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MISSOURI PUBLIC SERVICE COMMISSION

REGULATORY REVIEW DIVISION
UTILITY SERVICES – FINANCIAL ANALYSIS

SURREBUTTAL TESTIMONY

OF

DAVID MURRAY

SUMMIT NATURAL GAS OF MISSOURI, INC.

CASE NO. GR-2014-0086

Jefferson City, Missouri
August 2014

** Denotes Highly Confidential Information **

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Q. Please state your name.

A. My name is David Murray.

Q. Are you the same David Murray who prepared the Rate-of-Return Section of Staff's Cost of Service Report ("Staff Report") filed on May 30, 2014 and rebuttal testimony, filed on July 11, 2014?

A. Yes, I am.

Q. What is the purpose of your surrebuttal testimony?

A. The purpose of my surrebuttal testimony is to respond to Summit Natural Gas of Missouri, Inc. ("SNG") rebuttal testimonies filed by James M. Anderson and Rick H. Lawler. Mr. Anderson's rebuttal testimony mainly addressed my testimony as it relates to the cost of common equity. Mr. Lawler's rebuttal testimony mainly addressed my recommended capital structure.

EXECUTIVE SUMMARY

Q. Can you provide a brief summary of the general, overall concern you have with Mr. Anderson's and Mr. Lawler's rebuttal testimonies?

A. Yes. Mr. Anderson seems to believe that he can provide superior insight into SNG's cost of common equity based on his capital market experience. I will provide information directly from SNG's investor, The Infrastructure Investments Fund ("IIF"), advised by JP Morgan Asset Management, which contradicts some of Mr. Anderson's

testimony and corroborates the reasonableness of Staff's cost of equity estimate as compared to Mr. Anderson's estimate. Although this information in and of itself is informative in evaluating which witness more accurately and reliably estimated SNG's cost of equity, the fact that Staff had to persistently pursue information about IIF's required returns for its investment in Summit Utilities through the discovery process, while Mr. Anderson could have simply provided this information by voluntarily communicating with IIF, should be considered by the Commission. While IIF's extensive investment in gas distribution systems in Missouri is also worthy of the Commission's consideration, Staff believes because IIF is a private fund, and therefore, there is no publicly-available information available on its investment in Summit Utilities, it is of the utmost importance for IIF, Summit Utilities and SNG to be transparent when applying for rate increases in Missouri. This would certainly help with developing fair and reasonable rates for its Missouri gas distribution systems.

Mr. Lawler provides testimony regarding how SNG is financed and his belief that even if debt associated with the Lake of the Ozarks is removed, a capital structure with close to 60 percent equity is appropriate. Although his approach may add up mathematically, this is not how capital structures are determined for purposes of determining required returns. There is clear evidence that the Company believes its established districts should be able to support a capital structure that contains 40 percent equity and 60 percent debt. Because of SNG's growth initiatives, its current capital structure is not consistent with the capitalization Summit Utilities and its ultimate owner, IIF, considers appropriate for its established systems. The ratepayers of SNG's established systems should not pay a higher revenue requirement because SNG has to maintain more common equity to support its growth initiatives. Only companies that have too much market power, such as a natural monopoly, would be able to increase prices in one region or for another product line, in order to reduce

the price charged for another region or another product line. The purpose of regulating utility rates is to ensure that utilities do not abuse this market power and charge higher rates than could otherwise be charged in a competitive environment.

DISCOVERY ISSUES

Q. In your rebuttal testimony, you indicated that you may file supplemental rebuttal testimony if you received responses to the data requests the Commission compelled the Company to provide by July 2, 2014. Have you received responses to these data requests?

A. Yes.

Q. Why didn't you file supplemental rebuttal?

A. Because Staff did not receive complete responses until about a week before the surrebuttal due date. Consequently, Staff decided it would just discuss this information in its surrebuttal testimony.

RICK H. LAWLER

Q. Mr. Lawler characterizes your capital structure recommendation as a "projected capital structure." Do you agree with this characterization?

A. No. My capital structure recommendation is better characterized as a hypothetical capital structure. My hypothetical capital structure recommendation is based on SNG's own indications in past finance cases and data request responses in this case that SNG's established natural gas distribution districts should be able to support a debt ratio of 60 percent. Additionally, because SNG has a sister company, Colorado Natural Gas ("CNG") that is not embarking on significant expansion as SNG is doing in the Lake of the Ozarks, Staff believes that CNG is a fair proxy for what SNG's capital structure would have

been absent this expansion. Consequently, Staff recommended a hypothetical capital structure consistent with how SNG's established operations would have been capitalized absent expansion into Lake of the Ozarks.

Q. Mr. Lawler implies that SNG and CNG are significantly dissimilar entities in terms of maturity and degree of operational risk. Do you agree with Mr. Lawler's assessment?

A. No, not at least as it relates to SNG's legacy operations before expansion into the Lake of the Ozarks. While it is true that some of SNG's other districts haven't reached full penetration rates, this does not mean the investor views the risks of SNG as being significantly dissimilar than that of CNG. In fact, based on the attachment provided in response to Staff Data Request No. 137, **_____

_____

_____ **.

Q. Mr. Lawler indicates that until SNG's sustainable earnings before interest, taxes, depreciation, and amortization ("EBITDA") streams can support debt issued at a multiple of 5 times EBITDA, SNG will not be able to issue the amount of debt that would result in a 60 percent debt ratio. What it the problem with Mr. Lawler's conclusion in this statement?

A. Mr. Lawler fails to mention that SNG's current EBITDA results are not only influenced by the expansion into the Lake of the Ozarks, but they are also influenced by the Company's strategy to charge lower rates in districts in which it is trying to capture market share. This is the very reason why it is not producing EBITDA on a consolidated basis to support a debt ratio of 60 percent. Unfortunately, it is very difficult to disaggregate SNG's financial data to show the EBITDA each district generates. Staff concludes that, at least for

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the Rogersville and Gallatin districts, because the Company believes it can charge for all plant and expenses in these districts which have been in existence for many years, these districts' could support a 60 percent debt ratio.

Q. On page 7, line 16 through page 9, line 5 of his surrebuttal testimony, Mr. Lawler discusses several restrictions currently included in a $100 million loan outstanding at SNG. Why did SNG take out this loan?

A. SNG decided to enter this loan agreement mainly for the purposes of expanding into the Lake of the Ozarks. While it is true that $43 million of the proceeds were used to refinance a bridge loan issued for purposes of completing the Missouri Gas Utility ("MGU") and Southern Missouri Natural Gas ("SMNG") merger, this was not the impetus for taking out the $100 million, 3-year term loan. Summit Utilities' strategic plan around the beginning of 2012 was to postpone expansion in the Lake of the Ozarks and issue debt to recapitalize SNG and establish a permanent capital structure, which was expected to consist of 60 percent debt and 40 percent equity. Summit Utilities' had the same strategic plan around the same time for SNG's sister subsidiary, CNG. Because CNG did not embark on any additional expansion, it executed its recapitalization plan. However, because Summit Utilities changed its mind and decided to go forward with the Lake of the Ozarks expansion, Summit Utilities decided to extend the temporary financing at SNG for another three years. Consequently, because the Lake of the Ozarks' financials are now commingled with the rest of SNG's operations, it is difficult to know for sure how much debt SNG's operations could have supported if it had not expanded into the Lake of the Ozarks. Staff believes the evidence provided in SNG's prior applications for financing, coupled with the knowledge that CNG was able to execute on the recapitalization strategy that was developed at the same time, supports the use of the hypothetical capital structure Staff recommended.

JIM M. ANDERSON

Q. What areas of your testimony does Mr. Anderson address in his rebuttal testimony?

A. Mr. Anderson addresses almost every aspect of my recommendation, with primary emphasis on my ROE recommendation.

Q. Did Mr. Anderson address your capital structure recommendation?

A. Yes. Although this is at the end of his testimony, because I just addressed this issue with Mr. Lawler, I will address it first when responding to Mr. Anderson's testimony.

Capital Structure

Q. Mr. Anderson implies that your recommended capital structure will unfairly reduce the amount of net income available to shareholders by effectively reducing the ROE to 6.37 percent. How do you respond?

A. While I understand Mr. Anderson's logic that not allowing a return on actual equity invested results in a lower amount of revenue for shareholders, the flip side of Mr. Anderson's argument is that ratepayers from SNG's existing districts would be unfairly subsidizing the need for higher income to fund the additional equity needed to support districts that are lagging in their performance. As SNG's (and both predecessor companies MGU and SMNG) certificate cases have consistently been conditioned on the shareholder carrying the burden of risks due to expansion, it is important to ensure that there are no soft dollar cost shifts to ratepayers from the more established districts. Staff believes the best way to ensure this is to set the capital structure based on how SNG had planned to capitalize its operations before expansion into the Lake of the Ozarks.

Q. On page 16 of his testimony, Mr. Anderson proposes an allocation process to attempt to segregate the capital invested in SNG's legacy districts as compared to capital invested in the Lake of the Ozarks district. How do you respond?

A. I appreciate Mr. Anderson's attempt to remove the capital invested in the Lake of the Ozarks, but his attempt seems to ignore some of the fundamental financial principles he and Mr. Lawler emphasize throughout their rebuttal testimonies. Based on Mr. Anderson's proposed allocation methodology, $53 million of the $100 million of debt issued in 2013 would be allocated to the Lake of the Ozarks. This would imply that the remaining $37 million of capital needed to build-out the Lake of the Ozarks system was funded by equity capital. This results in an implied capital structure for the Lake of the Ozarks consisting of 59 percent debt and 41 percent equity, which is the very capital structure that Summit Utilities' planned to have for SNG if it hadn't expanded into the Lake of the Ozarks. Clearly Mr. Anderson's process of assigning the capital as it is spent violates the basic tenets of risk and return, which requires more equity to support the new systems as opposed to the established systems.

Q. Is Staff aware of any information that may be helpful for the Commission to consider as an alternative to the Staff's and the Company's recommended capital structures in this case?

A. Yes. In response to Staff Data Request No. 137, the sole shareholder of Summit Utilities, IIF, provided information from its auditor, KPMG, regarding the cost of equity it used to estimate the fair value of its investment in Summit Utilities. In order to estimate the cost of equity for purposes of estimating the fair value of IIF's equity investment, KPMG had to select a capital structure Summit Utilities plans to target on a

permanent basis. The capital structure KPMG used to estimate the value of the equity investment in Summit Utilities was ** _____ **.

Q. Are there any other adjustments Staff would propose based on the consideration of this alternative capital structure?

A. Yes. Staff would further propose that CNG's embedded cost of debt be used as a proxy for SNG's cost of debt. This cost of debt is 5.37 percent (see Schedule DM-1). Using this alternative capital structure with a 5.37 percent cost of debt results in a rate of return range of 7.14 percent to 7.54 percent (see Schedules DM-2).

Cost of Equity

Q. Does Mr. Anderson provide any persuasive information in his rebuttal testimony regarding your cost of common equity estimate to cause you to change your recommendation in this case?

A. No.

Q. Is any of the information Staff received as a result of Commission-ordered responses useful for purposes of assisting the Commission with determining a fair and reasonable ROE in this case?

A. Yes. After IIF was directed by the Commission to comply with certain Staff discovery requests, Staff discovered cost of equity estimates used by IIF's auditor, KPMG, for purposes of reporting the fair value of IIF's equity investment in Summit Utilities. The aggregate cost of equity estimate for Summit Utilities was ** _____ **.

Q. How did KPMG arrive at this cost of common equity estimate for Summit Utilities?

A. ** _____

_____

[redacted] **

Q. What risk premium adjustments did KPMG make to the baseline industry cost of equity to consider risks specific to Summit Utilities?

A. KPMG made a weighted-average **_ ** basis point adjustment for Summit Utilities' expansion and regional rate case risk specific to all of Summit's operations other than Maine (risks specific to Missouri and Colorado). KMPG made a weighted-average **__ ** basis point adjustment for risks specific to Maine. Finally, KPMG added a range of **_____ ** basis points for "General Company Risk."

Q. After adding all of these risk premium adjustments, what is KPMG's mid-point cost of equity for Summit Utilities?

A. **_____ **.

Q. Do you know how KMPG arrived at the "General Company Risk" adjustment of **_____ ** basis points?

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A. No. It was not clear from the documentation Staff received how KPMG quantified the ** _____ ** basis point adjustment. Staff followed up with Staff Data Request No. 137.2 to inquire as to IIF's knowledge regarding how this risk premium was quantified. SNG response was that it did not have this information.

Q. You indicated that some of the risk premium adjustments were based on weighted averages. Why were some of the risk premiums weighted?

A. KPMG separated its risk premium adjustments based on risks associated specifically with Maine and risks associated with Summit Utilities as if Maine was not included. KPMG assigned 50 percent weight to each risk premium adjustment based on an average estimate of EBITDA for Maine and Summit Utilities without Maine.

Q. How would this impact the risk premium that would be applied to Summit Utilities assuming Maine is not included?

A. The weighted-average regional and rate case risk premium adjustment would need to be doubled. This would result in a ** ___ ** basis point adjustment for Summit Utilities.

Q. What would the company-specific risk premium be for Summit Utilities after you made the necessary adjustment to eliminate Maine?

A. **___ ** basis points.

Q. What is the resulting cost of equity for Summit Utilities?

A. **_____ **.

Q. How does your baseline natural gas distribution industry cost of equity compare to that estimated by KPMG?

A. Staff's mid-point estimated cost of equity was 8.3 percent.

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Q. How does this compare to Mr. Anderson's baseline natural gas distribution industry cost of equity estimate?

A. Mr. Anderson's baseline natural gas distribution industry cost of equity estimate was 10.6 percent based on an average of three methods: the CAPM (9.1 percent), DCF (10.2 percent) and a total return method (12.5 percent).

Q. If you add the ** ___ ** basis point adjustment to your industry cost of equity estimate and Mr. Anderson's cost of equity estimate, what cost of equity is implied for Summit Utilities without Maine?

A. Adding ** ___ ** basis points to my industry cost of equity results in a cost of equity estimate of ** _____ **. Adding the same to Mr. Anderson's industry cost of equity estimate, results in a cost of equity estimate of ** _____ **.

Q. Assuming the Commission accepts the fact that KPMG's baseline industry cost of equity estimate proves Staff's baseline industry cost of equity estimate of 8.3 percent is reasonable, what is the biggest remaining issue remaining as it relates to estimating the cost of equity?

A. The appropriate risk premium to apply to the baseline industry cost of equity. Staff suggests a 200 basis point adjustment is appropriate, whereas Mr. Anderson believes the adjustment should be as high as 5.1 percent. Staff believes just the mere fact that KPMG's risk premium adjustment (excluding Maine) is approximately ** _____ ** indicates the reasonableness of Staff's risk premium adjustment as compared to Mr. Anderson's risk premium estimate of 5.1 percent.

