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DIVISION OF RATEPAYER ADVOCATES
CALIFORNIA PUBLIC UTILITIES COMMISSION

Report on the Results of Operations for Pacific Gas and Electric Company General Rate Case Test Year 2011

Cost Escalation

San Francisco, California
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COST ESCALATION

I. INTRODUCTION

This exhibit presents the analyses and recommendations of the Division of Ratepayer Advocates (DRA) regarding Pacific Gas and Electric Company's (PG&E) forecasts of labor and non-labor and capital related cost escalation for 2009, 2010, and Test Year (TY) 2011. Escalation is the rate of inflation for the costs of the utility's purchase of labor, materials, and capital related items.

DRA's recommendations are summarized in Section II. Sections III, IV, and V discuss DRA's and PG&E's historic and forecast estimates of labor, non-labor, and capital escalation rates, respectively. Section VI presents DRA's conclusions.

II. SUMMARY OF RECOMMENDATIONS

The following summarizes DRA's recommendations for 2009-2011:

- For labor escalation, DRA recommends 3.05 % for 2009, 3.11 % for 2010, and 3.30 % for 2011. On a compound basis this equals 9.76 percent for test year 2011. PG&E recommends labor escalation rates of 3.75 percent for 2009, 2010, and 2011, respectively. This represents a compound increase of 11.68 percent for test year 2011.
- For non-labor fossil generation, DRA recommends escalation rates of 0.18 percent for 2009, 1.27 percent for 2010, and 2.27 percent for 2011. This represents a compound increase of 3.76 percent for test year 2011. PG&E forecasts non-labor fossil generation non-labor escalation rates of 2.54 percent, 1.03 % and 1.43 percent for 2009, 2010, and 2011, respectively. Compounding the increases over the forecast period yields a compound escalation rate of 5.07 percent for 2011.
- For non-labor hydro escalation, DRA forecasts escalation rates of -0.86 percent, 1.54 % and 2.74 percent for 2009, 2010, and 2011, respectively. PG&E projects non-labor escalation rates of 2.49 percent in 2009, 0.67 percent in 2010, and 1.08 % in test year 2011. On a compound basis DRA projects a non-labor escalation rate of 3.43 percent for 2011 while PG&E projects a rate of 4.29 percent.
- In the case of nuclear non-labor escalation, DRA forecasts a decline in escalation of 2.33 percent in 2009, followed by increases in non-labor escalation of 1.32 percent and 2.42 percent in 2010 and 2011, respectively. Compounding the rates yields a compound escalation rate of

1.36 percent in 2011. PG&E projects increases in labor escalation of 2.47 percent in 2009, 0.89 percent in 2010, and 1.13 % in 2011. Compounding the rates yields a nuclear non-labor escalation rate of 4.55 percent for test year 2011.

- DRA projects a decline in electric distribution non-labor of -0.80 percent in 2009, followed by increases of 1.31 percent and 2.34 percent for 2010 and test year 2011, respectively. This yields a compound non-labor escalation rate of 2.84 percent in 2011. PG&E projects non-labor escalation rates 2.31 percent in 2009, -0.12 percent in 2010, and 0.61 percent in 2011. This is a compound increase of 4.18 percent for test year 2011.
- DRA forecasts non-labor transmission escalation rates of 0.07 percent, 1.20 percent, and 2.88 percent for 2009, 2010, and 2011, respectively. This is a compound increase of 3.68 percent for the forecast period. PG&E projects non-labor escalation rates of 2.98 percent in 2009, 1.31 percent in 2010, and 0.97 percent for the test year, for a compound increase of 5.35 percent for test year 2011.
- For electric administrative and general non-labor escalation rates, DRA and PG&E project the same rates. Specifically, 3.89 percent for 2009, 3.18 percent for 2010, and 2.92 percent for test year 2011. This is a compound increase of 10.32 percent for the test year.
- For gas distribution non-labor escalation, DRA forecasts a decrease of 0.32 percent for 2009, followed by increases of 1.34 percent and 2.33 percent for 2010 and 2011, respectively. On a compound basis this is an increase of 3.38 percent. PG&E projects increases in non-labor escalation of 1.83 percent in 2009, 1.00 percent in 2010, and 1.42 percent in test year 2011. These changes represent a compound increase of 5.38 percent for test year 2011.
- For gas transmission non-labor, DRA projects a decline of 2.85 percent in 2009, followed by increases of 1.53 percent and 2.64 percent in test year 2011, respectively. Compounding over the forecast period yields a test year escalation rate of 1.24 percent. PG&E, on the other hand, forecasts annual increases of 2.54 percent, 0.79 percent, and 1.26 percent for 2009, 2010, and 2011, respectively. This is a compound increase of 4.65 percent for test year 2011.
- For gas storage non-labor, DRA forecasts a decline of 1.80 percent for 2009, and annual percent increases of 1.44 percent and 2.71 percent for 2010 and 2011. On a compound basis, this is an increase of 2.31 percent for the test year. PG&E projects annual increases of 2.69 percent for 2009, 1.25 percent for 2010, and 1.66 percent for test year 2011, for a compound increase of 5.70 percent.
- As in the case of electric non-labor administrative and general non-labor escalation, DRA and PG&E are projecting the same annual escalation rates of 3.53 percent in 2009, 2.93 percent for 2010, and 2.67 percent in

