

BEFORE THE CORPORATION COMMISSION OF OKLAHOMA

**APPLICATION OF PUBLIC SERVICE COMPANY OF)
OKLAHOMA FOR COMMISSION AUTHORIZATION)
OF A PLAN AND COST RECOVERY OF ACTIONS)
OF PSO TO BE IN COMPLIANCE WITH CERTAIN)
ENVIRONMENTAL RULES PROMULGATED BY)
THE UNITED STATES ENVIRONMENTAL) CAUSE NO. PUD201200054
PROTECTION AGENCY; SUCH ACTIVITIES TO)
INCLUDE, BUT NOT BE LIMITED TO, CAPITAL)
EXPENDITURES FOR EQUIPMENT AND)
FACILITIES; CONSTRUCTION OR PURCHASE OF)
AN ELECTRIC GENERATING FACILITY OR ENTER)
INTO A LONG-TERM PURCHASE POWER)
CONTRACT (AND POSSIBLE EARNINGS ON THE)
CONTRACT); CHANGE IN DEPRECIATION RATES)
AND/OR ESTABLISHMENT AND RECOVERY OF A)
REGULATORY ASSET; AND FOR SUCH OTHER)
RELIEF AS THE COMMISSION DEEMS PSO IS)
ENTITLED.)**

**SURREBUTTAL TESTIMONY OF
DANIEL J. LAWTON
ON BEHALF OF
OKLAHOMA INDUSTRIAL ENERGY CONSUMERS**

MARCH 22, 2013

SECTION I: INTRODUCTION

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Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Daniel J. Lawton. My business address is 701 Brazos, Suite 500, Austin, Texas 78701.

Q. ARE YOU THE SAME DANIEL J. LAWTON WHO PREVIOUSLY PROVIDED TESTIMONY IN THIS CASE?

A. Yes, I submitted Responsive Testimony on behalf of the Oklahoma Industrial Energy Consumers (“OIEC”) on January 8, 2013

Q. DID YOU PREVIOUSLY PROVIDE AN OUTLINE OF YOUR EDUCATIONAL AND BUSINESS EXPERIENCE IN YOUR JANUARY 8, 2013 RESPONSIVE TESTIMONY?

A. Yes, I did.

Q. WHAT IS THE PURPOSE OF THIS SURREBUTTAL TESTIMONY?

A. The purpose of this Surrebuttal Testimony is to respond to Public Service Company of Oklahoma (“PSO” or “Company”) witness Alan Decker’s Rebuttal Testimony.

Q. PLEASE SUMMARIZE YOUR CONCLUSIONS WITH REGARD TO MR. DECKER’S REBUTTAL TESTIMONY AND THE REQUEST TO INCLUDE AN EARNINGS COMPONENT OVER AND ABOVE THE COSTS OF PSO’S PROPOSED PURCHASE POWER CONTRACT WITH CALPINE.

A. Mr. Decker has failed to provide any good public policy basis, generally ratemaking reasoning or sound economic or financial basis to support the Company’s request to include earnings in rates associated with the Calpine purchase power contract. Instead, Mr. Decker actually changes or disrards his earlier statements and conclusions in his Direct Testimony in an attempt to support what can only be described as an

25 unsupportable position-inclusion of earnings on purchase power contracts. Mr. Decker
 26 abandons any cost justification for his proposal; he ignores basic financial risk
 27 assessments and ignores customers completely. These are not the ingredients that should
 28 be employed by this or any regulatory authority when considering such a radical policy
 29 shift in ratemaking.

30 Mr. Decker has simply provided no basis or justification for including earnings on
 31 purchase power contracts in setting rates for consumers. Mr. Decker's singular reliance
 32 on the number of kilowatt hours provided rather than the actual cost of providing service
 33 represents a radical departure from rate making. Moreover, Mr. Decker's Direct
 34 Testimony claims of "financial pressures" absent the Commission's approval of the
 35 requested earnings are abandoned in his rebuttal presentation. The Company's request is
 36 an over-reach and is nothing more than a request for additional profits without cost
 37 support. If the Company's request is granted, customers pay higher rates, shareholders
 38 receive more profits and PSO's risks do not change.

39 In my opinion, if Mr. Decker's proposals are adopted, the Company will have a recipe
 40 for mischief leading to cost inefficiencies, perverse economic incentives and
 41 unnecessary higher costs to consumers.

42 **Q. HOW WILL YOU ADDRESS THE ISSUES RAISED IN MR. DECKER'S**
 43 **TESTIMONY?**

44 **A.** I simply address the issues in the order raised in Mr. Decker's Rebuttal Testimony;
 45 starting at page 2 and ending at page 12.

46

47 **SECTION II: MR. DECKER'S REBUTTAL TESTIMONY**

48 **Q. AT PAGE 2:21 THROUGH PAGE 3:2 OF HIS REBUTTAL TESTIMONY MR.**
 49 **DECKER ATTEMPTS TO TIE PSO'S EARNINGS REQUEST (AT LEAST IN**
 50 **PART) TO THE COMPANY'S ACTIONS TO COMPLY WITH THE**
 51

52 **REGIONAL HAZE RULE AND THE MERCURY AND AIR TOXICS**
53 **STANDARDS. DO YOU HAVE COMMENTS?**

54
55 A. Yes. The Company's request and the ultimate Commission decision on this issue have
56 absolutely no relevance to environmental compliance issues. Instead, the Company's
57 request to earn a return on the purchase power contract is an over reach by PSO to earn
58 an excess profit, ie: a return for which there are no corresponding cost responsibilities.
59 When excess profits are included in rates, the resulting charges to customers cannot be
60 considered fair, just or reasonable.

61
62 There is no connection (other than the two issues are in the same case) between the
63 Company's excess profits request (earning on a purchase power contract) and PSO's
64 efforts to meet environmental compliance requirements(the other issues in this case).

65
66
67 **Q. DOES MR. DECKER CONTINUE TO FOCUS HIS EARNINGS ARGUMENT**
68 **ON CAPACITY ADDITIONS RATHER THAN ACTUAL COST RECOVERY?**

69 A. Yes. At page 3 lines 3-11, Mr. Decker criticizes staff witness Dr. Roach for categorizing
70 PSO's earnings request as a "...request for foregone earnings for something PSO did not
71 build."

72 Mr. Decker argues that Dr. Roach is incorrect or misunderstands PSO's earnings
73 proposal, because the Company's earnings request is based on what they did do-obtain
74 lower cost capacity through the purchase power contract.

75 Whether the earnings request is based on what PSO did not do or on what PSO did do
76 makes little difference. In either case PSO has no additional investment or costs for
77 which the earnings request can be justified. Thus, Mr. Decker's analysis of Dr. Roach's
78 arguments is nothing more than hairsplitting that misses the issue. The issue before the
79 Commission is whether PSO should be allowed earnings where there is no cost or
80 investment by the Company. In this case, the Company addressed capacity needs by
81 purchasing capacity rather than building generation facilities because purchasing

82 capacity was the lowest cost alternative. Now, the Company wants additional earnings
83 or profits for selecting the lowest cost alternative.

84

85 **Q. IN YOUR OPINION IS IT BAD PUBLIC POLICY TO PROVIDE THE**
86 **COMPANY ADDED OR EXCESS PROFITS FOR MAKING PRUDENT**
87 **REASONABLE DECISIONS?**

88

89 A. Yes, it would lead to poor public policy to reward the Company and penalize the
90 consumer with excess rates for making decisions that are prudent, rational and cost
91 based business decisions. It is a reasonable expectation that PSO or any utility will select
92 the just and reasonable economic alternative which should lead to just and reasonable
93 rates. When rewards are added to the mix, then consumers will pay rates that are above
94 just and reasonable levels. This is why regulatory authorities focus ratemaking on the
95 recovery of all just and reasonable costs incurred by the utility plus the opportunity to
96 earn a reasonable return on investment used and useful in the provision of utility service.
97 PSO's requested earning on purchase power contracts is not a just or reasonable cost or
98 investment for which a return should be earned.