Q. Assuming you had used a range of risk premiums based on an assumed rating of 'BB' and 'BBB' rather than an average of the spreads for 'BB' and 'BBB' rated bonds, what risk premium spread would be implied?

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A. A spread of 77 to 322 basis points. The bond yields increase dramatically for debt rated below investment grade. The much higher range between bond yields for entities rated below investment grade makes it harder to estimate the cost of equity for these companies. However, as Staff explained in its testimony, the fact that CNG was able to issue long-term debt with an interest rate of around 5.5 percent implies that Summit Utilities and at least CNG and SNG are not viewed as being well below investment grade, as Mr. Anderson would suggest.

Q. On page 7, lines 1-7 of his rebuttal testimony, Mr. Anderson indicates the spread between 'A' rated bonds and 'B' rated bonds was 329 basis points as of July 1, 2014. This spread is similar to the average spread between 'A' rated bonds and 'BB' rated bonds for the months you analyzed. What is the average recent spread between 'A' rated 30-year utility bonds and 'BB' rated 30-year utility bonds?

A. For the three months ended through July 31, 2014, the monthly average spread is approximately 231 basis points.

Q. What was the average spread between 'A' rated 30-year utility bonds and 'B' rated 30-year utility bonds for the same period?

A. 356 basis points.

Q. What does this recent spread data imply about the capital markets in general?

A. The risk premium to invest in riskier assets has decreased in the last few months. At the beginning of the year the spread between 'A' rated 30-year utility bonds and 'BB' rated utility bonds was approximately 90 basis points higher (322 – 231). The recent spread between 'A' rated bonds and 'B' rated bonds has also declined since the beginning of the year. The spread has dropped by about 60 basis points (418 – 356).

Q. How should this information be considered for purposes of this case?

A. This information should be considered in determining the reasonableness of Staff's risk premium adjustment of 200 basis points. Assuming SNG's existing districts have a risk profile consistent with a rating as low as a 'BB' rating, Staff's 200 basis point adjustment seems fairly reasonable considering the fact that the spread between 'A' rated bonds and 'BB' rated bonds is now 231 basis points.

Q. On page 4 of his rebuttal testimony, Mr. Anderson indicates that your 200 basis point adjustment is based on the difference between CNG's interest rate on debt it issued and that of 'A' rated bonds. Did he misunderstand your testimony?

A. Yes. The 200 basis point adjustment Staff made was based on the average spread between 'A' rated bond yields and the average yield for 'BBB' and 'BB' bonds.

Q. Mr. Anderson indicates he could not find a source or reference for Staff's calculated adjustment. Did Staff provide this information to the Company?

A. Yes. Staff provided the spreadsheet supporting its 200 basis point adjustment with its work papers. Staff calculated the average bond yields for 30-year bonds for February through April 2014. The average 'A' rated 30-year utility bond yield for this period was 4.51 percent. The average 'BBB' rated 30-year utility bond yield for this period was 5.28 percent. The average 'BB' rated 30-year utility bond yield for this period was 7.72 percent. The average spread between the 'A' rated yields and the 'BBB' rated yields was 77 basis points (5.28 percent - 4.51 percent). The average spread between the 'A' rated yields and the 'BB' rated yields was 322 basis points (7.72 percent - 4.51 percent). The average of the two spreads ((322 + 77)/2) is approximately 200 basis points. Staff used BondsOnline for purposes of extracting this yield information.

Q. Although you did not compare CNG's bond yield to the average bond yield of 'A' rated utilities as Mr. Anderson thought you did, does this comparison provide insight on the potential credit rating of CNG?

A. Yes. Based on additional information SNG provided to Staff, Staff determined that CNG issued 20-year debt in October 2012. CNG issued this debt at a fixed rate of 5.5 percent. While each debt issuance may differ in its specific terms and conditions, it is useful to look at the average yield on utility bonds during the period in which CNG issued its debt in order to provide an informed opinion as to the credit standing the debt investor assigned to CNG when determining an appropriate interest rate to assign to the debt.

The average yield on 'BB' rated 30-year utility bonds was 6.87 percent for October 2012. The average yield on 'BB' rated 10-year utility bonds was 5.35 percent in October 2012. The average yield on 'B' rated 30-year utility bonds was 8.88 percent for October 2012. The average yield on 'B' rated 10-year utility bonds was 7.90 percent for October 2012. This data clearly implies that at least CNG was viewed as being consistent with at least a 'BB' rating.

Q. What credit rating does Mr. Anderson believe SNG would be assigned if it were rated?

A. 'B'.

Q. Does Mr. Anderson believe SNG's credit rating would be similar to that of CNG?

A. No.

Q. Does Mr. Anderson provide an opinion as to what CNG's credit rating might be?

A. No. Staff Data Request No. 0227 (see Highly Confidential Schedule 4) requested whether Mr. Anderson had estimated a credit rating for CNG and he responded he had not, but he did indicate that he believes the financial data proves that SNG's cost of capital should be higher than that of CNG's.

Q. Did Mr. Anderson provide any detail regarding the reasons SNG's financials are not as healthy as CNG's?

A. No, but based on his response, it appears he used some type of approach to attempt to disaggregate the Lake of the Ozarks financial information from the SNG districts subject to this rate case.

Q. Had Staff requested this disaggregated financial information before so it could try and evaluate how SNG's financials may have looked absent the blending of the Lake of the Ozarks financial information?

A. Yes. Staff had requested this information prior to filing its Cost of Service Report. Staff issued Data Request No. 0178.1 on May 7, 2014, specifically requesting SNG's financial information disaggregating information related to the Lake of the Ozarks. The Company simply provided consolidated financial information which included all of SNG's districts.

Q. What will Staff need to do if the Company introduces disaggregated financial information in its surrebuttal testimony?

A. Potentially file supplemental surrebuttal testimony as it is clear that Staff considered this information relevant in evaluating an appropriate capital structure for this case.

Staff's supplemental surrebuttal would address the methodology the Company used to disaggregate this information and provide Staff's opinion as to whether the Commission can

rely on the methodology, rely on the methodology with adjustments or not rely on the methodology at all. Staff would also need to verify whether this information can be further disaggregated by district to determine which districts are causing the lower EBITDA performance. If the Branson and Warsaw districts are underperforming, then it may be reasonable to charge those districts with a higher cost of capital than Rogersville and Gallatin because these districts are well established.

Q. Were you attempting to estimate SNG's credit rating when you evaluated CNG's cost of debt information?

A. No.

Q. For what purpose were you evaluating CNG's cost of debt information?

A. I was attempting to determine a proper hypothetical cost to apply to SNG's current rate districts as if SNG had not expanded into the Lake of the Ozarks. Many of the stringent covenants contained in SNG's current loan agreement are due to the fact that this loan was taken out mainly for purposes of expanding into the Lake of the Ozarks. The additional risks caused by this expansion should not be included in the cost of capital charged to SNG's other districts.

As I stated in the Cost of Service Report and in my rebuttal testimony, the Company represented to Staff in Case No. GO-2012-0102 (filed at the end of the 2011 calendar year) that it expected to receive a 5.50 percent interest rate on debt under the scenario in which it recapitalized the Company and postponed expansion into the Lake of the Ozarks. Being that this rate is similar to the cost of debt CNG achieved, it is reasonable to use this as a proxy for purposes of what SNG's cost of capital would have been for the districts subject to this rate case.

Q. Is it also reasonable to assume that SNG's credit rating would have been similar to that of CNG if SNG had not pursued expansion into the Lake of the Ozarks?

A. Yes. If SNG's expected interest cost was similar to what CNG actually achieved in 2012, then it doesn't appear that debt investors were assigning much more risk to SNG's operations as compared to CNG's operations.

Q. Is there any evidence that even with SNG's expansion into the Lake of the Ozarks, SNG's additional risk is not material enough to require a higher return to be assigned to it?

A. Yes. For purposes of reporting the value of its investment to investors, ** _____ _____ _____ _____ _____ _____ _____ **

Q. Has Mr. Anderson communicated to Staff through any recent responses to Staff Data Requests his opinion on SNG's potential credit rating?

A. Yes. In response to Staff Data Request No. 228 (see Highly Confidential Schedule 5), Mr. Anderson provides an estimate of SNG's potential credit rating if it were rated by Moody's. Being that this methodology requires some fairly subjective determinations, it is fairly difficult to conclude that an individual's application of this methodology will result in the credit rating Moody's would actually assign.

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Q. Did Mr. Anderson use Moody's most up-to-date guidelines for purposes of his analysis?

A. No. As of January 2014, Moody's updated its credit rating methodology. At the time Moody's updated its rating methodology, it upgraded the credit ratings of most all U.S. utilities by one notch due to its view that U.S. utility regulation has become more creditor friendly due to various regulatory mechanisms that have been allowed over the last several years. I have attached to my surrebuttal testimony, the announcement of the proposed refinements Moody's made to its methodology (see Schedule 6). Specifically, see Appendix A for the various factors analyzed by Moody's.

Q. Did you do a similar analysis as Mr. Anderson did to estimate a potential rating based on Moody's methodology?

A. Yes (see Highly Confidential Schedule 7). However, my analysis is based on SNG's consolidated financials, which includes Lake of the Ozarks. This analysis should not be used for purposes of estimating a fair and reasonable ROE and capital structure for the districts subject to this rate case. Staff is providing this assessment to illustrate how subjective this process is, but also to update Mr. Anderson's analysis to reflect Moody's updated methodology and also to make corrections to Mr. Anderson's assignment of lower ratings to categories in which Moody's generally assigns all utilities operating in the U.S. and Missouri the same rating.

Q. Is Factor 1 still based on one aggregate description?

A. No. It is now broken down into two factors. Factor 1a considers the legislative and judicial frameworks in which the utility operates. This subfactor should be the same for all utilities operating in the same sovereign country. Moody's assigns utilities operating in the United States an 'A2' rating for this subfactor. Factor 1b is based on the

consistency and predictability of the regulatory environment in which the company operates. This is a state-specific rating. Missouri's utilities are generally given an 'A' rating by Moody's for this category. Because Factor 1a and 1b each receive 12.5 percent in Moody's ratings methodology, this translates into a 25 percent weighting.

Q. What about Factor 2?

A. Factor 2 is also broken down into two factors. Factor 2a considers the timeliness of recovery of operating and capital costs. Missouri's gas utilities generally receive an 'A' rating for this subfactor. Missouri's integrated electric utilities generally receive a 'Baa' rating for this subfactor. Because SNG is currently in an expansionary mode with sizeable capital investments related to its current asset base, Staff believes a 'Ba' credit rating would be appropriate for SNG for this factor.

Factor 2b considers the sufficiency of rates of return. Missouri's gas utilities generally receive an 'A' rating in this category, whereas Missouri integrated electric utilities tend to receive a 'Ba' rating. Because SNG does have difficulty earning its' allowed rate of return, but due to expansionary efforts, not necessarily regulatory issues, Staff believes a Ba rating would be appropriate for SNG for this factor.

Factors 2a and 2b also receive 12.5 percent weight for a total of 25 percent.

Q. What about Factor 3?

A. Factor 3 addressed the diversification of the utility (10 percent weight). Staff does not have much guidance about how other Missouri utilities are rated in this category. Based on the qualitative descriptions Moody's provides for evaluating this category, Staff believes a Ba rating would be appropriate for SNG.

Q. What about Factor 4?

A. Factor 4 receives 40 percent of the overall weight for Moody's credit rating analysis. Factor 4 addresses the quantitative aspect of an entity by evaluating four financial ratios that provide insight regarding the entity's leverage and ability to service the fixed obligations that arise from this leverage. Many of these ratios are fairly similar to those that S&P analyzes when it evaluates a company's financial risk.

Staff's evaluation of SNG's credit ratios has not disaggregated any impact of the Lake of the Ozarks on SNG's financials. If the Company provides sufficient information in its surrebuttal testimony that allows Staff to disaggregate this information and determine what SNG's financial ratios may have looked like without the Lake of the Ozarks, Staff will provide this information either in supplemental surrebuttal or at the evidentiary hearing in this case.

Based on information SNG provided in response to Staff Data Request No. 178.1 (see Highly Confidential Schedule 7), the Company's cash flow as a percentage of debt is or is expected to be consistent with the benchmarks for an entity rated 'Ba'. This is also true for the Company's cash flow after dividends as a percentage of debt. SNG's interest coverage ratios are consistent with the benchmarks for a 'Baa' rating. Finally, SNG's current debt-to-total capitalization ratio and next year's debt-to-total capitalization ratio are consistent with an A rating.

Q. After assigning the weights to the ratings you assigned to all of Moody's categories, what indicated rating have you determined?

A. Baa2 to Baa3 (see Highly Confidential Schedule 7).

Q. Is this the rating you recommend the Commission use for purposes of determining a fair and reasonable ROE and capital structure in this case?

A. No. I still believe the best way to approach estimating SNG's cost of capital is to use a hypothetical capital structure and the inferred credit rating based on CNG's cost of debt.

Q. Even if the Commission were to use SNG's estimated credit rating, whether it is your estimate or Mr. Anderson's estimate, do any adjustments need to be made to this estimated credit rating?

A. Yes. I still propose that if the Company provides financial data in its surrebuttal testimony that provides a reasonable approach to remove Lake of the Ozarks financial data, that the estimated credit rating be based on this hypothetical situation.

Q. Isn't it likely that because you assume more leverage than that actually carried by SNG, the indicative rating would be lower?

A. Yes. More than likely, most of the financial ratios would be consistent with a 'Ba' rating. Consequently, the determination of the overall rating would be based on assigning values for Factors 2 and 3, which are more subjective in nature. However, being that the cost of debt for CNG with this leveraged capital structure was not consistent with a rating any lower than 'Ba', Staff does not believe debt investor's would assign anything lower than a 'Ba' rating to SNG for Missouri's regulatory environment. If SNG is rated any lower for qualitative factors, this would be due to concerns about meeting customer count goals.

Q. On page 10, line 2, through page 11, line 1 of his rebuttal testimony, Mr. Anderson criticizes your use of data for the cost of equity that falls beyond the updated test year in this case. How do you respond?

A. Quite frankly, I don't believe this has been an issue in any case in which I have sponsored testimony. It is simply a matter of practice to try and provide the most up to

date cost of equity information possible for purposes of setting the allowed ROE. The cost of common equity is determined by evaluating capital market information, which does not depend on the books and records of the Company. Consequently, Staff, and most other parties for that matter, have always used the most up to date information possible to estimate the cost of common equity.