test year 2011. This is a compound increase of 9.42 percent over the forecast period.

- DRA and PG&E are also projecting the same annual increases in total administrative and general non-labor escalation. Specifically, DRA and PG&E forecast annual increases of 3.79 percent in 2009, 3.12 percent in 2010 and 2.86 percent for test year 2011. Compounding the annual growth rates yields a compound escalation rate of 10.08 percent for 2011.

DRA and PG&E also developed capital related escalation rates for Steam Production, Nuclear Production, Hydro Production, Electric Transmission, Electric Distribution, Gas Transmission Plant and Gas Distribution Plant. The results are reported in Tables 4-3 and 4-4.

- For electric distribution, DRA forecasts capital related escalation rates of 1.34 percent in 2009, 0.16 percent in 2010, and 1.55 % in test year 2011. On a compound basis this equals 3.07 percent for test year 2011. PG&E projects capital escalation rates of 3.61 percent, 1.91 percent and 1.83 percent for 2009, 2010, and 2011, respectively. Compounding PG&E's annual escalation rates yields a compound escalation rate of 7.52 percent for test year 2011.
- For electric transmission, DRA projects a decrease in escalation for 2009 of 3.66 percent, followed by a decrease of 1.23 percent in 2010, and an increase of 2.16 percent for 2011. Compounding the annual escalation rates yields an escalation rate of -2.79 percent for test year 2011. PG&E forecasts annual escalation rates of 4.27 percent, 1.54 percent, and 0.62 percent, for 2009, 2010, and 2011, respectively. This is a compound increase of 6.53 percent.
- DRA forecasts lower nuclear generation capital escalation than does PG&E. DRA forecasts escalation rates of 0.02 percent for 2009, 1.41 percent for 2010, and 2.01 percent for 2011. This yields a compound escalation rate of 3.47 percent for test year 2011. PG&E projects escalation rates of 3.08 percent, 1.86 percent, and 1.40 percent, respectively, for 2009, 2010, and 2011. Compounding the annual changes yields a compound escalation rate of 7.34 percent for test year 2011.
- For hydro capital escalation, DRA projects a decline in escalation of 0.57 percent in 2009, followed by increases of 0.91 percent, and 2.30 percent in 2010 and 2011, respectively. On a compound basis this is an increase of 0.51 percent for test year 2011. PG&E forecasts annual increases of 3.41 percent, 1.94 percent, and 1.82 percent, respectively, for 2009, 2010, and 2011. Compounding the rates over the forecast period yields a compound escalation rate of 7.34 percent for test year 2011.

