BEFORE THE

FLORIDA PUBLIC SERVICE COMMISSION

	)	
IN RE: PETITION FOR RATE INCREASE BY GULF POWER COMPANY	)))	**DOCKET NO. 160186-EI**
	)	
IN RE: PETITION FOR APPROVAL OF 2016 DEPRECIATION AND DISMANTLEMENT STUDIES, APPROVAL OF PROPOSED DEPRECIATION RATES AND ANNUAL DISMANTLEMENT ACCRUALS AND PLANT SMITH UNITS 1 AND 2 REGULATORY ASSET AMORTIZATION, BY GULF POWER COMPANY	)))))))))))))	**DOCKET NO. 160170-EI**

Direct Testimony and Exhibits of

Michael P. Gorman

On behalf of

Federal Executive Agencies

January 13, 2017

BAI

BRUBAKER & ASSOCIATES, INC.

Project 10353

Table of Contents to the
Direct Testimony of Michael P. Gorman

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Direct Testimony of Michael P. Gorman

1 **I. INTRODUCTION AND SUMMARY**

2 **Q PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

3 A Michael P. Gorman. My business address is 16690 Swingley Ridge Road,

4 Suite 140, Chesterfield, MO 63017.

5

6 **Q WHAT IS YOUR OCCUPATION?**

7 A I am a consultant in the field of public utility regulation and a Managing Principal of

8 Brubaker & Associates, Inc., energy, economic and regulatory consultants.

9

10 **Q PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE.**

11 A This information is included in Appendix A to this testimony.

BRUBAKER & ASSOCIATES, INC.

1 **Q** **ON WHOSE BEHALF ARE YOU APPEARING IN THIS PROCEEDING?**

2 A I am appearing in this proceeding on behalf of the Federal Executive Agencies

3 ("FEA").

4

5 **Q** **WHAT IS THE SUBJECT MATTER OF YOUR TESTIMONY?**

6 A My testimony will address the current market cost of equity, and resulting overall rate

7 of return, for Gulf Power Company ("Gulf Power" or the "Company"). In my analyses,

8 I consider the results of several market models, the current economic environment

9 and outlook for the electric utility industry, as well as the financial integrity of Gulf

10 Power given my recommended return on equity. I will also respond to Gulf Power

11 witness Dr. James Vander Weide's recommended return on equity range for the

12 proxy group of 9.70% to 10.90% with a midpoint of 10.40%, and his proposed

13 60 basis point adder above the proxy group point estimate of 10.40%, to produce a

14 requested return on equity for Gulf Power of 11.00% and overall rate of return of

15 6.04%.

16 My silence in regard to any issue should not be construed as an endorsement

17 of Gulf Power's position.

18

19 **Q** **PLEASE SUMMARIZE YOUR RECOMMENDATIONS AND CONCLUSIONS ON**

20 **RATE OF RETURN.**

21 A I recommend the Florida Public Service Commission (the "Commission") award a

22 return on common equity of 9.20%, which is at the approximate midpoint of my

23 recommended range of 8.80% to 9.50%. My recommended return on equity will

24 fairly compensate Gulf Power for its current market cost of common equity, will

25 support its financial integrity and access to capital, and it will mitigate the claimed

1   revenue deficiency in this proceeding by fairly balancing the interests of investors

2   and ratepayers.

3   Gulf Power's proposed ratemaking capital structure contains an unreasonably

4   high balance of common equity to total capital than necessary to balance its financial

5   risk with a capital structure that results in just and reasonable rates. By using a

6   ratemaking capital structure with an inflated amount of common equity as Gulf Power

7   is proposing, its cost of service is inflated above the amount that is necessary to

8   maintain its financial integrity, credit rating, and access to capital under reasonable

9   terms and conditions. For this reason, Gulf Power's proposed capital structure

10   produces unjustified rate burdens on its customers, and the rates produced using its

11   proposed capital structure will not be just and reasonable.

12   Based on my recommended return on equity and capital structure, and the

13   Company's embedded cost of debt, I recommend an overall rate of return of 5.20%

14   as developed on my Exhibit MPG-1.

15   Finally, I will show that the 11.0% recommended return on equity, that has

16   been recommended by Gulf Power witness Dr. James Vander Weide is excessive

17   and unreasonable. Dr. Vander Weide's recommended return on equity is far above

18   a reasonable estimate of Gulf Power's market cost of equity and should be rejected.

19

20   **II. RATE OF RETURN**

21   **Q   PLEASE DESCRIBE THIS SECTION OF YOUR TESTIMONY.**

22   A   In this section of my testimony, I will explain the analysis I performed to determine

23   the reasonable rate of return in this proceeding and present the results of my

24   analysis. I begin my estimate of a fair return on equity by reviewing the authorized

25   returns approved by the regulatory commissions in various jurisdictions, the market

1　assessment of the regulated utility industry investment risk, credit standing, and

2　stock price performance. I used this information to get a sense of the market's

3　perception of the investment risk characteristics of the regulated utility industry in

4　general, which is then used to produce a refined estimate of the market's return

5　requirement for assuming investment risk similar to Gulf Power's regulated utility

6　operations.

7　As described below, I find the credit rating outlook of the industry to be stable,

8　supportive of the industry's financial integrity, and has supported access to an

9　abundance of low cost capital. Further, regulated utilities' stocks have exhibited

10　strong and stable price valuations over the last several years, which is evidence of

11　utility access to capital, and stable investment characteristics.

12　Based on this review of credit outlooks and stock price performance, I

13　conclude that the market continues to embrace the regulated utility industry as a

14　safe-haven investment option and views utility equity and debt investments as a

15　low-risk investment alternative.

16

17　**II.A. Electric Industry Authorized Returns on Equity,**
18　　　　**Access to Capital, and Credit Strength**

19　**Q　PLEASE DESCRIBE THE OBSERVABLE EVIDENCE ON TRENDS IN**

20　**AUTHORIZED RETURNS ON EQUITY FOR ELECTRIC UTILITIES, ELECTRIC**

21　**UTILITIES' CREDIT STANDING, AND ELECTRIC UTILITIES' ACCESS TO**

22　**CAPITAL TO FUND INFRASTRUCTURE INVESTMENT.**

23　A　Authorized returns on equity for electric utilities have been steadily declining over the

24　last 10 years as illustrated in the graph below. More recent authorized returns on

25　equity for electric utilities have declined down to about 9.6%, excluding limited issue

26　rider decisions.

Figure 1

Authorized Electric Returns on Equity
(Excludes Limited Issue Riders)
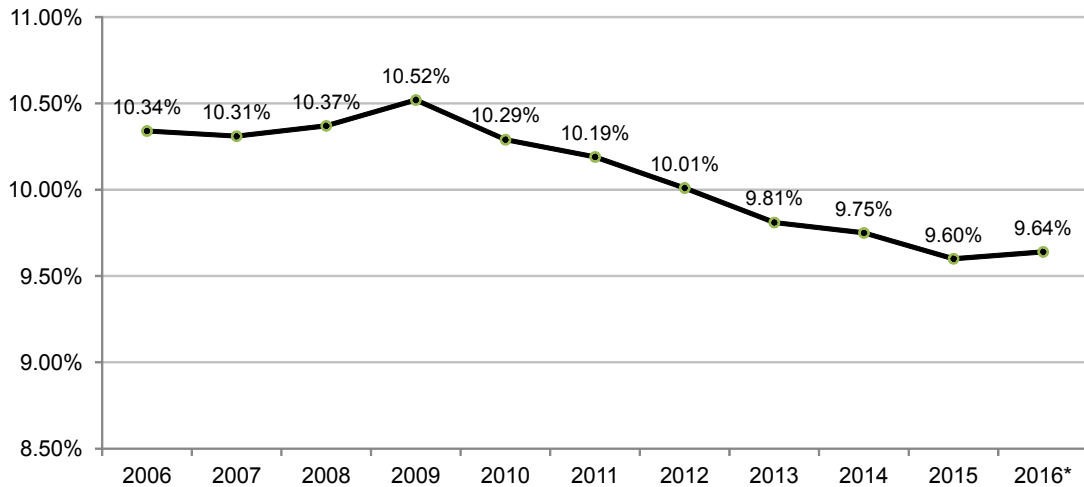
_____
Source and Note:
 Regulatory Research Associates, Inc., Regulatory Focus, Major Rate Case Decisions -- January - September 2016,
 October 14, 2016 at page 6.

 * The data includes the period Jan - Sep 2016.

1   Importantly, while the graph above suggests that authorized returns on equity

2   for electric utilities have averaged around 9.6%, the average has been skewed by

3   jurisdictions which award significantly above industry average authorized returns on

4   equity. The majority of returns on equity for integrated electric utility companies, as

5   shown in Table 1 below, have averaged about 9.6%, but predominantly fall in the

6   area of approximately 9.5%.

7

8

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TABLE 1

**2015 and 2016 Vertically Integrated Electric
Utility Rate Case Authorized Returns on Equity
Litigated Decisions**

Line	Company (1)	State (2)	Return on Equity (3)	Date (4)	S&P Credit Rating (5)
1	Kansas City Power & Light Company	KS	9.30%	09/10/15	BBB+
2	El Paso Electric Company	NM	9.48%	06/08/16	BBB
3	PacifiCorp	WY	9.50%	01/23/15	A
4	PacifiCorp	WA	9.50%	03/25/15	A
5	Kansas City Power & Light Company	MO	9.50%	09/02/15	BBB+
6	PacifiCorp	WY	9.50%	12/30/15	A
7	UNS Electric, Inc.	AZ	9.50%	08/18/16	
8	PacifiCorp	WA	9.50%	09/01/16	A
9	Union Electric Company	MO	9.53%	04/29/15	BBB+
10	Public Service Company of New Mexico	NM	9.58%	09/28/16	BBB+
11	Southwestern Public Service Company	TX	9.70%	12/17/15	A-
12	Northern States Power Company - MN	MN	9.72%	03/26/15	A-
13	Appalachian Power Company	WV	9.75%	05/26/15	BBB
14	Indianapolis Power & Light Company	IN	9.85%	03/16/16	BBB-
15	Wisconsin Public Service Corporation	WI	10.00%	11/19/15	A-
16	Northern States Power Company - WI	WI	10.00%	12/03/15	A-
17	Upper Peninsula Power Company	MI	10.00%	09/08/16	
18	Consumers Energy Company	MI	10.30%	11/19/15	BBB+
19	DTE Electric Company	MI	10.30%	12/11/15	BBB+

Source: SNL Financial, downloaded November 3, 2016.

Notes:
[1]Data through the third quarter of 2016.
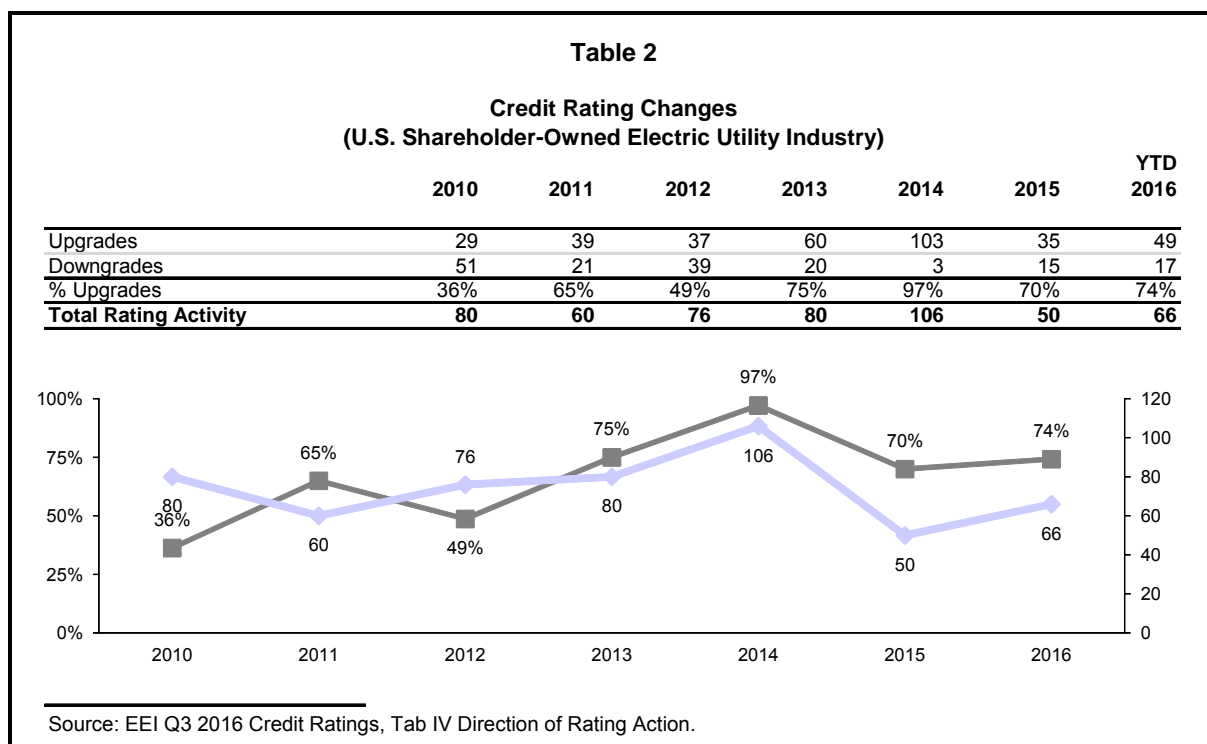[2]Rate cases for limited issue riders are excluded.
[3]Rate cases decided by settlement are excluded.
[4]Rate cases without return on equity authorization are excluded.

1   As shown in the graph and table above, a majority of the authorized returns

2   on equity have been at 9.58% or less in 2015 and 2016. Further, authorized returns

3   on equity have been declining.

1 **Q PLEASE DESCRIBE THE TREND IN CREDIT RATING CHANGES IN THE**

2 **ELECTRIC UTILITY INDUSTRY OVER THE LAST FIVE YEARS.**

3 A As shown below in Table 2, over the period 2010 through September 2016, the

4 electric utility industry has experienced a significant number of upgrades in credit

5 ratings by all of the major credit rating agencies (Fitch Ratings, Moody's, and

6 Standard & Poor's).

Table 2

Credit Rating Changes
(U.S. Shareholder-Owned Electric Utility Industry)

	2010	2011	2012	2013	2014	2015	YTD 2016
Upgrades	29	39	37	60	103	35	49
Downgrades	51	21	39	20	3	15	17
% Upgrades	36%	65%	49%	75%	97%	70%	74%
Total Rating Activity	**80**	**60**	**76**	**80**	**106**	**50**	**66**

Source: EEI Q3 2016 Credit Ratings, Tab IV Direction of Rating Action.

7 As noted above in Table 2, the upgrades in utility credit ratings started

8 outpacing downgrades in 2011, and more recently, the number of upgrades has

9 substantially exceeded the number of downgrades. For example, in 2014, there

10 were 103 upgrades and only three downgrades. In 2015, the number of upgrades

11 was more than twice the number of downgrades (35 upgrades and 15 downgrades).

12

13

1 **Q   HOW DID THIS CREDIT RATING ACTIVITY IMPACT THE CREDIT RATING OF**

2   **THE ELECTRIC UTILITY INDUSTRY?**

3 A   The credit rating changes for the electric utility industry reflect a significant

4   strengthening of the electric utility industry credit rating. As shown in Table 3 below,

5   in 2008, approximately 69% of the electric utility industry was rated from BBB- to

6   BBB+, 18% had a bond rating better than BBB+, and around 13% of the industry was

7   below investment grade. This industry rating improved steadily over the subsequent

8   six years. By the third quarter of 2016, only 3% of the industry was below investment

9   grade, around 65% continued to be in the range of BBB- to BBB+, and over 32% of

10   the industry had a bond rating above BBB+. Overall, the improvement to the credit

11   rating of the electric utility industry has been very significant.

TABLE 3

S&P Ratings by Category
(Year End)

Description	2008	2012	2013	2014	2015	2016 Q3
Regulated						
A or higher	8%	6%	3%	3%	3%	5%
A-	10%	17%	20%	21%	22%	27%
BBB+	23%	14%	17%	32%	33%	35%
BBB	23%	36%	49%	37%	33%	22%
BBB-	23%	17%	6%	3%	3%	8%
Below BBB-	13%	11%	6%	5%	6%	3%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Sources: EEI Q3 2016 Credit Ratings, Tab V – S&P Rating by Comp. Category.

12

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15

1 **Q HAVE CREDIT RATING AGENCIES COMMENTED ON DECLINING AUTHORIZED**

2 **RETURNS ON EQUITY?**

3 A Yes. Credit rating agencies recognize the declining trend in authorized returns and

4 the expectation that regulators will continue lowering the returns for U.S. utilities

5 while maintaining a stable credit profile. Specifically, Moody's states:

6 **Lower Authorized Equity Returns Will Not Hurt Near-Term Credit**
7 **Profiles**

8 The credit profiles of US regulated utilities will remain intact over the
9 next few years despite our expectation that regulators will continue to
10 trim the sector's profitability by lowering its authorized returns on
11 equity (ROE).[1]

12 Further, in a recent report, S&P states:

13 **2. Earned returns will remain in line with authorized returns**

14 Authorized returns on equity granted by U.S. utility regulators in rate
15 cases this year have been steady at about 9.5%. Utilities have been
16 adept at earning at or very near those authorized returns in today's
17 economic and fiscal environment. A slowly recovering economy,
18 natural gas and electric prices coming down and then stabilizing at
19 fairly low levels, and the same experience with interest rates have led
20 to a perfect "non-storm" for utility ratepayers and regulators, with
21 utilities benefitting alongside those important constituencies. Utilities
22 have largely used this protracted period of favorable circumstances to
23 consolidate and institutionalize the regulatory practices that support
24 earnings and cash flow stability. We have observed and we project
25 continued use of credit-supportive policies such as short lags between
26 rate filings and final decisions, up-to-date test years, flexible and
27 dynamic tariff clauses for major expense items, and alternative
28 ratemaking approaches that allow faster rate recognition for some
29 new investments.[2]

30

31

32

33

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[1]*Moody's Investors Service*, "US Regulated Utilities: Lower Authorized Equity Returns Will Not Hurt Near-Term Credit Profiles," March 10, 2015.
[2]*Standard & Poor's Ratings Services*: "Corporate Industry Credit Research: Industry Top Trends 2016, Utilities," December 9, 2015, at 23, emphasis added.

1 **Q   HAVE UTILITIES BEEN ABLE TO ACCESS EXTERNAL CAPITAL TO SUPPORT**

2 **INFRASTRUCTURE CAPITAL PROGRAMS?**

3 A   Yes. While cost of capital and authorized returns on equity were declining, the utility

4   industry has been able to fund substantial increases in capital investments needed

5   for infrastructure modernization and expansion. The Edison Electric Institute ("EEI")

6   reported in a 2015 financial review of the electric industry financial performance that

7   in 2011 electric "industry-wide capex has more than doubled since 2005."[3]

8   EEI also observed that, despite this nearly tripling of capital expenditures

9   during the period 2005-2015, a majority of the funding for utilities' capital

10   expenditures has been provided by internal funds. EEI reports approximately 25% of

11   funding needed to meet these increasing capital expenditures has been derived from

12   external sources and 75% of these capital expenditures have been funded by

13   internal cash. Further, despite nearly tripling capital expenditures, the electric utility

14   industry debt interest expense has declined by approximately 1.9% despite

15   increases in the amount of outstanding debt (and reductions to the cost of debt).[4]

16   This is clear proof that utilities have enjoyed access to large amounts of capital, and

17   that the costs of capital have declined.

18

19 **Q   IS THERE EVIDENCE OF ROBUST VALUATIONS OF ELECTRIC UTILITY**

20 **SECURITIES?**

21 A   Yes. These robust valuations are an indication that utilities can sell securities at high

22   prices, which is a strong indication that they can access capital under reasonable

23   terms and conditions, and at relatively low cost. As shown on my Exhibit MPG-2, the

24   historical valuation of the electric utilities based on a price-to-earnings ratio, price-to-

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[3]Edison Electric Institute, *2015 Financial Review, Annual Report of the U.S. Investor-Owned Electric Utility Industry*, page 17.
[4]*Id.*, pages 8 and 11.

1   cash flow ratio and market price-to-book value ratio, indicates utility security

2   valuations today are very strong and robust relative to the last 10 to 15 years. These

3   strong valuations of utility stocks indicate that utilities have access to equity capital

4   under reasonable terms and costs.

5

6 **Q**   **HOW SHOULD THE COMMISSION USE THIS MARKET INFORMATION IN**

7   **ASSESSING A FAIR RETURN FOR GULF POWER?**

8 A   Market evidence is quite clear that capital market costs are near historically low

9   levels. Authorized returns on equity have fallen to the low to mid 9.0% area; utilities

10   continue to have access to large amounts of external capital to fund large capital

11   programs; and utilities' investment grade credit standings are stable and have

12   improved due, in part, to supportive regulatory treatment. The Commission should

13   carefully weigh all this important observable market evidence in assessing a fair

14   return on equity for Gulf Power.

15

16 **II.B. Regulated Utility Industry Market Outlook**

17 **Q**   **PLEASE DESCRIBE THE CREDIT RATING OUTLOOK FOR REGULATED**

18   **UTILITIES.**

19 A   Regulated utilities' credit ratings have improved over the last few years and the

20   outlook has been labeled "Stable" by credit rating agencies. Credit analysts have

21   also observed that utilities have strong access to capital at attractive pricing (i.e., low

22   capital costs), which has supported very large capital programs.

23   Standard & Poor's ("S&P") recently published a report titled "Corporate

24   Industry Credit Research: Industry Top Trends 2016, Utilities." In that report, S&P

25   noted the following:

1   **Ratings Outlook.** <u>Stable</u> with a slight bias toward the negative.
2   Utilities in the U.S. continue to enjoy a confluence of financial,
3   economic, and regulatory environments that are tailor-made for
4   supporting credit quality. Low interest rates, modest economic
5   growth, and relatively stable commodity costs make for little
6   pressure on rates and therefore on the sunny disposition of
7   regulators.

8   **Credit Metrics.** We see credit metrics remaining within historic
9   norms for the industry as a whole and do not project overall
10   financial performance that would affect the industry's
11   creditworthiness.

12   **Industry Trends.** Taking advantage of the favorable market
13   conditions, utilities have been maintaining aggressive capital
14   spending programs to bolster system safety and reliability, as
15   well as technological advances to make the systems "smarter."
16   The elevated spending has not led to large rate increases, but if
17   macro conditions reverse and lead to rising costs that command
18   higher rates, we would expect utilities to throttle back on
19   spending to manage regulatory risk.[5]

20   Similarly, Fitch states:

21   **Stable Financial Performance:** The stable financial
22   performance of Utilities, Power & Gas (UPG) issuers continues
23   to support a sound credit profile for the sector, with 93% of the
24   UPG portfolio carrying investment-grade ratings as of June 30,
25   2015, including 65% in the 'BBB' rating category. Second-
26   quarter 2015 LTM [Long-Term Maturity] leverage metrics
27   remained relatively unchanged year over year (YOY) while
28   interest coverage metrics modestly improved. Fitch Ratings
29   expects this trend to broadly sustain for the remainder of 2015,
30   driven by positive recurring factors.

31   **Low Debt-Funded Costs:** The sustained low interest rate
32   environment has allowed UPG companies to refinance high-
33   coupon legacy debt with lower coupon new debt. Gross interest
34   expense on an absolute value represented approximately 4.6%
35   of total adjusted debt as of June 30, 2015, a decline of about
36   150 bps from the 6.1% recorded in the midst of the recession.
37   Fitch believes a rise in interest rates would largely be neutral to
38   credit quality, as issuers have generally built enough headroom
39   in coverage metrics to withstand higher financing costs.