99

100 **Q. IF CONSUMERS ARE GETTING THE BENEFIT OF ADDED KILOWATT**
101 **CAPACITY AT LOWER COSTS ISN'T IT REASONABLE FOR CUSTOMERS**
102 **TO PAY ADDED PROFITS TO PSO SHAREHOLDERS?**

103

104 A. No. Only a return on the cost of investments should be allowed for recovery from
105 ratepayers. Kilowatts sold (whether self-generated or purchased) are not part of the
106 ratemaking model. The following example should make this clear:

107

1. Assume PSO needs a new office building;

108

2. Assume the cost to self-build is a \$1,000,000 investment and the
109 annual cost of building the office is \$100,000 per year that would be
110 collected from the customers through rates;¹

¹ Under this self build option example I have assumed simply \$1,000,000 investment, 10% return, no operating
SURREBUTTAL TESTIMONY

111 3. Assume the company could rent a comparable existing office building
112 for \$50,000 per year fixed for ten years rental charges that would be
113 collected from customers though rates.
114

115 In this case the lowest cost alternative and the resulting prudent choice is the \$50,000
116 rental of a building. But, under Mr. Decker's theory- the company would be out earnings
117 of \$100,000 per year on the self-build option while customers get the benefits of a lower
118 cost office included in rates. Thus, under Mr. Decker's theory the company should be
119 provided some level of earnings for making the correct decision.
120

121 The fact that customers and the Company receive the benefit of an office building makes
122 no difference in the rate making model. Instead, when two office building choices are
123 indifferent, the lower cost option (the \$50,000 annual rental) should be selected. Only
124 the \$50,000 cost should be included in rate setting and the fact that the cost is created by
125 office rentals or kilowatt purchases makes no difference.
126

127 Whether it is earnings on purchase power kilowatts, an office building or any other of
128 the many decisions a utility makes every day it would be poor public policy to follow
129 Mr. Decker's theory. Regulation is a substitute for competition. In a competitive
130 environment, management is expected to make rational economic and prudent decisions.
131 If management does not make rational and prudent decisions competitors will capitalize
132 on such inefficient decision making.
133

134 If regulatory authorities abandon the cost based ratemaking model, as recommended by
135 Mr. Decker, and include excess profits in rates, the end result is that the ratemaking
136 model will no longer emulate competitive market conditions. Moreover, the regulated
137 companies would be incentivized to seek excess shareholder profits which are not
138 always consistent with efficient prudent choices.

139 **Q. AT PAGE 3 LINES 21-22 OF HIS REBUTTAL TESTIMONY, MR. DECKER**
 140 **STATES, "...THE PARTIES TAKE THE EXTREME POSITION THAT PSO**
 141 **SHOULD BE REQUIRED TO PROVIDE SERVICES WITHOUT EARNING**
 142 **ANYTHING FOR DOING SO." DO YOU AGREE WITH THIS CLAIM?**

143 A. Mr. Decker's statement is both false and misleading. First, it is false in that no party to
 144 this proceeding has recommended that PSO not recover its actual costs associated with
 145 the Calpine Contract- no more, no less. All parties have recommended however that the
 146 requested earnings, which are amounts over and above PSO's costs be denied.

147 Second, Mr. Decker's assertion that parties' positions to deny these excess earnings are
 148 somehow "extreme" is misleading. Parties' recommendations to exclude excess earnings
 149 are consistent with the regulatory model across the country. Instead, it is Mr. Decker's
 150 proposal to request added earnings where there is no cost or investment that is "extreme"
 151 in this case.

152 **Q. EARLIER YOU STATED THAT MR. DECKER HAS CHANGED OR**
 153 **ABANDONED HIS POSITION TAKEN IN HIS DIRECT TESTIMONY IN THIS**
 154 **CASE. PLEASE EXPLAIN.**

155 A. At page 4 lines 9-22 through page 6 line 4 of Mr. Decker's Rebuttal Testimony, Mr.
 156 Decker appears to take a different position than put forth in his Direct Testimony as to
 157 why PSO should recover earnings on purchase power contracts.

158 **Q. WHAT DID MR. DECKER CLAIM IN HIS DIRECT TESTIMONY?**

159 A. In his Direct Testimony Mr. Decker made the following statements with regard to the
 160 impact of the Calpine Contract on PSO earnings.

161 • Because PSO is currently not allowed earnings associated with long-term,
 162 firm purchased power contracts, the Calpine Contract represents another
 163 significant long-term earning loss for PSO.² (emphasis added)

² Direct testimony Alan Decker at 3:4-6.
 SURREBUTTAL TESTIMONY

- 164 • PSO is requesting earnings on the Calpine Contract because of the
 165 financial pressure that not earning on that contract will put on the
 166 company.³ (emphasis added)
- 167 • ...financial rating agencies will view PSO as a riskier investment than
 168 they might if PSO were earning on the contract.⁴ (emphasis added)

169

170 **Q. WHAT DOES MR. DECKER NOW CLAIM WITH REGARD TO COMPANY**
 171 **FINANCIALS WITH REGARD TO EARNINGS AND THE CALPINE**
 172 **CONTRACT?**

173 A. In his Rebuttal Testimony Mr. Decker states the following:

174 Neither in this cause nor in the Exelon Cause has PSO contended
 175 that it needed earnings on its long-term base load purchase power
 176 contacts to avoid current or even future financial distress.⁵
 177

178 Mr. Decker no longer talks about “significant long-term earnings loss”⁶, “financial
 179 pressure”⁷ or “financial rating agencies view[ing] PSO as a riskier investment.”⁸ Mr.
 180 Decker’s Direct Testimony claims are no longer supported by his recent Rebuttal
 181 Testimony admissions.

182 **Q. IS THERE EVIDENCE FROM A RECENT MOODY’S ANALYSIS THAT PSO’S**
 183 **RISK WILL DECLINE BY REPLACING CAPITAL EXPANSION WITH**
 184 **PURCHASE POWER CONTRACTS?**
 185

186 A. Yes. A February 6, 2013 Moody’s Investor Outlook: “Regulatory Support, Low
 187 Natural Gas Prices Maintains Stability” specifically addressed the Company’s and other
 188

³ Id at 3:9-10.

⁴ Id at 3:20-22

⁵ Rebuttal testimony Alan Decker at 4:12-14

⁶ Direct testimony Alan Decker at 3:4-6

⁷ Id at 3:9-10

⁸ Id at 3:20-22

189 utilities high levels of expected capital expansion as a negative for financial metrics.

190 With regard to PSO, Moody's states the following:

191 Although we expect metrics for the industry to be stable,
 192 companies with robust capital programs, ... Public Service
 193 Company of Oklahoma (Baa1, stable), could experience a decline
 194 in financial metrics⁹ due to increased debt associated with
 195 growing free cash flow deficits. In each of these cases, we
 196 anticipate that the resulting financial profile will still be
 197 appropriate for each company's rating.¹⁰

198
 199 I have included the entire Moody's Report in my schedule (DJI-1SR).

200 Given that the Calpine purchase power agreement, like the earlier Exelon agreement
 201 provides system capacity without capital expenditures for plant construction, PSO's
 202 capital expenditures program is reduced from what it would have been, absent the
 203 availability of the purchase power substitute for the self-build generation.

204
 205 The bottom line is the ability to lower the need of additional capital expenditures will
 206 lower PSO's risk. This point is clearly made in the recent Moody's analysis discussed
 207 above.

208

209 **Q. DOES THE RECENT MOODY'S STUDY YOU HAVE BEEN DISCUSSING**
 210 **ADDRESS OTHER RISKS THAT ARE REDUCED WITH LOWER CAPITAL**
 211 **EXPANSION?**

212

213 A. Yes. Another area addressed is the impact of capital expansion on rates.¹¹ On this issue,
 214 Moody's states the following:

215 We review capital investment in rate base positively over the
 216 longer term, as it contributes to growth in operating cash flow. ...
 217 However, given the magnitude of these investments,
 218 corresponding increases in customer bills and associated financing
 219 needs, we see the need for each company to carefully execute
 220 their capital raising strategies in order to maintain stable credit
 221 profiles across the sector. We view the relationship between

⁹ Mood's Investor Service, US Regulated Utilities: "Regulatory Support, Low Natural Gas Prices Maintains Stability", February 6, 2013 at 8.

