

Docket : A.12-04-015 et al  
Exhibit Number : DRA-03  
Commissioner : Ferron  
ALJ : Galvin  
Witness : Oh



**DIVISION OF RATEPAYER ADVOCATES  
CALIFORNIA PUBLIC UTILITIES COMMISSION**

**Report on  
The Cost of Capital  
for  
Test Year 2013**

**Phase 2: Adjustment Mechanism**

**A.12-04-015 et al**

San Francisco, California  
November 30, 2012

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1 **COST OF CAPITAL**  
2 **ADJUSTMENT MECHANISM**

3 **I. INTRODUCTION**

4 The Division of Ratepayer Advocates (DRA) submits its Cost of Capital  
5 (COC) testimony in response to the Cost of Capital Applications of Southern  
6 California Edison Company (SCE), San Diego Gas & Electric Company (SDG&E),  
7 Southern California Gas Company (SCG) and Pacific Gas and Electric Company  
8 (PG&E).

9 **II. SUMMARY OF RECOMMENDATIONS**

10 DRA recommends the continuation of the cost of capital mechanism (CCM)  
11 with a few modifications. The CCM is meeting the Commission goal of maintaining  
12 fair and reasonable capital structures and return on equity (ROE) for the major  
13 energy utilities while reducing the number of ROE proceedings and regulatory costs  
14 and simplifying workload requirements.

15 DRA recommends a deadband of 125 basis points, rather than 100 basis  
16 points. The deadband is the range of change in interest rates that may occur  
17 without triggering a change in the cost of capital.

18 DRA does not object to SCG's request to modify its benchmark index from  
19 the US Treasury to the Moody's utility bond index, or SCG's request to dispense with  
20 interest rate forecast projections as a factor in determining a triggering event.

21 **III. DISCUSSION**

22 On April 20, 2012, SCE, SDG&E, SCG, and PG&E filed their cost of capital  
23 applications.<sup>1</sup> The Assigned Commissioner's Scoping Memo and Ruling of June 15,  
24 2012 (Scoping Memo) consolidated the four costs of capital applications and

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<sup>1</sup> Southern California Edison Company A.12-04-015; San Diego Gas & Electric Company A.12-04-016; Southern California Gas Company A.12-04-017; and Pacific Gas and Electric Company A.12-04-018.

1 bifurcated the proceedings into two phases. The first phase addressed the utilities  
2 2013 test year cost of capital, including the appropriate capital structure, cost of long  
3 term debt, cost of preferred stock, and cost of common equity. The Scoping Memo  
4 stated that the second phase will address the CCM established in Decision (D.) 08-  
5 05-035, with the issues that impact the second phase identified as the  
6 appropriateness of continuing with the CCM, and proposed modifications to the  
7 CCM.<sup>2</sup>

8 The schedule for the second phase was established in the Evidentiary  
9 Hearing of October 2, 2012.<sup>3</sup> This testimony presents DRA's conclusion and  
10 recommendation on the second phase of the consolidated cost of capital  
11 applications.

#### 12 **A. Decision 08-05-035 Established a Multi-Year Cost of Capital** 13 **Mechanism for SCE, SDG&E, and PG&E**

14 Decision 08-05-035 established a uniform multi-year capital mechanism for  
15 SCE, SDG&E, and PG&E. Ordering Paragraph (OP) #1 ordered that the first  
16 complete filing<sup>4</sup> under the CCM should address the parties' experience with the  
17 CCM and whether modifications to the mechanism are warranted.<sup>5</sup>

#### 18 **1. SCE Recommends that the Current Cost of** 19 **Capital Mechanism be Retained**

20 SCE states that since inception, the CCM has worked well and that the  
21 Commission should retain it for SCE. SCE testifies that the CCM has provided  
22 certainty for SCE's customers and investors and avoided the use of scarce  
23 Commission resources to litigate SCE's cost of capital. SCE further states that the

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<sup>2</sup> The Assigned Commissioner's Scoping Memo and Ruling of June 15, 2012, p.3.

<sup>3</sup> Reporter's Transcript (R.T.) Vol. 4, pp., 769-770. Utilities filed supplemental testimony for Phase 2 on October 26, 2012.

<sup>4</sup> D.08-05-035, Ordering Paragraph No. 1, pp. 20-21, stated that the first full cost of capital application shall be due on April 20, 2010 for test year 2011. Commission rulings in D.09-10-016 for SCE and PG&E and in D.10-01-017 for SDG&E modified the D.08-05-035 filing date to April 20, 2012.