- For fossil steam generation, DRA projects annual increases of 1.44 percent, 0.37 percent, and 1.59 percent for 2009, 2010, and test year 2011, respectively. This is a compound increase of 0.51 percent. PG&E projects annual increases of 3.71 percent for 2009, 2.02 percent for 2010, and 1.44 percent for 2011. Compounding the annual increases yields a compound escalation for 2011 of 7.34 percent.
- DRA forecasts gas distribution capital escalation rates of 2.25 percent for 2009, 2.46 percent for 2010, and 2.10 percent for 2011. This is a compound increase of 6.87 percent for test year 2011. PG&E projects escalation rates of 3.17 percent, 2.19 percent, and 2.25 percent for 2009, 2010, and 2011, respectively. Compounding the rates yields a compound 2011 escalation rate of 7.80 percent.
- DRA projects a decline in gas transmission escalation rates of 1.58 percent for 2009, followed by increases of 0.08 percent in 2010, and 2.39 percent for test year 2011. This results in a compound escalation rate of 0.86 percent for test year 2011. PG&E forecasts annual increases for 2009, 2010, and 2011 of 3.08 percent, 1.76 percent, and 0.68 percent for gas distribution capital escalation. Compounding the annual increases yields a compound 2011 escalation rate of 5.62 percent.
- For common plant, DRA and PG&E recommend the same capital related escalation rates. Specifically, DRA and PG&E forecast annual increases of 0.81 percent, 0.35 percent, and 2.23 percent, for 2009, 2010, and test year 2011, respectively. Compounding the rates for the forecast period yields a compound test year escalation rate of 3.42 percent.

Table 4-1 compares DRA's and PG&E's forecasts of labor and non-labor escalation rates for 2009 through 2011:

Table 4-1
Comparison of DRA's and PG&E's Forecasts of
2009-2011 Labor and Non-Labor Annual Escalation Rates

Description	DRA Recommended			PG&E Proposed[1]		
	2009	2010	2011	2009	2010	2011
Labor	3.05%	3.11%	3.30%	3.75%	3.75%	3.75%
Non-Labor						
Fossil Generation	0.18 %	1.27 %	2.27 %	2.54 %	1.03 %	1.43 %
Hydro Generation	-0.86 %	1.54 %	2.74 %	2.49 %	0.67 %	1.08 %
Nuclear Generation	-2.33 %	1.32 %	2.42 %	2.47 %	0.89 %	1.13 %
Electric Distribution	-0.80 %	1.31 %	2.34 %	2.31 %	-0.12 %	0.61 %
Electric Transmission	0.07 %	1.20 %	2.88 %	2.98 %	1.31 %	0.97 %
Electric Admin & General	3.89 %	3.18 %	2.92 %	3.89 %	3.18 %	2.92 %
Gas Distribution	-0.32 %	1.34 %	2.33 %	2.83 %	1.00 %	1.42 %
Gas Transmission	-2.85 %	1.53 %	2.64 %	2.54 %	0.79 %	1.26 %
Gas Storage	-1.80 %	1.44 %	2.71 %	2.69 %	1.25 %	1.66 %
Gas Admin & General	3.53 %	2.93 %	2.67 %	3.53 %	2.93 %	2.67 %
Total Admin & General	3.79 %	3.12 %	2.86 %	3.79 %	3.12 %	2.86 %

[1] Exhibit PG&E-8, Chapter 3, Pages 3-3, 3-6.

Table 4-2 compares DRA's and PG&E's forecasts of labor and non-labor compounded escalation factors for 2009 through 2011:

Table 4-2
Comparison of DRA's and PG&E's Forecasts of
2009-2011 Labor and Non-Labor Compounded Escalation Factors
(2008 = 1.0000)