Q. On page 11 of his rebuttal testimony, Mr. Anderson provides information that he believes proves the cost of common equity has increased for utilities since January 2008. What are the flaws in Mr. Anderson's analysis that causes him to make this conclusion?

A. First, Mr. Anderson compares changes in the earnings per share and dividend payout ratio of his proxy group to an entirely different index, the Dow Jones Utility Average ("DJUA"). Even if there was an increase in the cost of common equity, this cannot be inferred by comparing financial data from one proxy group to the capital market data of another proxy group.

The DJUA only includes one company that is included in Mr. Anderson's natural gas utility proxy group, NiSource, and this company only derived 38.95 percent of its operating income from its gas distribution operations. The remaining 14 companies in the DJUA are either diversified energy companies, pipeline companies, electric utilities, or power companies. Only 6 of the electric utilities are defined as pure play regulated utilities by the Edison Electric Institute, meaning more than 80 percent of their holding company assets are regulated.

Q. In your rebuttal testimony, did you evaluate the relative valuation of Mr. Anderson's proxy group over the period he evaluated for purposes of determining the total return for the proxy group?

A. Yes. On page 24 of my rebuttal testimony, I provide a graph of the price-to-earnings ratios of Mr. Anderson's proxy group for the period December 31, 2007 through July 1, 2014. This graph clearly shows that the valuation levels of his gas distribution proxy group have gone up considerably in the last couple of years. The price-to-earnings ratios have been in the 18x to 20x range since the beginning of 2012, whereas they were generally trading in the 14x to 18x range before this period.

Q. Because Mr. Anderson compared his natural gas distribution proxy group to the DJUA, he concluded that investors in his gas distribution proxy group experienced capital losses. Is this correct?

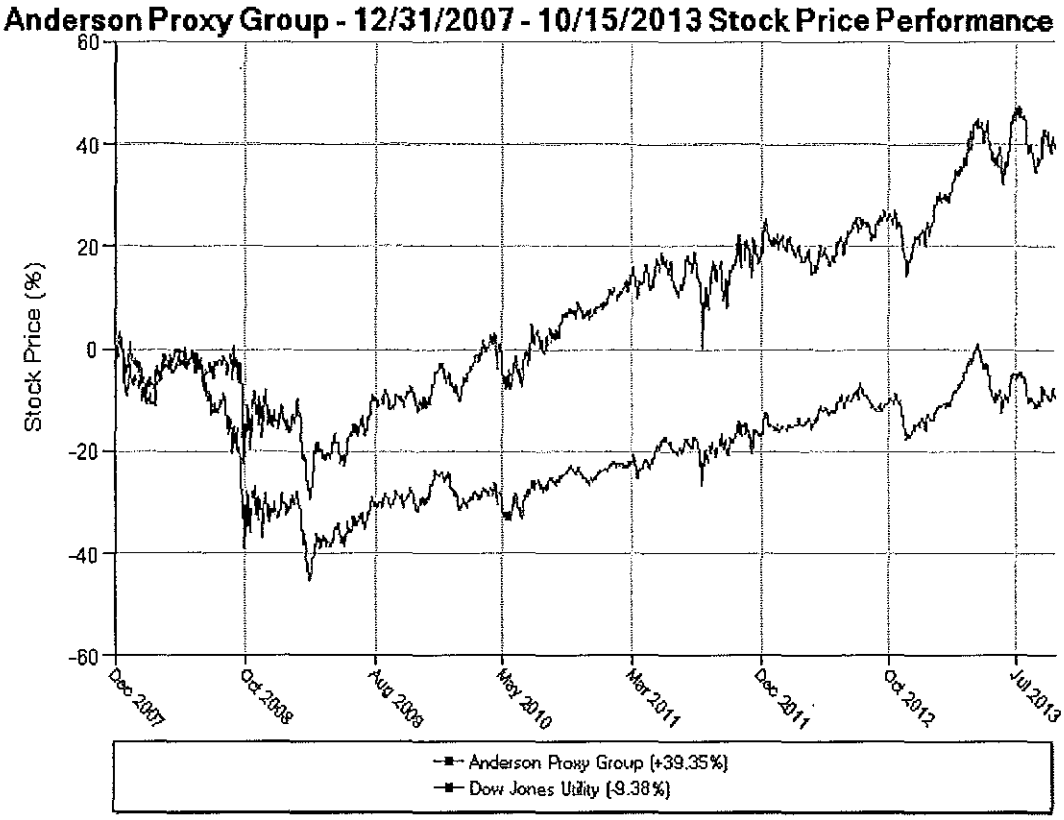
A. No. As I explained earlier, the DJUA is made up of a fairly diverse group of companies that are not all pure-play regulated utilities. Mr. Anderson's use of this index to draw conclusions on the cost of equity for regulated natural gas distribution companies is flawed. My analysis, shown in Schedules DM-4 and DM-5 attached to my rebuttal testimony, shows that his natural gas distribution proxy group experienced a capital gain of approximately 40 percent.

Q. Should Mr. Anderson have been aware of this fact before he wrote his rebuttal testimony?

A. Absolutely. His total return methodology required him to compile data on each of his proxy company's stock prices over the period he analyzed. He could have simply used this information to determine the capital gains for his proxy group over this same time period.

Q. Have you compared the capital gains of Mr. Anderson's proxy group to that of the DJUA?

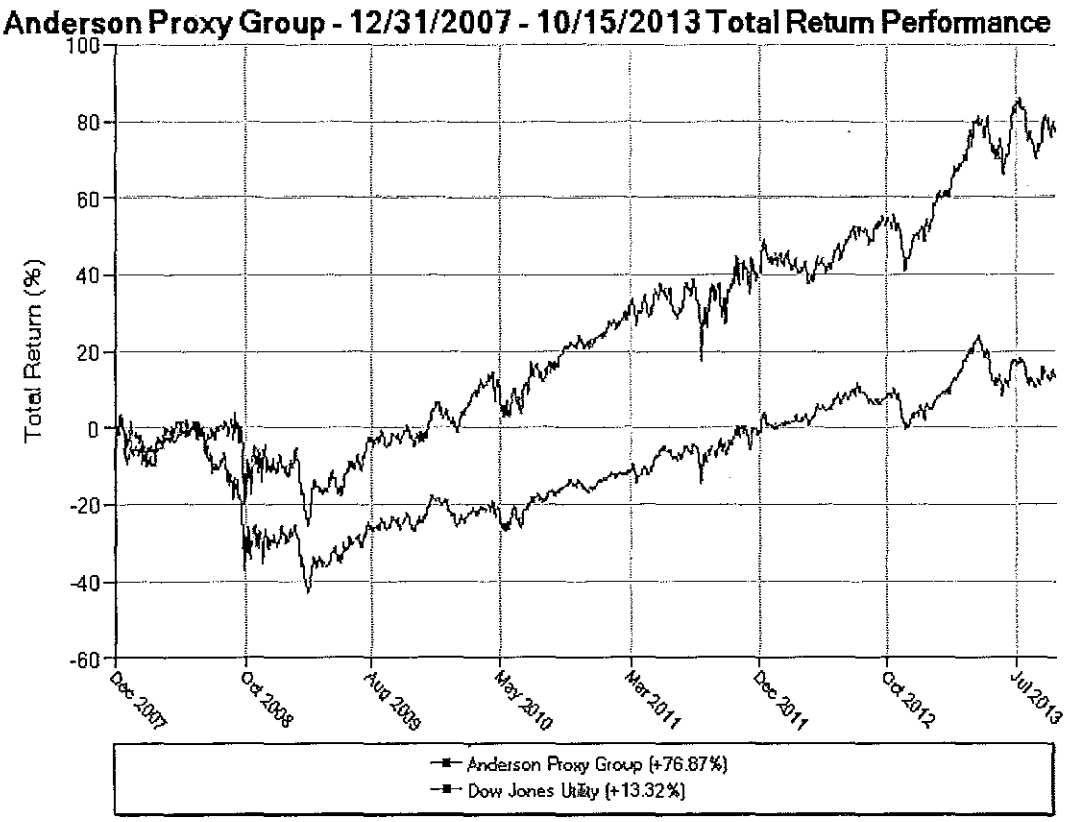
A. Yes. As one can see in the graph below from SNL Financial, the DJUA declined by 9.38 percent over the period Mr. Anderson analyzed, while his natural gas distribution proxy group increased by 39.35 percent:



Q. What about total returns?

A. Yes. The following graph also shows how much higher the total returns have been for the natural gas distribution industry compared to the DJUA:

continued on next page



Q. If stock market returns have been higher for the regulated gas distribution industry, then why does this support a lower allowed return on equity in a utility rate case?

A. The higher than normal returns for the gas distribution industry have been driven by an expansion of price-to-earnings ratios. The expansion of the price-to-earnings ratios for regulated utility stocks have been driven by low interest rates, which have caused investors to bid up prices of other assets in search of yield. Investors are willing to pay more (utility stocks more expensive to the investor) for utility stocks because the returns available in the fixed-income market are low. If investors are willing to pay a higher premium for utility stocks, this translates into a lower cost of equity for sellers of the equity, i.e. utility companies.

Q. Is the inverse relationship between utility valuation levels and interest rates widely recognized by investors?

A. Yes. For example, the following was stated in a recent article in Fortune magazine:

> The first red flag is the sector's rich valuation. Goldman Sachs utilities analyst Michael Lapides, who recently downgraded the group from neutral to a cautious rating, notes that utilities are currently trading at almost 15 times estimated 2015 earnings. That's significantly above their average forward price/earnings ratio since 1990 of 13. The recent surge in utility stocks "is an opportunity to reduce exposure," he says.[1]

Q. On page 12 of his rebuttal testimony, Mr. Anderson claims that the Staff's Cost of Service Report states that Summit Utilities and SNG are subsidiaries of IIF. Did Staff state this in its COS Report?

A. No. Staff issued Data Request No. 230 (see Highly Confidential Schedule 8) to request what parts of Staff's testimony Mr. Anderson relied on to make this conclusion. Mr. Anderson cites Staff's testimony subsequent to Staff's description of the relationship of IIF to Summit Utilities and SNG beginning on page 14, line 14 of Staff's COS Report. I believe a plain reading of Staff's first paragraph in this section clearly indicates that IIF is the sole shareholder of Summit Utilities. This is no different than any other ownership structure in which a corporation is wholly-owned by one investor. This does not imply a subsidiary/parent company relationship. Staff has clearly stated that IIF is the sole shareholder of Summit Utilities and therefore, it is also the sole owner of SNG, being that SNG is wholly-owned by Summit Utilities.

[1] "Don't Get Tangled Up in Utilities: The Dowdy Sector is Suddenly Hot With Investors Craving Yield and Stability, Here's a Better Option," Janice Revell, May 19, 2004, p. 62, Fortune.

Q. Mr. Anderson goes on to state that IIF's interest in Summit Utilities is exactly the same as Vanguard Group Funds' $806.9 million investment in Ameren Corporation or American Century Funds' $146 million investment in Laclede Group. Do you agree?

A. No. IIF is the sole shareholder in Summit Utilities. As of March 31, 2014, Vanguard's investment in Ameren represented 8.17 percent of the total shares outstanding. As of the same date, American Century Funds' investment in Laclede Group represented 6.96 percent of the total shares outstanding.[2]

As minority investors in Ameren's and Laclede's equity, Vanguard and American Century do not have control of strategic decisions made by each company's board of directors. IIF has direct control over capital investment decisions made by Summit Utilities. If IIF does not provide the capital, then certain projects would not move forward. While the officers and management as Summit Utilities may be given some autonomy on day-to-day issues, IIF will exert control when it needs to if it does not believe current management is acting in its best interests.

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[2] SNL Financial.

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As the sole shareholder in Summit Utilities, IIF has the ability to exert control over Summit Utilities' operations. It will not release capital for investment in Missouri unless it believes it is an investment that will produce returns consistent with the risks incurred. Consequently, IIF's required returns to invest in Summit Utilities and how these returns compare to IIF's other investments is an important consideration in this case. While Vanguard's and American Century's required returns for Ameren and Laclede would be informative, they are only minority shareholders in these companies.

Q. Did you request information regarding IIF's current role on Summit Utilities, Inc's board?

A. Yes. SNG indicated in response to Staff Data Request No. 218.1 that it did not have this information. Consequently, Staff's conclusions about IIF's control are based on the situational aspects of how IIF exerted control in past situations.

Q. On page 14, line 14 through page 15, line 13 of his rebuttal testimony, Mr. Anderson provides his rationale as to why it is inappropriate to adopt Staff's recommended capital structure. How do you respond?

A. Mr. Anderson implies that the reason SNG cannot issue up to its targeted capital structure is because of tightening in the capital markets. Obviously, this is not the primary reason because SNG's sister company, CNG, was able to issue up to 60 percent debt

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just two years ago, which was only a couple of years after the financial crisis in 2008 to 2009. SNG did not secure longer-term, permanent debt capital because it decided to pursue expansion in the Lake of the Ozarks. Because of the uncertainty with this large expansion, the current loan agreement contains fairly restrictive covenants, which includes, but is not limited to requiring IIF to make additional equity capital contributions if SNG's debt/EBITDA ratio does not meet certain thresholds. Although these restrictive covenants do show the debt investors' concern about the higher risk associated with providing capital to SNG, these covenants would not have been placed on SNG if it had simply recapitalized the Company and held off on expansion into the Lake of the Ozarks.

SUMMARY AND CONCLUSIONS

Q. Please summarize the conclusions of your Surrebuttal Testimony.

A. My conclusions are:

1. The Company still has not provided sufficient information to prove that their proposed capital structure has not been influenced by expansion into the Lake of the Ozarks. Not only is it unfair and unreasonable to request ratepayers in other districts to pay on the equity capital invested in the Lake of the Ozarks, but it is prohibited by the CCN granted for the Lake of the Ozarks;

2. Mr. Anderson's rebuttal testimony in which he tries to imply the natural gas distribution industry's cost of common equity has increased rather than decreased since January 2008 is based on inappropriate and flawed comparisons. Mr. Anderson's suggestion that the natural distribution industry's cost of common equity has gone up over a period of declining rates is contrary to the fundamental inverse correlation of utility stock prices to interest rate levels. Consequently, his use of a 12.5 percent total return diminishes rather than improves his cost of equity estimate.

3. My natural gas distribution cost of equity estimate is corroborated by IIF's own auditor. Mr. Anderson's estimate is approximately 250 basis points higher;

4. While the risk premium to apply to the industry cost of equity is certainly a matter of informed judgment, the approach and the amount of my risk premium adjustment is much more in line with other practitioners in the field of investing;

5. The Commission should accept my gas distribution industry cost of common equity estimate and make a decision on the appropriate risk premium adjustment based on the evolving evidence presented in surrebuttal and at the evidentiary hearing.