<sup>5</sup> D.08-05-035, Ordering Paragraph No. 1.

1 CCM is calibrated on the Moody's Baa long-term utility bond yield, and that SCE's  
2 mechanism should continue to use this index. SCE requests that the Commission  
3 reset the benchmark value of the index to the new authorized return on equity  
4 recommended by SCE of 11.10% and that the starting period for the 12-month  
5 average be from October 2011 through September 2012, consistent with the period  
6 that was used to establish the benchmark value previously. SCE also states that the  
7 Commission need not establish a uniform mechanism for all of its energy utilities.  
8 SCE cites the different mechanisms of SDG&E and SCG, and the different terms of  
9 its trigger mechanism from SDG&E and SCG in the 1990s. SCE states that it is  
10 unaware of any significant impediments created by the differences or any significant  
11 administrative problems.<sup>6</sup>

12 SCE filed Supplemental Phase 2 Testimony to recommend that the  
13 Commission continue to utilize a CCM over its adopted COC cycle and maintain the  
14 mechanism in its current form.<sup>7</sup>

15 **2. SDG&E Recommends that the Current Cost of**  
16 **Capital Mechanism Continue with Certain**  
17 **Modifications**

18 SDG&E's testimony describes the CCM's objectives, the history of its  
19 predecessor, the mechanics of the current CCM, and SDG&E's recommendation for  
20 the trigger mechanism going forward. SDG&E testifies that the present CCM, with  
21 certain modifications, should continue to be the basis for ROE and Rate of Return  
22 (ROR) adjustments between full COC proceedings.<sup>8</sup>

23 SDG&E states that an ongoing need exists for a COC trigger mechanism and  
24 supports continuation of the uniform CCM for the California investor-owned electric

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<sup>6</sup> Testimony Supporting Southern California Edison's Application for Authority to Establish Its Authorized Cost of Capital for Utility Operations for 2013 and to Reset the Annual Cost of Capital Adjustment Mechanism, April 20, 2012, pp. 73-75.

<sup>7</sup> SCE 2013 Cost of Capital Supplemental Phase 2 Testimony, filed October 26, 2012.

<sup>8</sup> Prepared Direct Testimony of Kenneth Deremer on Behalf of San Diego Gas & Electric Company, April 20, 2012.

1 utilities adopted in D.08-05-035.<sup>9</sup> SDG&E testifies that the combination of a 12-  
2 month measurement period and 100-basis point deadband provides a level of  
3 stability between full COC proceedings occurring every third year that strikes a  
4 balance between triggering too often and triggering too infrequently.<sup>10</sup>

5 SDG&E proposes to continue utilizing the currently authorized CCM, but that  
6 it include an off-ramp provision.<sup>11</sup> SDG&E states that utilizing an off-ramp provision  
7 provides a safeguard that protects against extreme changes in interest rates and  
8 also provides the Commission latitude to suspend the mechanism.<sup>12</sup> SDG&E  
9 proposes to have the option to invoke an off-ramp provision should the Single “A”  
10 Utility Bonds move by more than 250 basis points from the benchmark (upwards or  
11 downwards) during the October through September 12-month average time frame.  
12 The off-ramp modification would allow SDG&E, at its discretion, to notify the  
13 Commission’s Executive Director that it is suspending the trigger mechanism, and  
14 that it will subsequently file an application with the Commission to request, at a  
15 minimum, a full review of the CCM trigger event, and potentially a review of its  
16 overall COC. If SDG&E does not invoke the off-ramp provision, SDG&E will follow  
17 the specific guidelines of the CCM trigger and file a compliance advice letter  
18 addressing the full impacts to its COC resulting from the trigger mechanism.<sup>13</sup>

19 **3. PG&E Proposes that the Annual Cost of Capital**  
20 **Adjustment Mechanism Continue for Three Years,**  
21 **with change to the deadband and to the averaging**  
22 **period.**

23 According to PG&E, the CCM<sup>14</sup> has generally achieved the Commission  
24 objective to maintain a fair and reasonable cost of capital while reducing the time

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<sup>9</sup> *Id.*, p.2.

<sup>10</sup> *Id.*, p. 10.

<sup>11</sup> *Id.* p. 10.

<sup>12</sup> *Id.*, p. 11.

<sup>13</sup> *Id.*, p. 12..

