Application of Southern California Gas Company (U 904 G) for Authority to: (i) Adjust its Authorized Return on Common Equity, (ii) Adjust its Authorized Embedded Costs of Debt and Preferred Stock, (iii) Decrease its Overall Rate of Return, and (iv) Revise its Gas Rates Accordingly, and for Related Substantive and Procedural Relief.	A.12-04-___ (Filed April 20, 2012)

Exhibit No.: SCG-5

PREPARED DIRECT TESTIMONY OF
HERBERT S. EMMRICH
ON BEHALF OF SOUTHERN CALIFORNIA GAS COMPANY

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

APRIL 2012

The Gas Company

TABLE OF CONTENTS

I. INTRODUCTION 1

II. CCM'S OBJECTIVES 2

III. ADMINISTRATIVE HISTORY AND CURRENT MECHANICS 3

IV. PROPOSED CCM MECHANICS 8

V. SUMMARY AND CONCLUSION 11

VI. STATEMENT OF QUALIFICATIONS 13

APPENDIX: CCM BENCHMARK AND AUTOMATIC TRIGGER EXAMPLE

PREPARED DIRECT TESTIMONY OF

HERBERT S. EMMRICH

ON BEHALF OF SOUTHERN CALIFORNIA GAS COMPANY

I. INTRODUCTION

The purpose of my testimony is to discuss Southern California Gas Company's ("SoCalGas" or "Company") Market-Indexed Capital Adjustment Mechanism ("MICAM"), which currently determines SoCalGas' return on equity ("ROE") and overall Rate of Return ("ROR"). My testimony proposes a new Cost of Capital Mechanism ("CCM") for SoCalGas, effective as of the Test Year 2013. The MICAM is a formula, adopted in Decision ("D.") 97-07-054, which allows automatic adjustments to SoCalGas' ROE and ROR between Cost of Capital ("COC") proceedings. This testimony documents the administrative history of the MICAM, discusses the mechanism's objectives and mechanics, and describes SoCalGas' experience with the current MICAM.

SoCalGas believes that the mechanism should be modified to be more in line with the other California utilities' CCMs (which are benchmarked against utility bond yields). Thus, SoCalGas proposes Moody's A utility bonds as the appropriate benchmark. SoCalGas has requested on two previous occasions, in 2002 and 2009, to suspend its MICAM to re-evaluate the appropriate benchmark. Although the Commission ruled that SoCalGas should seek a more appropriate forum to address the MICAM, the Commission acknowledged that the use of 30-year Treasury bond yields as a benchmark may be flawed.[1] As such, in this state-wide COC proceeding, SoCalGas believes it is the proper forum to

[1] D.03-01-008 at 4.

propose a newly constructed CCM to replace the MICAM, which should then be used to determine SoCalGas' ROE and ROR between full COC proceedings.

II. CCM'S OBJECTIVES

The proposed CCM provides a formula that allows SoCalGas to automatically adjust its revenue requirement based on bond rate changes in each year that SoCalGas is not required to file a COC Application. SoCalGas' proposed CCM was designed with several goals in mind:

- **Objective results:** if the Commission adopts SoCalGas' proposed CCM, in the years between COC proceedings, SoCalGas' return will be a function of historical rates based on actual market data, which would produce an objective outcome.
- **A simple, balanced mechanism:** the proposed CCM is straight-forward and easy to calculate, as shown in Section IV. It moderates steep moves in long-term interest rates by applying 50% of the change in long-term rates to the ROE rate. This will help to accomplish the Commission's ROR moderation objective as reiterated in D.99-06-057: "We have moderated ROE increases during inflationary periods, and have declined to lower ROE abruptly when inflation is low."[2]
- **Dispense with interest rate forecasts:** under the CCM, SoCalGas' return is a function of historical rates, eliminating the need for interest rate projections and potential forecasting risk.
- **Transparent determination of the COC:** the outcome of a full COC proceeding is unpredictable, which increases the regulatory risk perceived by the utility's stakeholders. However, with a simple market-based CCM in between three year

[2] D.99-06-057 at 56.

period COC proceedings, various stakeholders benefit from the mechanism's objectives. Credit agencies and investment banks, who regularly evaluate the financial condition of the utilities, have indicated their preference of the automatic rate-setting mechanism, since it provides more clarity and transparency in understanding changes to a utility's ROE versus the uncertainty of trying to predict the outcome of a fully litigated COC proceeding on an annual basis.