Q. Does this conclude your surrebuttal testimony?

A. Yes, it does.

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Summit Natural Gas of Missouri Inc.'s Filing of Revised Tariffs To Increase its Annual Revenues For Natural Gas Service	))))	Case No. GR-2014-0086

AFFIDAVIT OF DAVID MURRAY

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

David Murray, of lawful age, on his oath states: that he has participated in the preparation of the foregoing Surrebuttal Testimony in question and answer form, consisting of 30 pages to be presented in the above case; that the answers in the foregoing Surrebuttal Testimony were given by him; that he has knowledge of the matters set forth in such answers; and that such matters are true and correct to the best of his knowledge and belief.

David Murray

Subscribed and sworn to before me this 8th day of August, 2014.

D. SUZIE MANKIN
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: December 12, 2016
Commission Number: 12412070

Notary Public

SUMMIT NATURAL GAS OF MISSOURI, INC.
CASE NO. GR-2014-0086

Colorado Natural Gas Cost of Long-Term Debt
as of December 31, 2013

		Amount Outstanding	Annual Cost
Bonds and Unsecured Notes Series:			
5.5% Debt	5.50%	$ 32,300,000	$1,776,500
5.2625% Debt	5.26%	26,740,000	$1,407,193
5.096% Debt	5.10%	5,104,750	$260,138
Total		**$64,144,750**	**$3,443,831**
Cost of Long-term Debt			**5.37%**

Source : Summit Utilities' 2013 Annual Audited Financial Statements

SUMMIT NATURAL GAS OF MISSOURI, INC.
CASE NO. GR-2014-0086

Weighted Average Cost of Capital
for Summit Natural Gas of Missouri

Capital Component	Percentage of Capital	Embedded Cost	Weighted Cost of Capital Using Common Equity Return of: 9.80%	10.30%	10.80%
Common Stock Equity	45.00%	-----	4.41%	4.64%	4.86%
Long-Term Debt	55.00%	5.37%	2.95%	2.95%	2.95%
	100.00%		**7.36%**	**7.59%**	**7.81%**

SCHEDULE DM-3

HAS BEEN DEEMED

HIGHLY CONFIDENTIAL

IN ITS ENTIRETY

SCHEDULE DM-4

HAS BEEN DEEMED

HIGHLY CONFIDENTIAL

IN ITS ENTIRETY

SCHEDULE DM-5

HAS BEEN DEEMED

HIGHLY CONFIDENTIAL

IN ITS ENTIRETY

MOODY'S
INVESTORS SERVICE

REQUEST FOR COMMENT

Proposed Refinements to the Regulated Utilities Rating Methodology and our Evolving View of US Utility Regulation

Table of Contents:

Analyst Contacts:

NEW YORK +1.212.553.1653

Michael G. Haggarty +1.212.553.7172
Senior Vice President
michael.haggarty@moodys.com

Bill Hunter +1.212.553.1761
Vice President - Senior Credit Officer
william.hunter@moodys.com

Jim Hempstead +1.212.553.4318
Associate Managing Director
james.hempstead@moodys.com

William L. Hess +1.212.553.3837
Managing Director - Utilities
william.hess@moodys.com

>>contacts continued on the last page

Introduction

We are seeking market feedback on a number of refinements that we are proposing to make in an update to our Regulated Electric and Gas Utilities Rating Methodology, which was last published in August 2009. The proposed updated rating methodology will continue to have a particular focus on regulatory risk and financial performance. The grid that is part of the proposed updated rating methodology is comprised of the same four factors as the existing grid: regulatory framework, ability to recover costs and earn returns, diversification, and financial strength. However, it will provide additional granularity on individual factor scores, add new sub-factors, and increase the relative weighting of the financial metrics when determining the grid-indicated rating. We do not expect that implementation of the proposed refinements will lead to any changes in current ratings.

On a separate issue, we are also seeking market commentary on our evolving view of the credit supportiveness of the US utility regulatory framework. Based on our observations of trends and events, we propose to adopt a generally more favorable view of the relative credit supportiveness of the US utility regulatory environment. Our updated view considers improving regulatory trends that include the increased prevalence of automatic cost recovery provisions, reduced regulatory lag, and generally fair and open relationships between utilities and regulators. While US state regulatory environments have been characterized by a process that is more openly adversarial than some other global jurisdictions, there have been very few instances where eventual regulatory outcomes deviated enough from the established regulatory framework to severely undercut utility creditworthiness. In the few instances where inconsistent regulatory decisions have led to serious credit stress, courts have proved to be a reliable secondary support for utility credit worthiness through rulings that mandate that regulatory decisions must follow the established regulatory framework.

Our revised view that the regulatory environment and timely recovery of costs is in most cases more reliable than we previously believed is expected to lead to a one notch upgrade of most regulated utilities in the US, with some exceptions. This evolving view is independent of the proposed changes in the methodology that are highlighted in the Summary section that follows, and would have taken place even if the 2009 methodology were to remain in place without modification.

Although the change of our US regulatory view does not by itself require the publication of a Request for Comment, based on an unusual confluence of factors in this instance, including the proximity in time of this change in view to an expected update in the methodology (even though the two are unrelated), the heavy weighting that regulatory factors have in our ratings as reflected in both the existing and proposed methodologies, the large number of US utilities that are potentially affected and the magnitude of debt outstanding in the sector, we think it is important to clearly communicate our developing views in this document and to solicit comments from market participants who may have interest.

We invite market participants to provide comments on this proposal and to make other suggestions for consideration by sending comments by October 23, 2013. Comments should be sent to RFC@moodys.com using the Request for Comment Form (the "RFC Response Form") available on the Request for Comment topic page on www.moodys.com. If your comments pertain to the proposed refinements to the rating methodology, please reference "Part I: Regulated Utility Methodology" in the topic line of your response. If your comments pertain to our evolving view of US utility regulation, please reference "Part II: US Utility Regulation" in the topic line of your response. The RFC response period for each of these topics will be open for at least 30 days from the date of publication of this Request for Comment.

Summary

PART I: Proposed Update of the Regulated Electric and Gas Utilities Methodology Changes to the Grid: Additional sub-factors and changes to factor weighting

» We propose to add sub-factors under Factor 1- Regulatory Framework and Factor 2- Ability to Recover Costs and Earn Returns, to provide more granularity and to better distinguish among regulated utilities. The sub-factors include Sub-factor (1a) – Legislative and Judicial Underpinnings to Regulatory Framework (12.5% weighting) , Sub-factor (1b) – Consistency and Predictability of Regulation (12.5%), Sub-factor (2a) – Timeliness of Recovery of Operating and Capital Costs (12.5%), and Sub-factor (2b) - Sufficiency of Rates and Returns (12.5%). A preliminary draft of the grid for the updated rating methodology is included in Appendix A and shows the new sub-factors.

» We propose to refine Factor 3 – Diversification to focus more on regulatory diversity and the strength of the service territory economy as the key considerations in the scoring of the Market Position sub-factor. We also propose to change the Generation and Fuel Diversity sub-factor by replacing the emphasis on carbon fuels with the broader concepts of "challenged" and "threatened" sources of generation, as detailed in Appendix B.

» The range of possible scores under each factor, previously Aaa to B, has been expanded to include the Caa rating category. The purpose is to provide greater transparency in the thinking behind our ratings for issuers at the lower end of the spectrum.

» The Liquidity sub-factor, currently weighted at 10% in the grid, will be removed from the methodology grid entirely and instead analyzed as a key rating consideration outside the grid. However, there will be no diminution in our emphasis on liquidity as a key rating driver, since it always an important credit consideration and can become the primary rating consideration if it is mismanaged or becomes problematic for a utility.

» The weighting in the grid for the four financial ratios that comprise Factor 4 – Financial Strength will increase to 40% from 30%, although the specific ratios will remain the same. Additional weighting and importance will be given to the two cash flow to debt ratios: CFO pre-WC/Debt (to 15% from 7.5%) and CFO pre-WC less Dividends/Debt (to 10% from 7.5%), with the other two ratios continuing to be weighted at 7.5%. The above-mentioned expansion of the scoring range will cause some changes in grid parameters outlined for each rating category, primarily at the lower end of the grid.

» The scoring grids, including the ranges for financial ratios, are primarily oriented toward vertically integrated utilities. We are contemplating lowering the financial ratio threshold ranges by approximately one category for certain utilities viewed as having lower business risk, for instance many US natural gas local distribution companies (LDC's) and certain US electric transmission and distribution companies (T&D's, which lack generation but generally retain some procurement responsibilities for customers). The purpose would be to better align the grid-scoring to our view, reflected in current ratings, that utilities at the same rating category level with an inherent lower business risk can have somewhat lower financial metrics. Alternately, business risk may be addressed in a different manner; for instance, by incorporating it more broadly into the qualitative factor scoring grids. Typically, lower risk utilities would be those having no electric generation assets, very strong insulation from commodity risks, good protection from volumetric risks, fairly limited capex needs and low exposure to storms, major accidents and natural disasters.

Additional summary comments about the updated rating methodology:

» As is our current practice, actual ratings of utility holding companies may be lowered by a notch or more because of structural subordination, and we are contemplating the potential of including this notching into our grid-indicated ratings to provide greater transparency. Our approach has and will consider the relative percentage of debt at the holding company versus debt at the operating subsidiaries, the diversity of holding company cash flows, the composition and materiality of non-utility businesses, and other considerations.

» We also propose to maintain our existing approach to notching between classes of debt. In most regions, we rate the senior secured debt of a utility one notch above its senior unsecured debt. However, US utility first mortgage bonds are typically rated two notches higher than the senior unsecured debt of the same issuer, given their first priority lien on critical infrastructure assets and the very high historical recovery rates for this class of debt in default situations.

The grid in the proposed methodology contains the same four factors as the existing rating methodology with the same weighting for each factor, but there are changes in the sub-factors and their weighting. We propose to assign equal weighting to four new sub-factors related to the regulatory framework and ability to recover costs and earn returns because we believe these sub-factors typically work together in approximately equal proportion as indicators of regulatory risk. These four sub-factors would still total 50% of the overall grid score, reflecting our view that the regulatory environment is the most important determinant of credit quality in the sector and generally comprises about half of the elements that are most pertinent for credit quality.

The grid in the proposed rating methodology would use the same four financial ratios but with some changes in weighting. The weighting of the two existing measures of cash flow generation relative to debt is to be increased because we believe these financial ratios are the strongest direct indicators of current capacity to service debt. The proposed 15% weight for CFO Pre-WC/Debt reflects our view that this is the single most predictive financial measure, followed in importance by CFO Pre-WC -

Dividends/Debt with a proposed 10% grid weighting. The additional weighting of these ratios is to be balanced by elimination of the separate liquidity sub-factor that has a 10% weighting in the existing grid. We propose to remove liquidity from the grid and consider it as a qualitative assessment outside the grid because its credit importance varies greatly over time and by issuer and accordingly is not well represented by a fixed grid weight. The weighting of the grid indicators for diversification are unchanged, but the proposed descriptive criteria have been refined to place greater emphasis on the economic and regulatory diversity of each utility's service area rather than the diversity of operations, because we think this emphasis better distinguishes credit risk.

As noted in the Summary above, we do not expect that implementation of the proposed refinements in the updated rating methodology will by themselves lead to any changes in current ratings.

PART II: Revised View of US Utility Regulation

» Our view of the credit supportiveness of regulatory jurisdictions around the globe is constantly evolving along with events. In most cases we would expect to simply update our view and to simultaneously make any rating changes that result. However, considering the large number of rated US utilities and the volume of their rated debt, combined with the magnitude of change in our view, we are soliciting comments on our rationale for a more favorable view of the US regulatory environment. We believe that many US regulatory jurisdictions have become more credit supportive of utilities over time and that the assessment of the regulatory environment in the US that has been incorporated in ratings may now be overly conservative.

» While we had previously viewed individual state regulatory risks for US utilities as generally being higher than utilities in most other developed countries (where regulation usually occurs at the national level), we have observed an overall decrease in regulatory risk in the US. While state regulatory jurisdictions seem to be more prone to highly visible disputes and parochial political intervention than national regulatory frameworks, which has sometimes raised concerns about regulatory consistency, we now believe that the more openly adversarial process in the US does not lead to materially less reliable regulatory outcomes for credit quality.

» There have been a number of favorable regulatory changes in recent years. For example, the increasing prevalence of riders, trackers, and other automatic cost recovery provisions in the US has reduced the amount of time between when a utility incurs and recovers costs, or "regulatory lag." These changes have happened incrementally - jurisdiction by jurisdiction or even issuer by issuer. We now believe that these changes, in aggregate, represent a significant improvement in the timeliness of cost recovery.

» We believe the majority of US utilities enjoy relatively fair and open relationships with their regulators, and that most regulators strive to maintain reliable, financially viable utilities in their states, while also balancing the needs of the state's commercial, industrial, and residential utility customers.

» There have been selected instances of regulatory and political pressure leading to financial distress for utilities in some US states, such as California, Illinois, and Maryland. However, it is noteworthy that state regulators have stopped short of triggering defaults after the experience in California where subsequent court rulings reversed regulatory actions that contributed to defaults by the two largest utilities in the state. We think regulatory decisions consider eventual judicial outcomes, and we propose to give more emphasis to the relatively consistent US judicial

framework as a factor that discourages highly inconsistent regulatory actions that would have a severe credit impact.

» Part of the evolution to our thinking is to give greater emphasis to the judicial framework into our analysis. A material number of litigated regulatory matters over the past decade could be viewed as an indication of a less supportive framework. However, the resultant body of case law has provided greater clarity into the rules of engagement for both utilities and regulators, which we view as providing a generally greater level of stability.

» We continue to believe US utilities may have more incentives to enter bankruptcy proceedings relative to similarly rated corporate issuers, due to their good track record of being able to reorganize and obtain rate relief while under the protection of federal bankruptcy courts. Nonetheless, utilities have experienced default rates that are lower than non-financial corporate issuers and much lower losses given default. This has been well documented in Moody's default and recovery studies on regulated utility debt.

» A comparison of key financial ratios used under the Regulated Electric and Gas Utilities Rating Methodology in rating utilities across several developed international jurisdictions with credit supportive regulatory frameworks (including Canada and Japan) shows that US regulated utilities in recent years have exhibited stronger financial ratios relative to similarly rated regulated international utility peers.

» We acknowledge that every regulatory framework will need to accommodate new realities and challenges that arise to confront the industry. Current examples of such challenges in the US include new nuclear construction, public policy initiatives on renewable energy, and the rise of distributed generation. However, our current view is that regulators and utilities will be able to reach reasonable agreements regarding these issues.