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[5]*Standard & Poor's Ratings Services*: "Corporate Industry Credit Research: Industry Top Trends 2016, Utilities," December 9, 2015, at 22, emphasis added.

1   **Capex Moderately Declining:** Fitch expects the
2   capex/depreciation ratio to be at the lower end of its five-year
3   historical range of 2.0x–2.5x in the near term, reflecting a
4   moderate decline in projected capex from the 2011–2014 highs.
5   The capex depreciation ratio was relatively flat YOY at about
6   2.4x. Capex targets investments toward base infrastructure
7   upgrades, utility-scale renewables and transmission
8   investments.

9   *   *   *

10   Key credit metrics for IUCs [investor-owned utility companies]
11   remained relatively stable YOY and continue to support the
12   sound credit profiles and <u>Stable Outlooks</u> characteristic of the
13   sector. EBITDAR [Earnings Before Interest, Taxes,
14   Depreciation, Amortization and Rent] and FFO [Funds From
15   Operations] coverage ratios were 5.6x and 5.9x, respectively, for
16   the LTM ended second-quarter 2015, while adjusted
17   debt/EDITDAR and FFO-adjusted leverage were 3.5x and 3.4x,
18   respectively.[6]

19   Moody's recent comments on the U.S. Utility Sector state as follows:

20   Our outlook for the US regulated utilities industry <u>is stable</u>. This
21   outlook reflects our expectations for fundamental business
22   conditions in the industry over the next 12 to 18 months.

23   **» The credit-supportive regulatory environment is the main**
24   **reason for our stable outlook.** We expect that the relationship
25   between regulators and utilities in 2016 will remain credit-
26   supportive, enabling utilities to recover costs in a timely manner
27   and maintain stable cash flows.

28   **» We estimate that the ratio of cash flow from operations**
29   **(CFO) to debt will hold steady at about 21%, on average for**
30   **the industry, over the next 12 to 18 months.** The use of timely
31   cost-recovery mechanisms and continued expense management
32   will help utilities offset a lack of growth in electricity demand and
33   lower allowed returns on equity, enabling financial metrics to
34   remain stable. Tax benefits tied to the expected extension of
35   bonus depreciation will also support CFO-to-debt ratios.

36   *   *   *

37   **» Utilities are increasingly using holding company leverage**
38   **to drive returns, a credit negative.** Although not a driver of our
39   outlook, utilities are using leverage at the holding company level
40   to invest in other businesses, make acquisitions and earn higher

---

[6] *Fitch Ratings*: "U.S. Utilities, Power & Gas Data Comparator," September 21, 2015, at 1 and 7, emphasis added.

1   returns on equity, which could have negative implications across

2   the whole family.[7]

3

4   **Q**   **PLEASE DESCRIBE UTILITY STOCK PRICE PERFORMANCE OVER THE LAST**

5   **SEVERAL YEARS.**

6   **A**   As shown in the graph below, SNL Financial has recorded utility stock price

7   performance compared to the market. The industry's stock performance data from

8   2004 through September 2016 shows that the SNL Electric Company Index has

9   outperformed the market in downturns and trailed the market during recovery. This

10   relatively stable price performance for utilities supports my conclusion that utility

11   stock investments are regarded by market participants as a moderate- to low-risk

12   investment.

FIGURE 2

Index Comparison

Source: SNL Financial, data through September 30, 2016.
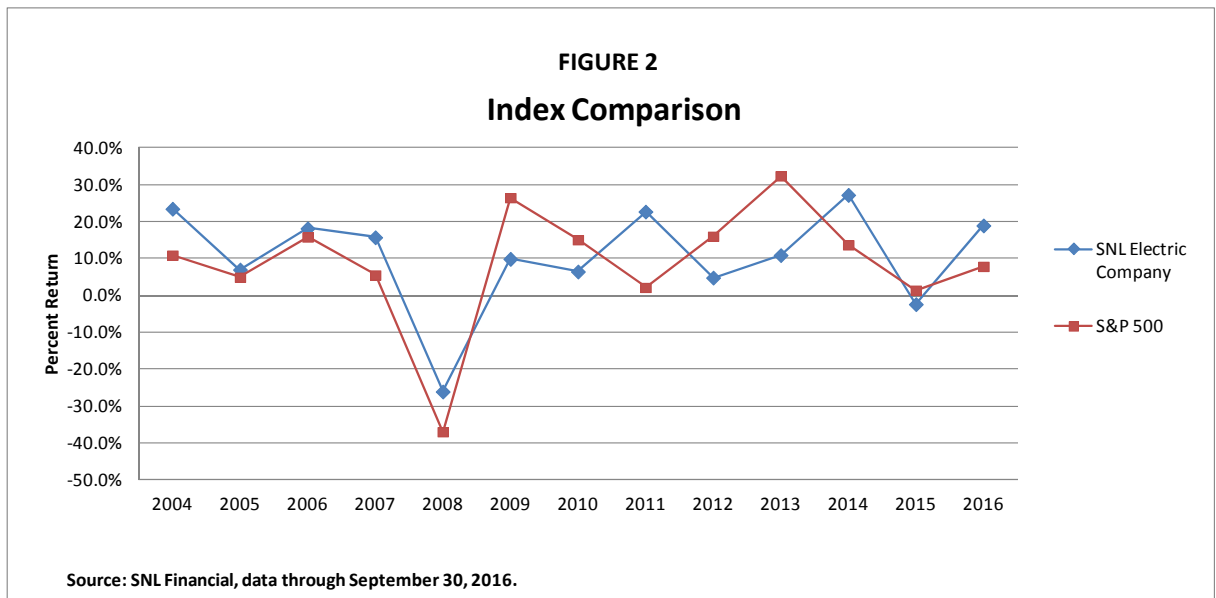
13

14

15

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[7] *Moody's Investors Service*: "2016 Outlook – US Regulated Utilities: Credit-Supportive Regulatory Environment Drives Stable Outlook," November 6, 2015, at 1, emphasis added.

1 **Q** **HAVE ELECTRIC UTILITY INDUSTRY TRADE ORGANIZATIONS COMMENTED**

2 **ON ELECTRIC UTILITY STOCK PRICE PERFORMANCE?**

3 A Yes. In its 4th Quarter 2015 Financial Update, the EEI stated the following

4 concerning the EEI Electric Utility Stock Index ("EEI Index"):

5 EEI Index returns during 2015 embodied the larger pattern seen
6 in Table I since the 2008/2009 financial crisis, as industry
7 business models have migrated to an increasingly regulated
8 emphasis. The industry has generated consistent positive
9 returns but has lagged the broader markets when markets post
10 strong gains, which in turn have been sparked both by slow but
11 steady U.S. economic growth and corporate profit gains and by
12 the willingness of the Federal Reserve to bolster markets with
13 historically unprecedented monetary support in the form of three
14 rounds of quantitative easing and near-zero short-term interest
15 rates. <u>While the Fed did raise short-term rates in December</u>
16 <u>2015 for the first time since 2006</u> (from zero to a range of 0.25%
17 to 0.50%), <u>this hardly effects [sic] longer-term yields, which</u>
18 <u>remain at historically low levels and are influenced more by the</u>
19 <u>level of inflation and economic strength than by the Fed's short-</u>
20 <u>term rate policy.</u>

21 *   *   *

22 **Regulated Fundamentals Remain Stable**

23 The rate stability offered by state regulation and the ability to
24 recover rising capital spending in rate base shield regulated
25 utilities from the volatility in the competitive power arena and
26 turn the growth of renewable generation (and the resulting need
27 for new and upgraded transmission lines) into a rate base
28 growth opportunity for many industry players.

29 *   *   *

30 In the shorter-term, analysts continue to see opportunity for 4-
31 6% earnings growth for regulated utilities in general along with
32 prospects for slightly rising dividends (with a dividend yield now
33 at about 4% for the industry overall). That formula has served
34 utility investors quite well in recent years, delivering long-term
35 returns equivalent to those of the broad markets but with much
36 lower volatility. Provided state regulation remains fair and
37 constructive in an effort to address the interests of ratepayers
38 and investors, it would appear that the industry can continue to

1   deliver success for all stakeholders, even in an environment of

2   flat demand and considerable technological change.[8]

3

4 **Q**   **HAVE YOU CONSIDERED CONSENSUS MARKET OUTLOOKS FOR CHANGES**

5   **IN INTEREST RATES IN FORMING YOUR RECOMMENDED RETURN ON**

6   **EQUITY IN THIS CASE?**

7 **A**   Yes.   The outlook for changes in interest rates has been highly impacted by

8   expected actions by the Federal Reserve Bank Open Market Committee changes in

9   short-term interest rates, and outlooks for inflation and GDP growth after the recent

10   Presidential election. The most recent consensus outlook on these factors is stated

11   in the December 2016 *Blue Chip Financial Forecasts* as follows:

12   At present, our panelists seem much more skeptical than fixed income
13   market participants that economic growth, <u>inflation, or both will shoot</u>
14   <u>higher over the next year and a half</u>. There was very little change
15   over the past month in consensus forecasts of economic growth and
16   inflation over the forecast horizon. While annual real GDP growth in
17   2017 is expected to exceed that in 2016, it still is forecast to closely
18   adhere to the slightly more than 2.0% average that has prevailed
19   since the end of the Great Recession.   Consensus forecasts of
20   inflation also underwent little change this month. The GDP price
21   index still is expected to register annualized rates of increase of
22   slightly more than 2.0% through Q1 2018, while the Consumer Price
23   Index is forecast to post annualized rates of increase about 0.2 of a
24   percentage point greater than that.

25   *   *   *

26   All of our panelists also expect the FOMC to hike rates by a quarter-
27   point in December, according to a special question asked of our
28   panelists this month. We also saw some upward adjustment to
29   consensus forecasts of interest rates and yields over the forecast
30   horizon.   However, it seemed to largely reflect a simple mark-to-
31   marking of forecasts given the post-election run-up in interest rates.
32   Yes, the consensus still looks for rates and yields to rise over the
33   forecasts horizon, but not at the breakneck pace seen in the
34   immediate post-election period. As for FOMC rate hikes in 2017,
35   28.9% of our panelists currently foresee only one 25 basis points
36   increase next year, 40.0% see two 25-basis-point increases, 17.8%

---

[8] *EEI Q4 2015 Financial Update*: "Stock Performance" at 4 and 6, emphasis added.

1   expect three quarter-point moves, and 13.3% said they anticipate the
2   FOMC to hike rates by 25 basis points four or more times.[9]

3   Based on these current outlooks, the consensus 30-year Treasury bond yield

4   projections forecast an increase from current yields of 2.5% or less, up to 3.4% out

5   over the next two years. Further, long-term outlooks are for the Federal Reserve

6   Funds to increase up to as much as 2.6% to 3% over the five- to 10-year forecast,

7   with 30-year Treasury bond yields increasing to 4.2% to 4.5% over that same time

8   period. These outlooks for short-term and long-term interest rate changes are

9   reflected in my market-based models and inputs used to estimate a fair return on

10   equity for Gulf Power in this proceeding.

11   I also note that the current outlook for interest rate increases over the short-

12   term and intermediate-term forecasts is for increases, but these expectations of

13   increased interest rates have consistently been reflected in analysts' past interest

14   rate projections but those projections have consistently turned out to be wrong. That

15   is, interest rates were projected to increase, but instead have stayed flat or declined.

16   As such, while I am considering the expectation of increased capital market costs in

17   the future, I must note that the certainty of increases in capital market costs and

18   timing of changes to capital market costs are at very best uncertain.

19

20   **Q**   **WHAT ARE THE IMPORTANT TAKEAWAY POINTS FROM THIS ASSESSMENT**

21   **OF UTILITY INDUSTRY CREDIT AND INVESTMENT RISK OUTLOOKS?**

22   A   Credit rating agencies consider the regulated utility industry to be "Stable" and

23   believe investors will continue to provide an abundance of low-cost capital to support

24   utilities' large capital programs at attractive costs and terms. All of this reinforces my

25   belief that utility investments are generally regarded as safe-haven or low-risk

---

[9]*Blue Chip Financial Forecasts*, December 1, 2016 at 1, emphasis added.

1   investments and the market continues to demand low-risk investments such as utility

2   securities.   The ongoing demand for low-risk investments can reasonably be

3   expected to continue to provide attractive low-cost capital for regulated utilities.

4

5   **II.C. Gulf Power Investment Risk**

6   **Q   PLEASE DESCRIBE THE MARKET'S ASSESSMENT OF THE INVESTMENT**

7   **RISK OF GULF POWER.**

8   A   The market's assessment of Gulf Power's investment risk is described by credit

9   rating analysts' reports. Gulf Power's current corporate bond ratings from S&P and

10   Moody's are A- and A2, respectively.[10] Gulf Power's outlook from both credit rating

11   agencies is "Stable." Specifically, S&P states:

12   **Business Risk: Excellent**

13   We assess Gulf Power's business risk profile as "excellent,"
14   incorporating the benefits of operations under a generally constructive
15   regulatory environment that enables the company to earn at or close
16   to the allowed return, a midsized customer base that should
17   experience moderate customer growth as the economy recovers, and
18   a consistently good operating record for its owned generation fleet.
19   Residential and commercial customers account for the majority of
20   sales and revenues, providing a measure of stability to cash flows,
21   and the company has no meaningful industrial exposure.

22   The regulatory environment for Gulf Power is generally constructive
23   and supportive of credit quality, enabling the company to recover
24   invested capital in a timely manner while earning adequate returns,
25   and to recover capacity, fuel, and environmental compliance costs
26   through riders. Recovery of transmission investments for the next few
27   years will not begin until 2017, and in the meantime the company will
28   accrue carrying costs.

29   **Financial Risk: Significant**

30   We view Gulf Power's financial risk profile as being in the "significant"
31   category using the medial volatility financial ratio benchmarks,
32   reflecting our base-case scenario that the company will maintain credit
33   protection measures that remain in the upper end of the category. We

---

[10]Liu Direct at 27.

1   expect the core ratios to weaken somewhat over the next few years

2   as capital spending rises (leading to modestly higher debt levels) and

3   as deferred tax benefits decline.[11]

4

5 III. GULF POWER'S PROPOSED CAPITAL STRUCTURE

6 **Q**   **WHAT IS GULF POWER'S PROPOSED CAPITAL STRUCTURE?**

7 A   Gulf Power's proposed capital structure is shown below in Table 4. This pro forma

8   capital structure ending on December 31, 2017 is sponsored by Gulf Power witness

9   Ms. Susan Ritenour.

TABLE 4

Gulf Power's Proposed Capital Structure
(December 31, 2017)

Description	Ratemaking (1)	Long-Term Investor Capital (2)	Total Investor Capital (3)
Long-Term Debt	30.27%	40.77%	40.13%
Preference Stock	3.91%	5.27%	5.19%
Common Equity	40.07%	53.96%	53.12%
Short-Term Debt	1.18%		1.56%
Customer Deposits	1.01%		
Net Deferred Taxes	23.52%		
Investment Credit	0.03%		
Total	100.00%	100.00%	100.00%

Source: Exhibit SDR-1, Schedule 14, page 1.

10

11 **Q**   **IS GULF POWER'S PROPOSED CAPITAL STRUCTURE REASONABLE?**

12 A   No. Gulf Power's common equity ratio of long-term investor capital was

13   approximately 50.7% as of September 30, 2016, and has not exceeded 51.0% in at

---

[11]Standard & Poor's RatingsDirect: "Gulf Power Co." June 16, 2015.

1   least the last five quarters.[12] Gulf Power has not explained or justified the increase in

2   this long-term investor capital common equity ratio as it proposes in this proceeding.

3

4 **Q**   **DO YOU BELIEVE THAT GULF POWER'S PROPOSED INCREASE IN ITS LONG-**

5   **TERM INVESTOR CAPITAL EQUITY RATIO IS REASONABLE?**

6 A   No. Indeed, Gulf Power's proposed capital structure contains an unreasonably large

7   ratio of common equity to total capital. A capital structure with too much common

8   equity unjustifiably inflates the Company's cost of service, and impose an unjustified

9   burden on customers. Therefore, I recommend a reasonable capital structure which

10   contains a balanced amount of debt and equity be used to set rates. Additionally,

11

12 **Q**   **WHY DO YOU BELIEVE THAT GULF POWER'S PROPOSED CAPITAL**

13   **STRUCTURE CONTAINS AN UNREASONABLE AMOUNT OF COMMON EQUITY**

14   **RELATIVE TO TOTAL LONG-TERM INVESTOR CAPITAL?**

15 A   I reached this conclusion based on an assessment of Gulf Power's capital structure

16   reviewed by credit rating agencies in assessing its credit strength, a comparison of

17   Gulf Power's capital structure to the capital structures approved by regulatory

18   commissions for other utility companies, and the capital structure used to set Gulf

19   Power's return on equity in this proceeding.

20

21

22

23

24

---

[12]Exhibit MPG-3, page 1 of 3.

1 **Q** **PLEASE DESCRIBE WHY YOU BELIEVE GULF POWER'S CAPITAL**

2 **STRUCTURE CONTAINS MORE COMMON EQUITY THAN NECESSARY TO**

3 **SUPPORT ITS CURRENT INVESTMENT GRADE BOND RATING.**

4 **A** This conclusion is based on a comparison of the equity and debt components of Gulf

5 Power's total financial risk considered by credit analysts in utility bond rating

6 evaluation by Standard & Poor's ("S&P"). In its assessment of the total financial risk

7 of Gulf Power and other utilities, S&P considers both on balance sheet debt

8 obligations and off balance sheet debt obligations. Off balance sheet debt

9 obligations include the debt-like characteristics of purchased power obligations,

10 operating leases, and other financial obligations that are not capitalized on a utility's

11 balance sheet. In assessing the financial risk of a utility, S&P considers an

12 "adjusted" debt ratio which considers both on balance sheet debt obligations and off

13 balance sheet debt obligations.

14 Based on Gulf Power's proposed capital structure, its adjusted debt ratio

15 would be approximately 44.0% as shown on page 1 of Exhibit MPG-3, page 2.

16 Gulf Power's adjusted debt ratio is significantly lower than that of industry

17 medians for comparable bond ratings, thus illustrating that its debt ratio is too low,

18 and its common equity ratio is too high. For example, as shown in Table 5 below,

19 this adjusted debt ratio for Gulf Power would be considerably lower than utility

20 industry medians adjusted debt ratios based on Standard & Poor's credit rating

21 reporting, for utility companies with BBB and A- bond ratings, and adjusted debt

22 ratios of around 50.8% up to 53.6%. For the industry average, which has a

23 corresponding BBB+ bond rating, the industry average adjusted debt ratio is around

24 52%. The equity component of these companies then would be the reciprocal of this

1   debt ratio, which would imply generally common equity components of total

2   capitalization including off-balance sheet debt of around 48%.

TABLE 5

Operating Utility Subsidiaries
(Industry Medians)

S&P Rating[1]	Adj. Debt Ratio (1)	Distribution (50% - 55%) (2)
AA-	42.6%	–
A	51.5%	78%
A-	51.7%	35%
BBB+	54.3%	36%
BBB	52.9%	38%
Gulf Power	47.1%	

_____
[1]Exhibit MPG-19, page 2.

3

4   As shown in Table 5 above, Gulf Power currently has a bond rating of A- from

5   S&P, but its adjusted debt ratio is in line with a credit rating considerably stronger

6   than A-. As illustrated in Table 5 above, Gulf Power's capital structure simply

7   contains too much common equity and much less debt than would support its

8   investment grade bond rating.

9

10   **Q**   **HOW DOES GULF POWER'S PROPOSED CAPITAL STRUCTURE COMMON**

11   **EQUITY RATIO COMPARE TO THAT APPROVED FOR ELECTRIC UTILITIES**

12   **FOR RATEMAKING PURPOSES?**

13   **A**   A comparison of Gulf Power's proposed capital structure common equity to that of

14   the electric utility industry approved capital structure is shown below in Table 6.

1   Since most utilities do not include non-investor capital in the ratemaking capital

2   structure, I have compared Gulf Power's proposed 53.96% common equity ratio of

3   long-term investor capital to the industry average common equity ratio approved by

4   regulatory commissions. As shown in Table 6 below, Gulf Power's proposed 53.96%

5   common equity ratio is considerably higher than the electric utility industry average

6   and median common equity ratios of approximately 50% over the period 2010-2016.

7   Indeed, the industry average common equity ratio has been relatively stable over this

8   time period. Support for this finding is shown below in Table 6.

TABLE 6

Trends in
State Authorized Common Equity Ratios

		Electric Utility Industry	
Line	Year	Average	Median
	(1)	(2)	(3)
1	2010	49.5%	49.8%
2	2011	49.1%	49.1%
3	2012	51.5%	52.0%
4	2013	50.1%	51.0%
5	2014	50.3%	50.0%
6	2015	50.2%	50.5%
7	2016*	49.5%	50.0%
8	**Average**	**50.0%**	**50.3%**
9	Min	49.1%	49.1%
10	Max	51.5%	52.0%
11	**Midpoint**	**50.3%**	**50.6%**
12	**Gulf Power Proposed**		**53.98%**

_____

Source:

SNL Financial, downloaded on Dec 15, 2016.
*Includes through Sep. 30, 2016

1   As shown in Table 6 above, Gulf Power's proposed capital structure contains

2   far more common equity than that of other electric utilities for ratemaking purposes.

3   Importantly, as I discuss above, the electric utility industry generally is able to access

4   large amounts of capital to support its capital program, and its bond rating has

5   improved. Therefore, this comparison of Gulf Power's proposed capital structure to

6   that of the electric utility industry strongly supports my conclusion that Gulf Power's

7   capital structure contains an unreasonably high amount of common equity.

8

9   **Q   WHY DO YOU BELIEVE THAT GULF POWER'S COMMON EQUITY RATIO IS**

10   **MUCH HIGHER THAN THE COMMON EQUITY RATIOS OF COMPARABLE RISK**

11   **PROXY COMPANIES TO WHICH YOU WILL MEASURE GULF POWER'S**

12   **RETURN ON EQUITY?**

13   A   As discussed later in my testimony, the proxy group used to estimate Gulf Power's

14   current market cost of equity has a long-term common equity ratio of total capital of

15   approximately 47.1%. Only three of the proxy companies have common equity ratios

16   of 52% or higher out of a total of 22. For this reason, Gulf Power's proposed

17   ratemaking capital structure including a 53.96% common equity ratio is simply

18   unreasonable and should be rejected.

19

20   **Q   WHY WOULD A CAPITAL STRUCTURE TOO HEAVILY WEIGHTED WITH**

21   **COMMON EQUITY UNNECESSARILY INCREASE GULF POWER'S COST OF**

22   **SERVICE IN THIS PROCEEDING?**

23   A   A capital structure too heavily weighted with common equity unnecessarily increases

24   Gulf Power's claimed revenue deficiency because common equity is the most

25   expensive form of capital and is subject to income tax expense. For example, if Gulf

1 Power's authorized return on equity is set at 9.0%, the revenue requirement cost to

2 customers would be approximately 14.4%, which includes the 9.0% after-tax return

3 and the related income expense of 5.4%, which is based on the tax conversion factor

4 of approximately 1.6x. (9.0% times 1.6x less 9.0%). In contrast, the cost of debt

5 capital is not subject to an income tax expense. Gulf Power's proposed embedded

6 cost of debt is around 4.40%. Common equity is more than three times as expensive

7 on a revenue requirement basis than debt capital.

8 A reasonable mix of debt and equity, as already approved by the Commission

9 in the prior rate cases, is necessary in order to balance Gulf Power's financial risk,

10 support an investment grade credit rating, and permit Gulf Power access to capital

11 under reasonable terms and prices. However, a capital structure too heavily

12 weighted with common equity will unnecessarily increase its cost of capital and

13 revenue requirement for ratepayers.