- **Reduced time and cost:** annual COC proceedings consume significant work-hours for both Commission and SoCalGas personnel, and frequently entail significant resources and filing/processing expenses. The Commission's initial MICAM decision for San Diego Gas & Electric Company ("SDG&E") confirmed the Commission's objective to conserve such resources, pointing out that the MICAM strikes a balance between shareholder and ratepayer interests, adding:

  > we explicitly state our intention to keep MICAM in place for an extended period … This should provide greater likelihood of an evening out of ratepayer and shareholder interests over time.[3]

  SoCalGas believes that adoption of the CCM will likewise achieve the Commission's objectives stated above.

III. ADMINISTRATIVE HISTORY AND CURRENT MECHANICS

The Commission authorized the current SoCalGas MICAM in the Performance Based Ratemaking ("PBR") decision (D.97-07-054). The mechanism took effect on January 1, 1998 using as its starting point SoCalGas' ROE, ROR, and capital structure for test year 1997, as set forth in D.96-11-060. The PBR plan did not provide for changes to SoCalGas' capital structure ratios (i.e., the percentage of long-term debt, preferred stock, and common

[3] D.96-06-055 at 24.

equity). However, the PBR plan did include a COC adjustment to enact changes in SoCalGas' COC as reflected by a MICAM trigger event.

SoCalGas' current MICAM utilizes two factors that must both 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 ("U.S.") Treasury bond yields. The second factor reflects a 12-month forward forecast of the 30-year Treasury bond yields by Global Insight.[4] If the change from the benchmark for both factors is 150 basis points or greater, the MICAM formula is triggered.[5] Once a triggering event occurs, the embedded cost of debt and preferred stock are trued up to actual levels, and the ROE is adjusted by one-half of the difference between the 12-month historical average and the benchmark. An advice letter is filed the Commission in October of the year of the trigger event to implement the new ROE and ROR, effective January 1 of the following year.

An initial MICAM benchmark was established at 6.95%, reflecting 30-year Treasury bond yields used in the 1997 COC proceeding (D.96-11-060). This benchmark equated to a trigger point of 5.45% on the downside and 8.45% on the upside. This benchmark was first triggered in October 2002. As a result of that trigger, SoCalGas' authorized ROE was reduced to 10.82% from 11.60%, and its rate of return to 8.68% from 9.49% beginning January 1, 2003.[6]

The 2002 ROR adjustment was made in accordance with the three triggering events defined in the MICAM. The first is the cost of long-term debt which is set equal to the current embedded average interest rate on outstanding long-term debt. In 2002, the long-

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[4] The 12-month forward forecast of 30-year Treasury bond yields was previously reported by Data Resource Inc.
[5] One basis point equals 0.01%.
[6] Advice Letter ("AL") 3199, filed October 29, 2002 (as amended by AL 3199-A, filed November 20, 2002).

term debt rate was reduced to 6.96%, a reduction from the previously authorized rate of 7.71%.[7] The second element is the current cost of preferred stock. In 2002, the preferred stock rate was reduced to 4.83% from the 6.35% previously authorized level. The third element is the ROE. The previously authorized ROE rate of 11.60% was reduced by 78 basis points to a new level of 10.82%. These data, applied to the fixed structural weights (long-term debt, preferred stock, and common equity) yielded a new ROR of 8.68%.