» As previously noted, our view of regulatory environments is constantly evolving and we normally make changes in our view and resulting rating changes without publishing a Request for Comment. We have seen a decline in the credit supportiveness of some regulatory environments that had been previously viewed as highly credit supportive. For example, we adopted a more conservative assessment for the regulatory environment and timely cost recovery for all of the Japanese utilities following the Fukushima disaster in 2011. This led to downgrades of their ratings and was reflected in lower scoring in our assessment of the regulatory and cost recovery factors in the grid.

For these reasons, we believe a more positive view of US utility regulation is warranted. This is expected to lead to a one notch upgrade of the ratings of most regulated utility credits in the US, with some exceptions. An improved view of US state regulatory frameworks is also likely to lead to higher scoring for many US utilities under the grid factors for utility regulatory frameworks and/or cost recovery provisions.

In most cases, we would expect all of the debt classes of a utility's capital structure to be upgraded by the same number of notches, although there could be some limited exceptions to this general rule. Most utility holding companies will be upgraded by the same number of notches to the extent that the upgraded regulated utility subsidiaries represent the holding company's predominant business and there are no extenuating circumstances, such as a large amount of holding company debt, substantial unregulated or other higher risk businesses, or other factors that may increase credit risk at the holding company.

While we anticipate that most US regulated utilities will be upgraded, there are issuer specific circumstances that may preclude an upgrade. These may include but are not limited to the following:

» Utilities that are part of corporate families that have significant unregulated or other higher risk operations as part of their overall business mix;

» Other corporate family considerations, such as a highly levered holding company, a complex corporate structure, or exposure to contagion risk due to the existence of lower rated affiliates;

» Utilities that are engaged in substantial construction programs for new generation plants (especially those with long lead-times or with technology that is less tested) or are in the midst of other major capital projects;

» Utilities that face material cost recovery risks or challenges related to significant capital investments;

» Utilities subject to concentration and/or event risk that are exposed to potentially sudden and unexpected changes in credit profile; and

» Utilities that are under downward credit pressure, particularly where this is reflected in a review for downgrade or a negative rating outlook.

Part I: Detailed Explanation of Proposed Refinements to Regulated Utilities Rating Methodology

This report includes a detailed rating grid that provides a reference tool that can be used to approximate credit profiles within the regulated electric and gas utility sector in most cases. The grid provides summarized guidance for the factors that are generally most important in assigning ratings to companies in this sector. However, the grid is a summary that does not include every rating consideration. The weights shown for each factor in the grid represent an approximation of their importance for rating decisions, but actual importance may vary substantially. In addition, the illustrative mapping examples typically included in the rating methodology and some of our other published research use historical results while ratings are based on our forward-looking expectations. As a result, the grid-indicated rating is not expected to match the actual rating of each company in most cases.

The rating methodology is not intended to be an exhaustive discussion of all factors that our analysts consider in assigning ratings in this sector. We note that our analysis for ratings in this sector covers factors that are common across all industries such as ownership, management, liquidity, corporate legal structure, governance and country related risks which are not explained in detail in this document as well as factors that can be meaningful on a company-specific basis. Our ratings consider these and other qualitative considerations that do not lend themselves to a transparent presentation in a grid format. The grid used for this methodology reflects a decision to avoid greater complexity that would result in grid-indicated ratings that map more closely to actual ratings in favor of a simple and more transparent presentation.

Addition of Sub-factors under Factor 1 - Regulatory Framework and Factor 2 - Ability to Recover Costs and Earn Returns

We have added sub-factors under Factor 1 – Regulatory Framework and Factor 2 – Ability to Recover Costs and Earn Returns, to provide more granularity and to better distinguish among regulated utilities. With Factors 1 and 2 each weighted at a relatively high 25% of the overall grid outcome in the current methodology, incremental changes in a utility's regulation or cost recovery provisions are not easily indicated. Breaking down these two broad factors into two sub-factors will allow us to better reflect and communicate sometimes subtle differences in regulatory and/or cost recovery provisions among utilities. The new sub-factors include Sub-factor (1a) – Legislative and Judicial Underpinnings to Regulatory Framework (12.5% weighting) , Sub-factor (1b) – Consistency and Predictability of Regulation (12.5%), Sub-factor (2a) – Timeliness of Recovery of Operating and Capital Costs (12.5%), and Sub-factor (2b) - Sufficiency of Rates and Returns (12.5%). A draft of each of these new methodology sub-factors is included in Appendix A.

Factor 1 – Regulatory Framework

Sub-factor 1a – Legislative and Judicial Underpinnings to Regulatory Framework (12.5% weighting)

For this sub-factor, we consider the scope, clarity, transparency, supportiveness and granularity of utility legislation, decrees, and rules. We also consider the strength of the regulator's authority over rate-making and other regulatory issues affecting the utility, the effectiveness of the judiciary or other independent body in arbitrating disputes in a disinterested manner, and whether the utility's monopoly has meaningful or growing carve-outs. In addition, we look at how well developed the framework is – both how fully fleshed out the rules and regulations are and how well tested it is, as well as the extent to which regulatory or judicial decisions have created a body of precedent that will help determine future rate-making. Finally, we consider how effective the utility is in navigating the regulatory framework – both the utility's ability to shape the framework and adapt to it. The inclusion of this sub-factor also represents a more explicit acknowledgement that the judicial system can be a major determinant of the regulatory framework.

Sub-factor 1b – Consistency and Predictability of Regulation (12.5%)

For this sub-factor, we consider the track record of regulatory decisions, in terms of consistency, predictability and supportiveness. We evaluate the utility's interactions in the regulatory process as well as the overall stance of the regulator toward the utility. In scoring this sub-factor, we will primarily evaluate the actions of regulators, politicians and jurists rather than their words. Nonetheless, words matter when they are an indication of future action. We seek to differentiate between political rhetoric that is encouraged by a relatively open regulatory process, and statements that are more clearly indicative of future actions and trends in decision-making.

Factor 2 – Ability to Recover Costs and Earn Returns

Sub-factor 2a – Timeliness of Recovery of Operating and Capital Costs (12.5%)

The criteria we consider in our assessments for this sub-factor include provisions and cost recovery mechanisms for operating costs, mechanisms that allow actual operating and/or capital expenditures to be trued-up periodically into rates without having to file a rate case (this may include formula rates, rider and trackers, or the ability to periodically adjust rates for construction work in progress) as well as the process and timeframe of base rate cases – those that are fully reviewed by the regulator, generally in a public format that includes testimony of the utility and other stakeholders and interest groups. We also look at the track record of the utility and regulator for timeliness. For instance, having a

formula rate plan is positive, but if the actual process has included reviews that are delayed for long periods, it may dampen the benefit to the utility. In addition, we seek to measure, or at least estimate, the lag between the time that a utility incurs major construction expenditures and the time that the utility will start to recover and/or earn a return on that expenditure.

Sub-factor 2b - Sufficiency of Rates and Returns (12.5%)

The criteria we consider in our assessments for this sub-factor include statutory protections that assure full cost recovery and a reasonable return for the utility on its investments, the regulatory mechanisms used to determine what a reasonable return should be, and the track record of the utility in actually recovering costs and earning its allowed returns. We examine rate case outcomes and compare them to the rate request submitted by the utility, to prior rate cases for the same utility and to recent rate case outcomes for a peer group of comparable utilities. We look at regulatory disallowances of costs or investments, with a focus on their financial severity and also the reasons given by the regulator, to determine the likelihood that such disallowances will be repeated in the future.

Refinement and Broadening of Factor 3 - Diversification

Sub-factor 3a – Market Position (5% or 10%)

The market position sub-factor will be refined to focus primarily on the economic diversity of the utility's service territory and the diversity of its regulatory regime. We will also consider the diversity of utility operations (e.g., regulated electric, gas, water, steam) when there are material operations in more than one area. Economic diversity is typically a function of the size and breadth of the territory and the businesses that drive its GDP and employment. For diversity of regulatory regimes, we typically look at the number of regulators and the percentages of revenues and utility assets that are under the purview of each. For vertically integrated utilities that have a meaningful amount of generation, this sub-factor will continue to have a weighting of 5%. For electric and transmission utilities without meaningful generation and for natural gas local distribution companies, this sub-factor will continue to have a weighting of 10%.

Sub-factor 3b – Generation and Fuel Diversity (0% or 5%)

We have changed this sub-factor by replacing the emphasis on exposure solely to carbon fuels in the current methodology with the broader concepts of exposure to "challenged" or "threatened" sources of generation. The sub-factor will continue to consider the fuel type of the issuer's generation and important power purchase agreements, the ability of the issuer to economically shift its generation and power purchases when there are changes in fuel prices, the degree to which the utility and its rate-payers are exposed to or insulated from changes in commodity prices, and exposure to the aforementioned "challenged" or "threatened" sources. For issuers with a meaningful amount of generation, this factor will continue to have a weighting of 5% and for those with no generation, 0%. The definition of "challenged" and "threatened" sources of generation is included in Appendix B.

Liquidity Analyzed as Key Rating Consideration Outside of Methodology Grid

The Liquidity sub-factor, weighted at 10% in the current grid, will be removed from the grid and will be analyzed as a key rating consideration outside the grid. However, there will be no diminution in our emphasis on liquidity as a key rating driver. Liquidity is always an important credit consideration and can become the primary rating consideration if it is mismanaged or becomes problematic for a utility. Liquidity can be of particular importance in an industry in which companies frequently generate negative free cash flow due to high capital expenditures and significant dividend payments.

Our fundamental analysis of a utility's liquidity will remain unchanged in the updated rating methodology. Using our projections of the financial performance of an issuer, we evaluate how its projected sources of cash (cash from operations, cash on hand, and existing multi-year credit facilities) compare to its projected uses (including all planned capital expenditures, dividends, maturities of short and long-term debt, and our projection of potential liquidity calls on financial hedges). Our assessment of liquidity assumes no access to capital markets, no incremental credit facilities, no renewal of existing credit facilities, no decrease in capital expenditures from the plan, and no reduction in dividends.

Methodology Grid Expanded to Include "Caa" Category

The range of possible scores under each factor in the grid, currently ranging from Aaa to B, will be expanded to include a "Caa" category. The purpose of this change is to provide greater transparency in our scoring of the grid for ratings at the lower end of the spectrum. While regulated utilities predominantly comprise an investment grade sector, with most issuers unlikely to be assigned grid scores of Caa, regulated utilities experiencing severe financial stress and some utilities in certain emerging markets are more likely to be scored at the lower end of the grid. As is demonstrated in the revised methodology sub-factor grids included in Appendix A, the criteria for Caa scoring is categorized as utilities with very unsupportive regulatory frameworks, poor or highly uncertain cost recovery provisions, little to no diversification, and extremely weak financial metrics. The inclusion of the Caa level in the grid will provide greater granularity that better enables distinctions among utilities at the lower end of the grid.

Weighting of Four Key Financial Ratios Increased to 40% from 30%

The overall weighting of the four key financial ratios included in Factor 4 – Financial Strength will increase to 40% from 30%, although the ratios themselves will remain the same. The ratios will continue to include Moody's standard adjustments and, in certain instances, analyst-determined adjustments specific to the issuer.

In the revised grid that is part of the proposed updated methodology, additional weighting will be given to the two cash flow to debt ratios to better reflect their importance in our financial analysis and in our credit rating discussions. For the most part, the financial parameters outlined for each scoring category will remain the same, except at the lower end of the grid, where slight adjustments to the parameters have been made to accommodate the aforementioned expansion of the grid to include a "Caa" scoring category.

The four financial ratios and their revised weightings where applicable are listed below:

» Cash from operations before changes in working capital (CFO Pre-W/C) + interest / interest – 7.5%*

» CFO Pre-W/C / debt – 15% (up from 7.5%)*

» CFO Pre-W/C - dividends / debt – 10% (up from 7.5%)*

» Debt / capitalization or debt / regulated asset value (RAV) – 7.5%*

*It is anticipated that the illustrative examples in the updated rating methodology document will use three year historical averages for financial ratios. However, the factors in the grid can be assessed using various time periods and rating committees may find it analytically useful to examine both historic and expected future performance for various periods of time.

Financial Ratio Threshold Ranges May Be Lowered Based on Business Risk

In our view, the different types of utility entities covered under this methodology have different levels of business risk. Vertically integrated utilities generally have a higher level of business risk because they are engaged in power generation. We view power generation as the highest-risk component of the electric utility business, as generation plants are typically the most expensive part of a utility's infrastructure (representing asset concentration risk) and are subject to the greatest risks in both construction and operation, including the risk that incurred costs will either not be recovered in rates or recovered with material delays. Other types of utilities may have lower business risk, due to factors that could include a generally greater transfer of risk to customers, very strong insulation from exposure to commodity price movements, good protection from volumetric risks, fairly limited capex needs and low exposure to storms, major accidents and natural disasters For instance, we tend to view many US natural gas local distribution companies (LDC's) and certain US electric transmission and distribution companies (T&D's, which lack generation but generally retain some procurement responsibilities for customers), as typically having a lower business risk profile than their vertically integrated peers.

The scoring grids, including the financial ratio ranges in the Factor 4 grid shown in Appendix A, are primarily oriented toward vertically integrated utilities. We are contemplating lowering the financial ratio threshold ranges for utilities with lower business risk, including lower risk T&D's and LDC's in the US, by approximately one category. As an example, the threshold for a Baa category scoring in interest coverage for a vertically integrated utility (3.0x - 4.5x) would, for a utility with lower business risk, be the range for an A category scoring. The purpose would be to better align the grid-scoring to our view, reflected in current ratings, that at the same rating category, utilities with lower business risk can have somewhat lower financial metrics. Alternately, business risk may be addressed in a different manner, for instance by incorporating it more broadly into the qualitative factor scoring grids. In cases of T&D's that we do not view as having materially lower risk than their vertically integrated peers, for instance due to increased risks from substantial storm exposure, a regulatory framework that exposes T&D's to energy supply risk, large capital expenditures for required maintenance or upgrades, or increased regulatory scrutiny due to poor reliability or other issues, we may instead use the same Factor 4 grid ranges as those for integrated utilities. The same may be true for LDC's that in our view do not have materially lower risk; for instance, due to their ownership of high pressure pipes or older systems requiring extensive gas main replacements, where gas commodity costs are not fully recovered in a reasonably contemporaneous manner, or where the LDC is not well insulated from declining volumes.