14

15 **Q** **WHAT CAPITAL STRUCTURE DO YOU RECOMMEND THE COMMISSION USE**

16 **TO SET GULF POWER'S OVERALL RATE OF RETURN IN THIS PROCEEDING?**

17 A For the reasons outlined above, I believe a ratemaking capital structure composed of

18 50.7% equity is sufficient to maintain Gulf Power's current investment grade bond

19 ratings, while considering its off-balance sheet debt equivalents, but minimize its cost

20 to retail customers to preserve this strong investment grade credit standing. My

21 proposed common equity ratio is based on Gulf Power's actual common equity ratio

22 at September 30, 2016.

23 Hence, my proposed capital structure will support Gulf Power's financial

24 integrity but at a lower cost than that proposed by Gulf Power in its proposed capital

1   structure. My recommended capital structure for setting rates in this proceeding is

2   outlined in Table 7 below.

TABLE 7			
FEA Proposed Capital Structure **(December 31, 2017)**			
Description	**Ratemaking** **(1)**	**Long-Term** **Investor Capital** **(2)**	**Total** **Investor Capital** **(3)**
Long-Term Debt	32.71%	44.06%	43.37%
Preference Stock	3.91%	5.27%	5.19%
Common Equity	37.63%	50.68%	49.88%
Short-Term Debt	1.18%		1.56%
Customer Deposits	1.01%		
Net Deferred Taxes	23.52%		
Investment Credit	0.03%		
Total	100.00%	100.00%	100.00%

Source: Exhibit MPG-1.

3

4   **Q   PLEASE DESCRIBE WHY YOU BELIEVE THAT YOUR PROPOSED CAPITAL**

5   **STRUCTURE FOR GULF POWER IS REASONABLE.**

6   A   My proposed capital structure is more reasonable than the Company's for several

7   reasons. First, the reduced common equity ratio produces an adjusted debt ratio

8   based on Standard & Poor's methodology of 47.1%. This is developed on my Exhibit

9   MPG-3, page 2. This debt ratio is more reasonably consistent with other electric

10   utilities with bond ratings similar to that of Gulf Power. Second, my capital structure

11   is more reasonably consistent with the electric utility industry average common

12   equity ratio of around 50%. As noted above, my proposed capital structure contains

13   a common equity ratio of 50.68% of long-term capital and 49.88% on total investor

14   capital. This capital structure is more consistent with the electric utility industry

15   averages, and again, the industry has proven to meet investor expectations and

1   maintain strong access to capital under reasonable terms and prices, and to support

2   strong credit. Finally, my proposed capital structure contains a common equity ratio

3   that is more in line with the proxy group companies used to estimate a fair return on

4   equity for Gulf Power in this proceeding. For all these reasons, I believe my

5   proposed capital structure is more reasonable than that of Gulf Power.

6

7   **III.A. Embedded Cost of Debt**

8   **Q**   **WHAT IS THE COMPANY'S EMBEDDED COST OF DEBT?**

9   A   Ms. Ritenour is proposing an embedded cost of debt of 4.40% as developed on her

10   Schedule 14, page 3.

11

12   **IV. RETURN ON EQUITY**

13   **Q**   **PLEASE DESCRIBE WHAT IS MEANT BY A "UTILITY'S COST OF COMMON**

14   **EQUITY."**

15   A   A utility's cost of common equity is the expected return that investors require on an

16   investment in the utility. Investors expect to earn their required return from receiving

17   dividends and through stock price appreciation.

18

19   **Q**   **PLEASE DESCRIBE THE FRAMEWORK FOR DETERMINING A REGULATED**

20   **UTILITY'S COST OF COMMON EQUITY.**

21   A   In general, determining a fair cost of common equity for a regulated utility has been

22   framed by two hallmark decisions of the U.S. Supreme Court: <u>Bluefield Water Works</u>

23   <u>& Improvement Co. v. Pub. Serv. Comm'n of W. Va.</u>, 262 U.S. 679 (1923) and <u>Fed.</u>

24   <u>Power Comm'n v. Hope Natural Gas Co.</u>, 320 U.S. 591 (1944).

1   These decisions identify the general financial and economic standards to be

2   considered in establishing the cost of common equity for a public utility. Those

3   general standards provide that the authorized return should: (1) be sufficient to

4   maintain financial integrity; (2) attract capital under reasonable terms; and (3) be

5   commensurate with returns investors could earn by investing in other enterprises of

6   comparable risk.

7

8   **Q   PLEASE DESCRIBE THE METHODS YOU HAVE USED TO ESTIMATE GULF**

9   **POWER'S COST OF COMMON EQUITY.**

10   A   I have used several models based on financial theory to estimate Gulf Power's cost

11   of common equity. These models are: (1) a constant growth Discounted Cash Flow

12   ("DCF") model using consensus analysts' growth rate projections; (2) a constant

13   growth DCF using sustainable growth rate estimates; (3) a multi-stage growth DCF

14   model; (4) a Risk Premium model; and (5) a Capital Asset Pricing Model ("CAPM"). I

15   have applied these models to a group of publicly traded utilities with investment risk

16   similar to Gulf Power.

17

18   **IV.A. Risk Proxy Group**

19   **Q   PLEASE DESCRIBE HOW YOU IDENTIFIED A PROXY UTILITY GROUP THAT**

20   **COULD BE USED TO REASONABLY REFLECT THE INVESTMENT RISK OF**

21   **GULF POWER AND USED TO ESTIMATE ITS CURRENT MARKET COST OF**

22   **EQUITY.**

23   A   I relied on the same proxy group developed by Gulf Power witness Dr. Vander Weide

24   with a few exceptions. I excluded Westar Energy and Great Plains Energy because

25   they are in the process of merging, as announced on May 31, 2016.   Similarly, I

1   excluded Dominion Resources because in September 2016, it finalized its acquisition

2   of Questar Corp. Finally, I excluded NextEra because it announced a proposal to

3   acquire Oncor Electric Delivery Company on July 29, 2016.

4

5 **Q**   **WHY IS IT APPROPRIATE TO EXCLUDE COMPANIES WHICH ARE INVOLVED**

6   **IN MERGER AND ACQUISITION ("M&A") ACTIVITY FROM THE PROXY**

7   **GROUP?**

8 **A**   M&A activity can distort the market factors used in DCF and risk premium studies.

9   M&A activity can have impacts on stock prices, growth outlooks, and relative volatility

10   in historical stock prices if the market was anticipating or expecting the M&A activity

11   prior to it actually being announced. This distortion in the market data thus impacts

12   the reliability of the DCF and risk premium estimates for a company involved in M&A.

13   Moreover, companies generally enter into M&A in order to produce greater

14   shareholder value by combining companies. The enhanced shareholder value

15   normally could not be realized had the two companies not combined.

16   When companies announce an M&A, the public assesses the proposed

17   merger and develops outlooks on the value of the two companies after the

18   combination based on expected synergies or other value adds created by the M&A.

19   As a result, the stock value before the merger is completed may not reflect

20   the forward-looking earnings and dividend payments for the company absent the

21   merger or on a stand-alone basis. Therefore, an accurate DCF return estimate on

22   companies involved in M&A activities cannot be produced because their stock prices

23   do not reflect the stand-alone investment characteristics of the companies. Rather,

24   the stock price more likely reflects the shareholder enhancement produced by the

25   proposed transaction. For these reasons, it is appropriate to remove companies

1   involved in M&A activity from a proxy group used to estimate a fair return on equity

2   for a utility.

3

4   **Q   PLEASE   DESCRIBE   WHY   YOU   BELIEVE   YOUR   PROXY   GROUP   IS**

5   **REASONABLY COMPARABLE IN INVESTMENT RISK TO GULF POWER.**

6   A   The proxy group is shown in Exhibit MPG-4.   The proxy group has an average

7   corporate credit rating from S&P of BBB+, which is slightly lower than S&P's

8   corporate credit rating for Gulf Power of A-.   The proxy group has an average

9   corporate credit rating from Moody's of Baa1, which is also a notch lower than Gulf

10   Power's corporate credit rating from Moody's of A2.   Based on this information, I

11   believe my proxy group has slightly higher but reasonably comparable investment

12   risk to Gulf Power.   Therefore, the return on equity produced by my proxy group is

13   conservative.

14   The proxy group has an average common equity ratio of 44.4% (including

15   short-term debt) from SNL Financial ("SNL") and 47.1% (excluding short-term debt)

16   from *The Value Line Investment Survey* ("*Value Line*") in 2015.

17   The Company's proposed common equity ratio of 53.1% is significantly

18   higher than the proxy group common equity ratio, which means that my proxy group

19   has higher financial risk and will produce a conservative return on equity for Gulf

20   Power. Similarly, my proposed common equity ratio of 50.7% is also higher than the

21   average proxy group common equity ratio. Based on these risk factors, I conclude

22   the proxy group reasonably approximates the investment risk of Gulf Power and

23   produces a conservative return on equity estimate for Gulf Power.

24

25

1 **<u>IV.B. Discounted Cash Flow Model</u>**

2 **Q   PLEASE DESCRIBE THE DCF MODEL.**

3 A   The DCF model posits that a stock price is valued by summing the present value of

4   expected future cash flows discounted at the investor's required rate of return or cost

5   of capital. This model is expressed mathematically as follows:

6    $$P_0 = \frac{D_1}{(1+K)^1} + \frac{D_2}{(1+K)^2} \ldots \ldots \frac{D_\infty}{(1+K)^\infty} \qquad \text{(Equation 1)}$$
7

8   P_0 = Current stock price
9   D = Dividends in periods 1 - ∞
10   K = Investor's required return

11   This model can be rearranged in order to estimate the discount rate or investor-

12   required return otherwise known as "K." If it is reasonable to assume that earnings

13   and dividends will grow at a constant rate, then Equation 1 can be rearranged as

14   follows:

15   K $= D_1/P_0 + G$ (Equation 2)

16   K = Investor's required return
17   D_1 = Dividend in first year
18   P_0 = Current stock price
19   G = Expected constant dividend growth rate

20   Equation 2 is referred to as the annual "constant growth" DCF model.

21

22 **Q   PLEASE DESCRIBE THE INPUTS TO YOUR CONSTANT GROWTH DCF**

23   **MODEL.**

24 A   As shown in Equation 2 above, the DCF model requires a current stock price,

25   expected dividend, and expected growth rate in dividends.

26

27

28

1 **Q** **WHAT STOCK PRICE HAVE YOU RELIED ON IN YOUR CONSTANT GROWTH**

2 **DCF MODEL?**

3 A I relied on the average of the weekly high and low stock prices of the utilities in the

4 proxy group over a 13-week period ending on December 16, 2016. An average

5 stock price is less susceptible to market price variations than a price at a single point

6 in time. Therefore, an average stock price is less susceptible to aberrant market

7 price movements, which may not reflect the stock's long-term value.

8 A 13-week average stock price reflects a period that is still short enough to

9 contain data that reasonably reflects current market expectations but the period is

10 not so short as to be susceptible to market price variations that may not reflect the

11 stock's long-term value. In my judgment, a 13-week average stock price is a

12 reasonable balance between the need to reflect current market expectations and the

13 need to capture sufficient data to smooth out aberrant market movements.

14

15 **Q** **WHAT DIVIDEND DID YOU USE IN YOUR CONSTANT GROWTH DCF MODEL?**

16 A I used the most recently paid quarterly dividend as reported in *Value Line.*[13] This

17 dividend was annualized (multiplied by 4) and adjusted for next year's growth to

18 produce the D1 factor for use in Equation 2 above.

19

20 **Q** **WHAT DIVIDEND GROWTH RATES HAVE YOU USED IN YOUR CONSTANT**

21 **GROWTH DCF MODEL?**

22 A There are several methods that can be used to estimate the expected growth in

23 dividends. However, regardless of the method, for purposes of determining the

24 market-required return on common equity, one must attempt to estimate investors'

---

[13]*The Value Line Investment Survey*, October 28, November 18, and December 16, 2016.

1   consensus about what the dividend, or earnings growth rate, will be, and not what an

2   individual investor or analyst may use to make individual investment decisions.

3   As predictors of future returns, security analysts' growth estimates have been

4   shown to be more accurate than growth rates derived from historical data.[14] That is,

5   assuming the market generally makes rational investment decisions, analysts'

6   growth projections are more likely to influence investors' decisions which are

7   captured in observable stock prices than growth rates derived only from historical

8   data.

9   For my constant growth DCF analysis, I have relied on a consensus, or

10   mean, of professional security analysts' earnings growth estimates as a proxy for

11   investor consensus dividend growth rate expectations. I used the average of

12   analysts' growth rate estimates from three sources: Zacks, SNL, and Reuters. All

13   such projections were available on December 16, 2016, and all were reported online.

14   Each consensus growth rate projection is based on a survey of security

15   analysts. There is no clear evidence whether a particular analyst is most influential

16   on general market investors. Therefore, a single analyst's projection does not as

17   reliably predict consensus investor outlooks as does a consensus of market analysts'

18   projections. The consensus estimate is a simple arithmetic average, or mean, of

19   surveyed analysts' earnings growth forecasts. A simple average of the growth

20   forecasts gives equal weight to all surveyed analysts' projections. Therefore, a

21   simple average, or arithmetic mean, of analyst forecasts is a good proxy for market

22   consensus expectations.

23

24

---

[14]*See, e.g.,* David Gordon, Myron Gordon, and Lawrence Gould, "Choice Among Methods of Estimating Share Yield," *The Journal of Portfolio Management*, Spring 1989.

1   **Q**   **WHAT ARE THE GROWTH RATES YOU USED IN YOUR CONSTANT GROWTH**

2   **DCF MODEL?**

3   **A**   The growth rates I used in my DCF analysis are shown in Exhibit MPG-5. The

4   average growth rate for my proxy group is 5.55%.

5

6   **Q**   **WHAT ARE THE RESULTS OF YOUR CONSTANT GROWTH DCF MODEL?**

7   **A**   As shown in Exhibit MPG-6, the average and median constant growth DCF returns

8   for my proxy group for the 13-week analysis are 9.23% and 9.30%, respectively.

9

10 **Q**   **DO YOU HAVE ANY COMMENTS ON THE RESULTS OF YOUR CONSTANT**

11   **GROWTH DCF ANALYSIS?**

12 **A**   Yes. The constant growth DCF analysis for my proxy group is based on a group

13   average long-term sustainable growth rate of 5.55%. The three- to five-year growth

14   rates are higher than my estimate of a maximum long-term sustainable growth rate

15   of 4.25%, which I discuss later in this testimony. I believe the constant growth DCF

16   analysis produces a reasonable high-end return estimate.

17

18 **Q**   **HOW DID YOU ESTIMATE A MAXIMUM LONG-TERM SUSTAINABLE GROWTH**

19   **RATE?**

20 **A**   A long-term sustainable growth rate for a utility stock cannot exceed the growth rate

21   of the economy in which it sells its goods and services. Hence, the long-term

22   maximum sustainable growth rate for a utility investment is best proxied by the

23   projected long-term Gross Domestic Product ("GDP"). *Blue Chip Financial Forecasts*

24   projects that over the next 5 and 10 years, the U.S. nominal GDP will grow

25   approximately 4.25%. These GDP growth projections reflect a real growth outlook of

1   around 2.2% and an inflation outlook of around 2.0% going forward. As such, the

2   average growth rate over the next 10 years is around 4.25%, which I believe is a

3   reasonable proxy of long-term sustainable growth.[15]

4   In my multi-stage growth DCF analysis, I discuss academic and investment

5   practitioner support for using the projected long-term GDP growth outlook as a

6   maximum sustainable growth rate projection. Hence, recognizing the long-term GDP

7   growth rate as a maximum sustainable growth is logical, and is generally consistent

8   with academic and economic practitioner accepted practices.

9

10   ## IV.C. Sustainable Growth DCF

11   **Q   PLEASE DESCRIBE HOW YOU ESTIMATED A SUSTAINABLE LONG-TERM**

12   **GROWTH RATE FOR YOUR SUSTAINABLE GROWTH DCF MODEL.**

13   A   A sustainable growth rate is based on the percentage of the utility's earnings that is

14   retained and reinvested in utility plant and equipment. These reinvested earnings

15   increase the earnings base (rate base). Earnings grow when plant funded by

16   reinvested earnings is put into service, and the utility is allowed to earn its authorized

17   return on such additional rate base investment.

18   The internal growth methodology is tied to the percentage of earnings

19   retained in the company and not paid out as dividends. The earnings retention ratio

20   is 1 minus the dividend payout ratio. As the payout ratio declines, the earnings

21   retention ratio increases. An increased earnings retention ratio will fuel stronger

22   growth because the business funds more investments with retained earnings.

23   The payout ratios of the proxy group are shown in my Exhibit MPG-7. These

24   dividend payout ratios and earnings retention ratios then can be used to develop a

---

[15]*Blue Chip Financial Forecasts*, December 1, 2016, at 14.

1   sustainable long-term earnings retention growth rate. A sustainable long-term

2   earnings retention ratio will help gauge whether analysts' current three- to five-year

3   growth rate projections can be sustained over an indefinite period of time.

4   The data used to estimate the long-term sustainable growth rate is based on

5   the Company's current market-to-book ratio and on *Value Line*'s three- to five-year

6   projections of earnings, dividends, earned returns on book equity, and stock

7   issuances.

8   As shown in Exhibit MPG-8, the average sustainable growth rate for the

9   proxy group using this internal growth rate model is 4.73%.

10

11   **Q   WHAT IS THE DCF ESTIMATE USING THESE SUSTAINABLE LONG-TERM**

12   **GROWTH RATES?**

13   A   A DCF estimate based on these sustainable growth rates is developed in Exhibit

14   MPG-9. As shown there, a sustainable growth DCF analysis produces proxy group

15   average and median DCF results for the 13-week period of 8.38% and 8.20%,

16   respectively.

17

18   **IV.D. Multi-Stage Growth DCF Model**

19   **Q   HAVE YOU CONDUCTED ANY OTHER DCF STUDIES?**

20   A   Yes. My first constant growth DCF is based on consensus analysts' growth rate

21   projections so it is a reasonable reflection of rational investment expectations over

22   the next three to five years. The limitation on this constant growth DCF model is that

23   it cannot reflect a rational expectation that a period of high or low short-term growth

24   can be followed by a change in growth to a rate that is more reflective of long-term

1   sustainable growth. Hence, I performed a multi-stage growth DCF analysis to reflect

2   this outlook of changing growth expectations.

3

4 **Q   WHY DO YOU BELIEVE GROWTH RATES CAN CHANGE OVER TIME?**

5 A   Analyst-projected growth rates over the next three to five years will change as utility

6   earnings growth outlooks change. Utility companies go through cycles in making

7   investments in their systems. When utility companies are making large investments,

8   their rate base grows rapidly, which in turn accelerates earnings growth. Once a

9   major construction cycle is completed or levels off, growth in the utility rate base

10   slows and its earnings growth slows from an abnormally high three- to five-year rate

11   to a lower sustainable growth rate.

12   As major construction cycles extend over longer periods of time, even with an

13   accelerated construction program, the growth rate of the utility will slow simply

14   because rate base growth will slow and the utility has limited human and capital

15   resources available to expand its construction program. Therefore, the three- to five-

16   year growth rate projection should be used as a long-term sustainable growth rate,

17   but not without making a reasonable informed judgment to determine whether it

18   considers the current market environment, the industry, and whether the three- to

19   five-year growth outlook is sustainable.

20

21 **Q   PLEASE DESCRIBE YOUR MULTI-STAGE GROWTH DCF MODEL.**

22 A   The multi-stage growth DCF model reflects the possibility of non-constant growth for

23   a company over time. The multi-stage growth DCF model reflects three growth

24   periods: (1) a short-term growth period consisting of the first five years; (2) a

1   transition period, consisting of the next five years (6 through 10); and (3) a long-term

2   growth period starting in year 11 through perpetuity.

3   For the short-term growth period, I relied on the consensus analysts' growth

4   projections described above in relationship to my constant growth DCF model. For

5   the transition period, the growth rates were reduced or increased by an equal factor

6   reflecting the difference between the analysts' growth rates and the long-term

7   sustainable growth rate.   For the long-term growth period, I assumed each

8   company's growth would converge to the maximum sustainable long-term growth

9   rate.

10

11   **Q**   **WHY IS THE GDP GROWTH PROJECTION A REASONABLE PROXY FOR THE**

12   **MAXIMUM SUSTAINABLE LONG-TERM GROWTH RATE?**

13   A   Utilities cannot indefinitely sustain a growth rate that exceeds the growth rate of the

14   economy in which they sell services. Utilities' earnings/dividend growth is created by

15   increased utility investment or rate base. Such investment, in turn, is driven by

16   service area economic growth and demand for utility service. In other words, utilities

17   invest in plant to meet sales demand growth. Sales growth, in turn, is tied to

18   economic growth in their service areas.

19   The U.S. Department of Energy, Energy Information Administration ("EIA")

20   has observed utility sales growth tracks the U.S. GDP growth, albeit at a lower level,

21   as shown in Exhibit MPG-10. Utility sales growth has lagged behind GDP growth for

22   more than a decade. As a result, nominal GDP growth is a very conservative proxy

23   for utility sales growth, rate base growth, and earnings growth. Therefore, the U.S.

24   GDP nominal growth rate is a conservative proxy for the highest sustainable

25   long-term growth rate of a utility.

1 **Q   IS THERE RESEARCH THAT SUPPORTS YOUR POSITION THAT, OVER THE**

2 **LONG TERM, A COMPANY'S EARNINGS AND DIVIDENDS CANNOT GROW AT**

3 **A RATE GREATER THAN THE GROWTH OF THE U.S. GDP?**

4 A   Yes. This concept is supported in published analyst literature and academic work.

5 Specifically, in a textbook titled "Fundamentals of Financial Management," published

6 by Eugene Brigham and Joel F. Houston, the authors state as follows:

7   The constant growth model is most appropriate for mature
8   companies with a stable history of growth and stable future
9   expectations. Expected growth rates vary somewhat among
10   companies, but <u>dividends for mature firms are often expected to</u>
11   <u>grow in the future at about the same rate as nominal gross</u>
12   <u>domestic product (real GDP plus inflation).</u>[16]

13   The use of the economic growth rate is also supported by investment

14 practitioners:

15   **Estimating Growth Rates**

16   One of the advantages of a three-stage discounted cash flow
17   model is that it fits with life cycle theories in regards to company
18   growth. In these theories, companies are assumed to have a life
19   cycle with varying growth characteristics. Typically, the potential
20   for extraordinary growth in the near term eases over time and
21   eventually growth slows to a more stable level.

22   *   *   *

23   Another approach to estimating long-term growth rates is to
24   focus on estimating the overall economic growth rate. Again,
25   this is the approach used in the *Ibbotson Cost of Capital*
26   *Yearbook*. To obtain the economic growth rate, a forecast is
27   made of the growth rate's component parts. Expected growth
28   can be broken into two main parts: expected inflation and
29   expected real growth. By analyzing these components
30   separately, it is easier to see the factors that drive growth.[17]

31

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[16] *"Fundamentals of Financial Management,"* Eugene F. Brigham and Joel F. Houston, Eleventh Edition 2007, Thomson South-Western, a Division of Thomson Corporation at 298, emphasis added.
[17] *Morningstar, Inc., Ibbotson SBBI 2013 Valuation Yearbook* at 51 and 52.

1 **Q** **IS THERE ANY ACTUAL INVESTMENT HISTORY THAT SUPPORTS THE**

2 **NOTION THAT THE CAPITAL APPRECIATION FOR STOCK INVESTMENTS**

3 **WILL NOT EXCEED THE NOMINAL GROWTH OF THE U.S. GDP?**

4 A Yes. This is evident by a comparison of the compound annual growth of the U.S.

5 GDP compared to the geometric growth of the U.S. stock market. Duff & Phelps

6 measures the historical geometric growth of the U.S. stock market over the period

7 1926-2015 to be approximately 5.8%. During this same time period, the U.S.