¹⁰ Id

¹¹ Id at 8

222 rising customer bills and the current economic environment as a
 223 potential credit negative. ... [H]igher costs of capex programs,
 224 recovery of these costs could be delayed over the intermediate-
 225 term in order to avoid customer rate shock and/or rate fatigue.¹²
 226

227 Thus, the purchase power contracts which reduce capital needs versus the self-build
 228 alternative will also reduce regulatory risks that Moody's notes could be significant for
 229 companies with robust capital programs like PSO. The purchase power contract at issue
 230 in this proceeding is the lower cost power supply alternative that reduces capital needs,
 231 lowers the impact of rate increases and ameliorates "rate shock and regulatory
 232 contentiousness," the types of risks recently identified by rating agencies such as
 233 Moody's.
 234

235 **Q. AT PAGES 11-12 OF HIS REBUTTAL TESTIMONY, MR. DECKER POINTS**
 236 **OUT THAT PSO CONFIRMED WITH BOTH MOODY'S AND STANDARD &**
 237 **POOR'S THAT THE COMPANY'S EARNINGS ON PURCHASED POWER**
 238 **CONTRACTS PROPOSAL WOULD NOT LIKELY RESULT IN A RATINGS**
 239 **UPGRADE – DO YOU HAVE ANY COMMENTS?**
 240

241 A. Yes. PSO could have saved time and the dime on the call if they had evaluated their
 242 own metrics – the earnings just do not move the metrics in any significant way. I also
 243 find Mr. Decker's claim that "...PSO has suggested that a modest level of earnings on
 244 the purchased power contracts will help PSO maintain or even slightly improve its
 245 financial condition"¹³ is not consistent with rating agencies responses on this matter.
 246 Both Moody's and S&P have indicated "that contract earnings ... given the relatively
 247 small amount involved, would not likely result in a ratings upgrade."¹⁴ There is no
 248 material benefit for increasing earnings – a fact confirmed by the rating agencies.
 249

¹² Id.

¹³ Rebuttal Testimony of Alan Decker at 4:14-16.

¹⁴ Id at 12:3-4

250 **Q. WHAT ABOUT MR. DECKER'S CLAIM THAT ADDED EARNINGS, NO**
251 **MATTER HOW MODEST, IMPROVE FINANCIAL RESULTS AND MAY BE**
252 **VIEWED AS A POSITIVE REGULATORY RESULT BY RATING AGENCIES?**
253

254 A. Again, Mr. Decker is promoting bad regulatory policy. While it is a mathematical and
255 financial truism that more earnings are better than less earnings – this does not mean it is
256 sound or good policy to increase utility earnings because more is better than less. For
257 example, \$50 million in unjustified non-cost related earnings would be better than the
258 Company's \$5 million annual request. Such a result would improve financial metrics but
259 be punishing to consumers through higher rates and would be neither cost based or just
260 and reasonable. Earnings authorized in ratemaking should be based on costs and
261 investment. Mr. Decker's more is better than less theory of setting rates has no merit.
262

263 **Q. AT PAGE 7 LINES 5-32 THROUGH PAGE 8 LINE 13 OF HIS REBUTTAL**
264 **TESTIMONY, MR. DECKER DISCUSSES STANDARD & POOR'S DEBT**
265 **IMPUTATION FOR PURCHASE POWER CONTRACTS. DO YOU HAVE ANY**
266 **COMMENTS?**
267

268 A. Yes. It is correct that S&P does impute debt obligations for certain agreements
269 (including purchase power contracts) when calculating financial metrics and
270 creditworthiness of operations. The S&P debt imputation is to recognize the ongoing
271 nature (like debt obligations) of the contractual agreement, in this case, the purchase
272 power agreement. The formula employed by S&P is included in Attachment B to Mr.
273 Decker's Rebuttal Testimony.
274 What Mr. Decker does not mention is that the S&P imputation of debt is substantially
275 less than the debt obligation that would be on the balance sheet under the self-build
276 option. In other words, the purchase power option is less risky than the self-build option
277 even when considering the S&P debt imputation.
278

279 In terms of debt imputation requiring an increase in rates or earnings, Mr. Decker has
280 acknowledged that additional earnings will not change the S&P risk assessment.¹⁵
281 Again, Mr. Decker's analysis and claims fall short.
282

283 **Q. HAS MR. DECKER PROVIDED ANY EVIDENCE OR ARGUMENT TO**
284 **JUSTIFY THE ADDED EARNINGS REQUESTED BY PSO?**
285

286 A. No. Quite simply, Mr. Decker's analysis fails to recognize that the ratemaking model
287 provides return and earnings on used and useful investment – not the number of
288 kilowatts provided to customers. There are numerous transmission and distribution
289 (T&D) electric operations across the country that purchase 100% of the kilowatt
290 capacity requirements through purchase power contracts, but receive earnings on T&D
291 investment not kilowatt hours sold to end use customers. These T&D operations have
292 prospered for many years under the basic regulatory model. Mr. Decker has provided no
293 sound reason to treat PSO as an exception.
294

295 **Q. DOES THIS CONCLUDE YOUR SURREBUTTAL TESTIMONY?**
296

297 A. Yes.
298
299
300
301

302 1669825.1:620435:01210

¹⁵ Alan Decker Rebuttal at 11:21-23-12:1-4
SURREBUTTAL TESTIMONY

SCHEDULE DJL-1SR

INDUSTRY OUTLOOK

US Regulated Utilities:

Regulatory Support, Low Natural Gas Prices Maintains Stability

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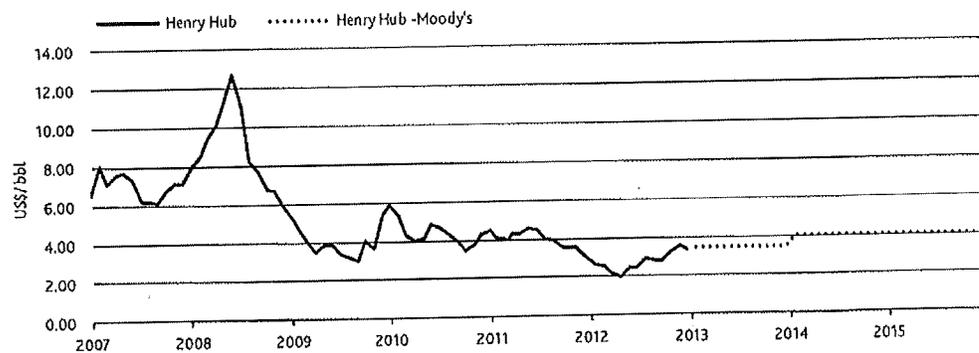
Our outlook for the investor-owned US regulated electric and gas utility sector is stable. This outlook reflects our expectations for the fundamental business conditions in the industry over the next 12 to 18 months.

- » **The outlook for the US investor-owned regulated electric and gas utility sector is stable.** We expect a supportive regulatory environment to remain intact over the next 12 to 18 months, providing a timely recovery of prudently incurred costs and investments through authorized rates. We see a sustained period of low natural gas prices benefitting utilities seeking other rate base increases; steady and stabilizing financial ratios, and average annual revenue increases between 3-5%.
- » **Capital markets remain highly accessible.** The sector benefits from flight-to-quality dynamics, with a return to long-term liquidity facilities as the norm.
- » **We expect high capital expenditures to continue for the foreseeable future.** Large capex will contribute to rate base growth; however, management must carefully address the financing of corresponding negative free cash flow, along with the increased rate pressure on customers.
- » **States to watch in 2013.** We see regulation throughout the US in a business-as-usual status over the near-term, but there are certain states where our perception of regulatory supportiveness may change in 2013. States we view as prone to positive changes are Maryland, Arizona, New Mexico and Texas. States we view as prone to negative changes are the eastern states impacted by Hurricane Sandy, Illinois, North Carolina, Ohio and Mississippi. We also see potential for negative changes at the FERC.
- » **We anticipate financial metrics stabilizing over the near term.** Cash recovery of costs through special recovery mechanisms and the extension of bonus depreciation should help to offset reduced allowed returns on equity (ROE) and low customer demand. Companies pursuing large capex plans will see a decline in financial metrics and are at the highest risk for recovery delays.