Concurrent with the 2002 MICAM triggering event, SoCalGas petitioned the Commission for suspension of its MICAM arguing that 30-year Treasury bond yields were no longer tracking utility bonds yields and therefore were no longer an appropriate indicator of a utility's COC. That petition was denied in D.03-01-008, although the Commission acknowledged that the use of 30-year Treasury bond yields as a benchmark may be flawed.[8] However, because the MICAM was one of several PBR components, the Commission stated the suspension of a possible flaw does not necessarily mitigate the impact that such flaw may have on the PBR.[9] That decision also concluded that SoCalGas should address the merits of a replacement trigger mechanism as part of its Test Year 2004 PBR/Cost of Service application.[10] Although SoCalGas sought to replace its 30-year Treasury bond yields index with Moody's Aa utility bonds in its 2004 PBR/Cost of Service application (filed in 2002), the proceeding resulted in a Joint Party settlement which did not adopt

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[7] D.96-11-060 at 34.
[8] D.03-01-008 at 4.
[9] *Id*. It is worth noting from subsequent proceedings and resulting decisions before the Commission that SoCalGas is no longer under the PBR that was instituted in 1997, and thus the MICAM no longer represents one of a pre-existing group of ratemaking provisions. The Commission noted this in its decision denying SoCalGas' second petition for modification, in D.09-07-033 at 7.
[10] D.03-01-008 at 4.

SoCalGas' proposed index change.[11] SoCalGas did not propose any change to its trigger mechanism in its 2008 General Rate Case ("GRC").

It is noteworthy that currently, no other utility in California operates under a CCM linked to Treasury bonds. In the 2008 COC Phase 2 decision (D.08-05-035), the Commission found that utility bond yields were better indicators of a utility's costs of capital than Treasury bond yields and further established a uniform, multi-year cost of capital mechanism for SDG&E, Southern California Edison Company ("SCE") and Pacific Gas and Electric Company ("PG&E") that replaced its existing cost of capital mechanism:

> The purpose of an interest rate benchmark is to gauge changes in interest rates that also indicate changes in the equity costs of utilities. U.S. Treasuries are more sensitive to economic changes and risks in the international capital markets than utility bonds because they are bought and sold globally. However, U.S. utility bonds are generally affected less than Treasuries as a result of major shifts of international capital because a majority of U.S. utility bonds are traded within the U.S. Consistent with our use of utility bond interest rates in ROE, PBR, and MICAM proceedings and desire to use an index that more likely correlates and moves with utility industry risk, utility bonds should be adopted for the CCM index.[12]

The 2008 financial crisis saw the collapse of the banking and financial industries, and a resulting tightening of the credit markets.[13] In 2009, SoCalGas petitioned the Commission for an immediate one-year suspension of its MICAM to prevent a potential downward adjustment to its authorized ROE, citing the decoupling of the 30-year Treasury

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[11] Petition to Modify Decision 97-07-054 and Request for Expedited Approval (filed April 7, 2009) at 4. ("2009 PFM").
[12] D.08-05-035 at 12-13.
[13] The National Bureau of Economic Research ("NBER"), the arbiter of the start and end dates of a recession, determined that the recession began in December 2007 ended in June 2009. *See* NBER Report entitled, "Business Cycle Dating Committee, National Bureau of Economic Research," (September 20, 2010), available at: http://www.nber.org/cycles/sept2010.html.

bond rate and utility bond rates. In its petition for modification, SoCalGas provided a timeline of events surrounding the financial crisis.[14] During 2008-2009, and by the Fall of 2008, U.S. capital markets were plagued by a general risk aversion. Banks were unwilling to lend to each other, investment-grade corporate borrowers were unable to raise debt and real estate and commercial lending activity dropped as the economy began to stall. Due to this credit crisis, the Federal Reserve Board ("Fed") intervened by reducing the federal funds rate and purchasing Treasury bonds and other agency securities in order to lower long-term borrowing rates. The Fed's intervention measures thereby caused a reduction to yields across the entire Treasury curve. Unlike the typical macroeconomic forces that drive Treasury bond yields, the Fed's reactionary stop-gap measures caused a drastic divergence between utility bond yields and Treasury bond yields:

- Treasury bond yields are highly sensitive to changes in international economic conditions, whereas the U.S. utilities' cost of equity is not.