<sup>14</sup> PG&E uses the term Annual Cost of Capital Adjustment Mechanism (ACCAM) as it did in the  
(continued on next page)

1 and costs to the CPUC and all parties associated with annual cost of capital  
2 proceedings.<sup>15</sup> PG&E proposes that the CCM be continued for three years with the  
3 next full cost of capital application for test year 2016 due April 20, 2015 with the  
4 applicable benchmark interest rate reset to the October 2011 through September  
5 2012 monthly average.<sup>16</sup>

6 PG&E proposes that the capital structure remain constant over the period the  
7 CCM is in effect, consistent with the current CCM. PG&E, however, reserves the  
8 right to file an application during the CCM period in the event PG&E must materially  
9 change its capital structure as a result of Commission decision in other proceedings.

10 In its Phase II Supplemental Testimony,<sup>17</sup> PG&E recommended that if the  
11 Commission wanted to make the mechanism more sensitive to utility bond interest  
12 rate movements, the CCM could be modified to use a deadband of 75 basis points  
13 rather than the current 100 basis point deadband, and a 6-month average to  
14 compute the interest rate index rather than the current 12-month period.<sup>18</sup>

## 15 **B. SCG Proposes a New Cost of Capital Mechanism**

16 SCG was not a party to D.08-05-035 which established the uniform multi-year  
17 CCM. SCG has been subject to a Market-Indexed Capital Adjustment Mechanism  
18 (MICAM) adopted in D.97-07-054, which allows automatic adjustments to SCG's  
19 ROE and ROR between COC proceedings.<sup>19</sup>

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2008 cost of capital proceeding. DRA uses the term Cost of Capital Mechanism (CCM) consistent with D.08-05-035 and the Scoping Memo.

<sup>15</sup> Pacific Gas and Electric Company Cost of Capital 2013 Prepared Testimony, p. 4-1..

<sup>16</sup> *Id.*

<sup>17</sup> See *supra* fn. 3.

<sup>18</sup> Pacific Gas and Electric Company Cost of Capital 2013 Phase II Supplemental Testimony, p. 1.

<sup>19</sup> Prepared Direct Testimony of Herbert S. Emmrich on Behalf of Southern California Gas Company, p.1..

1 SCG’s testimony documents the administrative history of the MICAM,  
2 discusses the mechanism’s objectives and mechanics, and describes SCG’s  
3 experience with the current MICAM.<sup>20</sup>

4 SCG recommends that the mechanism should be modified to be more  
5 consistent with the other California utilities’ CCMs (which are benchmarked against  
6 utility bond yields). SCG proposes Moody’s A utility bonds as the appropriate  
7 benchmark.

8 **C. DRA Recommends Continuation of the CCM, with Minor**  
9 **Modifications**

10 DRA recommends that the Commission retain the CCM between formal COC  
11 proceedings. The CCM is meeting its goal of streamlining the major energy utilities’  
12 cost of capital process while providing greater predictability to the utilities’ cost of  
13 capital; and also enabling the utilities, interested parties, and Commission staff to  
14 reduce and reallocate their respective workload requirements.<sup>21</sup> The CCM should  
15 continue as is, with minor modifications, as discussed below.

16 First, DRA recommends modifying the deadband. In a previous COC  
17 decision, the Commission has noted that the “...ROE adjustment should track but  
18 not move in lockstep with interest rate changes...” and that “...it would be  
19 unreasonable to adopt MICAM if it systematically sets SDG&E’s returns at levels  
20 higher than would result in the litigated annual cost of capital proceeding.”<sup>22</sup> As  
21 such, DRA recommends that the deadband be increased from 100 basis points to  
22 125 basis points to account for the increased difference between the 12 month  
23 average of 2011 and 2012, as shown in Table 1 below.

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<sup>20</sup> *Id.*, p. 1.