8 nominal compound annual growth of the U.S. GDP was approximately 6.2%.[18]

9 As such, the compound geometric growth of the U.S. nominal GDP has been

10 higher but comparable to the nominal growth of the U.S. stock market capital

11 appreciation. This historical relationship indicates that the U.S. GDP growth outlook

12 is a conservative estimate of the long-term sustainable growth of U.S. stock

13 investments.

14

15 **Q** **HOW DID YOU DETERMINE A SUSTAINABLE LONG-TERM GROWTH RATE**

16 **THAT REFLECTS THE CURRENT CONSENSUS OUTLOOK OF THE MARKET?**

17 A I relied on the consensus analysts' projections of long-term GDP growth. *Blue Chip*

18 *Financial Forecasts* publishes consensus economists' GDP growth projections twice

19 a year. These consensus analysts' GDP growth outlooks are the best available

20 measure of the market's assessment of long-term GDP growth. These analyst

21 projections reflect all current outlooks for GDP and are likely the most influential on

22 investors' expectations of future growth outlooks. The consensus economists'

23 published GDP growth rate outlook is 4.25% over the next 10 years.[19]

---

[18]*Duff & Phelps 2016 Valuation Handbook* inflation rate of 2.9% at 2-4, and U.S. Bureau of Economic Analysis, January 29, 2016.
[19]*Blue Chip Financial Forecasts, December 1, 2016, at 12*.

1   Therefore, I propose to use the consensus economists' projected 5- and

2   10-year average GDP consensus growth rates of 4.25%, as published by *Blue Chip*

3   *Financial Forecasts*, as an estimate of long-term sustainable growth. *Blue Chip*

4   *Financial Forecasts* projections provide real GDP growth projections of 2.2% and

5   GDP inflation of 2.0%[20] over the 5-year and 10-year projection periods.   These

6   consensus GDP growth forecasts represent the most likely views of market

7   participants because they are based on published consensus economist projections.

8

9   **Q**   **DO YOU CONSIDER OTHER SOURCES OF PROJECTED LONG-TERM GDP**

10   **GROWTH?**

11 A   Yes, and these sources corroborate my consensus analysts' projections, as shown

12   below in Table 8.

TABLE 8

GDP Forecasts

Source	Term	Real GDP	Inflation	Nominal GDP
Blue Chip Financial Forecasts	5-10 Yrs	2.2%	2.0%	4.25%
EIA – Annual Earnings Outlook	25 Yrs	2.2%	2.1%	4.4%
Congressional Budget Office	10 Yrs	2.0%	2.0%	4.0%
Moody's Analytics	30 Yrs	2.0%	2.0%	4.1%
Social Security Administration	50 Yrs			4.4%
The Economist Intelligence Unit	35 Yrs	1.9%	2.0%	3.9%

13   The EIA in its *Annual Energy Outlook* projects real GDP out until 2040. In its

14   2016 Annual Report, the EIA projects real GDP through 2040 to be 2.2% and a

---

[20] *Id.*

1   long-term GDP price inflation projection of 2.1%. The EIA data supports a long-term

2   nominal GDP growth outlook of 4.4%.[21]

3   Also, the Congressional Budget Office ("CBO") makes long-term economic

4   projections. The CBO is projecting real GDP growth to be 2.0% during the next

5   10 years with a GDP price inflation outlook of 2.0%.[22] The CBO 10-year outlook for

6   nominal GDP based on this projection is 4.0%.

7   Moody's Analytics also makes long-term economic projections. In its recent

8   30-year outlook to 2045, Moody's Analytics is projecting real GDP growth of 2.0%

9   with GDP inflation of 2.0%.[23] Based on these projections, Moody's is projecting

10   nominal GDP growth of 4.1% over the next 30 years.

11   The Social Security Administration ("SSA") makes long-term economic

12   projections out to 2090. The SSA's nominal GDP projection, under its intermediate

13   cost scenario of 50 years, is 4.4%.[24] The Economist Intelligence Unit, a division of

14   *The Economist* and a third-party data provider to SNL Financial, makes a long-term

15   economic projection out to 2050.[25] The Economist Intelligence Unit is projecting real

16   GDP growth of 1.9% with an inflation rate of 2.0% out to 2050. The real GDP growth

17   projection is in line with the consensus economists. The long-term nominal GDP

18   projection based on these outlooks is approximately 3.9%.

19   The real GDP and nominal GDP growth projections made by these

20   independent sources support the use of the consensus economist 5-year and 10-

21   year projected GDP growth outlooks as a reasonable estimate of market participants'

22   long-term GDP growth outlooks.

23

---

[21]DOE/EIA Annual Energy Outlook 2016 With Projections to 2040, May 2016, Table 20.
[22]*CBO: The Budget and Economic Outlook: 2016 to 2026*, January 2016, at 140.
[23]www.economy.com, *Moody's Analytics Forecast*, January 6, 2016.
[24]www.ssa.gov, "2016 OASDI Trustees Report," Table VI.G4.
[25]*SNL Financial, Economist Intelligence Unit*, downloaded on January 13, 2016.

1 **Q** **WHAT STOCK PRICE, DIVIDEND, AND GROWTH RATES DID YOU USE IN**

2 **YOUR MULTI-STAGE GROWTH DCF ANALYSIS?**

3 A I relied on the same 13-week average stock prices and the most recent quarterly

4 dividend payment data discussed above. For stage one growth, I used the

5 consensus analysts' growth rate projections discussed above in my constant growth

6 DCF model. The first stage growth covers the first five years, consistent with the

7 term of the analyst growth rate projections. The second stage, or transition stage,

8 begins in year 6 and extends through year 10. The second stage growth transitions

9 the growth rate from the first stage to the third stage using a linear trend. For the

10 third stage, or long-term sustainable growth stage, starting in year 11, I used a

11 4.25% long-term sustainable growth rate based on the consensus economists' long-

12 term projected nominal GDP growth rate.

13

14 **Q** **WHAT ARE THE RESULTS OF YOUR MULTI-STAGE GROWTH DCF MODEL?**

15 A As shown in Exhibit MPG-11, the average and median DCF returns on equity for my

16 proxy group using the 13-week average stock price are 8.18% and 8.05%,

17 respectively.

18

19 **Q** **PLEASE SUMMARIZE THE RESULTS FROM YOUR DCF ANALYSES.**

20 A The results from my DCF analyses are summarized in Table 9 below:

21

22

23

24

25

<table>
<tr><td colspan="3" align="center">**TABLE 9**</td></tr>
<tr><td colspan="3" align="center">**Summary of DCF Results**</td></tr>
<tr><td></td><td colspan="2" align="center">**Proxy Group**</td></tr>
<tr><td align="center">**Description**</td><td align="center">**Average**</td><td align="center">**Median**</td></tr>
<tr><td>Constant Growth DCF Model (Analysts' Growth)</td><td align="center">9.23%</td><td align="center">9.30%</td></tr>
<tr><td>Constant Growth DCF Model (Sustainable Growth)</td><td align="center">8.38%</td><td align="center">8.20%</td></tr>
<tr><td>Multi-Stage Growth DCF Model</td><td align="center">8.18%</td><td align="center">8.05%</td></tr>
</table>

2   I conclude that my DCF studies support a return on equity of 9.3%, primarily

3   based on my constant growth DCF (analysts' growth) result, which I find as a

4   reasonable high-end DCF return estimate.

IV.E. Risk Premium Model

Q   PLEASE DESCRIBE YOUR BOND YIELD PLUS RISK PREMIUM MODEL.

A   This model is based on the principle investors require a higher return to assume

greater risk. Common equity investments have greater risk than bonds because

bonds have more security of payment in bankruptcy proceedings than common

equity and the coupon payments on bonds represent contractual obligations. In

contrast, companies are not required to pay dividends or guarantee returns on

common equity investments. Therefore, common equity securities are considered to

be riskier than bond securities.

This risk premium model is based on two estimates of an equity risk

premium. First, I estimated the difference between the required return on utility

common equity investments and U.S. Treasury bonds. The difference between the

required return on common equity and the Treasury bond yield is the risk premium. I

estimated the risk premium on an annual basis for each year over the period January

1   1986 through September 2016. The common equity required returns were based on

2   regulatory commission-authorized returns for electric utility companies. Authorized

3   returns are typically based on expert witnesses' estimates of the contemporary

4   investor-required return.

5   The second equity risk premium estimate is based on the difference between

6   regulatory commission-authorized returns on common equity and contemporary

7   "A" rated utility bond yields by Moody's. I selected the period January 1986 through

8   September 2016 because public utility stocks consistently traded at a premium to

9   book value during that period. This is illustrated in Exhibit MPG-12, which shows the

10   market-to-book ratio since 1986 for the electric utility industry was consistently above

11   a multiple of 1.0x. Over this period, regulatory authorized returns were sufficient to

12   support market prices that at least exceeded book value. This is an indication that

13   regulatory authorized returns on common equity supported a utility's ability to issue

14   additional common stock without diluting existing shares. It further demonstrates

15   utilities were able to access equity markets without a detrimental impact on current

16   shareholders.

17   Based on this analysis, as shown in Exhibit MPG-13, the average indicated

18   equity risk premium over U.S. Treasury bond yields has been 5.47%. Since the risk

19   premium can vary depending upon market conditions and changing investor risk

20   perceptions, I believe using an estimated range of risk premiums provides the best

21   method to measure the current return on common equity for a risk premium

22   methodology.

23   I incorporated five-year and 10-year rolling average risk premiums over the

24   study period to gauge the variability over time of risk premiums. These rolling

25   average risk premiums mitigate the impact of anomalous market conditions and

1   skewed risk premiums over an entire business cycle. As shown on my Exhibit

2   MPG-13, the five-year rolling average risk premium over Treasury bonds ranged

3   from 4.25% to 6.75%, while the 10-year rolling average risk premium ranged from

4   4.38% to 6.41%.

5   As shown on my Exhibit MPG-14, the average indicated equity risk premium

6   over contemporary Moody's utility bond yields was 4.09%. The five-year and 10-

7   year rolling average risk premiums ranged from 2.88% to 5.58% and 3.20% to

8   5.05%, respectively.

9

10 **Q   DO YOU BELIEVE THAT THE TIME PERIOD USED TO DERIVE THESE EQUITY**

11   **RISK PREMIUM ESTIMATES IS APPROPRIATE TO FORM ACCURATE**

12   **CONCLUSIONS ABOUT CONTEMPORARY MARKET CONDITIONS?**

13 A   Yes. The time period I use in this risk premium study is a generally accepted period

14   to develop a risk premium study using "expectational" data.

15   Contemporary market conditions can change dramatically during the period

16   that rates determined in this proceeding will be in effect. A relatively long period of

17   time where stock valuations reflect premiums to book value is an indication the

18   authorized returns on equity and the corresponding equity risk premiums were

19   supportive of investors' return expectations and provided utilities access to the equity

20   markets under reasonable terms and conditions. Further, this time period is long

21   enough to smooth abnormal market movement that might distort equity risk

22   premiums. While market conditions and risk premiums do vary over time, this

23   historical time period is a reasonable period to estimate contemporary risk premiums.

24   Alternatively, some studies, such as Duff & Phelps referred to later in this

25   testimony, have recommended that use of "actual achieved investment return data"

1   in a risk premium study should be based on long historical time periods. The studies

2   find that achieved returns over short time periods may not reflect investors' expected

3   returns due to unexpected and abnormal stock price performance.   Short-term,

4   abnormal actual returns would be smoothed over time and the achieved actual

5   investment returns over long time periods would approximate investors' expected

6   returns.   Therefore, it is reasonable to assume that averages of annual achieved

7   returns over long time periods will generally converge on the investors' expected

8   returns.

9   My risk premium study is based on expectational data, not actual investment

10   returns, and, thus, need not encompass a very long historical time period.

11

12   **Q**   **BASED ON HISTORICAL DATA, WHAT RISK PREMIUM HAVE YOU USED TO**

13   **ESTIMATE   GULF   POWER'S   COST   OF   COMMON   EQUITY   IN   THIS**

14   **PROCEEDING?**

15   A   The equity risk premium should reflect the relative market perception of risk in the

16   utility industry today.   I have gauged investor perceptions in utility risk today in

17   Exhibit MPG-15, where I show the yield spread between utility bonds and Treasury

18   bonds over the last 36 years. As shown in this schedule, the average utility bond

19   yield spreads over Treasury bonds for "A" and "Baa" rated utility bonds for this

20   historical period are 1.52% and 1.96%, respectively. The utility bond yield spreads

21   over Treasury bonds for "A" and "Baa" rated utilities for 2016 were 1.37% and 2.18%,

22   respectively.   The current average "A" rated utility bond yield spread over Treasury

23   bond yields is now lower than the 36-year average spread. The current "Baa" rated

24   utility bond yield spread over Treasury bond yields is higher than the 36-year

25   average spread.

1   A current 13-week average "A" rated utility bond yield of 3.98% when

2   compared to the current Treasury bond yield of 2.75% as shown in Exhibit MPG-16,

3   page 1, implies a yield spread of around 123 basis points. This current utility bond

4   yield spread is lower than the 36-year average spread for "A" rated utility bonds of

5   1.52%. The current spread for the "Baa" rated utility bond yield of 1.80% is also

6   lower than the 36-year average spread of 1.96%. Further, when compared to the

7   projected Treasury bond yield of 3.40%, the current "Baa" utility spread is around

8   1.15%, lower than the 36-year average of 1.96%.

9   These utility bond yield spreads are evidence that the market perception of

10   utility risk is about average relative to this historical time period and demonstrate that

11   utilities continue to have strong access to capital in the current market.

12

13 **Q   HOW DO YOU DETERMINE WHERE A REASONABLE RISK PREMIUM IS IN THE**

14 **CURRENT MARKET?**

15 A   I observed the spread of Treasury securities relative to public utility bonds and

16   corporate bonds in gauging whether or not the risk premium in current market prices

17   is relatively stable relative to the past. What this observation of market evidence

18   clearly provides is that the valuations in the current market place an above average

19   risk premium on securities that have greater risk.

20   This market evidence is summarized below in Table 10, which shows the

21   utility bond yield spreads over Treasury bond yields on average for the period 1980

22   through the first three quarters of 2016. I also show the corporate bond yield

23   spreads for Aaa corporates and Baa corporates.

24

25

TABLE 10

Comparison of Yield Spreads Over Treasury Bonds

Description	Utility		Corporate	
	A	Baa	Aaa	Baa
Average Historical Spread	1.52%	1.96%	0.84%	1.94%
Q3, 2016 Spread	1.37%	2.18%	1.10%	2.22%

Source: Exhibit MPG-15.

1

2   The observable yield spreads shown in the table above illustrate that

3 securities of greater risk have above average risk premiums relative to the long-term

4 historical average risk premium. Specifically, A-rated utility bonds to Treasuries, a

5 relatively low-risk investment, have a yield spread in 2016 that has been very

6 comparable to that of its long-term historical yield spread. The A utility bond yield

7 spread is actually below the yield spread over the last 36 years. This is an indication

8 that low risk investments like Aaa corporate bond yield and A-rated utility bond yield

9 have premium values relative to minimal risk Treasury securities.

10   In contrast, the higher risk Baa utility and corporate bond yields currently

11 have an above-average yield spread of approximately 20 basis points (2.18% vs.

12 1.96%). The higher risk Baa utility bond yields do not have the same premium

13 valuations as their lower risk A-rated utility bond yields, and thus the yield spread for

14 greater risk investments is wider than lower risk investments.

15   This illustrates that securities with greater risk such as Baa yields versus A yields

16 are commanding above average risk premiums in the current marketplace. Utility

17 equity securities are greater risk than Baa utility bonds. Because greater risk

18 securities appear to support an above-average risk premium relative to historical

1   averages, this would support an above-average risk premium in measuring a fair

2   return on equity for a utility or equity security.

3

4   **Q   WHAT IS YOUR RECOMMENDED RETURN FOR GULF POWER BASED ON**

5   **YOUR RISK PREMIUM STUDY?**

6   A   To be conservative, I am recommending more weight to the high-end risk premium

7   estimates than the low-end. I state this because of the relatively low level of interest

8   rates now but relative upward movements of utility yields more recently. Hence, I

9   propose to provide 75% weight to my high-end risk premium estimates and 25% to

10   the low-end. Applying these weights, the risk premium for Treasury bond yields

11   would be approximately 6.13%,[26] which is considerably higher than the 31-year

12   average risk premium of 5.47% and reasonably reflective of the 3.4% projected

13   Treasury bond yield. A Treasury bond risk premium of 6.13% and projected

14   Treasury bond yield of 3.4% produce a risk premium estimate of 9.53%. Similarly,

15   applying these weights to the utility risk premium indicates a risk premium of

16   4.91%.[27] This risk premium is above the 31-year historical average risk premium of

17   4.09%. This risk premium in connection with the current Baa observable utility bond

18   yield of 4.55% produces an estimated return on equity of approximately 9.46%.

19   Based on this methodology, both my Treasury bond risk premium and my

20   utility bond risk premium indicate a return on equity in the range of 9.46% to 9.53%

21   with a midpoint of 9.50%.

22

23

24

---

[26](4.25% * 25%) + (6.75% * 75%) = 6.13%.
[27](2.88% * 25%) + (5.58% * 75%) = 4.91%.

1 ## IV.F. Capital Asset Pricing Model ("CAPM")

2 **Q**   **PLEASE DESCRIBE THE CAPM.**

3 A   The CAPM method of analysis is based upon the theory that the market-required

4   rate of return for a security is equal to the risk-free rate, plus a risk premium

5   associated with the specific security. This relationship between risk and return can

6   be expressed mathematically as follows:

7    $R_i = R_f + B_i \times (R_m - R_f)$ where:

8   R_i =   Required return for stock i
9   R_f =   Risk-free rate
10   R_m =   Expected return for the market portfolio
11   B_i=   Beta - Measure of the risk for stock

12   The stock-specific risk term in the above equation is beta. Beta represents the

13   investment risk that cannot be diversified away when the security is held in a

14   diversified portfolio. When stocks are held in a diversified portfolio, firm-specific risks

15   can be eliminated by balancing the portfolio with securities that react in the opposite

16   direction to firm-specific risk factors (e.g., business cycle, competition, product mix,

17   and production limitations).

18   The risks that cannot be eliminated when held in a diversified portfolio are non-

19   diversifiable risks. Non-diversifiable risks are related to the market in general and

20   referred to as systematic risks. Risks that can be eliminated by diversification are

21   non-systematic risks. In a broad sense, systematic risks are market risks and non-

22   systematic risks are business risks. The CAPM theory suggests the market will not

23   compensate investors for assuming risks that can be diversified away. Therefore,

24   the only risk investors will be compensated for are systematic or non-diversifiable

25   risks. The beta is a measure of the systematic or non-diversifiable risks.

26

27

1 **Q   PLEASE DESCRIBE THE INPUTS TO YOUR CAPM.**

2 A   The CAPM requires an estimate of the market risk-free rate, the Company's beta,

3   and the market risk premium.

4

5 **Q   WHAT DID YOU USE AS AN ESTIMATE OF THE MARKET RISK-FREE RATE?**

6 A   As previously noted, *Blue Chip Financial Forecasts*' projected 30-year Treasury bond

7   yield is 3.40%.[28]   The current 30-year Treasury bond yield is 2.75%, as shown in

8   Exhibit MPG-16. I used *Blue Chip Financial Forecasts*' projected 30-year Treasury

9   bond yield of 3.40% for my CAPM analysis.

10

11 **Q   WHY DID YOU USE LONG-TERM TREASURY BOND YIELDS AS AN ESTIMATE**

12   **OF THE RISK-FREE RATE?**

13 A   Treasury securities are backed by the full faith and credit of the United States

14   government so long-term Treasury bonds are considered to have negligible credit

15   risk. Also, long-term Treasury bonds have an investment horizon similar to that of

16   common stock. As a result, investor-anticipated long-run inflation expectations are

17   reflected in both common stock required returns and long-term bond yields.

18   Therefore, the nominal risk-free rate (or expected inflation rate and real risk-free rate)

19   included in a long-term bond yield is a reasonable estimate of the nominal risk-free

20   rate included in common stock returns.

21   Treasury bond yields, however, do include risk premiums related to

22   unanticipated future inflation and interest rates. A Treasury bond yield is not a

23   risk-free rate. Risk premiums related to unanticipated inflation and interest rates are

24   systematic of market risks. Consequently, for companies with betas less than 1.0,

---

[28] *Blue Chip Financial Forecasts*, December 1, 2016 at 2.

1   using the Treasury bond yield as a proxy for the risk-free rate in the CAPM analysis

2   can produce an overstated estimate of the CAPM return.

3

4   **Q   WHAT BETA DID YOU USE IN YOUR ANALYSIS?**

5   A   As shown in Exhibit MPG-17, the proxy group average Value Line beta estimate is

6   0.70.

7

8   **Q   HOW DID YOU DERIVE YOUR MARKET RISK PREMIUM ESTIMATE?**

9   A   I derived two market risk premium estimates: a forward-looking estimate and one

10   based on a long-term historical average.

11   The forward-looking estimate was derived by estimating the expected return

12   on the market (as represented by the S&P 500) and subtracting the risk-free rate

13   from this estimate. I estimated the expected return on the S&P 500 by adding an

14   expected inflation rate to the long-term historical arithmetic average real return on

15   the market. The real return on the market represents the achieved return above the

16   rate of inflation.

17   Duff & Phelps' *2016 Valuation Handbook* estimates the historical arithmetic

18   average real market return over the period 1926 to 2015 as 8.7%.[29]   A current

19   consensus analysts' inflation projection, as measured by the Consumer Price Index,

20   is 2.3%.[30]   Using these estimates, the expected market return is 11.20%.[31]   The

21   market risk premium then is the difference between the 11.20% expected market

22   return and my 3.40% risk-free rate estimate, or approximately 7.80%.

---

[29]*Duff & Phelps, 2016 Valuation Handbook: Guide to Cost of Capital* at 2-4. Calculated as [(1+0.12) / (1+0.03)] – 1.
[30]*Blue Chip Financial Forecasts*, December 1, 2016 at 2.
[31]{ [(1 + 0.087) ∗ (1 + 0.023)] – 1 } ∗ 100.

1   My historical estimate of the market risk premium was also calculated by

2   using data provided by Duff & Phelps in its *2016 Valuation Handbook*. Over the

3   period 1926 through 2015, the Duff & Phelps study estimated that the arithmetic

4   average of the achieved total return on the S&P 500 was 12.0%[32] and the total return

5   on long-term Treasury bonds was 6.00%.[33] The indicated market risk premium is

6   6.0% (12.0% - 6.0% = 6.0%).

7

8   **Q   HOW DOES YOUR ESTIMATED MARKET RISK PREMIUM RANGE COMPARE**

9   **TO THAT ESTIMATED BY DUFF & PHELPS?**

10 A   The Duff & Phelps analysis indicates a market risk premium falls somewhere in the

11   range of 5.5% to 6.9%. My market risk premium falls in the range of 6.0% to 7.8%.

12   My average market risk premium of 6.9% is at the high-end of the Duff & Phelps

13   range.

14

15 **Q   HOW DOES DUFF & PHELPS MEASURE A MARKET RISK PREMIUM?**

16 A   Duff & Phelps makes several estimates of a forward-looking market risk premium

17   based on actual achieved data from the historical period of 1926 through 2015 as

18   well as normalized data. Using this data, Duff & Phelps estimates a market risk

19   premium derived from the total return on large company stocks (S&P 500), less the

20   income return on Treasury bonds. The total return includes capital appreciation,

21   dividend or coupon reinvestment returns, and annual yields received from coupons

22   and/or dividend payments. The income return, in contrast, only reflects the income

23   return received from dividend payments or coupon yields. Duff & Phelps claims the

24   income return is the only true risk-free rate associated with Treasury bonds and is

---

[32] *Duff & Phelps, 2016 Valuation Handbook: Guide to Cost of Capital* at 2-4.
[33] *Id.*

1   the best approximation of a truly risk-free rate.[34] I disagree with this assessment

2   from Duff & Phelps because it does not reflect a true investment option available to

3   the marketplace and therefore does not produce a legitimate estimate of the

4   expected premium of investing in the stock market versus that of Treasury bonds.