Notching of Utility Holding Company Ratings Due to Structural Subordination May Be Included as a Grid Adjustment

Many utility company structures consist of a holding company that owns one or more operating subsidiaries. Under our current practices, ratings of utility holding companies are in many cases likely to be below those of operating companies due to structural subordination, since creditors of an operating subsidiary typically have a more direct claim on the cash flows and assets of these subsidiaries than do creditors of a holding company. When deciding whether or not to rate a holding company lower than it would be rated if it were an operating company, our considerations may include the relative percentage of debt at the holding company versus debt at the utility operating subsidiaries, operating company debt as a percentage of consolidated assets, the regulatory or effective limitations on movement of cash among the companies in the corporate family, the diversity of holding company cash flows, the composition and materiality of non-utility businesses, as well as other considerations. While structural subordination may exist in any industry sector, it is a particularly prevalent credit

issue in the utility sector, because incurrence of debt at both operating and holding companies is more widespread. We are contemplating the potential of including our notching practices into our grid-indicated ratings to provide greater visibility into the impact of this risk factor on ratings.

US Utility First Mortgage Bond Ratings are Typically Two Notches Above the Senior Unsecured Rating

In most regions, the typical rating relationship between different debt classes of regulated utilities is the same as for other investment grade non-financial corporate sectors, with senior secured debt rated one notch higher than the same issuer's senior unsecured rating. For the relatively small number of speculative grade utility issuers in certain regions, we apply our loss given default ratings methodology. However, our existing practice is to generally apply a two notch uplift to the first mortgage bond ratings of regulated electric and gas utilities in the US, and the updated rating methodology will not affect such rating relationships.

First mortgage bond holders in the US generally benefit from a first lien on most of the fixed assets used to provide utility service, including such assets as generating stations, transmission lines, distribution lines, switching stations and substations, and gas distribution facilities, as well as a lien on franchise agreements. In our view, the critical nature of these assets to the issuers and to the communities they serve has been a major factor that has led to very high recovery rates for this class of debt in situations of default, thereby justifying a two notch uplift. The combination of the breadth of assets pledged and the bankruptcy-tested recovery experience has been unique to the US.

We may not always rate US first mortgage bonds two notches higher than the senior unsecured rating, for instance if the pledged property is not viewed by Moody's as being critical infrastructure, or if the mortgage is materially weakened by carve-outs, lien releases or similar creditor-unfriendly terms.

PART II: Additional Details on Our Evolving View of US Utility Regulation

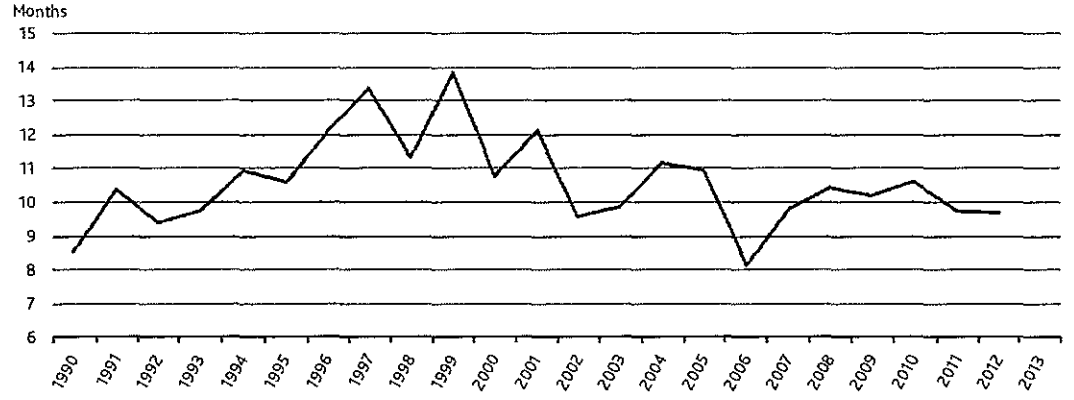
Note that the following discussion of our evolving view of US utility regulation does not represent a change in our rating methodology and does not require that a Request for Comment be published. However, given the large number of US utilities affected and the magnitude of debt outstanding in the US utility sector, in the interest of clarity, we thought it was important to share our views broadly by including them in this document and soliciting comments from those who may have interest. This change in our view of US utility regulation is independent of proposed revisions to the rating methodology and would have the same rating impact under the existing rating methodology and the proposed update to the rating methodology.

The Overall US Regulatory Environment Has Become More Credit Supportive

In recent years we believe that some regulatory jurisdictions have become more credit supportive of regulated utilities, most notably in the US. While we had previously viewed the regulatory risk of US utilities, typically regulated at the state level, as being higher than utilities in most other developed countries where regulation occurs at the national level, we are contemplating a significant revision of our view. We see improved levels of regulatory support across the US, which includes the increased use of single issue riders and trackers, timely rate case outcomes or rate settlements, and a collaborative approach toward infrastructure investment and refurbishment.

The increased prevalence of riders, trackers, and other automatic cost recovery mechanisms in the US has materially reduced the amount of time between when a utility incurs and recovers costs, otherwise known as "regulatory lag." These changes have occurred incrementally – jurisdiction by jurisdiction or even issuer by issuer. We now believe that these changes, in aggregate, represent a significant improvement in cost recovery.

EXHIBIT 1
Average Regulatory Lag



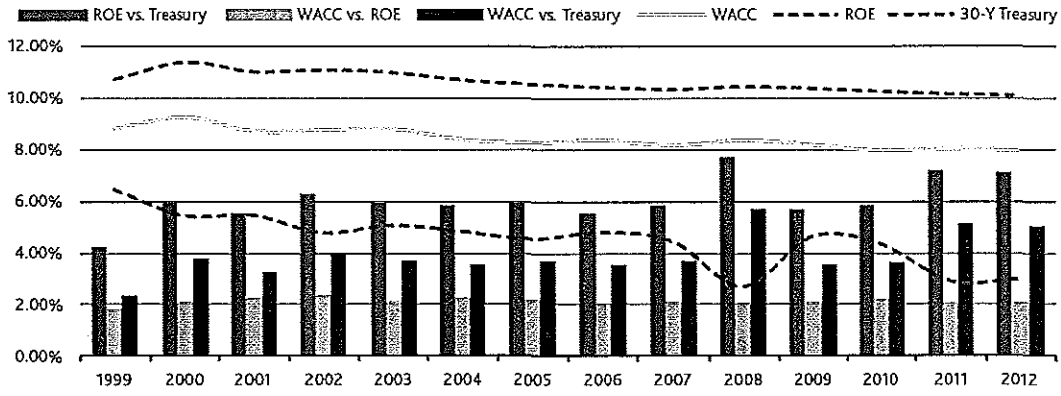
Source: SNL Financial/Edison Electric Institute

We also believe that the majority of US utilities enjoy relatively fair and open relationships with their regulators, and that most regulators strive to maintain reliable, financially viable utilities in their states, while also balancing the needs of the state's commercial, industrial, and residential utility customers. We see a high degree of regulatory support continuing for much of the sector, as sustained low natural gas prices help to foster a collaborative relationship between utilities, regulators, and customers. Low fuel prices, which are the industry's most significant expense, provide increased economic flexibility for regulators to more easily approve and for utilities to implement base rate increases and other cost recovery mechanisms.

While state regulation has the potential to reflect more intensive disputes and parochial interests, a regional business model is particularly well suited to effective constituency outreach efforts. Utilities are important contributors to the well-being of their local communities, and are typically one of the largest publically traded companies and largest employers in their areas, as well as a major source of property taxes for state and local governments.

Although allowed ROE's are in decline, we observe that they remain at favorable levels compared to the historical average 30 year treasury rates and that ROE's are in line with historical levels of a utility's weighted average cost of capital. However, as treasury rates have begun to increase in 2013, we note that US utility ROE levels may not increase commensurately or on as timely a basis, potentially pressuring industry profitability going forward.

EXHIBIT 2
US Regulated Utility Returns vs. Costs



Source: SNL Financial/Bloomberg

Over the intermediate term, we see utilities experiencing a decline in general rate case filings, whether due to prescriptive and forward looking rate plans that have been approved by their regulators, or due to a utility's willingness to postpone rate cases and focus on managing costs in an environment of low inflation and low fuel costs. This has been an evolution from historical experience, where many utilities filed more frequent rate cases requesting smaller rate increases in order to reduce regulatory lag and avert potential customer resistance. We view this change as a result of several factors, including the aforementioned growing use of tracking mechanisms, as well as increased willingness of regulators to be more forward looking in their rate setting than historically. We have also found that differentiating among rate case outcomes among individual states has become increasingly difficult, as most utilities have in recent years experienced fair and balanced rate case outcomes, with many agreeing to rate settlements or other negotiated outcomes.

Part of the evolution of our thinking has been an increased emphasis on the relevant judicial framework in our assessment of a utility's regulatory framework. The material number of litigated regulatory matters in the US could be viewed as indication of a less supportive framework. However, it may simply reflect a greater tendency for parties to pursue court remedies, and the resultant body of relatively consistent case law has provided greater clarity into the rules of engagement for utilities and their regulators as well as greater visibility into the legal outcomes that would result from a regulatory dispute, thereby reducing the likelihood that a critical regulatory issue between a utility and regulatory commission would depart so far from expectations as to trigger a default.

We are contemplating a more favorable view of US regulatory environments, which would be reflected in stronger grid scoring for the regulatory framework and/or cost recovery factors for some US regulated utilities. We acknowledge that regulatory frameworks will need to accommodate new challenges and some may not support higher scoring under the methodology. Current examples of such challenges include utilities that are pursuing new nuclear construction projects in Georgia and South Carolina, public policy initiatives encouraging greater use of renewable energy, and the growth of distributed generation. These new market developments will continue to require collaborative solutions on the part of utilities, regulators, and political stakeholders. New rate compacts and incentive pricing mechanisms will need to be implemented that maintain both electricity network reliability and the financial health of the incumbent utility. Our current view is that regulators and utilities will be able to reach reasonable agreements regarding these issues.

While we have a more favorable view of US utility regulation in general, we acknowledge that challenging regulatory decisions will continue to occur in some jurisdictions as they have in the past, whether for political, populist, economic , or other reasons. The state of Florida, for example, had a long track record of credit supportive utility regulation before political intervention in utility rate cases in 2010 caused a deterioration in that regulatory framework. Following the election of a new governor and a the appointment of several new utility commissioners, Florida's regulatory framework has improved and is again considered credit supportive. Similarly, the state of California had a very good regulatory regime before the California energy crisis in 2000-2001 led to a dramatic decline in its credit supportiveness. Partly as a result of the lessons learned and improvements made following that experience, California's utility regulatory framework is again considered to be strong. Because US utility regulation remains highly fragmented and is primarily implemented at the state level, scenarios such as these will continue to emerge and influence future rating actions.

Sector Has Experienced Few Defaults, While Recovery Has Been Extraordinarily High

While there have been selected instances of regulatory and political pressure leading to financial distress for utilities in some US states (California, Illinois, and Maryland, for example), the overall number of US regulated utility defaults have been extremely low. This has occurred despite the propensity of regulated utilities to be more likely to consider and pursue strategic bankruptcy filings at an earlier stage of distress compared to unregulated non-financial corporate issuers. In the few instances where this has occurred, the company has continued to operate as a going concern, while regulators and other parties work collaboratively to resolve issues, allowing the utility to eventually exit bankruptcy proceedings.

The essential nature of the service that regulated utilities provide, as well as the critical nature of their generation, transmission, and distribution assets, makes it almost impossible to liquidate or otherwise disaggregate a utility during bankruptcy proceedings. As result, in the few regulated utility defaults that have occurred in the US, holders of secured debt eventually recovered 100% of principal and interest on a nominal basis in most cases. Recovery on other classes of debt has also been very high. This has been documented in Moody's default and recovery studies. Although not a key driver of our evolving overall view of US utility credit risk, these studies support and corroborate our view that ratings in the US regulated utility sector could be higher.

In 2009, we published a default study on the regulated utility industry entitled "Default, Recovery, and Credit Loss Rates for Regulated Utilities, 1983-2008". This study concluded that the history of regulated utility defaults indicates that Baa-rated regulated utilities have had significantly lower one-year default rates than Baa-rated nonfinancial corporate issuers, while A-rated utilities have had modestly higher one-year default rates than A-rated nonfinancial corporate issuers. Regulated utilities have also experienced lower loss given default rates (and, by definition, higher recovery rates) than other corporate issuers. Overall, this regulated utility default study showed that regulated utilities have experienced lower credit losses than non-financial, non-utility corporate issuers.

More recently, in December 2012 we published our first report on the historical credit performance of Moody's rated long-term infrastructure debts entitled "Infrastructure Default and Recovery Rates, 1983-2012H1." The study compared historical cumulative default and recovery rates for a broader set of infrastructure debts, including US regulated utilities, with non-financial corporate issuers. Like the previous regulated utility default study discussed above, the infrastructure default study also showed that A-rated corporate infrastructure debts have higher one year default rates but lower losses given default than non-financial corporate issuers, while Baa-rated corporate infrastructure debts (representing the higher proportion of corporate infrastructure debts) have very similar one year

default rates as Baa-rated non-financial corporate debts. However, as recoveries have been better among the infrastructure debts, total credit loss rates have been about 30% lower than those of non-financial corporate debts, although in absolute terms they are of the same order of magnitude, indicating overall comparability in performance.

Credit loss rates for Ba-rated corporate infrastructure debts (representing a small proportion of corporate infrastructure debts) are lower than for non-financial corporate debts. This is driven by regulated utilities' (the major sub-factor of all Ba-rated infrastructure corporate debts) very low propensity to default and their high recovery rates. All other Ba-rated corporate infrastructure debts have credit loss rates similar to their non-financial corporate counterparts.

US Utility Financial Metrics Are Higher Than Similarly Rated International Utility Peers

In comparing financial ratios we use in the rating methodology for Regulated Electric and Gas Utilities of approximately 150 utility companies in several developed international jurisdictions with credit supportive regulatory frameworks (including Canada and Japan), US regulated utilities exhibit stronger ratios relative to similarly rated regulated international peers. For example, US utilities produce ratios of cash flow to debt that are almost twice as high as similarly rated international peers. The analysis included utilities with senior unsecured ratings in the A or Baa rating categories, and included electric, gas, networks, and water utilities, using historical financial data from Moody's Financial Metrics, as adjusted.

EXHIBIT 3

	Average (2005 - 2012)		Year-end 2012	
Jurisdiction	CFO / debt	FFO / debt	CFO / debt	FFO / debt
Average of international peers (A/Baa)	12%	12%	11%	10%
US - vertically integrated (A/Baa)	22%	23%	24%	23%
US - T&D, LDC (A/Baa)	18%	19%	19%	19%

Source: Moody's Financial Metrics

We note that federal tax policies, including accelerated bonus depreciation, have helped increase cash flows for many US utilities in recent years. But even if we exclude these benefits, in this example, by reducing the ratio of cash flow to debt by 300 basis points as a simplifying assumption, we still see more robust cash flow to debt ratios, roughly 50% higher than international peers.