<sup>21</sup> D.08-05-035, p. 16.

|                   | <b>Moody's<br/>Rated<br/>Aa</b> | <b>12-Month<br/>to<br/>12-Month<br/>Difference</b> | <b>Moody's<br/>Rated<br/>A</b> | <b>12-Month<br/>to<br/>12-Month<br/>Difference</b> | <b>Moody's<br/>Rated<br/>Baa</b> | <b>12-Month<br/>to<br/>12-Month<br/>Difference</b> |
|-------------------|---------------------------------|----------------------------------------------------|--------------------------------|----------------------------------------------------|----------------------------------|----------------------------------------------------|
| 10/00 to 9/01     | 7.68%                           |                                                    | 7.85%                          |                                                    | 8.05%                            |                                                    |
| 10/01 to 9/02     | 7.31%                           | -0.37%                                             | 7.51%                          | -0.35%                                             | 8.10%                            | 0.04%                                              |
| 10/02 to 9/03     | 6.59%                           | -0.72%                                             | 6.78%                          | -0.72%                                             | 7.12%                            | -0.98%                                             |
| 10/03 to 9/04     | 6.16%                           | -0.43%                                             | 6.26%                          | -0.52%                                             | 6.53%                            | -0.58%                                             |
| 10/04 to 9/05     | 5.50%                           | -0.66%                                             | 5.68%                          | -0.58%                                             | 5.93%                            | -0.61%                                             |
| 10/05 to 9/06     | 5.80%                           | 0.31%                                              | 6.06%                          | 0.38%                                              | 6.32%                            | 0.40%                                              |
| 10/06 to 9/07     | 5.87%                           | 0.06%                                              | 6.02%                          | -0.04%                                             | 6.26%                            | -0.06%                                             |
| 10/07 to 9/08     | 6.04%                           | 0.17%                                              | 6.24%                          | 0.22%                                              | 6.70%                            | 0.44%                                              |
| 10/08 to 9/09     | 6.05%                           | 0.02%                                              | 6.43%                          | 0.19%                                              | 7.65%                            | 0.95%                                              |
| 10/09 to 9/10     | 5.30%                           | -0.76%                                             | 5.54%                          | -0.89%                                             | 6.05%                            | -1.60%                                             |
| 10/10 to 9/11     | 5.05%                           | -0.25%                                             | 5.27%                          | -0.28%                                             | 5.76%                            | -0.30%                                             |
| 10/11 to 8/12*    | 3.94%                           | -1.10%                                             | 4.26%                          | -1.00%                                             | 5.02%                            | -0.74%                                             |
| *11 month average |                                 |                                                    |                                |                                                    |                                  |                                                    |

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Increasing the deadband to 125 basis points will strike a reasonable balance between triggering too often and not triggering often enough.<sup>23</sup>

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As shown in Table 2 below, from 2008, the time of D.08-05-035, utilities using the Moody utility bond index rate of Aa and A would have triggered once, irrespective of whether the deadband was set at 100 basis point or 125 basis points. For utilities using the Moody's utility bond index rate of Baa, the 100 basis points deadband would have triggered three times, while the 125 basis point deadband would have triggered twice in the five year period, as shown in Table 3 below.

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<sup>22</sup> D.96-06-035, p. 583.

<sup>23</sup> D.08-05-035, p.12.

| <b>Table 2: Triggering Events at 100 Basis Point</b>            |                |            |        |                                  |
|-----------------------------------------------------------------|----------------|------------|--------|----------------------------------|
| <b>Utilities Subject to Moody's Aa Utility Bond Index Rate</b>  |                |            |        |                                  |
|                                                                 | Benchmark Rate | Index Rate | Change | New Benchmark at 100 bp deadband |
| 10/07 to 9/08                                                   | 5.87%          | 6.04%      | 0.17%  |                                  |
| 10/08 to 9/09                                                   | 5.87%          | 6.05%      | 0.18%  |                                  |
| 10/09 to 9/10                                                   | 5.87%          | 5.30%      | -0.57% |                                  |
| 10/10 to 9/11                                                   | 5.87%          | 5.05%      | -0.82% |                                  |
| 10/11 to 8/12*                                                  | 5.87%          | 3.94%      | -1.93% | 3.94%                            |
| * 11 month average                                              |                |            |        |                                  |
| <b>Utilities Subject to Moody's A Utility Bond Index Rate</b>   |                |            |        |                                  |
|                                                                 | Benchmark Rate | Index Rate | Change | New Benchmark at 100 bp deadband |
| 10/07 to 9/08                                                   | 6.02%          | 6.24%      | 0.22%  |                                  |
| 10/08 to 9/09                                                   | 6.02%          | 6.43%      | 0.41%  |                                  |
| 10/09 to 9/10                                                   | 6.02%          | 5.54%      | -0.48% |                                  |
| 10/10 to 9/11                                                   | 6.02%          | 5.27%      | -0.75% |                                  |
| 10/11 to 8/12*                                                  | 6.02%          | 4.26%      | -1.76% | 4.26%                            |
| * 11 month average                                              |                |            |        |                                  |
| <b>Utilities Subject to Moody's Baa Utility Bond Index Rate</b> |                |            |        |                                  |
|                                                                 | Benchmark Rate | Index Rate | Change | New Benchmark at 100 bp deadband |
| 10/07 to 9/08                                                   | 6.26%          | 6.70%      | 0.44%  |                                  |
| 10/08 to 9/09                                                   | 6.26%          | 7.65%      | 1.39%  | 7.65%                            |
| 10/09 to 9/10                                                   | 7.65%          | 6.05%      | -1.60% | 6.05%                            |
| 10/10 to 9/11                                                   | 6.05%          | 5.76%      | -0.29% |                                  |
| 10/11 to 8/12*                                                  | 6.05%          | 5.02%      | -1.03% | 5.02%                            |
| * 11 month average                                              |                |            |        |                                  |