5   Nevertheless, I will use Duff & Phelps' conclusion to show the reasonableness of my

6   market risk premium estimates.

7   Duff & Phelps' range is based on several methodologies. First, Duff & Phelps

8   estimates a market risk premium of 6.9% based on the difference between the total

9   market return on common stocks (S&P 500) less the income return on Treasury

10   bond investments over the 1926-2015 period.

11   Second, Duff & Phelps updated the Ibbotson & Chen supply-side model

12   which found that the 6.9% market risk premium based on the S&P 500 was

13   influenced by an abnormal expansion of price-to-earnings ("P/E") ratios relative to

14   earnings and dividend growth during the period, primarily over the last 25 years.

15   Duff & Phelps believes this abnormal P/E expansion is not sustainable.[35] Therefore,

16   Duff & Phelps adjusted this market risk premium estimate to normalize the growth in

17   the P/E ratio to be more in line with the growth in dividends and earnings. Based on

18   this alternative methodology, Duff & Phelps published a long-horizon supply-side

19   market risk premium of 6.03%.[36]

20   Finally, Duff & Phelps developed its own recommended equity, or market, risk

21   premium by employing an analysis that considered a wide range of economic

22   information, multiple risk premium estimation methodologies, and the current state of

23   the economy by observing measures such as the level of stock indices and corporate

24   spreads as indicators of perceived risk. Based on this methodology, and utilizing a

---

[34] *Id.* at 3-28.
[35] *Id.* at 3-30.
[36] *Id.* at 3-31.

1   "normalized" risk-free rate of 4.0%, Duff & Phelps concluded that the current

2   expected, or forward-looking, market risk premium is 5.5%, implying an expected

3   return on the market of 9.5%.[37]

4

5   **Q   WHAT ARE THE RESULTS OF YOUR CAPM ANALYSIS?**

6   A   As shown in Exhibit MPG-18, based on my low market risk premium of 6.0% and my

7   high market risk premium of 7.8%, a risk-free rate of 3.40%, and a beta of 0.70, my

8   CAPM analysis produces a return of 7.57% to 8.82%. Based on my assessment of

9   risk premiums in the current market, as discussed above, I recommend my high-end

10   CAPM return estimate of 8.80%. This CAPM most closely aligns the market risk

11   premium with the current risk-free rate.

12

13   **IV.G. Return on Equity Summary**

14   **Q   BASED ON THE RESULTS OF YOUR RETURN ON COMMON EQUITY**

15   **ANALYSES DESCRIBED ABOVE, WHAT RETURN ON COMMON EQUITY DO**

16   **YOU RECOMMEND FOR GULF POWER?**

17   A   Based on my analyses, I estimate Gulf Power's current market cost of equity to be

18   9.20%.

19

20

21

22

23

24

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[37] *Id.* at 3-40.

TABLE 11

Return on Common Equity Summary

Description	Results
DCF	9.30%
Risk Premium	9.50%
CAPM	8.80%

1   My recommended return on common equity of 9.20% is at the approximate

2   midpoint of my estimated range of 8.80% to 9.50%. As shown in Table 11 above,

3   the high-end of my estimated range is based on my risk premium studies. The low-

4   end is based on my CAPM return. The DCF result falls within my range.

5   My return on equity estimates reflect observable market evidence, the impact

6   on Federal Reserve policies on current and expected long-term capital market costs,

7   an assessment of the current risk premium built into current market securities, and a

8   general assessment of the current investment risk characteristics of the electric utility

9   industry, and the market's demand for utility securities.

10

11   **IV.H. Financial Integrity**

12   **Q   WILL YOUR RECOMMENDED OVERALL RATE OF RETURN SUPPORT AN**

13   **INVESTMENT GRADE BOND RATING FOR GULF POWER?**

14   A   Yes. I have reached this conclusion by comparing the key credit rating financial

15   ratios for Gulf Power at my proposed return on equity and the Company's actual test-

16   year-end capital structure to S&P's benchmark financial ratios using S&P's new

17   credit metric ranges.

18

1   **Q   PLEASE DESCRIBE THE MOST RECENT S&P FINANCIAL RATIO CREDIT**

2   **METRIC METHODOLOGY.**

3   A   S&P publishes a matrix of financial ratios corresponding to its assessment of the

4   business risk of utility companies and related bond ratings. On May 27, 2009, S&P

5   expanded its matrix criteria by including additional business and financial risk

6   categories.[38]

7   Based on S&P's most recent credit matrix, the business risk profile categories

8   are "Excellent," "Strong," "Satisfactory," "Fair," "Weak," and "Vulnerable."   Most

9   utilities have a business risk profile of "Excellent" or "Strong."

10   The financial risk profile categories are "Minimal," "Modest," "Intermediate,"

11   "Significant," "Aggressive," and "Highly Leveraged."   Most of the utilities have a

12   financial risk profile of "Aggressive."   Gulf Power has an "Excellent" business risk

13   profile and a "Significant" financial risk profile.

14

15   **Q   PLEASE DESCRIBE S&P'S USE OF THE FINANCIAL BENCHMARK RATIOS IN**

16   **ITS CREDIT RATING REVIEW.**

17   A   S&P evaluates a utility's credit rating based on an assessment of its financial and

18   business risks. A combination of financial and business risks equates to the overall

19   assessment of Gulf Power's total credit risk exposure. On November 19, 2013, S&P

20   updated its methodology. In its update, S&P published a matrix of financial ratios

21   that defines the level of financial risk as a function of the level of business risk.

22   S&P publishes ranges for primary financial ratios that it uses as guidance in

23   its credit review for utility companies. The two core financial ratio benchmarks it

24   relies on in its credit rating process include: (1) Debt to Earnings Before Interest,

---

[38]S&P updated its 2008 credit metric guidelines in 2009, and incorporated utility metric benchmarks with the general corporate rating metrics. *Standard & Poor's RatingsDirect*: "Criteria Methodology: Business Risk/Financial Risk Matrix Expanded," May 27, 2009.

1   Taxes, Depreciation and Amortization ("EBITDA"); and (2) Funds From Operations

2   ("FFO") to Total Debt.[39]

3

4 **Q**   **HOW DID YOU APPLY S&P'S FINANCIAL RATIOS TO TEST THE**

5   **REASONABLENESS OF YOUR RATE OF RETURN RECOMMENDATIONS?**

6 **A**   I calculated each of S&P's financial ratios based on Gulf Power's cost of service for

7   its retail jurisdictional operations.   While S&P would normally look at total

8   consolidated Gulf Power financial ratios in its credit review process, my investigation

9   in this proceeding is not the same as S&P's.   I am attempting to judge the

10   reasonableness of my proposed cost of capital for rate-setting in Gulf Power's retail

11   regulated utility operations.   Hence, I am attempting to determine whether my

12   proposed rate of return will in turn support cash flow metrics, balance sheet strength,

13   and earnings that will support an investment grade bond rating and Gulf Power's

14   financial integrity.

15

16 **Q**   **DID YOU INCLUDE ANY OFF-BALANCE SHEET DEBT EQUIVALENTS?**

17 **A**   Yes, I did. The off-balance sheet debt equivalents and their associated amortization

18   and interest expense were obtained from the S&P Capital IQ website for 2015 and

19   used in my analysis presented on my Exhibit MPG-3 and Exhibit MPG-19.

20

21 **Q**   **PLEASE DESCRIBE THE RESULTS OF THIS CREDIT METRIC ANALYSIS AS IT**

22   **RELATES TO GULF POWER.**

23 **A**   The S&P financial metric calculations for Gulf Power at a 9.20% return are

24   developed on Exhibit MPG-19.   The credit metrics produced below, with Gulf

---

[39] *Standard & Poor's RatingsDirect*: "Criteria: Corporate Methodology," November 19, 2013.

1   Power's financial risk profile from S&P of "Intermediate" and business risk score by

2   S&P of "Excellent", will be used to assess the strength of the credit metrics based on

3   Gulf Power's retail operations in Florida.

4   Gulf Power's adjusted total debt ratio is approximately 47.1% from my Exhibit

5   MPG-3, page 1. This adjusted debt ratio as discussed above, is generally consistent

6   with the utility industry average adjusted debt ratio with an 'A' bond rating,

7   comparable to that of the proxy group, and reasonably consistent with an A- bond

8   rating which is consistent with Gulf Power's current bond rating. Hence, I concluded

9   this capital structure reasonably supports Gulf Power's current investment grade

10   bond rating.

11   Based on an equity return of 9.20%, Gulf Power will be provided an

12   opportunity to produce a debt to Earnings Before Interest, Taxes, Depreciation and

13   Amortization ("EBITDA") ratio of 3.3x. This is within S&P's "Intermediate" guideline

14   range of 2.5x to 3.5x."[40] This ratio supports an investment grade credit rating.

15   Gulf Power's retail operations FFO to total debt coverage at a 9.20% equity

16   return is 22%, which is within S&P's "Significant" metric guideline range of 13% to

17   22%. This FFO/total debt ratio will support an investment grade bond rating.

18   At my recommended return on equity of 9.20% and proposed capital structure, and

19   the Company's embedded debt cost, Gulf Power's financial credit metrics continue to

20   support credit metrics at an investment grade utility level.

21

22

23

24

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[40] *Id.*

1 **V. RESPONSE TO GULF POWER WITNESS DR. JAMES VANDER WEIDE**

2 **Q WHAT IS DR. VANDER WEIDE'S RETURN ON EQUITY RECOMMENDATION?**

3 A At page 51, Gulf Power witness Dr. Vander Weide summarizes his results for his

4 proxy group and Gulf Power's current market cost of equity. There, he concludes

5 that a fair return on equity for his proxy companies falls in the range of 9.7% to

6 10.9%, with an average return on equity of 10.4%. Dr. Vander Weide goes on to

7 state that the proxy companies are similar in business risk to Gulf Power, and Gulf

8 Power should have the same after-tax weighted average cost of capital ("ATWACC")

9 as his proxy companies. Dr. Vander Weide then determines that the required return

10 on equity to produce the same ATWACC for Gulf Power and the proxy companies is

11 11.0%.

12 Based on these analyses, Dr. Vander Weide recommends a return on equity

13 of 11.0% for Gulf Power in this case.

14

15 **Q HOW DID DR. VANDER WEIDE ARRIVE AT HIS ESTIMATED RETURN ON**

16 **EQUITY AND POINT ESTIMATE OF 10.4% FOR HIS PROXY COMPANIES?**

17 A Dr. Vander Weide relied on market-based models to estimate the current market cost

18 of equity for his proxy group companies. As shown below in Table 12, which

19 summarizes the results Dr. Vander Weide offers at page 51 of his testimony, Dr.

20 Vander Weide relied on a constant growth DCF study, risk premium methodologies,

21 and capital asset pricing model studies. Again, these results are summarized in

22 Table 12 below.

23

24

25

TABLE 12

Proxy Company Results

Model	Vander Weide Results		
	Proxy Company[1] **(1)**	**ATWACC Adder[2]** **(2)**	**Adjusted[2]** **(3)**
Constant Growth DCF	9.7%		9.5%
Ex Ante Risk Premium	10.9%		8.68% - 9.25%
Ex Post Risk Premium	10.6%		8.21% - 8.75%
CAPM Historical	10.1%		8.6%
CAPM DCF	10.8%		9.2%
Average	10.4%	0.6%	
Recommended Range	9.7% - 10.8%		8.6% - 9.5%

Sources:

[1]Vander Weide Direct Testimony at 51.
[2]Exhibit MPG-18 and Exhibit MPG-19.

1

2   As shown in Table 12 above under Column 1, Dr. Vander Weide's analyses

3 produced a return on equity in the range of 9.7% to 10.8%. The midpoint of this

4 range is 10.4%. As shown under Column 2, Dr. Vander Weide proposes a 0.6%

5 adder for his ATWACC adjustment. The combination of the average result for

6 Column 1 and the ATWACC adder in Column 2 supports the Company's requested

7 return on equity of 11%.

8

9

10

11

12

1 **V.A. ATWACC Adder**

2 **Q** **HOW DID DR. VANDER WEIDE PRODUCE THE ATWACC ADDER OF 60 BASIS**

3 **POINTS SHOWN IN TABLE 12 ABOVE?**

4 A This ATWACC adder was developed on his Exhibit No.___(JVW-1), Schedule 10.

5 On that schedule, Dr. Vander Weide relies on Gulf Power's long-term debt cost of

6 4.4%, preferred stock cost of 6.15%, and common equity return for the proxy group

7 companies of 10.4%. He then restates these costs to their after-tax costs. This

8 effectively reduces the cost of debt from 4.4% down to an after-tax cost of 2.68%.

9 Debt cost is reduced because debt interest expense is tax deductible whereas

10 preferred stock dividends and common stock return are not tax deductible.

11 He then relied on market value capital structures for a 10-year average

12 weight for *The Value Line Investment Survey* ("*Value Line*") Electric Utility Industry.

13 As shown in the top portion of his Schedule 10, he relies on a common equity ratio of

14 60%, a long-term debt ratio of 39.49%, and a preferred stock ratio of 0.51%. These

15 factors produce an ATWACC of 7.33% for the *Value Line* electric utilities at a 10.4%

16 return on equity.

17 Next, Dr. Vander Weide relies on the long-term sources of capital proposed

18 by Gulf Power in this proceeding to determine its rate of return. Dr. Vander Weide

19 found that for Gulf Power to earn the same ATWACC as the Electric Utility industry

20 (7.33%) at a 10.4% return on equity, Gulf Power needs to earn an 11.0% return on

21 equity.

22

23

24

25

1 **Q** **IS DR. VANDER WEIDE'S ESTIMATED RETURN ON EQUITY OF 11% FOR GULF**

2 **POWER REASONABLE?**

3 A No. Dr. Vander Weide's proposed ATWACC adjustment should be rejected for

4 several reasons. First, he has not provided an accurate comparison of the capital

5 structure weights for the Electric Utility Industry followed by *Value Line* and Gulf

6 Power. Specifically, Dr. Vander Weide relies on a 60% common equity for the

7 10-year average *Value Line* electric utilities on his Schedule 10. This is flawed for at

8 least two reasons. First, the proxy group companies are not the Electric Utility

9 Industry followed by *Value Line.* Rather, they are a group of companies which Dr.

10 Vander Weide believes have a similar business risk to Gulf Power, but different

11 financial risk. Hence, he should have focused on the capital structure weights of the

12 proxy group, not the Electric Utility Industry. Second, and importantly, Dr. Vander

13 Weide provided no evidence that the *Value Line* Electric Utility Industry has the same

14 business or financial risk to that of Gulf Power. This methodology simply is not

15 reliable. By comparing the capital structure weight of Gulf Power to his proxy group

16 shows that Gulf Power has more common equity than the proxy group, not less.

17 Specifically, reflecting only long-term investor capital, Gulf Power has approximately

18 53.96% common equity whereas the proxy group companies have approximately

19 47.1%. Hence, if this methodology is used at all, it should be used to reduce the

20 return on equity for Gulf Power relative to the proxy group. However, I believe the

21 methodology is flawed and should be rejected and not relied on at all.

22

23

24

25

1 **Q** **DO YOU HAVE OTHER CONCERNS WITH DR. VANDER WEIDE'S PROPOSED**

2 **ATWACC METHODOLOGY?**

3 A Yes. This methodology simply is flawed and produces an unjust result for Gulf

4 Power. Dr. Vander Weide's adjustment is actually more of a market-to-book ratio

5 adjustment rather than a financial risk adjustment. Essentially, he is estimating the

6 return on equity on a market value capital structure that needs to be applied to a

7 book value capital structure in order to support his recommended return on equity

8 based on market value capital structure weight. Stated differently, this is a market-

9 to-book ratio adjustment to the estimated return on common equity. A market-to-

10 book ratio adjustment is designed to maintain a targeted market value of the stock,

11 rather than to ensure that utility investors are fairly compensated for making

12 investment in utility plant and equipment. The concept is fundamentally flawed and

13 imbalanced.

14

15 **Q** **CAN YOU PROVIDE AN EXAMPLE WHY THE ATWACC OR MARKET-TO-BOOK**

16 **RATIO PRODUCES AN IMBALANCED RESULT?**

17 A Yes. The objective of measuring a fair return on equity is to ensure that investors

18 earn a rate of return that is comparable to the return they can earn on another

19 investment of comparable risk. From this standpoint, investors should be allowed to

20 earn the same rate of return on making utility plant investments as they can by

21 reinvesting in the stocks of the comparable risk proxy groups.

22 Based on Dr. Vander Weide's analyses, investors should expect to earn a

23 return of 10.4% by investing in the stocks of the proxy group. In significant contrast,

24 under Dr. Vander Weide's proposed ATWACC methodology, that same investor

25 could earn a return on plant investment in Gulf Power of 11% without taking

1   additional risk. This is not a comparable return for investments in comparable risk

2   enterprises.   Dr. Vander Weide's ATWACC adjustment or market-to-book ratio

3   adjustment to his proxy group return on equity estimates should be rejected.

4

5   ## V.B. Vander Weide's DCF

6   **Q   PLEASE DESCRIBE DR. VANDER WEIDE'S DCF ANALYSIS.**

7   A   Dr. Vander Weide relied on a quarterly compounded DCF study, with an adjustment

8   to the proxy group stock price of 5% to reflect flotation cost adjustments. Based on

9   this study, Dr. Vander Weide estimates a DCF return for his proxy group of 9.7%.[41]

10   This 9.7% DCF return is based on a proxy group average growth rate of 5.69%, and

11   next year dividend yield of around 4.0% (adjusted for flotation costs).

12

13   **Q   DO YOU TAKE ISSUE WITH DR. VANDER WEIDE'S DCF ANALYSES?**

14   A   Yes. I have several issues concerning his DCF analyses. First, Dr. Vander Weide's

15   constant growth DCF study is overstated because the analysts' three- to five-year

16   growth rates are not reasonable estimates of long-term sustainable growth.   The

17   constant growth DCF model used by Dr. Vander Weide requires an estimated

18   long-term sustainable growth.   In contrast, the analysts' growth rates he relies on

19   reflect only the outlooks over the next three to five years. To the extent the analysts'

20   growth rate estimates are not reasonable estimates of long-term sustainable growth,

21   then the DCF return estimate he produces from this study is not reliable. Because

22   the analysts' growth rates exceed a reasonable estimate of long-term sustainable

23   growth, Dr. Vander Weide's DCF return estimate is inflated and should be rejected.

---

[41]Vander Weide Direct Testimony at 26 and JHV Schedule 1-1.

1   Second, Dr. Vander Weide adjusted his dividend yield calculation by reducing

2   the stock price by 5%. This adjustment reflected the estimated cost of issuing stock

3   to the public or flotation cost expense. As outlined below, this flotation cost

4   adjustment is not a known and measurable cost for Gulf Power, and it overstates

5   Gulf Power's revenue requirement because it allows for recovery of an expense

6   which Dr. Vander Weide has failed to prove was actually incurred by Gulf Power, and

7   therefore is not appropriately included in the development of its cost of service.

8   Finally, Dr. Vander Weide's model overstates a fair return on equity for Gulf

9   Power because it reflects quarterly compounding of dividends. While Gulf Power

10   and the proxy group companies do pay quarterly dividends, the dividend

11   reinvestment return earned by investors in these proxy group companies is not paid

12   by the utility. Therefore, the compounded return associated with quarterly dividends

13   is not a cost to the utility.

14   Rather, dividend reinvestment returns are paid by receiving dividends from

15   the utility and reinvesting in another security of comparable risk and return. While

16   investors do expect to receive this reinvestment return, it is not a cost to the utility

17   because the utility does not pay the reinvestment cost. Therefore, the dividend

18   reinvestment return should not be included as a measurement of the utility's cost of

19   capital to the utility. If the dividend reinvestment return is included in the utility's cost

20   of capital, then investors will be allowed to earn the dividend reinvestment return

21   twice – first, from the utility in the authorized return on equity, and then again after

22   the utility pays the investor dividends and the investor reinvests the dividend in

23   another security at a comparable return.

24

25

1 **Q** **PLEASE DESCRIBE WHY YOU BELIEVE DR. VANDER WEIDE'S THREE- TO**

2 **FIVE-YEAR ANALYSTS' GROWTH RATE PROJECTIONS ARE NOT**

3 **REASONABLE ESTIMATES OF LONG-TERM SUSTAINABLE GROWTH.**

4 **A** As shown on his JHV Schedule 1-1, the growth rates from his proxy group

5 predominantly exceed the projected nominal growth of the U.S. GDP. As stated

6 above, consensus economists' projections of long-term growth for the U.S. GDP are

7 around 4.25%. In contrast, Dr. Vander Weide's 26 utility company proxy group has

8 an average growth rate of 5.69%, as shown on my Exhibit MPG-20.

9 I explained above that both practitioners and academics support the notion

10 that long-term sustainable growth cannot be greater than the growth rate of the

11 economy in which the company sells its goods and services. Growth can exceed the

12 service area economic growth over short periods of time, but over the long-term the

13 expectation that the growth will exceed the growth of the economy in which a

14 company sells its services is not rational or reasonable.

15 ## V.B.1. Flotation Costs

16 **Q** **PLEASE DESCRIBE DR. VANDER WEIDE'S PROPOSED FLOTATION COST**

17 **ADJUSTMENT.**

18 **A** Dr. Vander Weide proposes a flotation cost adjustment by comparing the difference

19 in his DCF return by making an adjustment to the stock price versus no adjustment.

20 Dr. Vander Weide proposes to calculate the expected dividend yield by dividing the

21 expected dividend by 95% of the average stock price, or a 5 percentage point

22 reduction to the stock price, as a measure of flotation cost. Dr. Vander Weide

23 observes that studies outlining flotation costs indicate that utilities generally incur a

24 cost of 5% of the share price in issuing stock to the public. This flotation cost is in

1   the form of direct expenses for issuing stock to the public, and pricing pressure when

2   selling new stock.

3   Dr. Vander Weide estimates this 5% flotation cost by reviewing academic

4   studies of flotation cost for utility companies, and reviewing actual issuances of other

5   companies.[42]

6

7   **Q   IS DR. VANDER WEIDE'S FLOTATION COST ADJUSTMENT TO GULF**

8   **POWER'S RETURN ON EQUITY REASONABLE?**

9   A   No. I do not dispute that flotation costs would be appropriate if it was based on Gulf

10   Power's actual cost of issuing stock to the public. However, Dr. Vander Weide's

11   flotation cost is not based on known and measurable costs for Gulf Power, because

12   it is not based on Gulf Power's actual costs. Instead, Dr. Vander Weide's flotation

13   cost adjustment reflects economic studies of other utility companies that have

14   actually sold stock to the public.   In his proposed flotation cost adjustment,

15   Dr. Vander Weide failed to recognize that Gulf Power does not incur costs

16   associated with selling stock to the public.   Including a public flotation cost

17   adjustment to a fair return on equity will produce an excessive rate of return to Gulf

18   Power unless the adjustment is shown to be reasonably compensatory for actual

19   flotation cost expenses. Dr. Vander Weide's proposed adjustment, again, is not

20   based on this important balanced consideration in determining a fair return on equity

21   for Gulf Power.

22

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[42]Vander Weide Direct Testimony at 26-27 and Appendix 3.