Low natural gas prices continue to benefit utilities, customers and commissions

The abundant supply of domestic natural gas is a material credit positive for regulated utilities. Low natural gas prices have facilitated an easing of fuel costs and power prices throughout the nation and should continue to provide a backdrop for continued supportive regulatory relationships over the next 12-18 months. The proliferation of shale gas supplies in the US has driven natural gas prices to new lows as seen in Figure 1, below. This phenomenon, in combination with low customer demand due to a sluggish recovering economy, mild weather and the effects of energy efficiency and demand side management (DSM), has kept power prices low - a trend we expect to persist through 2013.

FIGURE 1
Natural Gas Prices and Assumptions¹



Source: EIA.gov and Moody's

Since a peak of over \$12 per MMBtu in 2008, gas prices have been on a rather steady decline. Since fuel and purchased power costs represent the single largest utility cost, and are typically a direct pass-through to rate payers, customer bills benefit significantly from reduced commodity and procurement costs.

These variable cost decreases have provided headroom in rates, enabling regulators to allow utilities to recover rising non-fuel costs through increases in base rates without a material change to the aggregate amount of a customer's bill. The offset of fixed cost increases, with variable cost decreases, is largely unnoticed by the typical residential consumer. The cost offset helps to avoid any negative customer reaction that might place political pressure on utility commissions and lead to their reluctance to allow some general rate increases for utilities.

Figure 1 also reflects our belief that the cost environment for natural gas will be low for several years. We expect this environment to give regulators additional flexibility in maintaining their support for the recovery of rising utility operating costs. Our natural gas price expectations are influenced by our view that a sudden "game-changing" growth spurt in demand is unlikely over the near term and that a gradual increase in gas consumption will occur throughout all corporate sectors in 2013. Our price assumptions show Henry Hub natural gas at \$3.50 per MMBtu for 2013 and at \$4.00 thereafter.

¹ Our natural gas price assumptions are derived from the Moody's energy team and its Global Oil and Natural Gas outlook. These price assumptions are used for rating purposes and as sensitivity inputs for production companies' projected performance.

Low commodity prices benefit industry liquidity

Low commodity costs have also bolstered utility liquidity profiles, as reduced collateral calls and inexpensive hedges are increasingly replacing historical positions. The sector continues to benefit from open and welcoming credit markets, as utilities remain a safe haven for investors looking for steady and predictable returns. Furthermore, bank support via long-term credit facilities (e.g., 5 year tenors) has returned, following a contraction during the Great Recession.

We expect the industry axiom of open and welcoming markets to continue over the next 12 to 18 months; however, the flight from trouble in Europe may have potentially run its course, and Basel III requirements on bank capital may weaken the appetite of lender interest in the sector. Since the next round of refinancing may be more expensive, it will provide an indication of which issuers refinance only opportunistically and which issuers refinance because maintaining longer-term liquidity is a core tenet of their financial policy.

Regulatory support is a credit positive, despite lower authorized ROEs

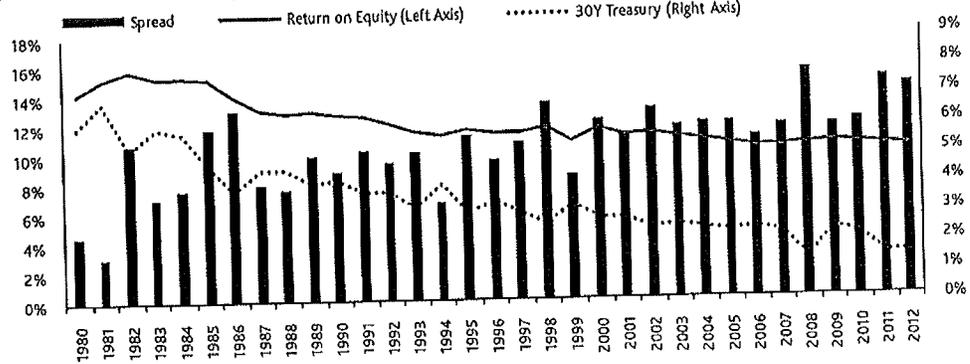
Given the headroom created by lower fuel and purchased power costs, regulatory support for general rate increases has continued throughout the nation with few states generating any prospect of immediate concern. The general trend for approved rate increases in the US were 61% of requested amounts granted in 2012, compared to 55% in 2011 and 57% in 2010. Our ongoing premise is that regulatory commissions prefer to regulate financially healthy utilities and that utility managements have core competencies in navigating the regulatory landscape, in order to support the long-term financial wellbeing of the companies.

One point of interest to note is in the trend of falling allowed ROEs throughout the industry, which includes several jurisdictions recently crossing below the 10.00% threshold. For example, several issuers in Oregon (Northwest Natural Gas, A3, negative and Idaho Power, Baa1, stable) and Washington (Puget Sound Energy, Baa2, stable and Avista Corp. Baa2, stable) dropped below 10.00% allowed ROE in 2012, with some companies experiencing sub-10.00% allowed ROE in multiple jurisdictions, such as PacifiCorp (Baa1, stable) and Kansas City Power & Light (Baa2, stable - its Missouri rate case decision occurred in January 2013). According to SNL Financial, the average allowed ROE for investor owned utilities, has dropped to 10.07% in 2012 versus 10.21% in 2011. We have observed two oft-cited reasons behind a commission reducing a utility's allowed ROE; those being 1) the prevalence of single item rate making through specific riders and trackers, and 2) the current low interest rate environment.

Many commissions have reasoned that a heightened use of special cost recovery mechanisms such as environmental cost trackers, weather normalization adjustments, decoupling mechanisms, and the like, have reduced the business and financial risk of a utility, thus justifying a reduction in allowed ROE.

Similarly, various commissions cite that due to the current low interest rate environment, a utility's cost of capital has been reduced to a point that warrants a lower allowed return and reduced rates for customers. Figure 2 identifies the declining ROE trend in recent years, compared to the risk free rate of return on the 30 year US Treasury bill.

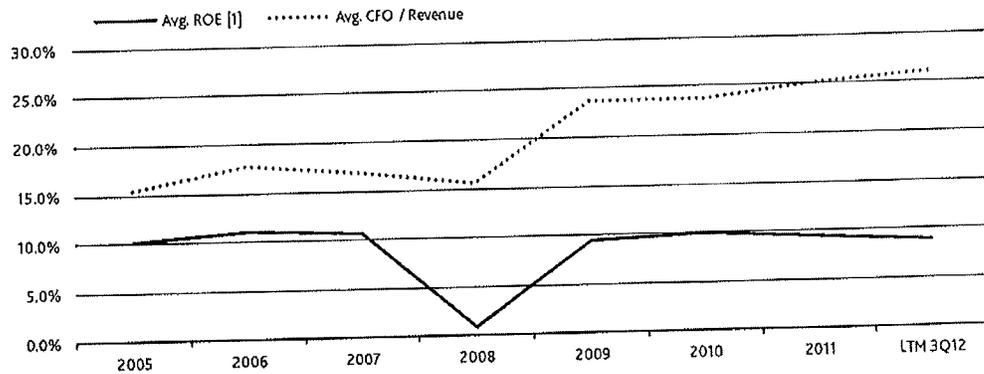
FIGURE 2
Authorized Returns on Equity, Treasury Rates and Spread



Source: SNL & Bloomberg

We expect the risk free rate of return to remain low through 2014 and that pressure on ROEs will persist over the near-term. Despite this trend, we see evidence of cash recovery being sufficient to sustain most utility financial profiles over the next 12 to 18 months. In Figure 3 below, we observe that although ROE has declined over the past two years, cash flow from operations (CFO) as a percentage of revenue has actually increased, potentially due to enhanced cost recovery provided by trackers and certainly from federal tax incentives such as accelerated bonus depreciation.

FIGURE 3
Cash Generation versus Returns



[1] 2008 Moody's Adjusted Net Income experienced significant reductions due to large losses in pension plan assets for several companies in our peer group.

Source: Moody's

If cash recovery is maintained near current levels, despite minor reductions in ROE, there should be no negative impact on ratings. However, declining allowed ROE levels are negative because we often regard the level of allowed ROE as a barometer of the relationship that a specific utility maintains with its commission. Thus we view punitive reductions to ROE as a credit negative, although the immediate impact is usually delayed, somewhat, by continued growth in rate base. Furthermore, we could see negative rating actions if ROEs were to decline to levels near 9.00%, as reduced revenues will eventually lead to declines in cash flow, or turn investor interest toward competing utilities in more investor-friendly jurisdictions, or even to different sectors.