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| Table 3: Triggering Events at 125 Basis Point            |                |            |        |                                  |
|----------------------------------------------------------|----------------|------------|--------|----------------------------------|
| Utilities Subject to Moody's Baa Utility Bond Index Rate |                |            |        |                                  |
|                                                          | Benchmark Rate | Index Rate | Change | New Benchmark at 125 bp deadband |
| 10/07 to 9/08                                            | 6.26%          | 6.70%      | 0.44%  |                                  |
| 10/08 to 9/09                                            | 6.26%          | 7.65%      | 1.39%  | 7.65%                            |
| 10/09 to 9/10                                            | 7.65%          | 6.05%      | -1.60% | 6.05%                            |
| 10/10 to 9/11                                            | 6.05%          | 5.76%      | -0.29% |                                  |
| 10/11 to 8/12*                                           | 6.05%          | 5.02%      | -1.03% |                                  |
| * 11 month average                                       |                |            |        |                                  |

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Second, DRA agrees with SCG that the Moody's Utility Bond index is an appropriate measure of the utility capital cost and that SCG should be allowed to change its mechanism index from the US Treasury to the Moody's Utility Bond index. DRA does not oppose SCG's elimination of the interest rate forecast in determining a COC triggering event.<sup>24</sup>

DRA opposes the off-ramp recommendation made by SCG and SDG&E. SCG and SDG&E both propose that it have the option to invoke an off-ramp should the Moody's A utility bonds move by more than 250 basis points from the benchmark during the October through September 12-month average time frame.<sup>25</sup> The proposed off-ramp is redundant and unnecessary as D.08-05-035 already includes a provision for utilities to file a cost of capital application outside of the CCM process upon an extraordinary or catastrophic event that materially impacts their respective

<sup>24</sup> SCG's current MICAM utilizes two factors that must be triggered to enact a change in the COC. The first factor compares the most recent trailing 12-month average of the 30-year United States Treasury bond yield. The second factor reflects a 12-month forward forecast of the 30-year Treasury bond yield by Global Insight. Prepared Direct Testimony of Herbert S. Emmrich on Behalf of Southern California Gas Company A.12-04-017, p. 4.

<sup>25</sup> Prepared Direct Testimony of Herbert S. Emmrich on Behalf of Southern California Gas Company A.12-04-017, p. 11 and Prepared Direct Testimony of Kenneth Deremer on Behalf of San Diego Gas & Electric Company, A.12-04-016, p. 12.

1 cost of capital and/or capital structure and impacts them differently than the overall  
2 financial markets.<sup>26</sup>

3 Third, the Commission should clarify the index that each utility uses in the  
4 CCM. In D.08-05-035, the Commission established the Moody's Aa utility bonds for  
5 AA credit-rated utilities or higher, and Moody's Baa utility bonds for BBB credit-rated  
6 utilities or lower.<sup>27</sup> A credit rating of A exists between the two Standard & Poor's  
7 credit ratings of AA or BBB. D.08-05-035 does not specify what the index should be  
8 if a utility falls into this intermediate credit rating. As PG&E describes in its prepared  
9 testimony, the Commission did not prescribe which interest rate index was  
10 appropriate for utilities with a split rating, i.e., utilities with ratings in different rating  
11 categories. As PG&E provides in its testimony, PG&E is currently rated A3 by  
12 Moody's, BBB+ by Fitch, and BBB by S&P. Hence under the current mechanism it  
13 is not evident which index applies to PG&E.<sup>28</sup> The Commission should assign a  
14 specific index to each utility to remove any ambiguity. DRA recommends Moody's  
15 "A" rated utility bonds for SDG&E and SCG (as proposed by the utilities), and  
16 Moody's Baa rated utility bonds for PG&E and SCE.