1   **Q**   **IS IT REASONABLE TO ASSUME, AS DR. VANDER WEIDE HAS, THAT GULF**

2   **POWER HAS ACTUALLY INCURRED FLOTATION COSTS?**

3   **A**   No. Gulf Power would only incur flotation costs if it has sold stock to the public, for

4   the purpose of using the proceeds to invest in Gulf Power infrastructure. Gulf Power

5   stock is not market traded. Rather, it is held by its publicly traded parent company,

6   Southern Company. Gulf Power's common equity capital is produced from several

7   sources including retained earnings, and equity contributions from its parent

8   company. Gulf Power's retained earnings do not cause Gulf Power to incur a stock

9   issuance (flotation) cost. Gulf Power's parent company equity contributions can be

10   funded from many sources. If its parent company makes equity contributions with

11   internal funds, or issues debt capital to fund equity contributions in the utility, then the

12   parent company would not incur a stock issuance flotation cost, in making equity

13   investments in Gulf Power.

14   Only in the event where stock is sold to the public by the parent company,

15   and the parent company allocates all or a portion of the stock sale costs to the utility,

16   would there be a flotation cost incurred by Gulf Power.

17

18   **Q**   **IN THE EVENT A PARENT COMPANY DID ISSUE STOCK TO THE PUBLIC AND**

19   **DID INCUR FLOTATION COSTS, WOULD SUCH EXPENSES BE VERIFIABLE**

20   **AND AUDITABLE BY THE UTILITY?**

21   **A**   Yes. If a parent company issued stock to the public to make equity contributions to

22   the utility company, and the affiliate interest agreement with the parent company

23   allows for transferring these stock costs to the utility, then the actual flotation cost

24   could be audited by the Board, determined to be legitimate and reasonable, and then

25   could be included in the utility's cost of service. Unfortunately, Dr. Vander Weide has

1   not provided any proof of any actual flotation cost incurred by Gulf Power, or properly

2   allocated to Gulf Power by its parent company. Therefore, this cost should not be

3   included in its cost of service, because it is not known and measurable.

4

5 **Q**   **HOW WOULD DR. VANDER WEIDE'S DCF MODEL BE CHANGED IF IT IS**

6   **CORRECTED TO REMOVE THE UNJUSTIFIED FLOTATION COST**

7   **ADJUSTMENT, AND QUARTERLY COMPOUNDING ASSUMPTION?**

8 **A**   As shown on my attached Exhibit MPG-20, Dr. Vander Weide's DCF study for Gulf

9   Power would be reduced down to a proxy group average of 9.53%, and proxy group

10   median of 9.51%.

11 **V.C. Vander Weide Ex Ante Risk Premium**

12 **Q**   **PLEASE DESCRIBE DR. VANDER WEIDE'S EX ANTE RISK PREMIUM**

13   **METHODOLOGY.**

14 **A**   Dr. Vander Weide estimated a DCF return on a proxy group of electric companies

15   relative to the utility bond yield with a rating of "A." He performed this analysis for a

16   period from September 1999 through March 2016. Dr. Vander Weide then performs

17   a regression analysis to develop his risk premium estimate of 4.7% for this historical

18   period based on prospective DCF return estimates relative to bond yields. (Appendix

19   4, pages 2-3)

20   To this estimated market risk premium of 4.7%, he added a projected "A"

21   rated utility bond yield of 6.2%. He then concluded that this produced a return on

22   common equity of 10.9%. (Vander Weide Direct Testimony at Appendix 4, page 3).

23

24

1 **Q** **HOW DID DR. VANDER WEIDE PROJECT AN "A" UTILITY BOND YIELD?**

2 A Dr. Vander Weide projects 6.2% using two methods. First, he uses the *Value Line*

3 projected AAA corporate bond yield of 5.6% and the average yield spread between

4 an A utility bond yield and an AAA corporate bond yield of 34 basis points. This

5 produces an A utility bond yield projection of 5.94%.

6 Second, Dr. Vander Weide considered the Energy Information Administration

7 ("EIA") forecast of an AA rated utility bond yield of 6.21%. Then he adds a spread

8 between AA bond yields and A utility bond yields of approximately 23 basis points.

9 He adds this projected AA to A utility bond yield spread of 23 basis points to the

10 projected AA utility bond yield of 6.21% to derive a projected A-rated utility bond yield

11 of 6.44%.

12 His recommended projected A utility bond yield is the average of these two

13 projections, 6.19% ((5.94% + 6.44%)/2), rounded to 6.20%.[43]

14

15 **Q** **PLEASE DESCRIBE THE ISSUES YOU HAVE WITH DR. VANDER WEIDE'S EX**

16 **ANTE RISK PREMIUM ANALYSIS.**

17 A I believe Dr. Vander Weide's estimated market risk premium from his ex ante risk

18 premium study represents an unreasonable risk premium return estimate.

19 Dr. Vander Weide's projected "A"-rated utility bond yield of 6.2% is more than

20 220 basis points above current observable "A"-rated utility bond yields of

21 approximately 4% over the 13-week period ending December 16, 2016. (Exhibit

22 MPG-16). Indeed, it is approximately 185 basis points higher than the highest "A"-

23 rated utility bond yield perceived in that 13-week period. More importantly, Dr.

24 Vander Weide's projection of an "A"-rated utility bond yield has not been shown to be

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[43]Direct Testimony at 37.

1   reasonably consistent with any market participant's outlook on the cost of utility

2   capital during the period rates determined in this proceeding will be in effect. As

3   such, Dr. Vander Weide's utility bond yield projection overstates current observable

4   utility bond yields, has no basis, and has been shown to have no relationship to

5   market participants' outlook over the next two to three years. Rather, the *Value Line*

6   projection and the Energy Information Administration ("EIA") projections used by Dr.

7   Vander Weide reflect projected outlooks for capital market costs that are many years

8   out into the future, ranging 10 years in the future. These projected interest rates do

9   not reflect consensus investor information for the current market, and do not reflect

10   outlooks for capital costs applicable to the period rates determined in this case are

11   likely to be in effect.

12

13   **Q   WOULD IT BE APPROPRIATE TO RELY ON LONG-TERM PROJECTED**

14   **INTEREST RATES IN FORMING A FAIR RETURN ON EQUITY FOR GULF**

15   **POWER IN THIS PROCEEDING?**

16   A   No. Forecasted interest rates have proven to be highly unreliable. Hence, current

17   observable interest rates are just as reliable an estimate of future interest rates as

18   are economists' projections. Exhibit MPG-21 illustrates this point. On this exhibit,

19   under Columns 1 and 2, I show the actual market yield at the time a projection is

20   made for Treasury bond yields two years in the future. In Column 1, I show the

21   actual Treasury yield and, in Column 2, I show the projected yield two years out.

22   As shown in Columns 1 and 2, over the last several years, Treasury yields

23   were projected to increase relative to the actual Treasury yields at the time of the

24   projection. In Column 4, I show what the Treasury yield actually turned out to be two

1   years after the forecast. Under Column 5, I show the actual yield change at the time

2   of the projections relative to the projected yield change.

3   As shown in this exhibit, over the last several years, economists consistently

4   have been projecting that interest rates will increase. However, as demonstrated

5   under Column 5, those yield projections have turned out to be overstated in virtually

6   every case. Indeed, actual Treasury yields have decreased or remained flat over the

7   last five years, rather than increase as the economists' projections indicated. As

8   such, current observable interest rates are just as likely to predict future interest

9   rates as are economists' projections.

10

11   **Q   CAN DR. VANDER WEIDE'S EX ANTE RISK PREMIUM STUDY BE REVISED TO**

12   **PRODUCE A MORE REASONABLE ESTIMATE OF GULF POWER'S CURRENT**

13   **COST OF COMMON EQUITY?**

14   A   Yes. Applying his equity risk premium estimate of 4.70% to the current 13-week

15   observable "A" rated utility bond yield[44] of 3.98% and "Baa" rated utility bond yield of

16   4.55% produces a return on equity in the range of 8.68% to 9.25% for Gulf Power.

17

18   ## V.D. Vander Weide Ex Post Risk Premium

19   **Q   PLEASE DESCRIBE DR. VANDER WEIDE'S EX POST RISK PREMIUM**

20   **METHODOLOGY.**

21   A   In Dr. Vander Weide's ex post risk premium methodology, he made two comparisons

22   of the historical realized return on a stock index relative to estimated annual return

23   for an "A" rated utility bond. His first risk premium study compared the total annual

24   realized return on the S&P 500 versus the annual return on an A-rated utility bond

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[44]Exhibit MPG-16.

1   index over the period 1937-2015. This produced a realized annual arithmetic

2   average risk premium of 4.5%.[45] Second, Dr. Vander Weide compared the actual

3   achieved annual return on an S&P utility stock index versus the annual total return

4   on an A-rated utility bond. This produced an arithmetic average annual equity risk

5   premium of 3.9% over the period 1937-2001.[46]

6   Based on this analysis, Dr. Vander Weide estimates an equity risk premium

7   in the range of 4.5% (based on S&P 500) to 3.9% (based on utility yields). He then

8   applies this estimated equity risk premium to his projected "A" rated utility bond yield

9   of 6.2% to produce an estimated equity risk premium in the range of 10.7% to 10.1%

10   with a midpoint of 10.4%. (Vander Weide Direct Testimony at 35). He then adds

11   20 basis points for flotation costs, resulting in a midpoint estimate of 10.6%.

12

13   **Q   DO YOU BELIEVE THAT DR. VANDER WEIDE'S EX POST RISK PREMIUM**

14   **RECOMMENDATION IS REASONABLE?**

15   A   No, I reject it for several reasons. First, as discussed earlier, his projected "A" rated

16   utility bond yield of 6.2% substantially exceeds current observable utility bond yields

17   of 3.98%.

18   Second, Dr. Vander Weide's development of an equity risk premium based

19   on the S&P 500 does not reasonably reflect the risk return relationships for Gulf

20   Power's common equity securities. Therefore, this is simply not a reasonable

21   methodology to estimate a fair return on equity for Gulf Power.

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[45]JHV-1, Schedule 3-1 and Schedule 3-2.
[46]JHV-1, Schedule 4.

1 **Q** **HOW WOULD DR. VANDER WEIDE'S EX POST RISK PREMIUM MODEL**

2 **CHANGE IF CURRENT OBSERVABLE AND VERIFIABLE "A" RATED UTILITY**

3 **BOND YIELDS ARE USED IN THAT MODEL?**

4 A Using a current observable A-rated utility bond yield of 3.98%, and an equity risk

5 premium in the range of 3.9% to 4.5%, produces a return on equity in the range of

6 7.88% to 8.53%. The midpoint of this range is 8.21%. Similarly, using a current

7 observable Baa-rated utility bond yield of 4.55%, and an equity risk premium in the

8 range of 3.9% to 4.5% produces a return on equity in the range of 8.45% to 9.05%.

9 The midpoint of this range is 8.75%.

10 For the reasons outlined above, I reject Dr. Vander Weide's flotation cost

11 adjustment for Gulf Power because he has not shown this as a legitimate cost of

12 service item for Gulf Power, and therefore represents an adjustment which is not

13 known and measurable.

14

15 **V.E. Vander Weide CAPM**

16 **Q** **PLEASE DESCRIBE DR. VANDER WEIDE'S CAPM STUDIES.**

17 A Dr. Vander Weide performed a historical CAPM study based on a market risk

18 premium of 6.9%, a risk-free rate of 4.2%, and beta estimate of 0.75. This study

19 produced a return on equity estimate of 9.38%, to which Dr. Vander Weide adds a

20 0.20% flotation adder to get to 9.6%. (Vander Weide Direct Testimony at 45).

21 However, Dr. Vander Weide states that this method understates the cost of

22 equity by comparing the realized S&P utility index risk premium of 5.34% to that of

23 the S&P 500 index risk premium of 5.92%. The realized S&P Utility risk premium is

24 approximately 90%, or 0.90, of the S&P 500 risk premium. Dr. Vander Weide

25 asserts that the average utility beta of 0.75 would understate the cost of equity

1   compared to the 0.90 realized difference in risk premiums. Based on this analysis,

2   Dr. Vander Weide proposes to use a beta estimate of 0.90 with his 4.2% risk-free

3   rate and 6.9% market risk premium. This produces a return on equity estimate of

4   10.4. He then adds his flotation cost adjustment of 20 basis points to produce an

5   adjusted estimate of 10.6%. The average of these two methods for his historical

6   CAPM is 10.1% ((9.6% + 10.6%) ÷ 2 = 10.1%).

7   Dr. Vander Weide also performed a DCF-based CAPM study, where he

8   estimated the market risk premium using a DCF return on the S&P 500. Based on

9   that study, Dr. Vander Weide estimated a market risk premium of 7.7% (Schedule 9).

10   Using this market risk premium, his risk-free rate of 4.2%, and beta estimate of 0.75,

11   produced a CAPM return estimate of 9.98% increased to approximately 10.2% for a

12   20 basis point flotation cost adder. (Vander Weide Direct Testimony at 50).

13   Again, Dr. Vander Weide observed that the measured beta may not

14   accurately represent the utility's betas going forward. As such, based on a

15   relationship between the historical return on the market and historical return on the

16   S&P Utility Stock Index, he adjusted the *Value Line* beta of 0.75 up to 0.90. Using

17   this alternative beta, a risk-free rate of 4.2%, a market risk premium of 7.7%, and a

18   20 basis point flotation cost adder, he estimates a current market cost of equity of

19   11.4%. The average of these two methods for his DCF-based CAPM is 10.8%

20   ((10.2% + 11.4%) ÷ 2 = 10.8%).

21   Dr. Vander Weide then concludes that his CAPM analyses indicate a return in

22   the range of 10.1% to 10.8%.[47]

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[47]Vander Weide Direct at 49-50.

1 **Q** **DO YOU HAVE ANY CONCERNS WITH DR. VANDER WEIDE'S HISTORICAL**

2 **CAPM RETURN ESTIMATE?**

3 A Yes. His CAPM return estimate of 9.6% based on a *Value Line* measured beta is

4 overstated because of his inclusion of a flotation cost allowance of 20 basis points.

5 That return produces a CAPM return estimate of 9.40% excluding his flotation cost

6 adder. Dr. Vander Weide has not justified Gulf Power's actual cost of issuing stock

7 to the public, and therefore his flotation cost adjustment is not known and

8 measurable and should be excluded from his cost study.

9 Second, his historical CAPM return estimate based on an adjustment to the

10 *Value Line* beta is inappropriate and should be rejected. Dr. Vander Weide's

11 proposal to increase the observable *Value Line* beta of 0.75 for his proxy group up to

12 0.90 reflects an adjustment to a *Value Line* beta that has already been adjusted for

13 long-term tendencies of a security to move toward the market beta of 1. Dr. Vander

14 Weide's proposal for an adjustment on top of an adjustment is inappropriate.

15 Specifically, *Value Line* already adjusts a raw beta estimate for a long-term

16 tendency to converge toward a market beta of 1. *Value Line*'s beta adjustment

17 process will increase a raw beta estimate of less than 1 up toward 1 based on this

18 long-term tendency. *Value Line*'s adjustment will also decrease beta estimates for

19 industries with raw beta estimates above 1, for the long-term tendency to converge

20 on the market beta of 1. Dr. Vander Weide's proposal to adjust a *Value Line*

21 adjusted beta has no academic support, no sound theoretical basis, and

22 accomplishes nothing but to inflate a reasonable estimate of Gulf Power's current

23 market cost of equity.

24

25

1 **Q** **HOW DID DR. VANDER WEIDE DERIVE HIS RISK-FREE RATE OF 4.20%?**

2 A He derived a forecasted yield of a Treasury bond rate based on data he gathered

3 from *Value Line*, EIA and other sources. Specifically, he relies on a *Value Line*

4 forecast of 10-year Treasury note of 3.5% and adds a spread of 40 basis points to

5 produce his estimated forecasted yield on a long-term Treasury bond of around

6 3.90%.

7 He uses an EIA forecasted 10-year Treasury bond yield of 4.1%, and adds

8 the 40 basis point spread to produce a forecasted long-term Treasury bond yield of

9 4.50%.

10 His point estimate of 4.20% is the midpoint of his forecast using these *Value*

11 *Line* and EIA projected 10-year Treasury bond yields (3.90% to 4.50%).

12

13 **Q** **IS DR. VANDER WEIDE'S PROJECTION OF A RISK-FREE RATE**

14 **REASONABLE?**

15 A No. He has not shown that his projected Treasury bond yields reflect current capital

16 market participants' outlooks, and therefore are not a general assessment of

17 independent market analysts' assessment of Gulf Power's market cost of capital. A

18 more balanced methodology would be to use *The Blue Chip Financial Forecasts*'

19 consensus economists' projected Treasury bond rates. This is a source I used as an

20 independent assessment of what market participants believe Treasury bond rates

21 will be two years out. Based on that assessment, a Treasury bond rate of 3.4% is

22 appropriate.

23

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1 **Q** **HOW WOULD DR. VANDER WEIDE'S CAPM STUDIES CHANGE IF *THE BLUE***

2   ***CHIP FINANCIAL FORECASTS*' PROJECTED TREASURY BOND RATE OF 3.4%**

3   **WAS USED, AND THE *VALUE LINE* PROXY GROUP BETA IS NOT ADJUSTED?**

4 **A** Using a risk-free rate projection of 3.4%, a beta estimate of 0.75, and market risk

5   premium of 6.9% indicates a CAPM return estimate of 8.6%. If his DCF-based

6   market risk premium estimate of 7.7% is used to reflect the low level of Treasury

7   bond yields reflecting the market's premiums paid for low-risk securities, the CAPM

8   return estimate would be 9.2%. Hence, this reasonable estimate of a CAPM return

9   estimate would indicate a return in the range of 8.6% to 9.2%.

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11 **Q** **DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

12 **A** Yes, it does.

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1 <u>**Qualifications of Michael P. Gorman**</u>

2 **Q** **PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

3 A Michael P. Gorman. My business address is 16690 Swingley Ridge Road,

4 Suite 140, Chesterfield, MO 63017.

5

6 **Q** **PLEASE STATE YOUR OCCUPATION.**

7 A I am a consultant in the field of public utility regulation and a Managing Principal with

8 the firm of Brubaker & Associates, Inc. ("BAI"), energy, economic and regulatory

9 consultants.

10

11 **Q** **PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND WORK**

12 **EXPERIENCE.**

13 A In 1983 I received a Bachelors of Science Degree in Electrical Engineering from

14 Southern Illinois University, and in 1986, I received a Masters Degree in Business

15 Administration with a concentration in Finance from the University of Illinois at

16 Springfield. I have also completed several graduate level economics courses.

17 In August of 1983, I accepted an analyst position with the Illinois Commerce

18 Commission ("ICC"). In this position, I performed a variety of analyses for both

19 formal and informal investigations before the ICC, including: marginal cost of

20 energy, central dispatch, avoided cost of energy, annual system production costs,

21 and working capital. In October of 1986, I was promoted to the position of Senior

22 Analyst. In this position, I assumed the additional responsibilities of technical leader

23 on projects, and my areas of responsibility were expanded to include utility financial

24 modeling and financial analyses.

25

1   In 1987, I was promoted to Director of the Financial Analysis Department. In

2   this position, I was responsible for all financial analyses conducted by the Staff.

3   Among other things, I conducted analyses and sponsored testimony before the ICC

4   on rate of return, financial integrity, financial modeling and related issues. I also

5   supervised the development of all Staff analyses and testimony on these same

6   issues. In addition, I supervised the Staff's review and recommendations to the

7   Commission concerning utility plans to issue debt and equity securities.

8   In August of 1989, I accepted a position with Merrill-Lynch as a financial

9   consultant. After receiving all required securities licenses, I worked with individual

10   investors and small businesses in evaluating and selecting investments suitable to

11   their requirements.

12   In September of 1990, I accepted a position with Drazen-Brubaker &

13   Associates, Inc. ("DBA"). In April 1995, the firm of Brubaker & Associates, Inc. was

14   formed. It includes most of the former DBA principals and Staff. Since 1990, I have

15   performed various analyses and sponsored testimony on cost of capital,

16   cost/benefits of utility mergers and acquisitions, utility reorganizations, level of oper-

17   ating expenses and rate base, cost of service studies, and analyses relating to

18   industrial jobs and economic development. I also participated in a study used to

19   revise the financial policy for the municipal utility in Kansas City, Kansas.

20   At BAI, I also have extensive experience working with large energy users to

21   distribute and critically evaluate responses to requests for proposals ("RFPs") for

22   electric, steam, and gas energy supply from competitive energy suppliers. These

23   analyses include the evaluation of gas supply and delivery charges, cogeneration

24   and/or combined cycle unit feasibility studies, and the evaluation of third-party

25   asset/supply management agreements. I have participated in rate cases on rate

1   design and class cost of service for electric, natural gas, water and wastewater

2   utilities. I have also analyzed commodity pricing indices and forward pricing methods

3   for third party supply agreements, and have also conducted regional electric market

4   price forecasts.

5   In addition to our main office in St. Louis, the firm also has branch offices in

6   Phoenix, Arizona and Corpus Christi, Texas.

7

8   **Q   HAVE YOU EVER TESTIFIED BEFORE A REGULATORY BODY?**

9   A   Yes. I have sponsored testimony on cost of capital, revenue requirements, cost of

10   service and other issues before the Federal Energy Regulatory Commission and

11   numerous state regulatory commissions including: Arkansas, Arizona, California,

12   Colorado, Delaware, Florida, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas,

13   Louisiana, Michigan, Mississippi, Missouri, Montana, New Jersey, New Mexico, New

14   York, North Carolina, Ohio, Oklahoma, Oregon, South Carolina, Tennessee, Texas,

15   Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin, Wyoming, and

16   before the provincial regulatory boards in Alberta and Nova Scotia, Canada. I have

17   also sponsored testimony before the Board of Public Utilities in Kansas City, Kansas;

18   presented rate setting position reports to the regulatory board of the municipal utility

19   in Austin, Texas, and Salt River Project, Arizona, on behalf of industrial customers;

20   and negotiated rate disputes for industrial customers of the Municipal Electric

21   Authority of Georgia in the LaGrange, Georgia district.

22

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25

1 **Q** **PLEASE DESCRIBE ANY PROFESSIONAL REGISTRATIONS OR**
2 **ORGANIZATIONS TO WHICH YOU BELONG.**

3 A I earned the designation of Chartered Financial Analyst ("CFA") from the CFA
4 Institute. The CFA charter was awarded after successfully completing three
5 examinations which covered the subject areas of financial accounting, economics,
6 fixed income and equity valuation and professional and ethical conduct. I am a
7 member of the CFA Institute's Financial Analyst Society.

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Gulf Power Company

Rate of Return
December 31, 2017
(Dollars in Thousands)

Line	Description	Total Company Subtotal	Ratio	Other Rate Base Adjs.	Total Adjusted Capital Structure Net of Adjs.	Juris. Factor	Jurisdictional Adjusted Amount (1)	Adjusted Weight (4)	Cost (5)	Weighted Cost (6)
1	Long-Term Debt	$ 1,203,631	32.72%	$ 396,862	$ 806,768	0.9808683	$ 791,334	32.71%	4.40%	1.44%
2	Preference Stock	143,901	3.91%	47,447	96,454	0.9808683	94,608	3.91%	6.15%	0.24%
3	Common Equity	1,384,453	37.64%	456,483	927,970	0.9808683	910,216	37.63%	**9.20%**	3.46%
4	Short-Term Debt	43,355	1.18%	14,295	29,060	0.9808683	28,504	1.18%	3.02%	0.04%
5	Customer Deposits	36,605	1.00%	12,069	24,536	1.0000000	24,536	1.01%	2.30%	0.02%
6	Net Deferred Taxes	865,456	23.53%	285,359	580,097	0.9808683	568,999	23.52%	0.00%	0.00%
7	Investment Credit	1,096	0.03%	361	735	0.9808683	721	0.03%	0.00%	0.00%
8	**Total**	$ 3,678,497	100.00%	$ 1,212,878	$ 2,465,619	0	$ 2,418,917	100.00%		5.20%

Long-Term Capital Structure

Line	Description									
8	Long-Term Debt	$ 1,203,631	44.06%	$ 396,862	$ 806,768	0.9808683	$ 791,334	44.06%	4.40%	1.94%
9	Preference Stock	143,901	5.27%	47,447	96,454	0.9808683	94,608	5.27%	6.15%	0.32%
10	Common Equity	1,384,453	50.68%	456,483	927,970	0.9808683	910,216	50.68%	9.20%	4.66%
11	**Total**	$ 2,731,985	100.00%	$ 900,793	$ 1,831,192		$ 1,796,158	100.00%		6.92%

Source:
Exhibit MPG-3, page 3.