- Since U.S. Treasuries are considered to be the safest investment in the world, investors across the world tend to flock to investments in U.S. Treasuries at times of widespread global economic turmoil. In such periods of turmoil, the required return on riskier investments such as utility bonds and stocks increases while the yield on U.S. Treasury bonds declines.

- Yields on U.S. Treasury bonds are highly sensitive to efforts by the Fed to stimulate the economy.[15]

As a condition of the requested suspension of its MICAM, SoCalGas proposed to file a COC application to address revisions to its COC trigger mechanism at the same time that SCE, PG&E, and SDG&E would file their next COC applications.[16] The Commission denied SoCalGas' petition, stating "SoCalGas has not convinced us that its ROE should be

[14]2009 PFM at 7-9 and Declaration of Gary H. Hayes.
[15] 2009 PFM at 7-9.
[16] *Id.* at 13.

frozen because of a possibility that its trigger mechanism may be activated requiring a lower ROE."[17]

Due to the subsequent slow economic recovery since 2008, SoCalGas' MICAM did in fact trigger in January 2012. The trailing 12-month average Treasury bond yields fell below the 3.88% down-side benchmark threshold during the first quarter of 2011, and the forward-looking 12-month average forecast also exceeded the 150 point deadband, thereby triggering the MICAM, and resulting in an ROE reduction of 80 basis points below the current 10.82% to 10.02%, effective January 1, 2013. SoCalGas believes that the 80 basis point reduction in ROE under the current MICAM is too large and will make it difficult for SoCalGas to attract adequate low cost equity capital to fund needed utility investments. The proposed CCM, described in Section IV below, will achieve the Commission's goal to moderate ROR changes more effectively, while allowing SoCalGas to continue to attract adequate capital at low cost.[18]

IV. PROPOSED CCM MECHANICS

Under the proposed CCM, SoCalGas' ROR will increase, decrease, or remain unchanged, depending on movements in utility bond yields. The trigger event occurs if the October through September 12-month average of Moody's A rated utility bond yield changes more than 100 basis points higher or lower than the benchmark interest rate, which is either (a) the October through September average of Moody's A utility bond yields[19] from the year of SoCalGas' most recent COC proceeding or (b) the most recent year thereafter

[17] D.09-07-033 at 8.

[18] In SoCalGas' Test Year 2012 GRC (A.10-12-006), I sponsored the Company's post-test year testimony where I indicated the Company's intent to file a COC application in April 2012 to establish its COC along with the other California utilities. Witness Robert Schlax explains in his testimony that a state-wide COC proceeding is the appropriate forum for SoCalGas to address changes to its COC structure and MICAM.

[19] Moody's utility index adjusted for utility's credit rating. The current SoCalGas credit rating is "A" as described in the testimony of witness Michael Foster.

where the October through September average utility bond yield triggers an automatic adjustment. If the difference between the current October through September 12-month average and the benchmark exceeds 100 basis points (a "trigger event"), an automatic adjustment to SoCalGas' COC results, in accordance with the following procedure:

1. The ROE is adjusted by one-half of the difference between the trigger-inducing Moody's A utility bond 12-month average and the benchmark.
2. The costs of long-term debt and preferred stock are updated to reflect actual August month-end embedded costs in that trigger year, forecasted interest rates for variable long-term debt, and new long term debt and preferred stock scheduled to be issued.
3. The authorized capital structure is not adjusted, but the CCM allows the company to file a capital structure adjustment application in the event of change to credit rating.
4. SoCalGas shall file a Tier 2 advice letter in October of the trigger year to be effective on January 1 of the following year.
5. The CCM trigger would be effect for the three-year COC period. With the complexity of processing full COC proceedings, a three-year term provides a balance between not having a full proceeding every year but often enough to review for significant changes or impacts to SoCalGas.
6. In any year where the 12-month (October through September) average Moody's A utility bond rates triggers an automatic ROE adjustment, that average becomes the new benchmark.

7. Allow a COC application outside of the CCM process if an extraordinary or catastrophic event materially impacts cost of capital or capital structure and affects the company differently than the overall financial markets.