17 Fourth, DRA opposes PG&E's request for a new provision reserving the right  
18 to file an application in the event PG&E must materially change its capital structure  
19 as a result of Commission decisions in other proceedings. The request is vague,  
20 open-ended and subject to interpretation regarding the need to change the capital  
21 structure. As stated above, Commission D.08-05-035 established and adopted  
22 appropriate provisions for utilities to file a cost of capital application outside of the  
23 CCM process which should be retained without modification.

24 Finally, DRA opposes PG&E's recommendation to modify the CCM to use a  
25 deadband of 75 basis points and a 6-month average measurement period. The

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<sup>26</sup> D.08-05-035 ,Conclusion of Law No. 6, p. 19.

<sup>27</sup> While D.08-05-035, Ordering Paragraph 1.e, pp. 20-21, specifies the Moody's Baa utility bonds for BB credit-rated utilities or lower, this is assumed to be a typographical error as there are multiple references to the BBB credit-rated utilities.

<sup>28</sup> PG&E Prepared Testimony, p. 4-2.

1 Commission rejected this same proposal in D.08-05-035 as the benchmark would  
 2 likely trigger too frequently, and the Commission should do the same in this  
 3 proceeding. As Table 4 below shows, under PG&E's proposal, four triggering  
 4 events would have resulted since D.08-05-035.  
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**Table 4: Utilities Subject to Moody's Baa Utility Bond Index Rate (6 Month Average)**

|               | Benchmark<br>Rate | Index<br>Rate | Change | New Benchmark<br>at 75 bp deadband |
|---------------|-------------------|---------------|--------|------------------------------------|
| 10/07 to 3/08 | 6.41%             | 6.46%         | 0.05%  |                                    |
| 10/08 to 3/09 | 6.41%             | 8.22%         | 1.81%  | 8.22%                              |
| 4/09 to 9/09  | 8.22%             | 7.07%         | -1.15% | 7.07%                              |
| 10/09 to 3/10 | 7.07%             | 6.20%         | -0.87% | 6.20%                              |
| 4/10 to 9/10  | 6.20%             | 5.90%         | -0.30% |                                    |
| 10/10 to 3/11 | 6.20%             | 5.94%         | -0.26% |                                    |
| 4/11 to 9/11  | 6.20%             | 5.57%         | -0.63% |                                    |
| 10/11 to 3/12 | 6.20%             | 5.08%         | -1.13% | 5.08%                              |
| 4/12 to 8/12* | 5.08%             | 4.94%         | -0.14% |                                    |

\* Five month average  
 Assumes the initial benchmark would have been six month average of 3/7 to 9/07.

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1 **IV. QUALIFICATIONS OF WITNESS**

2 Q.1 Please state your name and business address.

3 A.1 My name is Jerry Oh. My business address is 505 Van Ness Avenue, San  
4 Francisco, California, 94102.

5 Q.2 By whom are you employed and in what capacity?

6 A.2 I am employed by the California Public Utilities Commission as a Public  
7 Utilities Regulatory Analyst V in the Division of Ratepayer Advocates Energy  
8 Cost of Service and Natural Gas Branch.

9 Q.3 Briefly describe your educational background and work experience.

10 A.3 I received a Bachelor's of Arts degree in Business Economics from the  
11 University of California at Los Angeles in 1993. From 1995 to 2000, I was  
12 employed as a Bank Examiner conducting safety and soundness examination  
13 of commercial banks. The safety and soundness examination included  
14 analyzing the banks market risk and credit risk. From 2000 to 2007, I worked  
15 as a Regulatory Analyst and Financial Examiner in the Commission's Energy  
16 Division. Since 2007, I have worked on general rate cases of large water  
17 utilities as a member of DRA. I have been DRA's expert witness in  
18 Administrative and General expense, Operations and Maintenance expense,  
19 Cost of Capital, Affiliate Transactions, Taxes, and Results of Operations. I  
20 have supported my testimony in formal Commission hearings.

21 Q.4 What is the purpose of your testimony?

22 A.4 I am responsible for Exhibit DRA-03.

23 Q.5 Does that complete your prepared testimony?

24 A.5 Yes, it does.

25