EXHIBIT 4

	Average (2005 - 2012)		Year-end 2012	
Jurisdiction	CFO / debt	FFO / debt	CFO / debt	FFO / debt
Average of international peers (A/Baa)	12%	12%	11%	10%
US - vertically integrated (A/Baa)	19%	20%	21%	20%
US - T&D, LDC (A/Baa)	15%	16%	16%	16%

Source: Moody's Financial Metrics

In addition, US regulated utilities have lower balance sheet leverage and a larger equity cushion to absorb losses than similarly rated international peers, which is in part driven by the respective regulatory framework. With that said, higher leverage exhibited by some of the international peers is a function of those specific regulatory environments and the overall rate recovery structure in those

jurisdictions. US utilities also have a sizeable contribution towards their capitalization from generous federal tax policies through the use of deferred taxes.

EXHIBIT 5

	Average (2005 - 2012)			Year-end 2012		
Jurisdiction	Debt / Equity	Debt / Book Capitalization	Debt + Equity / Book Capitalization	Debt / Equity	Debt / Book Capitalization	Debt + Equity / Book Capitalization
Average of international peers (A/Baa)	223%	65%	94%	247%	66%	94%
US - vertically integrated (A/Baa)	116%	45%	84%	112%	43%	81%
US - T&D, LDC (A/Baa)	124%	45%	81%	125%	44%	78%

Source: Moody's Financial Metrics

Although we believe the wide differences in historical financial ratios is partly explained by the differences in regulatory framework, we are increasingly viewing the stronger US financials as more than mitigating the slightly higher overall regulatory risk profile that the US holds relative to its international peers that typically operate under a national regulatory regime.

In the table below, we show selected median financials for the 2005 – 2012 period against the year-end 2012 financials. The international peers saw a 23% increase in debt, a 29% increase in revenue, a 21% increase in assets and an 11% decline in CFO. In the US, we see an 18% increase in debt, a 2% decline in revenue, and a 20% and 28% increase in assets and CFO, respectively.

EXHIBIT 6

		2005 - 2012 Median Totals ($ Millions)				2012 total ($ Millions)			
Jurisdiction	Number of Companies	Debt	Revenue	Assets	CFO	Debt	Revenue	Assets	CFO
Total international utility peers	58	$309,566	$158,364	$513,109	$35,967	$374,061	$211,673	$628,912	$33,824
US - vertically integrated	57	$171,395	$166,941	$484,970	$35,271	$202,311	$171,198	$600,779	$48,044
US - T&D, LDC	38	$78,719	$79,523	$213,408	$14,229	$86,494	$67,511	$238,117	$16,712
Total US regulated utility	95	$250,114	$246,463	$698,378	$49,500	$288,805	$238,709	$838,896	$64,756
Total regulated utilities	153	$559,680	$404,828	$1,211,487	$85,467	$662,866	$450,383	$1,467,808	$98,580

Source: Moody's Financial Metrics

Credit Supportiveness of Some Regulatory Jurisdictions has Declined in Recent Years

In recent years we have perceived a decline in the credit supportiveness of some regulatory jurisdictions that we had previously viewed as highly credit supportive. For example, following the 2011 Fukushima nuclear disaster in Japan, we downgraded the ratings of nine Japanese utilities, partly reflecting our expectation of a less supportive Japanese government regulatory framework for these utilities going forward. At the same time, we re-evaluated the Japanese utility industry's relative position as a regulatory environment and modified the grid scoring for Japanese utilities accordingly.

While we continue to view the Japanese regulatory framework as credit supportive due to the strong support of the utilities by their key regulator, the Ministry of Economy, Trade, and Industry (METI), as well as the Japanese government, we felt it had become somewhat less supportive than before the

Fukushima crisis, particularly as it relates to nuclear power. As a result, we lowered the grid scoring for Factor 1 of the methodology, Regulatory Framework, to either Aa or A from Aaa, depending on each utility's particular circumstances. Based on our current view, Japan's electric utilities that have nuclear generation capabilities are currently scored A for this factor, due to the ongoing uncertainty associated with regard to nuclear generation, while in general the gas utilities and non-nuclear exposed electric utilities are currently still viewed as appropriately scored at the Aa level.

Our updated view was also reflected in the grid scoring for Factor 2 – Ability to Recover Costs and Earn Returns for Japan's utilities. Although Japanese utility regulation includes statutory provisions that insure the timely recovery of operating, capital, fuel and financing costs, plus a rate of return, there are some limitations on automatic fuel related rate increases for both electric and gas utilities. This limitation, in addition to some of the utilities expanding internationally and into non-utility businesses, resulted in our decision to slightly revise the grid scoring for this factor, with most of the utilities initially lowered to an A score from a Aa score.

Subsequently, the prolonged shut-down of nuclear plants in Japan and the resulting higher reliance on fossil fuels have significantly raised operating costs for those utilities previously reliant on nuclear power. Although some of the nuclear-dependent utilities have successfully raised their tariffs, the new rates are insufficient to return them to profitability, as they are based on cost structures that incorporate some nuclear restarts. As a result, the scoring of some of the nuclear dependent utilities for this grid factor was subsequently lowered to Baa.

Conclusion

The refinements we are proposing to make to our Regulated Electric and Gas Utilities Rating Methodology are intended to provide additional granularity on individual factor grid scores by adding new sub-factors and to increase the relative weighting of the financial metrics when determining the grid-indicated rating. The methodology will continue to emphasize both regulatory risk and financial performance. The grid that is part of the methodology will continue to focus on the same four factors: regulatory framework, ability to recover costs and earn returns, diversification, and financial strength. The proposed refinements are not expected to lead to any rating changes. Comments on these refinements are welcome using the instructions on the cover page of this document.

At the same time, and unrelated to the update of the rating methodology, we are seeking comment on our view that the relative credit supportiveness of the US utility regulatory framework has improved, and that we should assess regulatory risks more favorably for US utilities. Improvements include the increased prevalence of automatic cost recovery provisions, reduced regulatory lag, generally fair and open relationships between utilities and regulators, and the demonstration of a strong judicial framework. As a result, we intend to take a more positive view of US utilities in factoring regulatory risks into ratings. This would also be reflected in higher grid scoring for utility regulatory frameworks and cost recovery provisions under the rating methodology. Our more favorable view of US regulation relative to other global jurisdictions is expected to lead to a one notch upgrade of most US regulated utilities, with some exceptions. In most cases, we would expect all of the debt classes of a utility's capital structure to be upgraded by the same number of notches, although there could be limited exceptions. The US utility sector's low number of defaults, high recovery levels, and comparatively strong financial metrics provide additional corroboration for our view that ratings should generally be higher. Comments on our evolving view of US utility regulation are also welcome using the instructions on the cover page of this document.

Appendix A: Preliminary Regulated Electric and Gas Utilities Methodology Factor Grid

Factor 1a: Legislative and Judicial Underpinnings to Regulatory Framework (12.5%)

Aaa	Aa	A	Baa
Utility regulation occurs under a fully developed framework that is national in scope based on legislation that provides the utility a nearly absolute monopoly within its service territory, an unquestioned assurance that rates will be set in a manner that will permit the utility to make and recover all necessary investments, an extremely high degree of clarity as to the manner in which utilities will be regulated and prescriptive methods and procedures for setting rates. Existing utility law is comprehensive and supportive such that changes in legislation are not expected to be necessary; or any changes that have occurred have been strongly supportive of utilities credit quality in general and sufficiently forward-looking so as to address problems before they occurred. There is an independent judiciary that can arbitrate disagreements between the regulator and the utility should they occur, including access to national courts, very strong judicial precedent in the interpretation of utility laws, and a strong rule of law. We expect these conditions to continue.	Utility regulation occurs under a fully developed national, state or provincial framework based on legislation that provides the utility an extremely strong monopoly (see note 1) within its service territory, a strong assurance, subject to limited review, that rates will be set in a manner that will permit the utility to make and recover all necessary investments, a very high degree of clarity as to the manner in which utilities will be regulated and reasonably prescriptive methods and procedures for setting rates. If there have been changes in utility legislation, they have been timely and clearly credit supportive of the issuer in a manner that shows the utility has had a strong voice in the process. There is an independent judiciary that can arbitrate disagreements between the regulator and the utility, should they occur including access to national courts, strong judicial precedent in the interpretation of utility laws, and a strong rule of law. We expect these conditions to continue.	Utility regulation occurs under a well developed national, state or provincial framework based on legislation that provides the utility a very strong monopoly (see note 1) within its service territory, an assurance, subject to reasonable prudency requirements, that rates will be set in a manner that will permit the utility to make and recover all necessary investments, a high degree of clarity as to the manner in which utilities will be regulated, and overall guidance for methods and procedures for setting rates. If there have been changes in utility legislation, they have been mostly timely and on the whole credit supportive for the issuer, and the utility has had a clear voice in the legislative process. There is an independent judiciary that can arbitrate disagreements between the regulator and the utility, should they occur, including access to national courts, clear judicial precedent in the interpretation of utility law, and a strong rule of law. We expect these conditions to continue.	Utility regulation occurs (i) under a national, state, provincial or municipal framework based on legislation that provides the utility a strong monopoly within its service territory that may have some exceptions such as greater self-generation (see note 1), a general assurance that, subject to prudency requirements that are mostly reasonable, rates will be set will be set in a manner that will permit the utility to make and recover all necessary investments, reasonable clarity as to the manner in which utilities will be regulated and overall guidance for methods and procedures for setting rates; or (ii) under a new framework where independent and transparent regulation exists in other sectors. If there have been changes in utility legislation, they have been credit supportive or at least balanced for the issuer but potentially less timely, and the utility had a voice in the legislative process. There is either (i) an independent judiciary that can arbitrate disagreements between the regulator and the utility, including access to courts at least at the state or provincial level, reasonably clear judicial precedent in the interpretation of utility laws, and a generally strong rule of law; or (ii) regulation has been applied (under a well developed framework) in a manner such that redress to an independent arbiter has not been required. We expect these conditions to continue.

Ba	B	Caa
Utility regulation occurs (i) under a national, state, provincial or municipal framework based on legislation or government decree that provides the utility a monopoly within its service territory that is generally strong but may have a greater level of exceptions (see note 1), and that, subject to prudency requirements which may be stringent, provides a general assurance (with somewhat less certainty) that rates will be set will be set in a manner that will permit the utility to make and recover necessary investments; or (ii) under a new framework where the jurisdiction has a history of less independent and transparent regulation in other sectors. Either: (i) the judiciary that can arbitrate disagreements between the regulator and the utility may not have clear authority or may not be fully independent of the regulator or other political pressure, but there is a reasonably strong rule of law; or (ii) where there is no independent arbiter, the regulation has mostly been applied in a manner such redress has not been required. We expect these conditions to continue.	Utility regulation occurs (i) under a national, state, provincial or municipal framework based on legislation or government decree that provides the utility monopoly within its service territory that is reasonably strong but may have important exceptions, and that, subject to prudency requirements which may be stringent or at times arbitrary, provides more limited or less certain assurance that rates will be set in a matter that will permit the utility to make and recover necessary investments; or (ii) under a new framework where we would expect less independent and transparent regulation, based either on the regulator's history in other sectors or other factors. The judiciary that can arbitrate disagreements between the regulator and the utility may not have clear authority or may not be fully independent of the regulator or other political pressure, but there is a reasonably strong rule of law. Alternately, where there is no independent arbiter, the regulation has been applied in a manner that often requires some redress adding more uncertainty to the regulatory framework. . There may be a periodic risk of creditor-unfriendly government intervention in utility markets or rate-setting.	Utility regulation occurs (i) under a national, state, provincial or municipal framework based on legislation or government decree that provides the utility a monopoly within its service territory, but with little assurance that rates will be set in a manner that will permit the utility to make and recover necessary investments; or (ii) under a new framework where we would expect unpredictable or adverse regulation, based either on the jurisdiction's history of in other sectors or other factors. The judiciary that can arbitrate disagreements between the regulator and the utility may not have clear authority or is viewed as not being fully independent of the regulator or other political pressure. Alternately, there may be no redress to an effective independent arbiter. The ability of the utility to enforce its monopoly or prevent uncompensated usage of its system may be limited. There may be a risk of creditor-unfriendly nationalization or other significant intervention in utility markets or rate-setting.

Note 1: The strength of the monopoly refers to the legal, regulatory and practical obstacles for customers in the utility's territory to obtain service from another provider. Examples of a weakening of the monopoly would include the ability of a city or large user to leave the utility system to set up their own system, the extent to which self-generation is permitted (e.g. cogeneration) and/or encouraged (e.g., net metering, DSM generation). At the lower end of the ratings spectrum, the utility's monopoly may be challenged by pervasive theft and unauthorized use. Since utilities are generally presumed to be monopolies, a strong monopoly position in itself is not sufficient for a strong score in this sub-factor, but a weakening of the monopoly can lower the score.

Factor 1b: Consistency and Predictability of Regulation (12.5%)

Aaa	Aa	A	Baa
The issuer's interaction with the regulator has led to a strong, lengthy track record of predictable, consistent and favorable decisions. The regulator is highly credit supportive of the issuer and utilities in general. We expect these conditions to continue.	The issuer's interaction with the regulator has a led to a considerable track record of predominantly predictable and consistent decisions. The regulator is mostly credit supportive of utilities in general and in almost all instances has been highly credit supportive of the issuer. We expect these conditions to continue.	The issuer's interaction with the regulator has led to a track record of largely predictable and consistent decisions. The regulator may be somewhat less credit supportive of utilities in general, but has been quite credit supportive of the issuer in most circumstances. We expect these conditions to continue.	The issuer's interaction with the regulator has led to an adequate track record. The regulator is generally consistent and predictable, but there may some evidence of inconsistency or unpredictability from time to time, or decisions may at times be politically charged. However, instances of less credit supportive decisions are based on reasonable application of existing rules and statutes and are not overly punitive. We expect these conditions to continue.

Ba	B	Caa
We expect that regulatory decisions will demonstrate considerable inconsistency or unpredictability or that decisions will be politically charged, based either on the issuer's track record of interaction with regulators or other governing bodies, or our view that decisions will move in this direction. The regulator may have a history of less credit supportive regulatory decisions with respect to the issuer, but we expect that the issuer will be able to obtain support when it encounters financial stress, with some potentially material delays. The regulator's authority may be eroded at times by legislative or political action. The regulator may not follow the framework for some material decisions.	We expect that regulatory decisions will be largely unpredictable or even somewhat arbitrary, based either on the issuer's track record of interaction with regulators or other governing bodies, or our view that decisions will move in this direction. However, we expect that the issuer will ultimately be able to obtain support when it encounters financial stress, albeit with material or more extended delays. Alternately, the regulator is untested, lacks a consistent track record, or is undergoing substantial change. The regulator's authority may be eroded on frequent occasions by legislative or political action. The regulator may more frequently ignore the framework in a manner detrimental to the issuer.	We expect that regulatory decisions will be highly unpredictable and frequently adverse, based either on the issuer's track record of interaction with regulators or other governing bodies, or our view that decisions will move in this direction. Alternately, decisions may be credit supportive, but often unenforceable. The regulator's authority may have be seriously eroded by legislative or political action. The regulator may consistently ignore the framework to the detriment of the issuer.