Our primary concern about the trend toward lower industry ROEs is the eventual return of higher interest rates without the benefit of timely and commensurate adjustments toward higher allowed ROEs. That is, when the relationship between interest rates and ROEs starts to converge (identified by the green columns in Figure 2), there is risk for credit deterioration and negative rating impacts.

We view regulatory compacts that have annual updates to ROEs, such as the historical multi-year rate plans evidenced in states like New York and Vermont, to be more credit supportive in circumstances of a rising interest rate environment. The allowed ROEs in the historical rate plans of these states are formulaic, with treasury bill rates as an automatic input to the outcome of an allowed ROE. They also contain annual rate increases to capture rising costs and investment for the respective utility. Conversely, in states where there are several years between rate cases, there is a higher risk of allowed returns lagging interest rate growth and achieving all-in rates that do not reflect the reality of a more costly economic environment.

States to watch in 2013

Although our general view of regulation throughout the US is business-as-usual over the near-term, there are certain states where our perception of regulatory supportiveness may change in 2013. Figure 4 identifies those states we view a change in the current regulatory environment, either positive or negative, as a real possibility in 2013, with a bias to the negative. We also describe the circumstances motivating our vigilance in these states.

FIGURE 4

Potential Shifts in Regulatory Support

| Positive Potential | | Negative Potential | |
|--------------------|---|--------------------|---|
| State | Comment | State | Comment |
| MD | Governor recently wrote to Maryland Public Service Commission urging them to adopt a task force recommendation to allow cost recovery mechanism for investments aimed at improving reliability of a utility's distribution system. | NY, NJ, CT | Effects of Hurricane Sandy and potential for deferred recovery of costs and heightened political influence over rate making. |
| AZ | UNS Gas, Arizona Public Service, and Southwest all recently received credit supportive rate case outcomes and included shorter time frames for deciding cases and decoupling. Positive outlook for UNS Energy and subsidiary Tucson Electric Power (TEP) reflects our expectation for a reasonable outcome in upcoming TEP rate case. | IL | Although recent legislation has improved Commonwealth Edison and Ameren Illinois' cost recovery prospects, the regulatory and political environment remains unpredictable with adverse regulatory decisions continuing to be a continuing trend. |
| NM | The state recently finalized rules allowing rates to be based on a forward looking test year, but these new rules have yet to be implemented in a rate order. The legislature is also expected to promulgate rules following a recent referendum requiring more stringent qualifications for elected commissioners. | NC | At Duke Energy, management changes and other developments following the Progress Energy merger and a subsequent settlement with North Carolina Utilities Commission has increased regulatory risk at a time when both of its North Carolina utility subsidiaries are pursuing rate cases. |

FIGURE 4

Potential Shifts in Regulatory Support

| Positive Potential | | Negative Potential | |
|--------------------|--|--------------------|---|
| TX | Political and regulatory intervention seeks to alter the market structure to benefit generators. | OH | Although Electric Security Plans provide some clarity through 2014, the market transition toward fully deregulated generation could negatively affect utility financials. |
| | | MS | Unanimous Mississippi Public Service Commission vote to deny Mississippi Power's request of financing costs on Kemper County IGCC plant due to a pending Sierra Club lawsuit was a credit negative. A settlement agreement on cost recovery has since been reached. |
| | | FERC | Changes already enacted to the FERC rate making methodology in California and the current legal battle regarding New England transmission ROE reductions threaten pervasive changes to the degree of financial support offered by the FERC. |

Stable financials, but falling cash flow ratios for big spenders

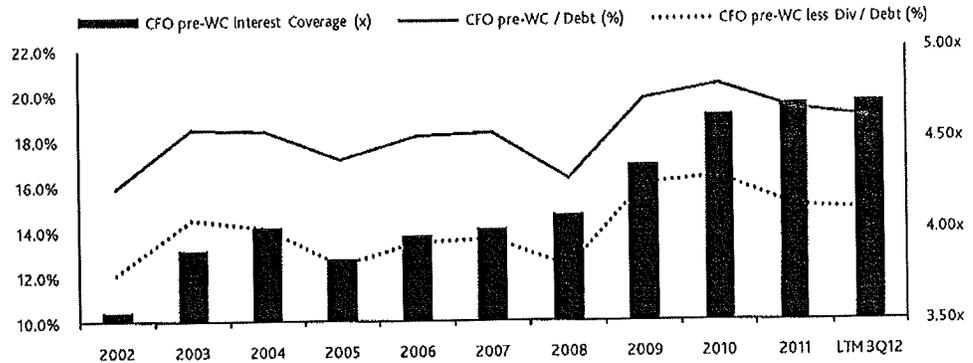
In recent years, utilities have elected to take advantage of favorable tax policies which boost near term cash flow in exchange for reduced rate base growth in the future – specifically, bonus depreciation. This voluntary tax election also benefits utilities because it temporarily boosts key financial metrics such as CFO pre-WC to debt² and CFO pre-WC interest coverage. Since 2009, tax policy changes such as those associated with accelerated bonus depreciation, uniform capitalization and capitalized repairs have provided the industry with one-time changes to tax accounting methods that have generated significant amounts of cash flow from tax savings or refunds.

We estimate that, on average, a utility company's cash flow to debt metric benefitted anywhere from 200 to 300 basis points in any given year (2009-12), depending on the timing of when a given company exercised accounting methodology changes. Although these one-time effects have largely run their course, we note that the recent extension of 50% bonus depreciation will continue to support (or inflate, if comparing to organic run-rate potential) cash flow levels in 2013.

As seen in Figure 5, even with benefits from 100% bonus depreciation in 2011 and 50% in 2012, cash flow coverage of debt has declined for our peer group since the height of 2010.

² Cash Flow from Operations before Working Capital to debt

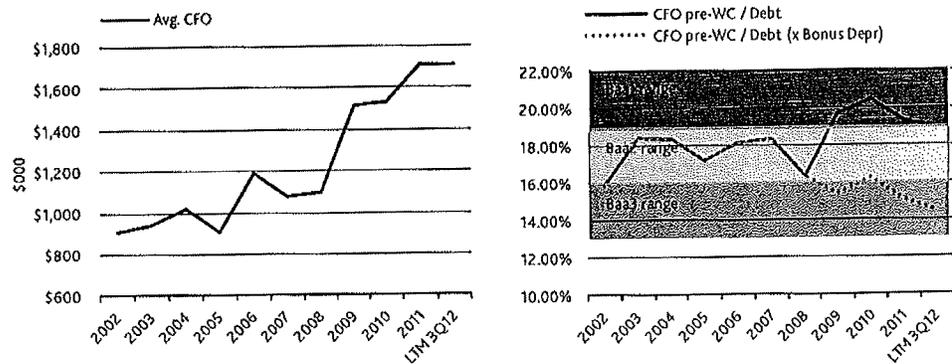
FIGURE 5
Key Cash Flow Metrics



Source: Moody's

This inflation due to one-time benefits is a risk, as utilities will likely have lower cash flow when bonus depreciation ends, all else being equal. In Figure 6, we estimate the magnitude of the effects of bonus depreciation (assuming 70% of capex represents qualifying assets and a 35% tax rate) on the peer group's CFO pre-WC to debt. Without bonus depreciation, the financial profile of the group falls from a level in-line with the low Baa1 rating range of our Regulated Electric & Gas rating methodology, to a level solidly in the Baa3 range.