Description	DRA Recommended			PG&E Proposed		
	2009	2010	2011	2009	2010	2011
Labor	1.0305	1.0625	1.0976	1.0375	1.0764	1.1168
Non-Labor						
Fossil Generation	1.0018	1.0146	1.0376	1.0254	1.0359	1.0507
Hydro Generation	0.9914	1.0067	1.0343	1.0249	1.0317	1.0429
Nuclear Generation	0.9767	0.9897	1.0136	1.0247	1.0338	1.0455
Electric Distribution	0.9920	1.0049	1.0284	1.0231	1.0218	1.0418
Electric Transmission	1.0070	1.0127	1.0368	1.0298	1.0433	1.0535
Electric Admin & General	1.0389	1.0719	1.1032	1.0389	1.0719	1.1032
Gas Distribution	0.9968	1.0102	1.0338	1.0283	1.0385	1.0538
Gas Transmission	0.9715	0.9864	1.0124	1.0254	1.0335	1.0465
Gas Storage	0.9820	0.9961	1.0231	1.0269	1.0397	1.0570
Gas Admin and General	1.0353	1.0657	1.0942	1.0353	1.0657	1.0942
Total Admin and General	1.0379	1.0703	1.1008	1.0379	1.0703	1.1008

Table 4-3
Comparison of DRA's and PG&E's 2009-2011
Forecasts of Annual Capital Related Escalation

Description	DRA Recommended			PG&E Proposed		
	2009	2010	2011	2009	2010	2011
Electric Distribution	1.34 %	0.16 %	1.55 %	3.61 %	1.91 %	1.83 %
Electric Transmission	-3.66 %	-1.23 %	2.16 %	4.27 %	1.54 %	0.62 %
Nuclear Generation	0.02 %	1.41 %	2.01 %	3.08 %	1.86 %	1.40 %
Hydro Generation	-0.57 %	0.91 %	2.30 %	3.41 %	1.94 %	1.82 %
Fossil Generation	1.44 %	0.37 %	1.59 %	3.71 %	2.02 %	1.44 %
Gas Distribution	2.25 %	2.46 %	2.01 %	3.17 %	2.19 %	2.25 %
Gas Transmission	-1.58 %	0.08 %	2.39 %	3.08 %	1.76 %	0.68 %
Common Plant	0.81 %	0.35 %	2.23 %	0.81 %	0.35 %	2.23 %

Table 4-4
Comparison of DRA's and PG&E's Forecasts of
2009-2011 Compound Capital Escalation Factors
(2008 = 1.0000)

Description	DRA Recommended			PG&E Proposed		
	2009	2010	2011	2009	2010	2011
Electric Distribution	1.0134	1.0150	1.0307	1.0361	1.0559	1.0752
Electric Transmission	0.9634	0.9516	0.9721	1.0427	1.0587	1.0653
Nuclear Generation	1.0002	1.0143	1.0347	1.0308	1.0500	1.0647
Hydro Generation	0.9943	1.0033	1.0264	1.0341	1.0542	1.0734
Fossil Generation	0.9856	0.9893	1.0051	1.0371	1.0581	1.0734
Gas Distribution	1.0225	1.0476	1.0687	1.0317	1.0543	1.0780
Gas Transmission	0.9842	0.9850	1.0086	1.0308	1.0490	1.0562
Common Plant	1.0081	1.0116	1.0342	1.0081	1.0116	1.0342

III. DISCUSSION / ANALYSIS OF LABOR ESCALATION

A. PG&E Methodology

PG&E's historic and forecast labor escalation rates are based on weighted average wage and salary increases for PG&E's major employment categories: "(1) Bargaining Unit Clerical/Physical; (2) Manager/Supervisor ; and (3) Professional/Technical."[2] PG&E further explains that: "The bargaining unit clerical/physical group is comprised of International Brotherhood of Electric Workers (IBEW)-represented employees, Engineers and Scientists of California (ESC)-represented employees and clerical employees that are covered by a collective bargaining agreement. The manager/supervisor group is comprised of all supervisory employees (e.g. those classified as supervisors, managers, superintendents, or directors). The professional/technical group is comprised of non-supervisory professional and technical employees."[3]

For the forecast period, PG&E employees covered by the various collective bargaining agreements are scheduled to receive wage increases of 3.75 percent per year through the test year. PG&E also applies these wage increases to the attrition years 2012 and 2013. For the employees not subject to collective bargaining agreements, wage increases for 2009 "were targeted at 3.75 percent. For the 2010 – 2013 period, we have assumed their salary increases will be in line with the wage increases of union represented employees."[4]

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[2] Pacific Gas and Electric Company, 2011 General Rate Case, Prepared Testimony, General Report, (PG&E-8), Chapter 3, December 21, 2009, p. 3-2.