Factor 2a: Timeliness of Recovery of Operating and Capital Costs (12.5%)

Aaa	Aa	A	Baa
Tariff formulas and automatic cost recovery mechanisms provide full and highly timely recovery of all operating costs and essentially contemporaneous return on all incremental capital investments, with statutory provisions in place to preclude the possibility of challenges to rate increases or cost recovery mechanisms. By statute and by practice, general rate cases are efficient, focused on an impartial review, quick, and permit inclusion of fully forward -looking costs.	Tariff formulas and automatic cost recovery mechanisms provide full and highly timely recovery of all operating costs and essentially contemporaneous or near-contemporaneous return on most incremental capital investments, with minimal challenges by regulators to companies' cost assumptions. By statute and by practice, general rate cases are efficient, focused on an impartial review, of a very reasonable duration before non-appealable interim rates can be collected, and primarily permit inclusion of forward-looking costs.	Automatic cost recovery mechanisms provide full and reasonably timely recovery of fuel, purchased power and all other highly variable operating expenses. Material capital investments may be made under tariff formulas or other rate-making permitting reasonably contemporaneous returns, or may be submitted under other types of filings that provide recovery of cost of capital with minimal delays. Instances of regulatory challenges that delay rate increases or cost recovery are generally related to large, unexpected increases in sizeable construction projects. By statute or by practice, general rate cases are reasonably efficient, primarily focused on an impartial review, of a reasonable duration before rates (either permanent or non-refundable interim rates) can be collected, and permit inclusion of important forward -looking costs.	Fuel, purchased power and all other highly variable expenses are generally recovered through mechanisms incorporating delays of less than one year, although some rapid increases in costs may be delayed longer where such deferrals do not place financial stress on the utility. Incremental capital investments may be recovered primarily through general rate cases with moderate lag, with some through tariff formulas. Alternately, there may be formula rates that are untested or unclear. Potentially greater tendency for delays due to regulatory intervention, although this will generally be limited to rates related to large capital projects or rapid increases in operating costs.

Ba	B	Caa
There is an expectation that fuel, purchased power or other highly variable expenses will eventually be recovered with delays that will not place material financial stress on the utility, but there may be some evidence of unwillingness of regulators to make timely rate changes to address volatility in fuel, or purchased power, or other market-sensitive expenses. Recovery of costs related to capital investments may be subject to delays that are somewhat lengthy , but not so pervasive as to be expected to discourage important investments.	The expectation that fuel, purchased power or other highly variable expenses will be recovered may be subject to material delays due to second-guessing of spending decisions by regulators or due to political intervention. Recovery of costs related to capital investments may be subject to delays that are material to the issuer, or may be likely to discourage some important investment.	The expectation that fuel, purchased power or other highly variable expenses will be recovered may be subject to extensive delays due to second-guessing of spending decisions by regulators or due to political intervention. Recovery of costs related to capital investments may be uncertain, subject to delays that are extensive, or that may be likely to discourage even necessary investment.

Note: Tariff formulas include formula rate plans as well as trackers and riders related to capital investment.

Factor 2b: Sufficiency of Rates and Returns (12.5%)

Aaa	Aa	A	Baa
Sufficiency of rates to cover costs and attract capital is (and will continue to be) unquestioned.	Rates are (and we expect will continue to be) set at a level that permits full cost recovery and a fair return on all investments, with minimal challenges by regulators to companies' cost assumptions. This will translate to returns (measured in relation to equity, total assets, rate base or regulatory asset value, as applicable) that are strong relative to global peers.	Rates are (and we expect will continue to be) set at a level that generally provides full cost recovery and a fair return on investments, with limited instances of regulatory challenges and disallowances. In general, this will translate to returns (measured in relation to equity, total assets, rate base or regulatory asset value, as applicable) that are generally above average relative to global peers, but may at times be average.	Rates are (and we expect will continue to be) set at a level that generally provides full operating cost recovery and a mostly fair return on investments, but there may be somewhat more instances of regulatory challenges and disallowances, although ultimate rate outcomes are sufficient to attract capital without difficulty. In general, this will translate to returns (measured in relation to equity, total assets, rate base or regulatory asset value, as applicable) that are average relative to global peers, but may at times be somewhat below average.

Ba	B	Caa
Rates are (and we expect will continue to be) set at a level that generally provides recovery of most operating costs but return on investments may be less predictable, and there may be decidedly more instances of regulatory challenges and disallowances, but ultimate rate outcomes are generally sufficient to attract capital. In general, this will translate to returns (measured in relation to equity, total assets, rate base or regulatory asset value, as applicable) that are generally below average relative to global peers, or where allowed returns are average but difficult to earn. Alternately, the tariff formula may not take into account all cost components and/or remuneration of investments may be unclear or at times unfavorable.	We expect rates will be set at a level that at times fails to provide recovery of costs other than cash costs, and regulators may engage in somewhat arbitrary second-guessing of spending decisions or deny rate increases related to funding ongoing operations based much more on politics than on prudency reviews. Return on investments may be set at levels that discourages investment. We expect that rate outcomes may be difficult or uncertain, negatively affecting continued access to capital. Alternately, the tariff formula may fail to take into account significant cost components other than cash costs, and/or remuneration of investments may be generally unfavorable.	We expect rates will be set at a level that often fails to provide recovery of material costs, and recovery of cash costs may also be at risk. Regulators may engage in more arbitrary second-guessing of spending decisions or deny rate increases related to funding ongoing operations based primarily on politics. Return on investments may be set at levels that discourage necessary maintenance investment. We expect that rate outcomes may often be punitive or highly uncertain, with a markedly negative impact on access to capital. Alternately, the tariff formula may fail to take into account significant cash cost components, and/or remuneration of investments may be primarily unfavorable.

Factor 3: Diversification (10%)

	Sub-Factor Weighting	Aaa	Aa	A	Baa
Market Position	5% *	A very high degree of multinational and regional diversity in terms of regulatory regimes and/or service territory economies.	Material operations in three or more nations or substantial geographic regions providing very good diversity of regulatory regimes and/or service territory economies.	Material operations in two to three nations, states, provinces or regions that provide good diversity of regulatory regimes and service territory economies. Alternately, operates within a single regulatory regime with low volatility, and the service territory economy is robust, has a very high degree of diversity and has demonstrated resilience in economic cycles.	May operate under a single regulatory regime viewed as having low volatility, or where multiple regulatory regimes are not viewed as providing much diversity. The service territory economy may have some concentration and cyclicality, but is sufficiently resilient that it can absorb reasonably foreseeable increases in utility rates.
Generation and Fuel Diversity	5% **	A high degree of diversity in terms of generation and/or fuel sources such that the utility and rate-payers are well insulated from commodity price changes, no generation concentration, and very low exposures to Challenged or Threatened Sources (see definitions below).	Very good diversification in terms of generation and/or fuel sources such that the utility and rate-payers are affected only minimally by commodity price changes, little generation concentration, and low exposures to Challenged or Threatened Sources.	Good diversification in terms of generation and/or fuel sources such that the utility and rate-payers have only modest exposure to commodity price changes; however, may have some concentration in a source that is neither Challenged nor Threatened. Exposure to Threatened Sources is low. While there may be some exposure to Challenged Sources, it is not a cause for concern.	Adequate diversification in terms of generation and/or fuel sources such that the utility and rate-payers have moderate exposure to commodity price changes; however, may have some concentration in a source that is Challenged. Exposure to Threatened Sources is moderate, while exposure to Challenged Sources is manageable.

	Sub-Factor Weighting	Ba	B	Caa	Definitions
Market Position	5% *	Operates in a market area with somewhat greater concentration and cyclicality in the service territory economy and/or exposure to storms and other natural disasters, and thus less resilience to absorbing reasonably foreseeable increases in utility rates. May show somewhat greater volatility in the regulatory regime(s).	Operates in a limited market area with material concentration and more severe cyclicality in service territory economy such that cycles are of materially longer duration or reasonably foreseeable increases in utility rates could present a material challenge to the economy. Service territory may have geographic concentration that limits its resilience to storms and other natural disasters, or may be an emerging market. May show decided volatility in the regulatory regime(s).	Operates in a concentrated economic service territory with pronounced concentration, macroeconomic risk factors, and/or exposure to natural disasters.	"Challenged Sources" are generation plants that face higher but not insurmountable economic hurdles resulting from penalties or taxes on their operation, or from environmental upgrades that are required or likely to be required. Some examples are carbon-emitting plants that incur carbon taxes, plants that must buy emissions credits to operate, and plants that must install environmental equipment to continue to operate, in each where the taxes/credits/upgrades are sufficient to have a material impact on those plants' competitiveness relative to other generation types or on the utility's rates, but where the impact is not so severe as to be likely require plant closure.
Generation and Fuel Diversity	5% **	Modest diversification in generation and/or fuel sources such that the utility or rate-payers have greater exposure to commodity price changes. Exposure to Challenged and Threatened Sources may be more pronounced, but the utility will be able to access alternative sources without undue financial stress.	Operates with little diversification in generation and/or fuel sources such that the utility or rate-payers have high exposure to commodity price changes. Exposure to Challenged and Threatened Sources may be high, and accessing alternate sources may be challenging and cause more financial stress, but ultimately feasible.	Operates with high concentration in generation and/or fuel sources such that the utility or rate-payers have exposure to commodity price shocks. Exposure to Challenged and Threatened Sources may be very high, and accessing alternate sources may be highly uncertain.	"Threatened Sources" are generation plants that are not currently able to operate due to major unplanned outages or issues with licensing or other regulatory compliance, and plants that are highly likely to be required to de-activate, whether due to the effectiveness of currently existing or expected rules and regulations or due to economic challenges. Some recent examples would include coal fired plants in the US that are not economic to retro-fit to meet mercury and air toxics standards, plants that cannot meet the effective date of those standards, nuclear plants in Japan that have not been licensed to re-start after the Fukushima Dai-ichi accident, and nuclear plants that are required to be phased out within 10 years (as is the case in some European countries).

*10% weight for issuers that lack generation **0% weight for issuers that lack generation

Factor 4: Financial Strength (40%)

	Sub-Factor Weighting	Aaa	Aa	A	Baa	Ba	B	Caa
(CFO pre-WC + Interest) / Interest	7.5%	≥ 8x	6x - 8x	4.5x - 6x	3x - 4.5x	2x - 3x	1x - 2x	< 1x
(CFO pre-WC) / Debt	15%	≥ 40%	30% - 40%	22% - 30%	13% - 22%	5% - 13%	1% - 5%	< 1%
(CFO pre-WC – Dividends) / Debt	10%	≥ 35%	25% - 35%	17% - 25%	9% - 17%	0% - 9%	(5%) - 0%	< (5%)
Debt / Capitalization *	7.5%	< 25%	25% - 35%	35% - 45%	45% - 55%	55% - 65%	65% - 75%	≥ 75%
Debt / RAV *		< 30%	30% - 45%	45% - 60%	60% - 75%	75% - 85%	85% - 95%	≥ 95%

* The use of Debt / Capitalization or Debt / Regulated Asset Value (RAV) will depend largely on the regulatory regime in which the utility operates. Debt / Capitalization is currently used for most of the issuers rated under this methodology, because in many regions (currently including North America and many Asian countries) RAV does not exist. Where RAV exists, the Debt / RAV ratio may be preferable. The regulated asset base is comprised of the physical assets that are used to provide regulated distribution services, and the RAV represents the value (determined by regulators) on which the utility is permitted to earn a return. RAV can be calculated in various ways, using different rules that can be revised periodically, depending on the regulatory regime. Where RAV is calculated using consistent rules, we view Debt / RAV as the better credit measure and use it for this sub-factor. Where RAV does not exist or the method of calculation is subject to arbitrary or unpredictable revisions, we use Debt / Capitalization.

Appendix B: "Challenged" and "Threatened" Generation Sources

By "Challenged Sources", we mean generation plants that face higher but not insurmountable economic hurdles resulting from penalties or taxes on their operation, or from environmental upgrades that are required or likely to be required. Some examples are carbon-emitting plants that incur carbon taxes, plants that must buy emissions credits to operate, and plants that must install environmental equipment to continue to operate, in each where the taxes/credits/upgrades are sufficient to have a material impact on those plants' competitiveness relative to other generation types or on the utility's rates, but where the impact is not so severe that plant closure is likely.

By "Threatened Sources", we mean generation plants that are not currently able or permitted to operate due to major unplanned outages or issues with licensing or other regulatory compliance, and plants that are highly likely to be required to de-activate, whether due to the effectiveness of currently existing or expected rules and regulations or due to economic challenges. Some recent examples would include coal fired plants in the US for which retro-fitting to meet mercury and air toxics standards is not economically viable or cannot be achieved by the effective date of those standards, nuclear plants in Japan that have not been licensed to re-start after the Fukushima Dai-ichi accident, and nuclear plants that are required to be phased out within 10 years (as is the case in some European countries).

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» contacts continued from page 1

Analyst Contacts:

BUENOS AIRES +54.11.3752.2000

Daniela Cuan +54.11.5129.2617
Vice President - Senior Analyst
daniela.cuan@moodys.com

HONG KONG +852.3551.3077

Patrick Mispagel +852.3758.1538
Associate Managing Director
patrick.mispagel@moodys.com

LONDON +44.20.7772.5454

Helen Francis +44.20.7772.5422
Vice President - Senior Credit Officer
helen.francis@moodys.com

Monica Merli +44.20.7772.5433
Managing Director - Infrastructure Finance
monica.merli@moodys.com

SAO PAULO +55.11.3043.7300

Jose Soares +55.11.3043.7300
Vice President - Senior Credit Officer
jose.soares@moodys.com

SINGAPORE +65.6398.8308

Ray Tay +65.6398.8306
Assistant Vice President - Analyst
ray.tay@moodys.com

TOKYO +81.3.5408.4100

Kazusada Hirose +81.3.5408.4175
Vice President - Senior Credit Officer
kazusada.hirose@moodys.com

Richard Bittenbender +81.3.5408.4025
Associate Managing Director
richard.bittenbender@moodys.com

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Authors
Michael G. Haggarty
Bill Hunter
Jim Hempstead

Production Associate
Masaki Shiomi

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