8. Provide the utility with a voluntary off-ramp provision as further discussed below.

As described in Section III, SoCalGas believes utility bond yields are better indicators of a utility's costs of capital than Treasury bond yields. Further, SoCalGas recommends a 100 basis point deadband under a 12-month average measurement period. In D.08-05-035, the Commission found that this combination best "mitigates volatility of interest rates"[20] and strikes a reasonable balance between triggering too often and not triggering enough. Choosing a deadband or measurement period that is overly sensitive to interest rates would be disruptive to the mechanism's main objectives.

Because extreme interest rate changes could impair the integrity of the mechanism's results, the proposed CCM also incorporates an "off-ramp" provision, as employed in prior SDG&E MICAMs.[21] SoCalGas believes that utilizing an off-ramp provision provides a safeguard that protects against extreme changes in interest rates, and also provides the Commission latitude to suspend the mechanism. As noted above, the Commission's consistent practice has been to moderate changes in ROE relative to changes in interest rates in order to increase the stability of ROEs over time. The off-ramp proposal is intended for such events that would cause extreme impacts to the utility bond index (and in association also SoCalGas' ROE) due to unique economic conditions, such as, hyperinflation, significant impacts to the domestic or global financial markets, or unusual utility industry-specific events.

[20] D.08-05-035 at 12.
[21] D.96-06-055; D.03-09-008.

SoCalGas proposes it have the option to invoke an off-ramp provision should the Moody's A utility bonds move by more than 250 basis points from the benchmark (upwards or downwards) during the October through September 12-month average time frame. If this were to occur, SoCalGas could, at its discretion, notify the Commission's Executive Director that it is suspending the trigger mechanism, and that it will subsequently file an application with the Commission that at a minimum will request a full review of the CCM trigger event, and potentially a review of its overall COC. If SoCalGas decides not to invoke the off-ramp provision in the event of a greater than 250-basis point trigger, SoCalGas will follow the specific guidelines of the CCM trigger and file the compliance advice letter addressing the full impacts to its cost of capital resulting from the trigger mechanism.

The proposal also allows an adjustment outside of the mechanism process if an extraordinary or catastrophic event occurs that has a material impact. SoCalGas proposes a three-year COC period in order to provide customers with rate stability. A three year COC term will advance that goal. Therefore, SoCalGas proposes that a full COC proceeding be conducted triennially and that its proposed CCM be employed in the applicable years.[22] Every three years, SoCalGas will file a complete application as part of the state-wide Commission COC proceeding. Between the years in which rates are set by such COC applications, the CCM will continue to apply.

V. SUMMARY AND CONCLUSION

As my foregoing testimony explains, SoCalGas has been operating under a MICAM for approximately 15 years. However, due to the changing global economy, tightening

[22] Conceptually speaking, CCMs would not be applicable the year preceding a COC test year. The Commission decision authorizing the cost of capital for a particular test year would supersede a change associated with a trigger event from the preceding year (that would normally be implemented the following January).

credit markets, and decoupling of the 30-year Treasury bond rate and utility bond rates, the 30-year Treasury bond yield is no longer an appropriate index for the trigger mechanism. The features inherent in the CCM of the other large energy utilities at present strike an appropriate balance to preserve ROE stability, relative to changes that could lead to more or less likely trigger events such as a more broad or narrow dead band, different measurement periods, or the period between COC proceedings. Therefore SoCalGas is requesting the Commission to approve the following primary changes in the MICAM to a new CCM, effective as of Test Year 2013:

1. change the trigger benchmark from the 30-Year Treasury Bond to Moody's A utility bonds;
2. change the comparative average interest rate period to a historical October through September 12-month average (with no forecast period);
3. change the triggering event from a 150 basis points change in the 30-year Treasury bond to a 100 basis points change in Moody's A utility bond;
4. provide the Company with an off-ramp option if the October through September 12-month average of Moody's A utility bond changes by more than 250 basis points from the benchmark; and
5. permit the CCM trigger to be effective for the three-year COC period.

This concludes my prepared direct testimony.