[3] Pacific Gas and Electric Company, 2011 General Rate Case, Prepared Testimony, General Report, (PG&E-8), Chapter 3, December 21, 2009, p. 3-2.

[4] Pacific Gas and Electric Company, 2011 General Rate Case, Prepared Testimony, General Report, (PG&E-8), Chapter 3, December 21, 2009, p. 3-4.

An aggregate labor wage increase is derived by weighting each group's wage increase by the percent of employees in each category. As PG&E explains: "These weights are 66.31 percent, 11.35 percent, and 22.34 percent, respectively, for union-represented employees, managers and administrators, and professional and technical workers."[5] Since each group receives a 3.75 percent wage increase into the forecast period the aggregate wage increase or labor escalation rate is also 3.75 percent per year.

B. DRA Methodology

DRA's labor escalation methodology is similar to PG&E's with one important exception. Rather than apply the union negotiated wage increases to non-union employees, DRA based its wage increases for the non-union groups from forecasts taken from the IHS Global Insight Power Planner. Specifically, for managers and supervisors, DRA proxies wage increases with the Global Insight Index, (**ECIPWMBFNS**), Employment Cost Index-Managers and Administrators. For the Professional/Technical employee group DRA relies upon the Global Insight Index, (**ECIPWPARNS**), Employment Cost Index – Professional and Technical Workers. Forecasts of wage increases for these two indexes were taken from the Global Insight Power Planner-Fourth Quarter 2009. After applying the weightings DRA arrives at labor escalation rates of 3.05 percent for 2009, 3.11 percent for 2010, and 3.30 percent for test year 2011. DRA's results are reported in Table 4-5.

DRA's approach is similar to the approach used by PG&E in its last General Rate Case (GRC). Southern California Edison (SCE) also utilized this approach in its last GRC. Furthermore, current macro-economic conditions suggest that with relatively high national and California unemployment rates PG&E should not experience upward wage pressure in the forecast period. Global Insight, for example, forecasts that: "We expect the pace of hiring to be modest-around 850,000 jobs added over the course of 2010, a small dent in the 8.4 million job hole created

[5] Pacific Gas and Electric Company, 2011 General Rate Case, Prepared Testimony, General Report, (PG&E-8), Chapter 3, December 21, 2009, p. 3-4.

by the recession…The unemployment rate will come down only slowly, though as some workers who had given up looking for jobs return to the labor force when prospects improve. We expect an average jobless rate of 9.6 % for 2010."[6]

Table 4-5
DRA Labor Escalation
2009 – 2011

Category	Index	Weight	2009	2010	2011
	(1)	(2)	(3)	(4)	(5)
Represented	Union Wage	66.31 %	3.75 %	3.75 %	3.75 %
Manager/Supervisor	ECIMBFNS	11.35 %	1.19 %	1.90 %	1.78 %
Professional/Technical	ECIPWPARNS	22.34 %	1.91 %	1.79 %	2.72 %
Total		**100.00 %**	**3.05 %**	**3.11 %**	**3.30 %**

Source: Global Insight Power Planner – Fourth Quarter 2009.

IV. DISCUSSION / ANALYSIS OF NON-LABOR ESCALATION

A. PG&E Methodology

PG&E's historic and forecast non-labor escalation rates are based on indexes taken from the IHS Global Insight Power Planner. The indexes in the Global Insight Power Planner follow the Federal Energy Regulatory Commission (FERC) uniform system of accounts. Table 4-6 shows the functional expense categories and the Global Insight Power Planner index associated with each functional category.

[6] IHS Global Insight, U.S. Executive Summary, March 2010, pp. 1-2.

