,069,318
Feb-16	\$ 1,933,726	\$ 2,088	\$ -	\$ 1,935,814
Mar-16	\$ -	\$ -	\$ -	\$ -
Apr-16	\$ -	\$ -	\$ -	\$ -
May-16	\$ -	\$ -	\$ -	\$ -
Jun-16	\$ -	\$ -	\$ -	\$ -
Jul-16	\$ -	\$ -	\$ -	\$ -
Aug-16	\$ -	\$ -	\$ -	\$ -
Sep-16	\$ -	\$ -	\$ -	\$ -
Oct-16	\$ -	\$ -	\$ -	\$ -
Total	\$ 6,067,898	\$ 6,552	\$ -	\$ 6,074,450

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Pacific Gas and Electric Company

CPIM Year 23

November 1, 2015 - October 31, 2016

Actual Commodity Purchases Volume Summary in MMBtu

	CGT-								
	PGE Citygate	CGT	El Paso	GTN	Kern	Nova	Ruby	TW	Total
Nov-15	2,419,780	4,123,721	-	195,564	-	9,357,797	6,347,520	-	22,444,382
Dec-15	909,026	8,949,179	3,197,828	161,199	-	9,644,512	7,176,500	-	30,038,244
Jan-16	-	9,644,816	3,154,058	167,378	-	9,711,333	7,024,104	-	29,701,689
Feb-16	175,100	8,759,963	2,965,487	217,902	-	9,085,774	6,106,861	-	27,311,087
Mar-16	350,600	1,156,604	3,173,961	247,700	-	9,696,168	6,569,117	-	21,194,150
Apr-16	311,198	2,328,945	758,142	330,347	-	9,396,658	6,349,635	-	19,474,925
May-16	158,300	2,381,954	793,408	1,103,799	-	9,650,673	6,338,106	-	20,426,240
Jun-16	10,000	1,986,909	758,042	1,275,814	-	9,388,412	5,871,819	-	19,290,996
Jul-16	336,200	1,204,483	664,326	1,052,824	-	9,641,668	7,059,817	-	19,959,318
Aug-16	30,000	2,909,352	625,414	339,530	-	9,666,785	6,049,792	-	19,620,873
Sep-16	10,000	2,943,088	939,080	200,670	-	9,314,198	5,639,047	802,483	19,848,566
Oct-16	132,400	3,082,777	603,659	317,000	-	9,622,712	4,546,100	1,763,900	20,068,548
Total	4,842,604	49,471,791	17,633,405	5,609,727	-	114,176,690	75,078,418	2,566,383	269,379,018

## Pacific Gas and Electric Company

CPIM Year 23

November 1, 2015 - October 31, 2016

## Actual Commodity Sale Volume in MMBtu Summary

	CGT- PGE Citygate	CGT- All	El Paso	GTN	Kern	Nova	Ruby	TW	WFS	Total
Nov-15	(3,050,714)	(5,000)	-	-	-	-	(38,500)	-	-	(3,094,214)
Dec-15	(1,785,430)	(47,500)	(151,989)	(60,000)	-	-	(620,000)	(238,696)	-	(2,903,615)
Jan-16	(6,020,700)	(7,831)	-	(3,993)	-	(44,832)	(466,000)	-	-	(6,543,356)
Feb-16	(10,696,898)	(26,189)	-	-	-	-	(50,000)	(3,200)	-	(10,776,287)
Mar-16	(6,482,346)	(2,400)	-	(12,400)	-	(948)	(40,000)	-	-	(6,538,094)
Apr-16	(2,912,600)	(139,456)	(15,771)	-	-	(54,499)	(138,000)	(51,099)	-	(3,311,425)
May-16	(6,700,862)	(36,836)	(83,193)	(37,986)	(9,000)	(422,632)	(447,469)	(78,600)	-	(7,816,578)
Jun-16	(6,273,821)	(329,673)	(45,600)	(627,948)	-	(269,180)	(112,100)	(12,700)	-	(7,671,022)
Jul-16	(5,451,161)	(14,100)	(93,337)	(586,290)	-	(365,194)	(1,235,936)	(38,790)	-	(7,784,808)
Aug-16	(7,306,859)	-	(53,098)	(238,907)	-	(171,365)	(155,765)	-	-	(7,925,994)
Sep-16	(9,768,812)	(31,361)	(402,801)	(225,900)	-	(30,330)	(51,400)	(23,388)	(317,000)	(10,850,992)
Oct-16	(7,004,333)	(19,100)	(10,000)	(150,000)	-	(56,869)	-	(165,912)	(156,000)	(7,562,214)
Total	(73,454,536)	(659,446)	(855,789)	(1,943,424)	(9,000)	(1,415,849)	(3,355,170)	(612,385)	(473,000)	(82,778,599)



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Pacific Gas and Electric Company

CPIM Year 23

November 1, 2015 - October 31, 2016

Benchmark Load

	Ruby Opal	NOVA Aeco	TW San Juan	GTN Kingsgate	KR Opal	Topock-Baja	Citygate	Total
Nov-15	5,907,596	8,893,740	4,042,812	1,410	-	2,163,922	3,703,750	24,713,230
Dec-15	5,634,705	9,328,117	7,340,644	1,457	-	4,390,126	1,520,901	28,215,950
Jan-16	5,386,490	9,273,827	5,681,521	24,738	-	1,584,866	250,341	22,201,783
Feb-16	3,344,627	8,321,661	4,345,938	17,690	-	1,242,835	121,995	17,394,746
Mar-16	4,501,104	9,202,986	4,103,047	13,051	-	93,927	50,852	17,964,967
Apr-16	5,651,973	9,043,710	2,202,308	-	-	1,121,276	-	18,019,267
May-16	4,713,167	9,287,678	2,254,093	18,879	-	49,341	-	16,323,158
Jun-16	2,703,087	8,799,446	2,175,210	-	-	-	-	13,677,743
Jul-16	2,900,980	8,587,396	1,921,783	-	-	-	-	13,410,159
Aug-16	2,556,019	8,998,163	1,921,783	24,386	-	-	-	13,500,351
Sep-16	2,440,110	8,197,789	1,859,790	45,840	-	-	-	12,543,529
Oct-16	4,273,535	9,008,915	1,921,783	58,838	-	116,659	-	15,379,730
Total	50,013,393	106,943,428	39,770,712	206,289	-	10,762,952	5,647,839	213,344,613