Gulf Power Company

Valuation Metrics

									Price to Earnings (P/E) Ratio [1]							
Line	Company	15-Year Average (1)	2016 [2] (2)	2015 (3)	2014 (4)	2013 (5)	2012 (6)	2011 (7)	2010 (8)	2009 (9)	2008 (10)	2007 (11)	2006 (12)	2005 (13)	2004 (14)	2003 (15)	2002 (16)
1	ALLETE	17.17	21.40	15.06	17.23	18.59	15.88	14.66	15.98	16.08	13.95	14.78	16.55	17.91	25.21	N/A	N/A
2	Alliant Energy	15.46	22.10	18.07	16.60	15.28	14.50	14.45	12.47	13.86	13.43	15.08	16.82	12.59	14.00	12.69	19.93
3	Ameren Corp.	15.08	17.90	17.55	16.71	16.52	13.35	11.93	9.66	9.26	14.21	17.45	19.39	16.72	16.28	13.51	15.78
4	American Electric Power	13.43	14.50	15.77	15.88	14.49	13.77	11.92	13.42	10.03	13.06	16.27	12.91	13.70	12.42	10.66	12.68
5	Avangrid, Inc.	29.12	17.30	40.94	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	Avista Corp.	17.66	19.60	17.60	17.28	14.64	19.30	14.08	12.74	11.42	14.97	30.88	15.39	19.45	24.43	13.84	19.27
7	Black Hills	17.45	21.00	16.14	19.03	18.24	17.13	31.13	18.10	9.93	N/A	15.02	15.77	17.27	17.13	15.95	12.52
8	CenterPoint Energy	14.17	18.60	18.10	16.96	18.75	14.85	14.58	13.78	11.81	11.27	15.00	10.27	19.06	17.84	6.05	5.59
9	CMS Energy Corp.	16.22	19.40	18.29	17.30	16.32	15.07	13.62	12.46	13.56	10.87	26.84	22.18	12.60	12.39	N/A	N/A
10	Consol. Edison	14.90	18.50	15.59	15.90	14.72	15.39	15.08	13.30	12.55	12.29	13.78	15.49	15.13	18.21	14.30	13.28
11	Dominion Resources	17.63	19.20	22.14	22.97	19.25	18.91	17.27	14.35	12.74	13.78	20.63	15.98	24.89	15.07	15.24	12.05
12	DTE Energy	15.04	18.20	18.11	14.91	17.92	14.89	13.51	12.27	10.41	14.81	18.27	17.43	13.80	16.04	13.69	11.28
13	Duke Energy	16.21	17.90	18.22	17.91	17.45	17.46	13.76	12.69	13.32	17.28	16.13	N/A	N/A	N/A	N/A	N/A
14	Edison Int'l	13.71	18.10	14.77	13.05	12.70	9.71	11.81	10.32	9.72	12.36	16.03	12.99	11.74	37.59	6.97	7.78
15	El Paso Electric	16.74	17.90	18.33	16.38	15.88	14.47	12.60	10.72	10.79	11.89	15.26	16.92	26.72	22.03	18.26	22.99
16	Empire District Electric	18.17	23.80	18.71	16.21	15.00	15.76	15.76	16.75	14.34	17.26	21.70	15.92	24.50	24.81	15.83	16.18
17	Entergy Corp.	13.66	15.70	12.53	12.89	13.21	11.22	9.06	11.57	11.98	16.56	19.30	14.28	16.28	15.09	13.77	11.53
18	Eversource Energy	17.37	17.50	18.11	17.92	16.94	19.86	15.35	13.42	11.96	13.66	18.75	27.07	19.76	20.77	13.35	16.07
19	Exelon Corp.	14.08	13.00	12.58	16.02	13.43	19.08	11.30	10.97	11.49	17.97	18.22	16.53	15.37	12.99	11.77	10.46
20	FirstEnergy Corp.	17.80	17.80	17.02	39.79	13.06	21.10	22.39	11.75	13.02	15.64	15.59	14.23	16.07	14.13	22.47	12.95
21	Fortis Inc.	19.30	20.20	18.00	24.29	19.97	20.12	18.79	18.22	16.36	17.48	21.14	17.68	N/A	N/A	N/A	N/A
22	Great Plains Energy	15.67	20.20	19.37	16.47	14.19	15.53	16.11	12.10	16.03	20.55	16.35	18.30	13.96	12.59	12.23	11.09
23	Hawaiian Elec.	17.77	13.00	20.40	15.88	16.21	15.81	17.09	15.85	19.79	23.16	21.57	20.33	18.27	19.18	13.76	13.47
24	IDACORP, Inc.	15.60	18.90	16.22	14.67	13.45	12.41	11.54	11.83	10.20	13.93	18.19	15.07	16.70	15.49	26.51	18.88
25	MGE Energy	17.52	26.20	20.28	17.19	17.01	17.23	15.82	14.98	15.14	14.22	15.01	15.88	22.40	17.98	17.55	15.96
26	NextEra Energy, Inc.	15.50	21.50	16.89	17.25	16.57	14.43	11.54	10.83	13.42	14.48	18.90	13.65	17.88	13.65	17.88	13.60
27	NorthWestern Corp	16.50	15.10	18.36	16.24	16.86	15.72	12.62	12.90	11.54	13.87	21.74	25.95	17.09	N/A	N/A	N/A
28	OGE Energy	14.57	16.30	17.69	18.27	17.69	15.16	14.37	13.31	10.83	12.41	13.75	13.68	14.95	14.13	11.84	14.12
29	Otter Tail Corp.	24.75	24.60	18.20	18.84	21.12	21.75	47.48	55.10	31.16	30.06	19.02	17.35	15.40	17.34	17.77	16.01
30	PPL Corp.	14.18	14.60	13.92	14.08	12.84	10.88	10.52	11.93	25.69	17.64	17.26	14.10	15.12	12.51	10.59	11.06
31	PG&E Corp.	16.41	17.30	26.40	15.00	23.67	20.70	15.46	15.80	13.01	12.08	16.85	14.84	15.37	13.81	9.50	N/A
32	Pinnacle West Capital	15.26	18.30	16.04	15.89	15.27	14.35	14.60	12.57	13.74	16.07	14.93	13.69	19.24	15.80	13.96	14.43
33	PNM Resources	17.54	18.90	16.85	18.68	16.13	14.97	14.53	14.05	18.09	N/A	35.65	15.57	17.38	15.02	14.73	15.08
34	Portland General	15.73	18.80	17.71	15.32	16.88	13.98	12.37	12.00	14.40	16.30	11.94	23.35	N/A	N/A	N/A	N/A
35	Public Serv. Enterprise	13.05	14.00	12.41	12.61	13.50	12.79	10.40	10.37	10.04	13.65	16.54	17.81	16.74	14.26	10.58	10.00
36	SCANA Corp.	13.97	17.50	14.67	13.68	14.43	14.80	13.67	12.93	11.63	12.67	14.96	15.42	14.44	13.57	13.05	12.17
37	Sempra Energy	14.09	25.80	19.73	21.87	19.68	14.89	11.77	12.60	10.09	11.80	14.01	11.50	11.79	8.65	8.96	8.19
38	Southern Co.	15.73	18.30	15.85	16.04	16.19	16.97	15.85	14.90	13.52	16.13	15.95	16.19	15.92	14.68	14.83	14.63
39	Vectren Corp.	16.62	19.30	17.92	19.98	20.66	15.02	15.83	15.10	12.89	16.79	15.33	18.92	15.11	17.57	14.80	14.16
40	WEC Energy Group	15.55	18.20	21.33	17.71	16.50	15.76	14.25	14.01	13.35	14.77	16.47	15.97	14.46	17.51	12.43	10.46
41	Westar Energy	15.14	22.90	18.45	15.36	14.04	13.43	14.78	12.96	14.95	16.96	16.04	12.18	14.79	17.44	10.78	14.02
42	Xcel Energy Inc.	16.49	17.90	16.54	15.44	15.04	14.82	14.24	14.13	12.66	13.69	16.65	14.80	15.36	13.65	11.62	40.80
43	Average	16.04	18.74	18.02	17.36	16.35	15.69	15.31	14.34	13.58	15.23	17.84	16.46	16.73	16.79	13.76	14.37
44	Median	15.29	18.30	17.82	16.47	16.21	15.07	14.37	12.93	12.89	14.22	16.47	15.90	15.99	15.49	13.69	13.54

Sources:
1 The Value Line Investment Survey Investment Analyzer Software, downloaded on December 14, 2016.
2 The Value Line Investment Survey, October 28, November 18, and December 16, 2016.

Gulf Power Company

Valuation Metrics

Market Price to Cash Flow (MP/CF) Ratio [1]

Line	Company	15-Year Average (1)	2016 [2/a] (2)	2015 (3)	2014 (4)	2013 (5)	2012 (6)	2011 (7)	2010 (8)	2009 (9)	2008 (10)	2007 (11)	2006 (12)	2005 (13)	2004 (14)	2003 (15)	2002 (16)
1	ALLETE	9.27	8.75	7.49	8.80	9.15	8.18	7.91	8.04	8.51	9.29	10.30	11.06	11.54	11.46	N/A	N/A
2	Alliant Energy	7.11	10.35	8.86	8.40	7.52	7.50	7.21	6.59	6.23	7.49	7.92	8.00	5.09	5.52	4.76	5.20
3	Ameren Corp.	6.71	7.13	6.87	6.95	6.61	5.48	5.02	4.23	4.25	6.35	7.69	8.57	8.57	8.24	6.74	7.96
4	American Electric Power	5.96	7.63	7.09	7.00	6.57	5.93	5.46	5.54	4.71	5.71	6.84	5.54	6.07	5.50	4.69	5.19
5	Avangrid, Inc.	10.15	8.99	11.30	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	Avista Corp.	6.33	8.11	6.76	7.30	6.21	6.88	6.40	5.80	4.06	5.12	7.58	5.30	6.58	7.58	5.36	5.90
7	Black Hills	7.36	8.28	8.06	8.81	8.03	6.04	7.85	6.16	4.25	11.26	7.62	6.92	7.57	6.69	6.89	5.92
8	CenterPoint Energy	4.69	5.96	5.75	6.25	6.56	5.15	5.39	4.70	4.05	4.29	5.17	3.94	4.70	4.26	2.08	2.16
9	CMS Energy Corp.	5.20	8.38	7.53	7.13	6.68	6.03	5.41	4.48	3.64	3.45	5.57	4.40	4.04	3.20	2.88	NMF
10	Consol. Edison	8.05	9.32	7.96	7.89	7.77	8.31	8.15	7.39	6.72	6.89	8.31	8.65	8.59	9.31	7.90	7.64
11	Dominion Resources	9.13	11.01	11.84	12.27	10.88	9.92	9.45	8.12	6.98	8.27	8.65	7.81	10.09	7.68	7.51	6.53
12	DTE Energy	5.85	8.62	8.52	6.42	6.65	5.91	5.18	4.69	3.59	4.90	5.73	5.21	5.54	6.00	5.62	5.20
13	Duke Energy	7.48	8.23	7.95	8.12	8.11	9.53	6.56	6.01	5.96	7.13	7.16	N/A	N/A	N/A	N/A	N/A
14	Edison Int'l	5.15	6.54	5.92	5.68	5.46	4.59	4.22	4.11	3.95	5.63	7.01	5.87	5.61	6.84	2.82	2.96
15	El Paso Electric	5.51	7.17	6.47	6.33	6.19	5.78	5.16	4.31	3.98	4.95	6.44	6.25	6.67	4.65	3.90	4.39
16	Empire District Electric	7.69	8.43	7.27	7.29	7.07	6.97	6.43	6.88	6.23	6.94	8.78	8.17	9.20	9.60	8.22	7.93
17	Entergy Corp.	5.84	4.11	4.11	4.21	4.03	4.23	3.90	4.66	5.68	7.96	9.21	7.16	8.76	7.12	6.84	5.57
18	Eversource Energy	6.30	11.04	10.12	10.14	8.08	9.30	6.99	4.97	4.61	4.12	6.18	6.02	3.55	3.78	2.85	2.75
19	Exelon Corp.	6.29	4.30	4.70	5.09	4.61	5.54	5.86	5.10	5.98	9.65	9.89	8.62	7.97	6.29	5.71	4.97
20	FirstEnergy Corp.	6.32	5.48	5.38	7.43	6.15	7.42	7.33	4.49	4.91	7.58	7.89	7.53	6.04	5.15	6.90	5.10
21	Fortis Inc.	8.22	10.67	7.29	9.25	7.93	8.09	8.38	7.40	6.76	7.58	9.18	7.89	N/A	N/A	N/A	N/A
22	Great Plains Energy	6.44	9.59	6.66	6.45	5.73	6.09	5.74	4.49	5.06	7.71	7.13	7.68	6.70	6.52	5.92	5.14
23	Hawaiian Elec.	7.86	7.69	9.25	7.64	8.15	8.05	7.73	7.81	6.95	9.10	7.95	8.47	8.29	8.44	6.12	6.20
24	IDACORP, Inc.	7.64	10.83	9.37	8.59	7.78	7.05	6.64	6.52	5.31	7.10	8.23	7.73	7.55	7.15	7.27	7.53
25	MGE Energy	10.41	15.27	12.53	11.42	11.20	10.77	9.48	9.05	8.40	8.42	9.23	9.30	11.73	11.04	10.20	8.09
26	NextEra Energy, Inc.	7.13	10.36	7.93	7.98	7.60	7.58	5.98	5.33	6.09	7.34	9.02	6.51	6.71	6.71	5.97	5.77
27	NorthWestern Corp	7.45	8.79	8.99	9.01	7.61	6.85	5.89	5.79	5.05	5.57	8.45	9.39	7.31	8.13	N/A	N/A
28	OGE Energy	7.42	8.43	9.25	10.65	9.93	7.35	7.48	6.61	5.37	6.43	7.58	7.50	7.04	6.73	5.62	5.39
29	Otter Tail Corp.	8.98	9.65	9.04	9.45	9.58	8.43	9.04	8.07	8.01	11.65	9.53	8.66	8.18	9.01	8.13	8.33
30	PPL Corp.	7.32	8.67	8.73	7.32	6.59	5.87	5.98	7.46	8.82	9.17	8.90	7.58	7.57	6.49	5.41	5.30
31	PG&E Corp.	6.16	6.75	7.24	5.65	6.84	5.86	5.32	5.42	4.71	4.61	5.84	5.28	5.07	5.13	4.05	14.69
32	Pinnacle West Capital	5.80	7.81	6.91	7.03	6.85	6.34	5.80	5.65	3.84	4.19	4.76	4.48	7.48	5.88	4.80	5.21
33	PNM Resources	6.68	8.49	6.95	7.48	6.47	5.80	4.94	4.58	4.53	7.10	10.67	7.50	7.62	6.84	5.55	5.72
34	Portland General	5.44	7.00	6.73	5.49	6.06	5.08	4.86	4.13	4.63	4.81	5.34	5.74	N/A	N/A	N/A	N/A
35	Public Serv. Enterprise	7.13	7.28	6.66	6.48	6.40	6.40	6.03	6.04	6.20	8.46	9.83	8.41	8.59	7.17	6.79	6.24
36	SCANA Corp.	7.04	9.99	8.33	7.50	7.49	7.40	6.75	6.52	5.88	6.38	7.15	7.03	5.40	6.86	6.59	6.36
37	Sempra Energy	7.40	10.95	9.99	10.77	9.37	7.26	6.13	6.53	6.07	7.07	8.61	7.22	6.96	5.16	4.85	4.00
38	Southern Co.	8.29	9.49	8.23	8.42	8.30	8.75	8.22	7.79	7.08	8.18	8.62	8.41	8.28	8.28	7.83	
39	Vectren Corp.	6.85	8.35	7.82	7.57	6.82	5.79	5.81	5.58	5.24	6.90	6.53	7.37	7.06	7.63	7.27	6.92
40	WEC Energy Group	8.04	10.69	12.90	10.27	9.58	9.24	8.43	8.15	6.87	7.57	7.84	7.27	6.40	6.27	4.91	4.27
41	Westar Energy	6.62	10.34	9.05	7.93	7.23	6.71	6.67	5.51	5.32	7.09	6.88	5.81	7.00	6.54	4.24	2.94
42	Xcel Energy Inc.	6.22	7.98	7.62	7.31	7.00	6.85	6.47	6.28	5.43	5.71	6.51	5.54	5.62	5.31	4.27	5.46
43	Average	6.97	8.64	8.03	7.83	7.39	6.98	6.53	6.02	5.61	6.95	7.75	7.15	7.18	6.85	5.77	5.91
44	Median	6.85	8.46	7.87	7.50	7.07	6.85	6.40	5.80	5.37	7.09	7.84	7.44	7.05	6.72	5.66	5.57

Sources:
1 The Value Line Investment Survey Investment Analyzer Software, downloaded on December 14, 2016.
2 The Value Line Investment Survey, October 28, November 18, and December 16, 2016.
Note:
[a] Based on the average of the high and low price for 2016 and the projected 2016 cash flow per share,
    published in The Value Line Investment Survey, October 28, November 18, and December 16, 2016.

Gulf Power Company

Valuation Metrics

Line	Company	12-Year Average (1)	2016 [2/a] (2)	2015 (3)	2014 (4)	2013 (5)	2012 (6)	2011 (7)	2010 (8)	2009 (9)	2008 (10)	2007 (11)	2006 (12)	2005 (13)
								Market Price to Book Value (MP/BV) Ratio [1]						
1	ALLETE	1.56	1.50	1.37	1.42	1.51	1.34	1.35	1.28	1.15	1.55	1.89	2.09	2.22
2	Alliant Energy	1.55	1.98	1.86	1.86	1.70	1.57	1.46	1.31	1.04	1.33	1.67	1.52	1.33
3	Ameren Corp.	1.30	1.61	1.46	1.45	1.29	1.18	0.90	0.83	0.78	1.25	1.60	1.62	1.68
4	American Electric Power	1.47	1.82	1.55	1.54	1.40	1.31	1.23	1.23	1.08	1.48	1.85	1.56	1.57
5	Avangrid, Inc.	0.78	0.84	0.72	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	Avista Corp.	1.23	1.56	1.36	1.33	1.25	1.21	1.19	1.07	0.94	1.11	1.29	1.30	1.13
7	Black Hills	1.41	1.81	1.59	1.79	1.62	1.21	1.14	1.07	0.83	1.22	1.57	1.47	1.63
8	CenterPoint Energy	2.38	2.55	2.43	2.27	2.30	1.99	1.87	1.96	1.77	2.49	3.13	2.75	3.06
9	CMS Energy Corp.	1.78	2.70	2.43	2.26	2.09	1.91	1.66	1.48	1.10	1.23	1.82	1.42	1.32
10	Consol. Edison	1.37	1.55	1.42	1.34	1.38	1.47	1.38	1.22	1.08	1.17	1.47	1.47	1.52
11	Dominion Resources	2.63	3.00	3.34	3.55	2.97	2.84	2.37	2.01	1.80	2.42	2.69	2.07	2.50
12	DTE Energy	1.35	1.76	1.65	1.62	1.51	1.35	1.20	1.16	0.89	1.10	1.35	1.29	1.39
13	Duke Energy	1.15	1.37	1.29	1.28	1.19	1.12	1.11	1.00	0.91	1.06	1.15	N/A	N/A
14	Edison Int'l	1.59	1.86	1.76	1.68	1.57	1.53	1.24	1.07	1.04	1.56	2.05	1.80	1.93
15	El Paso Electric	1.50	1.65	1.48	1.52	1.49	1.59	1.64	1.17	0.98	1.33	1.69	1.71	1.76
16	Empire District Electric	1.34	1.64	1.32	1.39	1.27	1.23	1.25	1.24	1.07	1.30	1.47	1.45	1.49
17	Entergy Corp.	1.69	1.37	1.40	1.33	1.21	1.31	1.35	1.62	1.66	2.44	2.65	1.89	2.01
18	Eversource Energy	1.37	1.63	1.53	1.47	1.38	1.28	1.50	1.31	1.12	1.31	1.60	1.22	1.05
19	Exelon Corp.	2.45	1.14	1.14	1.28	1.17	1.46	1.95	2.07	2.57	4.39	4.79	3.89	3.60
20	FirstEnergy Corp.	1.57	1.24	1.16	1.15	1.28	1.44	1.33	1.36	1.54	2.52	2.23	1.92	1.64
21	Fortis Inc.	1.52	1.50	1.33	1.35	1.45	1.59	1.59	1.56	1.33	1.48	1.63	1.96	N/A
22	Great Plains Energy	1.20	1.19	1.12	1.11	1.02	0.96	0.93	0.87	0.80	1.11	1.66	1.77	1.86
23	Hawaiian Elec.	1.59	1.64	1.71	1.49	1.54	1.62	1.54	1.44	1.16	1.61	1.57	2.01	1.78
24	IDACORP, Inc.	1.28	1.74	1.54	1.45	1.33	1.19	1.17	1.13	0.92	1.09	1.26	1.37	1.22
25	MGE Energy	1.92	2.60	2.10	2.10	2.06	1.92	1.75	1.65	1.54	1.62	1.75	1.83	2.09
26	NextEra Energy, Inc.	1.92	2.24	2.09	2.15	1.93	1.74	1.55	1.49	1.70	2.06	2.34	1.80	1.93
27	NorthWestern Corp	1.43	1.69	1.60	1.54	1.56	1.42	1.35	1.22	1.07	1.15	1.48	1.65	1.42
28	OGE Energy	1.83	1.64	1.79	2.22	2.24	1.94	1.90	1.70	1.37	1.52	1.98	1.91	1.80
29	Otter Tail Corp.	1.66	1.90	1.78	1.90	1.96	1.58	1.35	1.19	1.18	1.71	1.93	1.76	1.74
30	PPL Corp.	2.13	2.26	2.24	1.64	1.55	1.58	1.47	1.61	2.10	3.19	3.05	2.43	2.50
31	PG&E Corp.	1.58	1.64	1.57	1.39	1.38	1.41	1.46	1.56	1.41	1.50	1.94	1.83	1.84
32	Pinnacle West Capital	1.30	1.70	1.52	1.44	1.47	1.39	1.25	1.14	0.95	1.00	1.26	1.26	1.25
33	PNM Resources	1.05	1.44	1.33	1.21	1.09	0.98	0.80	0.69	0.56	0.66	1.23	1.21	1.45
34	Portland General	1.22	1.53	1.42	1.37	1.28	1.14	1.09	0.94	0.92	1.05	1.32	1.36	N/A
35	Public Serv. Enterprise	1.93	1.64	1.58	1.57	1.44	1.46	1.59	1.67	1.78	2.58	2.99	2.46	2.45
36	SCANA Corp.	1.49	1.71	1.47	1.48	1.48	1.48	1.36	1.33	1.20	1.45	1.62	1.64	1.72
37	Sempra Energy	1.72	2.10	2.17	2.20	1.84	1.53	1.28	1.35	1.32	1.60	1.87	1.70	1.73
38	Southern Co.	2.04	1.76	1.99	2.02	2.04	2.15	1.99	1.83	1.73	2.12	2.24	2.23	2.35
39	Vectren Corp.	1.75	2.15	2.11	2.08	1.82	1.57	1.53	1.41	1.34	1.64	1.74	1.77	1.82
40	WEC Energy Group	1.83	2.07	1.82	2.34	2.21	2.05	1.81	1.65	1.40	1.57	1.77	1.71	1.62
41	Westar Energy	1.31	1.86	1.49	1.44	1.33	1.26	1.20	1.10	0.93	1.10	1.36	1.30	1.41
42	Xcel Energy Inc.	1.47	1.86	1.66	1.55	1.50	1.51	1.41	1.32	1.19	1.30	1.53	1.40	1.38
43	Average	1.61	1.77	1.66	1.67	1.59	1.51	1.43	1.35	1.25	1.62	1.89	1.77	1.79
44	Median	1.51	1.69	1.56	1.52	1.49	1.46	1.36	1.31	1.15	1.48	1.69	1.71	1.73

Sources:
1 The Value Line Investment Survey Investment Analyzer Software, downloaded on December 14, 2016.
2 The Value Line Investment Survey, October 28, November 18, and December 16, 2016.
Note:
[a] Based on the average of the high and low price for 2016 and the projected 2016 cash flow per share,

Gulf Power Company

Gulf Power Company's Actual Capital Structure
(Dollars in Thousands)

Line	Description	Gulf's Actual Capital Structure for the Period Ending:				
		09/15 Q	12/15 Q	03/16 Q	06/16 Q	09/16 Q
		(1)	(2)	(3)	(4)	(5)
	Total Long-Term Capital					
1	Long-Term Debt	$ 1,310,209	$ 1,310,353	$ 1,310,497	$ 1,189,074	$ 1,191,024
2	Preferred Stock	150,000	150,000	150,000	150,000	150,000
3	Common Equity	1,353,658	1,351,169	1,349,691	1,356,391	1,377,767
4	Total	$ 2,813,867	$ 2,811,522	$ 2,810,188	$ 2,695,465	$ 2,718,791
5	Long-Term Debt	46.56%	46.61%	46.63%	44.11%	43.81%
6	Preferred Stock	5.33%	5.34%	5.34%	5.56%	5.52%
7	**Common Equity**	**48.11%**	**48.06%**	**48.03%**	**50.32%**	**50.68%**
8	Total	100.00%	100.00%	100.00%	100.00%	100.00%
	Total Investor Supplied Capital					
9	Long-Term Debt	$ 1,310,209	$ 1,310,353	$ 1,310,497	$ 1,189,074	$ 1,191,024
10	Short-Term Debt	40,000	40,000	40,000	40,000	40,000
11	Preferred Stock	150,000	150,000	150,000	150,000	150,000
12	Common Equity	1,353,658	1,351,169	1,349,691	1,356,391	1,377,767
13	Total	$ 2,853,867	$ 2,851,522	$ 2,850,188	$ 2,735,465	$ 2,758,791
14	Long-Term Debt	45.91%	45.95%	45.98%	43.47%	43.17%
15	Short-Term Debt	1.40%	1.40%	1.40%	1.46%	1.45%
16	Preferred Stock	5.26%	5.26%	5.26%	5.48%	5.44%
17	**Common Equity**	**47.43%**	**47.38%**	**47.35%**	**49.59%**	**49.94%**
18	Total	100.00%	100.00%	100.00%	100.00%	100.00%

Gulf Power Company, FERC Form 3Q, various dates.