Table 4 – 6

Pacific Gas and Electric O &M Expense Categories and Global Insight Power Planner Indexes

O&M Expense Category	Global Insight Power Planner Index
Electric Distribution	JEDOMMS
Electric Transmission	JETOMMS
Nuclear Steam Generation	JENOMMS
Hydro Generation	JEHOMMS
Fossil Steam Generation	JFOMMS
Gas Distribution	JGDOMMS
Gas Transmission	JGTOMMS
Gas Storage	JGUSOMMS
Admin and General – Electric	JEADGOMMSH
Admin and General – Gas	JGADOMMSH

Source: Pacific Gas and Electric Company, 2011 General Rate Case, Prepared Testimony, (PG&E-8), Chapter 3, December 21, 2009, p. 3-5.

With the exception of the administrative and general categories, JEADGOMMSH and JGADOMMSH, the indexes reported in Table 4-6 were taken directly from the Global Insight Power Planner. PG&E's forecasts were taken from the Global Insight Power Planner – Second Quarter 2008 while DRA's forecasts are taken from the more recent Global Insight Power Planner- Fourth Quarter 2009.

The A&G indexes used by PG&E have been adjusted to account for the impact of health care escalation. PG&E explains that: "To avoid the double-counting of health costs escalation, the effect of healthcare cost increases is excluded from the administrative non-labor escalation rates shown in this chapter. This was done

by requesting adjusted non-labor escalation rates from the Global Insight UCIS service that excludes the effect of healthcare cost escalation."[7]

B. DRA Non-Labor Methodology

DRA relied upon the same non-labor escalation rates as did PG&E. DRA's non-labor escalation rates, however, are based on a more recent Global Insight forecast. DRA relied upon non-labor escalation rates by functional category based information taken from the Global Insight Power Planner – Fourth Quarter 2009.

V. DISCUSSION / ANALYSIS OF CAPITAL ESCALATION

A. PG&E Methodology

PG&E also presents escalation rates designed to escalate capital costs. PG&E explains that "The escalation rates communicated as part of the forecasting process at PG&E were by function and not by asset class or account…The cost indices for gas and electric plant for 2003 through 2006 to derive the escalation rates for 2004 through 2006 are from the Handy-Whitman Cost Index…The forecasted indices for 2007 through 2012 to derive the escalation rates for 2007 through 2012 were provided by Global Insight. The forecast is from the second quarter of 2008."[8]

PG&E presents capital related escalation rates for the following categories: Electric Distribution, Electric Transmission, Nuclear Generation, Hydro Generation, Fossil Generation, Gas Distribution, Gas Transmission, and Common Plant. With the exception of Gas Distribution plant, PG&E's capital related escalation indexes were taken directly from the Global Insight Power Planner. The gas distribution plant index is a weighted average of Global Index Power Planner sub-indexes. The sub-indexes

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[7] Pacific Gas and Electric Company, 2011 General Rate Case, Prepared Testimony, (PG&E-8), Chapter 3, December 21, 2009, p. 3-5.

[8] Pacific Gas and Electric, Response to DRA Data Request, DRA-065-TMR, Questions 1 and 2, December 4, 2009.

reflect cost indexes associated with gas distribution such as compressor station equipment, plastic pipes, steel pipes, and compressor station equipment.

B. DRA Methodology

DRA's forecasts of capital related escalation rates mirror PG&E's methodology. The differences between DRA and PG&E reflect DRA's use of a more recent Global Insight Power Planner forecast. Specifically, DRA relied upon the Global Insight Power Planner forecast – Fourth Quarter 2009 while PG&E relied upon the Global Insight forecast – Second Quarter 2008.

VI. CONCLUSION

This exhibit has presented DRA's and PG&E forecasts of labor, non-labor, and capital related escalation rates for 2009, 2010, and test year 2011. DRA recommends changes to PG&E's labor escalation methodology. As a result of DRA's recommended changes to PG&E's labor escalation methodology and the use of a more recent Global Insight forecast, DRA recommends lower labor escalation rates than does PG&E.

DRA has adopted PG&E non-labor and capital related escalation methodology. DRA's non-labor and capital escalation rates differ from PG&E's non-labor and capital related escalation rates because DRA based its forecast on more recent Global Insight Power Planner Forecast.

Finally, DRA recommends that the labor, non-labor, escalation rates be updated in September in accordance with the Commission adopted General Rate Case plan.