FIGURE 6
Effects of Bonus Depreciation



Source: Moody's

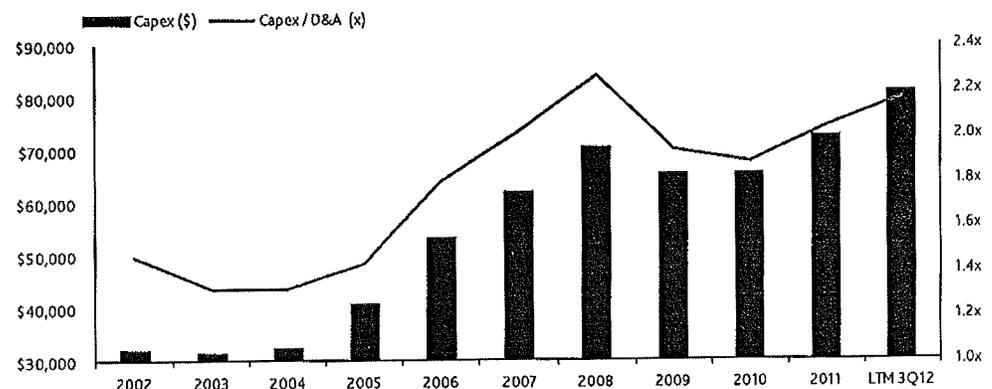
Nevertheless, we expect financial metrics to remain relatively steady in 2013, given our assumptions of ongoing rate relief, the continuance of low interest rates, cash flow stability provided by cost recovery mechanisms, government policy from the extension of bonus depreciation, and the potential for the Moving Ahead for Progress in the 21st Century Act (MAP-21) to reduce the funding requirements for pension obligations. More importantly, we think managements will utilize a balanced mix of debt and equity to keep the leverage and capitalization of their utilities in a conservative range and not test negatively biased rating actions.

Although we expect metrics for the industry to be stable, companies with robust capital programs, such as Virginia Electric and Power Company (A3, stable), Indiana Michigan Power company (Baa2, stable), SCANA Corporation (Baa3, stable), and Public Service Company of Oklahoma (Baa1, stable), could experience a decline in financial metrics due to increased debt associated with growing free cash flow deficits. In each of these cases, we anticipate that the resulting financial profile will still be appropriate for each company's current rating.

Rate shock and regulatory contentiousness are primary risks to stable outlook

Capital expenditure plans for most US utilities have rapidly outpaced depreciation and amortization (D&A) levels in recent years. The need for environmental retrofits, growth in renewable energy use and basic system maintenance and upgrades are the primary drivers for the capex growth trend observed amongst our sample utility peer group (made up of 45 industry peers; see Appendix A). Figure 7 shows the relationship between capex and D&A over the past ten years for these companies.

FIGURE 7
Capex Levels for Moody's Peer Group
(\$ millions)



Source: Moody's

We view capital investment in rate base positively over the longer term, as it contributes to growth in operating cash flow. Given the low commodity price environment, we assume that these growth investments will be recovered through base rate cases on a timely basis without contentious regulatory proceedings. However, given the magnitude of these investments, corresponding increases in customer bills and associated financing needs, we see the need for each company to carefully execute their capital raising strategies in order to maintain stable credit profiles across the sector. We view the relationship between rising customer bills and the current economic environment as a potential credit negative. While the risk of this scenario (i.e., significant rate shock) is considered to be remote, if there were a reversal in the plodding economic recovery, and lower variable costs were no longer sufficient to offset the higher costs of capex programs, recovery of these costs could be delayed over the intermediate-term in order to avoid customer rate shock and/or rate fatigue.

In order to gain an appreciation for the magnitude of these prospective risks, we analyzed the potential rate impact of expected capex levels for companies involved in large capital programs. Figure 8 shows the utilities that we believe have the largest potential rate increases over the near-term. The analysis includes 2013-2014 capex data made available in 2011 10K company disclosures and assumptions

explained in Appendix B (also see our report "High Capital Expenditures Adding to Rate Pressure for Utilities" (October 2012)). Although the time horizon of the capital expenditures extends outside of our outlook horizon, we find it valuable to determine what companies will require substantial rate increases to recover capital expenditures, in order to monitor management's near-term response to mitigate and/or absorb future risks to rate recovery. Proactive management strategies, in our opinion, include implementing cost cutting measures, strengthening the balance sheet and bolstering liquidity. Several of these utilities were recently awarded increases in rate cases that were determined in late 2012.

FIGURE 8
Largest Potential Rate Increases

| Company | Rating | Total Rate Increase for 2013-2014 Spending | Estimated Capex 2013-2014 (millions) | CFO pre-WC / Debt LTM 3Q12 | Projected CFO pre-WC / Debt 2014 | Metric Cushion | Supportiveness of Regulation |
|-------------------------------|--------|--|--------------------------------------|----------------------------|----------------------------------|----------------|------------------------------|
| Louisville Gas and Electric | Baa1 | 18% | \$1,538 | 27% | 23% | 7% | Above Average (A) |
| Mississippi Power | A3 | 18% | \$1,235 | 14% | 16% | -4% | Above Average (A) |
| South Carolina Electric & Gas | Baa2 | 12% | \$2,600 | 17% | 17% | 0% | Above Average (A) |
| Kentucky Utilities | Baa1 | 11% | \$1,583 | 23% | 21% | 5% | Above Average (A) |
| Southwestern Public Service | Baa2 | 11% | \$1,160 | 24% | 22% | 6% | Average (Baa) |
| PPL Electric Utilities | Baa2 | 10% | \$1,689 | 22% | 21% | 5% | Average (Baa) |

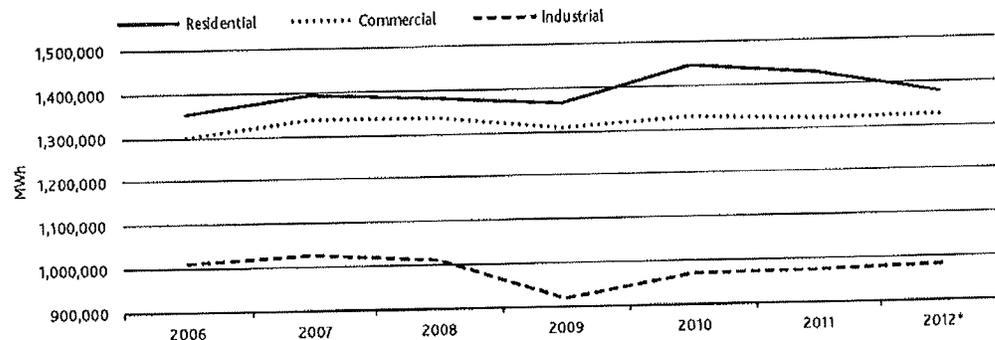
Source: SNL, 10K and EIA filings, Moody's

Over the next two years, some of these companies could find themselves poorly positioned within their rating category as a result of their cash outlay. Although we assume a 50% debt financing of these expenditures, negative ratings action could occur if management takes a more aggressive leverage policy or if cash flow recovery is slower than expected. Thus, attention will be given to the progress of each company's capex program and the regulatory developments that dictate the timing and duration of recovery.

Utilities will need to manage continued flat volume growth due to economy, energy efficiency and demand side management

Another key to our outlook assumptions is the industry's ability to pass through base rate increases (aided by low commodity costs) without the benefit of robust organic growth in customers or usage per customer. Flat to declining demand (see Figure 9) represents yet another key risk to the stability of our outlook, as it places the full amount of rising cost pressure on a static amount of customer use.

FIGURE 9
Retail Sales by Customer Class



*2012 data through November
Source: EIA.gov

Effects of a struggling economy, mild weather and continuing efforts promoting more efficient appliances and customer conservation (aka demand side management, DSM) are all contributing to very-low-to-declining demand growth across the majority of the sector. Whereas fiscal and monetary policy is still attempting to prod the economy out of the Great Recession and spur growth, federal and many state governments are taking significant measures to increase greater energy efficiency through various means including appliance and equipment standards, building codes, transportation policies and utility programs. These policies are gaining momentum across the country, with most states increasing their budget allocation for efficiency programs in recent years.

The credit implication of these initiatives are largely twofold. On one hand, we view utilities having a high degree of fixed cost recovery in the demand portion of rates as better positioned to withstand a low demand environment. Thus, utilities in states such as California and New York, where legislatively backed decoupling mechanisms have been implemented at essentially every utility, should maintain relatively stable and predictable financial results, even with slumping energy sales. On the other hand, utilities that have a greater portion of fixed costs in the energy or other variable portions of the rate payer's bill have greater exposure to fluctuations in demand and a higher potential for negative rating action in a continuing low demand environment.