VI. STATEMENT OF QUALIFICATIONS

My name is Herbert S. Emmrich. My business address is 555 West Fifth Street, Los Angeles, California 90013-1011. I am employed by SoCalGas as Demand Forecasting and Economic Analysis Manager in the Regulatory Affairs Department. I have been in this position since May l, 2011.

I earned an undergraduate degree in Economics and Behavioral Sciences from California State University at Dominguez Hills in 1970 and a Master of Arts Degree in Economics from California State University at Long Beach in 1974. I also completed 2 years of post-graduate coursework in Economics at UCLA from 1970 to 1972. In addition, during the past 27 years, I held analyst, manger and director positions in the Regulatory Affairs, Planning, Customer Services, Marketing, Gas Acquisition, and Commercial and Industrial Services Departments of SoCalGas and SDG&E.

My employment outside of SoCalGas has been in the areas of economics, environmental assessment, business planning, and energy sector development. I held the positions of: Economist, Regional Economist and Environmental Assessment Manager at the U.S. Bureau of Land Management's Pacific Outer Continental Shelf Office, in Los Angeles, from 1975 to 1979; Economic Policy Supervisor and Issues and Policy Manager of Getty Oil Company from 1979 to 1984; and, Senior Energy Advisor of the U.S. Agency for International Development's Caucasus Office in Tbilisi, Republic of Georgia, from 1998 to 2002. In addition, I have taught micro and macro economic theory at El Camino College, Torrance, CA; Cal State University, Dominguez Hills, CA; and the Georgian Institute of Public Policy in Tbilisi, Republic of Georgia.

I have previously testified before this Commission.

APPENDIX

CCM BENCHMARK AND AUTOMATIC TRIGGER EXAMPLE

For illustrative purposes, the table below shows the actual average Moody's A utility bond yield for October 2010 through September 2011 (this will be replaced with updated rates at the time of the CPUC decision). The final benchmark would be determined by the October 2011 through September 2012 measurement period and reflected in the compliance advice letter to implement the final COC decision.

SoCalGas Proposed CCM – Benchmark for 2011

Monthly average Moody's A utility bond yields:

October	5.10%
November	5.37%
December	5.56%
January	5.57%
February	5.68%
March	5.56%
April	5.55%
May	5.32%
June	5.26%
July	5.26%
August	4.69%
September	4.48%
Average	5.28%

The benchmark for 2010 – 2011 would equal 5.28% (Moody's October 2010 through September 2011 average of Moody's A-rated utility bond yield). The benchmark would remain in effect until the earlier of a trigger event or the conclusion of the proposed three-year COC period. If the average Moody's A utility bond yield for a future October through September period moves below 4.28% or above 6.28%, a CCM automatic adjustment will be triggered.

For illustrative purposes, assume an authorized ROE of 10.90%. Suppose a trigger event occurs in October 2013, where the 12-month October 2012 through September 2013 Moody's A utility bond average is 6.38% (a 110 basis-point change from the benchmark). The upward trigger event would cause a 55 basis point adjustment to SoCalGas' authorized ROE from 10.90% to 11.45%. The October 2012 through September 2013 average of 6.38% would become the new benchmark level. The resulting ROR would be based on the newly set ROE and updated actual August month-end embedded costs of long-term debt and preferred stock, but there would be no change to the authorized capital structure.

Now suppose the inverse: a trigger event occurs where the 12 month average is 4.18%. The downward trigger event would cause a 55 basis point decrease to SoCalGas' authorized

ROE from 10.90% to 10.35%. The October 2012 through September 2013 average of 4.18% would become the new benchmark level. The resulting ROR would be based on this newly set ROE and updated actual August month-end embedded costs of long-term debt and preferred stock, and there would continue to be no change to the authorized capital structure.

In each of the examples discussed, SoCalGas would file a Tier 2 advice letter informing the Commission of the CCM trigger event, including all necessary calculations to determine the trigger, adjusted cost of capital levels, and associated related rate-impacts. Customer rates would reflect the new cost of capital levels the following January, consistent with current practices.

SoCalGas would participate in the triennial COC proceedings and file a new full COC case every three years.