Since a growing utility can recover more fixed costs through margin expansion from new customers, reducing the need for general rate increases, a low demand or no growth environment ups the ante for utility asks in rate cases. Rate cases under no growth scenarios become must-haves for a utility, in order to recover increasing operating costs. The addition of static growth to the aforementioned mixture of rising consumer rates in a depressed economic environment might lead to breach of the inflection point (i.e., the point at which customers complain to regulators about their inability to pay for continued utility rate increases) in one or more states. Appendix C details a state-by-state comparison of inflection point sensitivity, based on income, average utility bill and retail rates. States that we suspect to be potential areas of inflection point concern (e.g., Kansas, Michigan, Missouri and West Virginia) are those where utility bill rate increases have grown at a high rate since 2008, and also where the utility bill represents a relatively high percentage of the rate payer's discretionary income.

One point of growth differentiation is found with local distribution companies (LDCs) that are benefitting from the attractive economics of heating one's home or small business with natural gas versus propane or oil. Service territories containing a large amount of customers who have historically

used propane or oil for heating have begun converting their heating systems to run on natural gas, given the exceedingly low cost for natural gas. Many of these conversion opportunities are significant for companies like UIL Corp. (Baa3 stable) and UGI Utilities (A3 stable) in the Northeast, which has traditionally relied on oil for space heating and the natural gas grid has been late to develop.

Federal Government actions represent a wild card

Although Congress has approved a short-term extension of the debt ceiling, ultimate policies regarding the debt ceiling and budget sequestrations are highly uncertain and have the potential to impede the already sluggish economic growth. On January 30, the Commerce Department reported that the economy shrunk by 0.1% in 4Q12 – the first economic contraction since the recession ended in 2009. Uncertainties surrounding government spending and the economy's durability in 2013 could have negative effects that exacerbate an already low power demand environment; a negative for the sector.

These economic vagaries are at play while newly re-elected President Obama's eventual nominee to replace Lisa Jackson, the head of the Environmental Protection Agency, may try to generate renewed momentum for additional environmental compliance regulations. However, the slow and litigious process for promulgating regulations means that their impact would be unlikely to have a material impact in the near-term.

Appendix A – Peer group listing

| | MDY Rating | MDY Outlook |
|-----------------------------------|------------|---------------------|
| Madison Gas and Electric [1] | A1 | Stable |
| PECO Energy | A3 | Stable |
| Public Service Electric and Gas | A3 | Stable |
| Wisconsin Energy | A3 | Stable |
| ALLETE, Inc. | Baa1 | Stable |
| Alliant Energy | Baa1 | Stable |
| Baltimore Gas and Electric [2] | Baa1 | Stable |
| Consolidated Edison, Inc. | Baa1 | Stable |
| Integrus Energy Group, Inc. | Baa1 | Stable |
| MidAmerican Energy Holdings Co. | Baa1 | Stable |
| NextEra Energy, Inc. | Baa1 | Stable |
| OGE Energy Corp. | Baa1 | Stable |
| PG&E Corporation | Baa1 | Stable |
| Sempra Energy | Baa1 | Stable |
| Southern Company (The) | Baa1 | Stable |
| Xcel Energy Inc. | Baa1 | Stable |
| American Electric Power | Baa2 | Stable |
| Commonwealth Edison [2] | Baa2 | Stable |
| Dominion Resources Inc. | Baa2 | Stable |
| DTE Energy | Baa2 | Positive |
| Duke Energy | Baa2 | Stable |
| Edison International | Baa2 | Stable |
| IDACORP, Inc. | Baa2 | Stable |
| ITC Holdings Corp. | Baa2 | Stable |
| Northeast Utilities | Baa2 | Stable |
| Pinnacle West Capital Corporation | Baa2 | Stable |
| TECO Energy, Inc. | Baa2 | Stable |
| Westar Energy, Inc. | Baa2 | Stable |
| Ameren Corporation | Baa3 | Stable |
| Black Hills Corporation | Baa3 | Positive |
| CenterPoint Energy, Inc. | Baa3 | Positive |
| Cleco Corporation | Baa3 | Stable |
| Entergy Corporation | Baa3 | Stable |
| FirstEnergy Corp. | Baa3 | Stable |
| Great Plains Energy | Baa3 | Stable |
| NISource Inc. [3] | Baa3 | Stable |
| Pepco Holdings, Inc. | Baa3 | Stable |
| PPL Corporation | Baa3 | Stable |
| SCANA Corporation | Baa3 | Stable |
| UIL Holdings | Baa3 | Stable |
| CMS Energy | Ba1 | Positive |
| DPL Inc. | Ba1 | Under Review - Down |
| NV Energy Inc. | Ba1 | Stable |
| PNM Resources, Inc. | Ba1 | Stable |
| Puget Energy, Inc. | Ba1 | Stable |
| UNS Energy | Ba1 | Positive |

[1] Madison Gas and Electric is used as a proxy for its parent, MGE Energy, which is not rated.

[2] Significant operating subsidiaries are used when its parent company is not rated under the Regulated Electric & Gas Utilities methodology.

[3] The Baa3 rating is the Senior Unsecured rating at its guaranteed financing subsidiary.

Appendix B – Capex Model Assumptions

We calculated the revenue requirements for utilities assuming a 50/50 debt to equity capital structure, 10.00% ROE, and a 30-year expected life for the capex. Based on our estimates, the revenue requirements associated with the capex is approximately 13.8% of the annual spending. Increases in the equity ratio or equity and debt returns raise the revenue requirement, and increases in the useful life of the asset reduce the revenue requirement. We also assumed underlying revenue growth of 1% based on customer and usage growth. Based on our conversations with utilities, the revenue requirement varies between 12-18% depending on the capital structure, allowed returns, and other rate recovery treatment.

FIGURE 10
Generic Revenue Requirement Example
 Step 1: Calculate the Weighted Average Cost of Capital

| | % of Capitalization | x | After Tax Return | = | After Tax WACC | Pre-Tax WACC @ 35% rate |
|--------|---------------------|---|------------------|---|----------------|-------------------------|
| Debt | 50% | x | 5.50% | = | 2.75% | 2.75% |
| Equity | 50% | x | 10.00% | = | 5.00% | 7.7% |
| | | | WACC | | 7.75% | 10.4% |

Step 2: Calculate Revenue Requirement

| | | | | |
|-------------------------|-------------|---|------|--|
| Capital Expenditures | 100 | | | |
| Pre-Tax Debt Return | 100 x 2.75% | = | 2.8 | |
| Pre-Tax Equity Return | 100 x 7.69% | = | 7.7 | |
| Depreciation @ 30 years | 100 / 30 | = | 3.3 | |
| Revenue Requirement | | | 13.8 | |

Step 3: Project Income Statement

| Income Statement | |
|-----------------------------------|------|
| Revenue Requirement | 13.8 |
| - D&A | 3.3 |
| - Interest Exp | 2.8 |
| = Pre-Tax Income | 7.7 |
| - Tax Expense | 2.7 |
| = Net Income | 5.0 |
| + Depreciation | 3.3 |
| = Cash from Operations (NI + D&A) | 8.3 |
| CFO / Debt | 17% |
| Net Income | 5.0 |
| / Equity | 50 |
| = Return on Equity | 10% |

Appendix C – Inflection point data

| | Average Bill / Disposable Income | | | | Average Retail Rate (cents per kilowatt hour) | | | | |
|----------------------|----------------------------------|------|------|------|---|-------|-------|-------|------------------|
| | 2008 | 2009 | 2010 | 2011 | 2008 | 2009 | 2010 | 2011 | 2008 - 2011 CAGR |
| West Virginia | 3.4% | 3.7% | 4.3% | 4.2% | 7.06 | 7.90 | 8.79 | 9.39 | 7.4% |
| Michigan | 2.7% | 2.9% | 3.2% | 3.3% | 10.75 | 11.60 | 12.46 | 13.27 | 5.4% |
| Missouri | 3.1% | 3.3% | 3.8% | 3.8% | 8.00 | 8.54 | 9.08 | 9.75 | 5.1% |
| Kansas | 2.7% | 3.0% | 3.4% | 3.4% | 8.88 | 9.53 | 10.03 | 10.65 | 4.6% |
| Nebraska | 2.7% | 2.9% | 3.1% | 3.0% | 7.87 | 8.52 | 8.94 | 9.32 | 4.3% |
| Pennsylvania | 3.3% | 3.3% | 3.7% | 3.7% | 11.35 | 11.65 | 12.70 | 13.26 | 4.0% |
| Kentucky | 3.9% | 4.0% | 4.4% | 4.2% | 7.94 | 8.37 | 8.57 | 9.20 | 3.7% |
| North Dakota | 2.7% | 2.9% | 2.8% | 2.8% | 7.51 | 7.58 | 8.13 | 8.58 | 3.4% |
| Ohio | 3.4% | 3.5% | 3.9% | 3.7% | 10.06 | 10.67 | 11.32 | 11.42 | 3.2% |
| Indiana | 3.5% | 3.7% | 3.9% | 3.9% | 8.87 | 9.50 | 9.56 | 10.06 | 3.2% |
| Wisconsin | 2.9% | 3.0% | 3.2% | 3.1% | 11.51 | 11.94 | 12.65 | 13.02 | 3.1% |
| South Dakota | 2.7% | 2.9% | 3.0% | 2.8% | 8.27 | 8.49 | 8.97 | 9.35 | 3.1% |
| Minnesota | 2.5% | 2.6% | 2.7% | 2.7% | 9.74 | 10.04 | 10.59 | 10.96 | 3.0% |
| Idaho | 3.1% | 3.6% | 3.4% | 3.3% | 6.99 | 7.80 | 7.99 | 7.87 | 3.0% |
| Oregon | 3.2% | 3.3% | 3.2% | 3.4% | 8.49 | 8.68 | 8.87 | 9.54 | 3.0% |
| Vermont | 2.9% | 2.9% | 3.0% | 3.0% | 14.48 | 14.90 | 15.57 | 16.26 | 2.9% |
| Tennessee | 4.3% | 4.4% | 4.7% | 4.7% | 8.91 | 9.32 | 9.23 | 9.98 | 2.9% |
| South Carolina | 4.8% | 5.1% | 5.6% | 5.3% | 9.89 | 10.44 | 10.50 | 11.05 | 2.8% |
| Georgia | 4.3% | 4.5% | 4.9% | 4.9% | 9.93 | 10.13 | 10.07 | 11.05 | 2.7% |
| Colorado | 2.1% | 2.2% | 2.5% | 2.5% | 10.13 | 10.00 | 11.04 | 11.27 | 2.7% |
| Wyoming | 2.0% | 2.3% | 2.2% | 2.3% | 8.21 | 8.58 | 8.77 | 9.11 | 2.6% |
| Virginia | 3.5% | 3.9% | 3.9% | 3.7% | 9.62 | 10.61 | 10.45 | 10.64 | 2.6% |
| Iowa | 2.9% | 3.1% | 3.3% | 3.0% | 9.49 | 9.99 | 10.42 | 10.46 | 2.5% |
| New Mexico | 2.5% | 2.6% | 2.7% | 2.8% | 10.01 | 10.02 | 10.52 | 11.00 | 2.4% |
| Washington | 2.5% | 2.6% | 2.6% | 2.7% | 7.54 | 7.68 | 8.04 | 8.28 | 2.4% |
| Utah | 2.6% | 2.7% | 2.8% | 2.8% | 8.26 | 8.48 | 8.71 | 8.96 | 2.1% |
| Arizona | 4.1% | 4.5% | 4.5% | 4.4% | 10.27 | 10.73 | 10.97 | 11.08 | 1.9% |
| North Carolina | 4.0% | 4.4% | 4.8% | 4.4% | 9.52 | 9.99 | 10.12 | 10.26 | 1.9% |
| California | 2.5% | 2.8% | 2.7% | 2.6% | 13.81 | 14.74 | 14.75 | 14.78 | 1.7% |
| Montana | 2.9% | 3.0% | 2.9% | 3.1% | 9.13 | 8.93 | 9.16 | 9.75 | 1.7% |
| Hawaii | 6.6% | 4.9% | 5.4% | 6.2% | 32.50 | 24.20 | 28.10 | 34.68 | 1.6% |
| Alabama | 5.2% | 5.3% | 5.7% | 5.4% | 10.40 | 10.66 | 10.67 | 11.09 | 1.6% |
| Alaska | 3.2% | 3.4% | 3.1% | 3.3% | 16.55 | 17.14 | 16.26 | 17.62 | 1.6% |
| Illinois | 2.6% | 2.7% | 2.9% | 2.8% | 11.07 | 11.27 | 11.52 | 11.78 | 1.6% |
| New Hampshire | 2.9% | 3.1% | 3.0% | 3.0% | 15.68 | 16.26 | 16.32 | 16.52 | 1.3% |
| District of Columbia | 1.8% | 1.9% | 2.1% | 1.8% | 12.79 | 13.76 | 14.01 | 13.40 | 1.2% |

| | Average Bill / Disposable Income | | | | Average Retail Rate (cents per kilowatt hour) | | | | |
|---------------|----------------------------------|------|------|------|---|-------|-------|-------|------------------|
| | 2008 | 2009 | 2010 | 2011 | 2008 | 2009 | 2010 | 2011 | 2008 - 2011 CAGR |
| Oklahoma | 3.6% | 3.6% | 4.0% | 4.0% | 9.09 | 8.49 | 9.14 | 9.47 | 1.0% |
| United States | 3.4% | 3.6% | 3.7% | 3.6% | 11.26 | 11.51 | 11.54 | 11.72 | 1.0% |
| New Jersey | 3.0% | 3.0% | 3.3% | 3.0% | 15.66 | 16.31 | 16.57 | 16.23 | 0.9% |
| New York | 3.1% | 3.0% | 3.2% | 3.1% | 18.30 | 17.50 | 18.74 | 18.26 | -0.1% |
| Florida | 4.3% | 5.0% | 4.6% | 4.3% | 11.65 | 12.39 | 11.44 | 11.51 | -0.3% |
| Delaware | 4.4% | 4.5% | 4.7% | 4.3% | 13.93 | 14.07 | 13.80 | 13.70 | -0.4% |
| Mississippi | 5.4% | 5.3% | 5.6% | 5.3% | 10.39 | 10.22 | 9.87 | 10.17 | -0.5% |
| Nevada | 3.8% | 4.4% | 4.1% | 3.7% | 11.93 | 12.86 | 12.36 | 11.61 | -0.7% |
| Arkansas | 4.1% | 4.1% | 4.3% | 4.1% | 9.27 | 9.14 | 8.86 | 9.02 | -0.7% |
| Maryland | 4.1% | 4.4% | 4.4% | 3.7% | 13.84 | 14.98 | 14.32 | 13.31 | -1.0% |
| Maine | 3.1% | 3.0% | 2.9% | 2.8% | 16.20 | 15.65 | 15.71 | 15.38 | -1.3% |
| Connecticut | 3.6% | 3.9% | 3.6% | 3.3% | 19.55 | 20.33 | 19.25 | 18.11 | -1.9% |
| Louisiana | 4.6% | 3.7% | 4.3% | 4.1% | 10.28 | 8.10 | 8.98 | 8.96 | -3.4% |
| Texas | 4.9% | 5.0% | 4.7% | 4.6% | 13.04 | 12.38 | 11.60 | 11.08 | -4.0% |
| Massachusetts | 2.9% | 2.8% | 2.6% | 2.4% | 17.68 | 16.87 | 14.59 | 14.67 | -4.6% |
| Rhode Island | 3.3% | 2.9% | 3.0% | 2.6% | 17.45 | 15.60 | 15.92 | 14.33 | -4.8% |

The inflection point data contains average household income statistics from the Bureau of Economic Analysis (BEA) and average retail electric prices according to the Energy Information Administration (EIA). As the EIA information contains average retail prices throughout each state, including the rates charged by municipal utilities and generation and transmission cooperatives, a specific investor owned utility's rates and CAGR may differ from the averages presented here.

Moody's Related Research

Industry Outlooks:

- » [2013 Utilities and Power Outlook Presentation, December 2012 \(148183\)](#)
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To access any of these reports, click on the entry above. Note that these references are current as of the date of publication of this report and that more recent reports may be available. All research may not be available to all clients.

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