Gulf Power Company

FEA Proposed Capital Structure
Adjusted Debt Ratio
<u>Standard & Poor's Credit Metrics</u>
(Dollars in Thousands)

Line	Description	Company Proposed		Gorman Proposed	
		Amount[1] (1)	Weight (2)	Amount[2] (3)	Weight (4)
1	Long-Term Debt	$ 1,113,800	38.6%	$ 1,203,631	41.7%
2	Short-Term Debt	$ 43,355	1.5%	$ 43,355	1.5%
3	Off-Balance Sheet Debt[3]	$ 112,908	3.9%	$ 112,908	3.9%
4	Total Adjusted Debt	$ 1,270,063	**44.0%**	$ 1,359,894	47.1%
5	Preferred Stock	$ 143,901	5.0%	$ 143,901	5.0%
6	Common Equity	$ 1,474,284	51.0%	$ 1,384,453	47.9%
7	**Total**	$ **2,888,248**	**100.0%**	$ **2,888,248**	**100.0%**

Sources:

[1]Exhibit SDR-1, Schedule 14.

[2]Exhibit MPG-3, page 2.

[3]CreditStats, www.globalcreditportal.com, January 6, 2017.

Gulf Power Company

FEA Adjusted Capital Structure

(December 31, 2017)

	Total Company Subtotal	Ratio	Other Rate Base Adjs.	Total Adjusted Capital Structure Net of Adjs.	Juris. Factor	Juris. Capital Structure	Juris. Ratio
Gulf Proposed[1]:							
Long-Term Debt	$ 1,113,800	30.28%	$ 367,244	$ 746,556	0.9808683	$ 732,273	30.27%
Preference Stock	143,901	3.91%	47,447	96,454	0.9808683	94,609	3.91%
Common Equity	1,474,284	40.08%	486,103	988,181	0.9808683	969,275	40.07%
Short-Term Debt	43,355	1.18%	14,295	29,060	0.9808683	28,504	1.18%
Customer Deposits	36,605	1.00%	12,069	24,536	1.0000000	24,536	1.01%
Net Deferred Taxes	865,456	23.53%	285,359	580,097	0.9808683	568,999	23.52%
Investment Credit	1,096	0.03%	361	735	0.9808683	721	0.03%
Total	$ 3,678,497	100.00%	$ 1,212,878	$ 2,465,619		$ 2,418,917	100.00%
FEA Adjusted:							
Long-Term Debt	$ 1,203,631	32.72%	$ 396,862	$ 806,768	0.9808683	$ 791,334	32.71%
Preference Stock	143,901	3.91%	47,447	96,454	0.9808683	94,608	3.91%
Common Equity	1,384,453	37.64%	456,483	927,970	0.9808683	910,216	37.63%
Short-Term Debt	43,355	1.18%	14,295	29,060	0.9808683	28,504	1.18%
Customer Deposits	36,605	1.00%	12,069	24,536	1.0000000	24,536	1.01%
Net Deferred Taxes	865,456	23.53%	285,359	580,097	0.9808683	568,999	23.52%
Investment Credit	1,096	0.03%	361	735	0.9808683	721	0.03%
Total	$ 3,678,497	100.00%	$ 1,212,878	$ 2,465,619		$ 2,418,917	100.00%

Sources:

[1]Exhibit SDR-1, Schedule 14.

Gulf Power Company

Proxy Group

Line	Company	Credit Ratings[1]		Common Equity Ratios	
		S&P (1)	Moody's (2)	SNL[1] (3)	Value Line[2] (4)
1	ALLETE, Inc.	BBB+	A3	53.3%	53.7%
2	Alliant Energy Corporation	A-	Baa1	46.5%	51.4%
3	Ameren Corporation	BBB+	Baa1	47.4%	49.7%
4	American Electric Power Company, Inc.	BBB+	Baa1	46.3%	50.2%
5	Black Hills Corporation	BBB	Baa2	43.2%	44.0%
6	CenterPoint Energy, Inc.	A-	Baa1	28.3%	30.5%
7	CMS Energy Corporation	BBB+	Baa2	29.3%	31.4%
8	DTE Energy Company	BBB+	Baa1	47.3%	49.8%
9	Duke Energy Corporation	A-	Baa1	47.9%	51.4%
10	Eversource Energy	A	Baa1	50.0%	53.6%
11	NorthWestern Corporation	BBB	A3	44.1%	46.9%
12	PPL Corporation	A-	Baa2	33.2%	34.8%
13	PG&E Corporation	BBB+	Baa1	48.8%	50.4%
14	Pinnacle West Capital Corporation	A-	A3	53.7%	57.0%
15	PNM Resources, Inc.	BBB+	Baa3	40.6%	45.5%
16	Portland General Electric Company	BBB	A3	50.7%	52.2%
17	SCANA Corporation	BBB+	Baa3	45.5%	48.1%
18	Sempra Energy	BBB+	Baa1	43.3%	47.3%
19	Southern Company	A-	Baa2	40.5%	44.0%
20	Vectren Corporation	A-	N/A	48.3%	49.4%
21	WEC Energy Group, Inc.	A-	A3	45.4%	48.6%
22	Xcel Energy Inc.	A-	A3	43.3%	45.9%
23	**Average**	**BBB+**	**Baa1**	**44.4%**	**47.1%**
24	**Gulf Power Company**	**A-**	**A2**		**50.7%[3]**

Sources:

[1] SNL Financial, Downloaded on December 16, 2016.

[2] *The Value Line Investment Survey*, October 28, November 18, and December 16, 2016.

[3] Exhibit MPG-1.

Gulf Power Company

Consensus Analysts' Growth Rates

Line	Company	Zacks Estimated Growth %[1] (1)	Zacks Number of Estimates (2)	SNL Estimated Growth %[2] (3)	SNL Number of Estimates (4)	Reuters Estimated Growth %[3] (5)	Reuters Number of Estimates (6)	Average of Growth Rates (7)
1	ALLETE, Inc.	5.50%	N/A	6.00%	1	5.00%	1	5.50%
2	Alliant Energy Corporation	5.50%	N/A	7.90%	1	6.00%	1	6.47%
3	Ameren Corporation	6.50%	N/A	7.00%	2	5.65%	2	6.38%
4	American Electric Power Company, Inc.	5.40%	N/A	3.10%	5	1.89%	1	3.46%
5	Black Hills Corporation	6.00%	N/A	6.00%	2	7.00%	1	6.33%
6	CenterPoint Energy, Inc.	5.00%	N/A	4.80%	4	6.07%	4	5.29%
7	CMS Energy Corporation	6.00%	N/A	7.20%	3	7.26%	2	6.82%
8	DTE Energy Company	5.80%	N/A	5.40%	4	5.63%	3	5.61%
9	Duke Energy Corporation	5.00%	N/A	4.10%	5	1.70%	1	3.60%
10	Eversource Energy	6.30%	N/A	6.10%	4	5.82%	4	6.07%
11	NorthWestern Corporation	5.00%	N/A	4.70%	3	4.50%	2	4.73%
12	PPL Corporation	3.50%	N/A	4.70%	8	2.44%	3	3.55%
13	PG&E Corporation	3.60%	N/A	5.50%	5	5.84%	6	4.98%
14	Pinnacle West Capital Corporation	4.70%	N/A	4.90%	5	4.63%	3	4.74%
15	PNM Resources, Inc.	6.80%	N/A	7.00%	4	6.85%	2	6.88%
16	Portland General Electric Company	6.30%	N/A	5.90%	3	6.67%	3	6.29%
17	SCANA Corporation	5.50%	N/A	6.10%	3	6.03%	3	5.88%
18	Sempra Energy	6.90%	N/A	11.40%	2	7.65%	2	8.65%
19	Southern Company	4.10%	N/A	4.10%	8	3.80%	5	4.00%
20	Vectren Corporation	5.30%	N/A	5.00%	2	4.57%	3	4.96%
21	WEC Energy Group, Inc.	6.20%	N/A	6.60%	3	6.93%	4	6.58%
22	Xcel Energy Inc.	5.40%	N/A	5.10%	4	5.65%	3	5.38%
23	**Average**	**5.47%**	**N/A**	**5.85%**	**4**	**5.34%**	**3**	**5.55%**

Sources:

[1] Zacks Elite, http://www.zackselite.com/, downloaded on December 16, 2016.

[2] SNL Interactive, http://www.snl.com/, downloaded on December 16, 2016.

[3] Reuters, http://www.reuters.com/, downloaded on December 16, 2016.

Gulf Power Company

Constant Growth DCF Model
(Consensus Analysts' Growth Rates)

Line	Company	13-Week AVG Stock Price[1] (1)	Analysts' Growth[2] (2)	Annualized Dividend[3] (3)	Adjusted Yield (4)	Constant Growth DCF (5)
1	ALLETE, Inc.	$60.61	5.50%	$2.08	3.62%	9.12%
2	Alliant Energy Corporation	$37.16	6.47%	$1.18	3.38%	9.85%
3	Ameren Corporation	$49.29	6.38%	$1.76	3.80%	10.18%
4	American Electric Power Company, Inc.	$62.03	3.46%	$2.36	3.94%	7.40%
5	Black Hills Corporation	$59.63	6.33%	$1.68	3.00%	9.33%
6	CenterPoint Energy, Inc.	$23.25	5.29%	$1.03	4.66%	9.95%
7	CMS Energy Corporation	$41.14	6.82%	$1.24	3.22%	10.04%
8	DTE Energy Company	$93.97	5.61%	$3.30	3.71%	9.32%
9	Duke Energy Corporation	$77.20	3.60%	$3.42	4.59%	8.19%
10	Eversource Energy	$53.42	6.07%	$1.78	3.53%	9.61%
11	NorthWestern Corporation	$56.57	4.73%	$2.00	3.70%	8.44%
12	PPL Corporation	$33.72	3.55%	$1.52	4.67%	8.21%
13	PG&E Corporation	$60.28	4.98%	$1.96	3.41%	8.39%
14	Pinnacle West Capital Corporation	$75.02	4.74%	$2.50	3.49%	8.23%
15	PNM Resources, Inc.	$32.45	6.88%	$0.88	2.90%	9.78%
16	Portland General Electric Company	$42.27	6.29%	$1.28	3.22%	9.51%
17	SCANA Corporation	$71.35	5.88%	$2.30	3.41%	9.29%
18	Sempra Energy	$102.98	8.65%	$3.02	3.19%	11.84%
19	Southern Company	$49.64	4.00%	$2.24	4.69%	8.69%
20	Vectren Corporation	$49.41	4.96%	$1.68	3.57%	8.53%
21	WEC Energy Group, Inc.	$57.90	6.58%	$1.98	3.64%	10.22%
22	Xcel Energy Inc.	$40.23	5.38%	$1.36	3.56%	8.95%
23	**Average**	**$55.89**	**5.55%**	**$1.93**	**3.68%**	**9.23%**
24	**Median**					**9.30%**

Sources:

[1] SNL Financial, Downloaded on December 17, 2016.

[2] Exhibit MPG-5.

[3] *The Value Line Investment Survey*, October 28, November 18, and December 16, 2016.

Gulf Power Company

Payout Ratios

Line	Company	Dividends Per Share		Earnings Per Share		Payout Ratio	
		2015 (1)	Projected (2)	2015 (3)	Projected (4)	2015 (5)	Projected (6)
1	ALLETE, Inc.	$2.02	$2.40	$3.38	$3.75	59.76%	64.00%
2	Alliant Energy Corporation	$1.10	$1.50	$1.69	$2.45	65.09%	61.22%
3	Ameren Corporation	$1.66	$2.05	$2.38	$3.25	69.75%	63.08%
4	American Electric Power Company, Inc.	$2.15	$2.75	$3.59	$4.50	59.89%	61.11%
5	Black Hills Corporation	$1.62	$2.20	$2.83	$4.25	57.24%	51.76%
6	CenterPoint Energy, Inc.	$0.99	$1.19	$1.08	$1.40	91.67%	85.00%
7	CMS Energy Corporation	$1.16	$1.60	$1.89	$2.50	61.38%	64.00%
8	DTE Energy Company	$2.84	$4.00	$4.45	$6.25	63.82%	64.00%
9	Duke Energy Corporation	$3.24	$3.90	$4.10	$5.25	79.02%	74.29%
10	Eversource Energy	$1.67	$2.20	$2.76	$3.75	60.51%	58.67%
11	NorthWestern Corporation	$1.92	$2.32	$2.90	$4.00	66.21%	58.00%
12	PPL Corporation	$1.50	$1.76	$2.37	$2.50	63.29%	70.40%
13	PG&E Corporation	$1.82	$2.70	$2.00	$4.50	91.00%	60.00%
14	Pinnacle West Capital Corporation	$2.44	$3.10	$3.92	$4.75	62.24%	65.26%
15	PNM Resources, Inc.	$0.80	$1.30	$1.64	$2.35	48.78%	55.32%
16	Portland General Electric Company	$1.18	$1.60	$2.04	$2.75	57.84%	58.18%
17	SCANA Corporation	$2.18	$2.80	$3.81	$4.75	57.22%	58.95%
18	Sempra Energy	$2.80	$4.00	$5.23	$7.50	53.54%	53.33%
19	Southern Company	$2.15	$2.54	$2.84	$3.50	75.70%	72.57%
20	Vectren Corporation	$1.54	$1.95	$2.39	$3.35	64.44%	58.21%
21	WEC Energy Group, Inc.	$1.74	$2.40	$2.34	$3.50	74.36%	68.57%
22	Xcel Energy Inc.	$1.28	$1.70	$2.10	$2.75	60.95%	61.82%
23	**Average**	**$1.81**	**$2.36**	**$2.81**	**$3.80**	**65.62%**	**63.08%**

Source:
The Value Line Investment Survey, October 28, November 18, and December 16, 2016.

Gulf Power Company

Sustainable Growth Rate

Line	Company	Dividends Per Share (1)	Earnings Per Share (2)	Book Value Per Share (3)	Book Value Growth (4)	ROE (5)	Adjustment Factor (6)	Adjusted ROE (7)	Payout Ratio (8)	Retention Rate (9)	Internal Growth Rate (10)	Sustainable Growth Rate (11)
					3 to 5 Year Projections							
1	ALLETE, Inc.	$2.40	$3.75	$43.00	3.01%	8.72%	1.01	8.85%	64.00%	36.00%	3.19%	3.70%
2	Alliant Energy Corporation	$1.50	$2.45	$20.00	4.04%	12.25%	1.02	12.49%	61.22%	38.78%	4.84%	5.19%
3	Ameren Corporation	$2.05	$3.25	$34.00	3.50%	9.56%	1.02	9.72%	63.08%	36.92%	3.59%	3.59%
4	American Electric Power Company, Inc.	$2.75	$4.50	$41.75	2.76%	10.78%	1.01	10.93%	61.11%	38.89%	4.25%	4.28%
5	Black Hills Corporation	$2.20	$4.25	$39.00	6.38%	10.90%	1.03	11.23%	51.76%	48.24%	5.42%	9.28%
6	CenterPoint Energy, Inc.	$1.19	$1.40	$9.00	2.26%	15.56%	1.01	15.73%	85.00%	15.00%	2.36%	2.80%
7	CMS Energy Corporation	$1.60	$2.50	$19.50	6.53%	12.82%	1.03	13.23%	64.00%	36.00%	4.76%	6.22%
8	DTE Energy Company	$4.00	$6.25	$60.50	4.36%	10.33%	1.02	10.55%	64.00%	36.00%	3.80%	4.56%
9	Duke Energy Corporation	$3.90	$5.25	$63.00	1.76%	8.33%	1.01	8.41%	74.29%	25.71%	2.16%	2.32%
10	Eversource Energy	$2.20	$3.75	$39.50	3.89%	9.49%	1.02	9.67%	58.67%	41.33%	4.00%	4.00%
11	NorthWestern Corporation	$2.32	$4.00	$40.00	3.78%	10.00%	1.02	10.19%	58.00%	42.00%	4.28%	4.66%
12	PPL Corporation	$1.76	$2.50	$19.00	5.24%	13.16%	1.03	13.49%	70.40%	29.60%	3.99%	4.68%
13	PG&E Corporation	$2.70	$4.50	$42.25	4.63%	10.65%	1.02	10.89%	60.00%	40.00%	4.36%	5.39%
14	Pinnacle West Capital Corporation	$3.10	$4.75	$49.00	3.48%	9.69%	1.02	9.86%	65.26%	34.74%	3.42%	3.79%
15	PNM Resources, Inc.	$1.30	$2.35	$25.50	4.18%	9.22%	1.02	9.40%	55.32%	44.68%	4.20%	4.25%
16	Portland General Electric Company	$1.60	$2.75	$30.25	3.53%	9.09%	1.02	9.25%	58.18%	41.82%	3.87%	4.02%
17	SCANA Corporation	$2.80	$4.75	$47.75	4.62%	9.95%	1.02	10.17%	58.95%	41.05%	4.18%	4.79%
18	Sempra Energy	$4.00	$7.50	$54.75	2.86%	13.70%	1.01	13.89%	53.33%	46.67%	6.48%	6.48%
19	Southern Company	$2.54	$3.50	$32.25	7.38%	10.85%	1.04	11.24%	72.57%	27.43%	3.08%	5.78%
20	Vectren Corporation	$1.95	$3.35	$26.15	5.15%	12.81%	1.03	13.13%	58.21%	41.79%	5.49%	6.58%
21	WEC Energy Group, Inc.	$2.40	$3.50	$32.50	3.46%	10.77%	1.02	10.95%	68.57%	31.43%	3.44%	3.44%
22	Xcel Energy Inc.	$1.70	$2.75	$25.50	4.07%	10.78%	1.02	11.00%	61.82%	38.18%	4.20%	4.22%
23	**Average**	**$2.36**	**$3.80**	**$36.10**	**4.13%**	**10.88%**	**1.02**	**11.10%**	**63.08%**	**36.92%**	**4.06%**	**4.73%**

Sources and Notes:
Cols. (1), (2) and (3):   *The Value Line Investment Survey* , October 28, November 18, and December 16, 2016.
Col. (4): [Col. (3) / Page 2 Col. (2)] ^ (1/5) - 1.
Col. (5): Col. (2) / Col. (3).
Col. (6): [2 * (1 + Col. (4))] / (2 + Col. (4)).
Col. (7): Col. (6) * Col. (5).
Col. (8): Col. (1) / Col. (2).
Col. (9): 1 - Col. (8).
Col. (10): Col. (9) * Col. (7).
Col. (11): Col. (10) + Page 2 Col. (9).

Gulf Power Company

Sustainable Growth Rate

Line	Company	13-Week Average Stock Price[1] (1)	2015 Book Value Per Share[2] (2)	Market to Book Ratio (3)	Common Shares Outstanding (in Millions)[2] 2015 (4)	3-5 Years (5)	Growth (6)	S Factor[3] (7)	V Factor[4] (8)	S * V (9)
1	ALLETE, Inc.	$60.61	$37.07	1.64	49.10	51.10	0.80%	1.31%	38.84%	0.51%
2	Alliant Energy Corporation	$37.16	$16.41	2.26	226.92	230.00	0.27%	0.61%	55.84%	0.34%
3	Ameren Corporation	$49.29	$28.63	1.72	242.63	242.63	0.00%	0.00%	41.92%	0.00%
4	American Electric Power Company, Inc.	$62.03	$36.44	1.70	491.05	492.00	0.04%	0.07%	41.26%	0.03%
5	Black Hills Corporation	$59.63	$28.63	2.08	51.19	61.00	3.57%	7.43%	51.99%	3.86%
6	CenterPoint Energy, Inc.	$23.25	$8.05	2.89	430.00	435.00	0.23%	0.67%	65.37%	0.44%
7	CMS Energy Corporation	$41.14	$14.21	2.90	277.16	288.00	0.77%	2.23%	65.46%	1.46%
8	DTE Energy Company	$93.97	$48.88	1.92	179.47	187.00	0.83%	1.59%	47.98%	0.76%
9	Duke Energy Corporation	$77.20	$57.74	1.34	688.00	704.00	0.46%	0.62%	25.21%	0.16%
10	Eversource Energy	$53.42	$32.64	1.64	317.19	317.25	0.00%	0.01%	38.90%	0.00%
11	NorthWestern Corporation	$56.57	$33.22	1.70	48.17	49.50	0.55%	0.93%	41.28%	0.38%
12	PPL Corporation	$33.72	$14.72	2.29	673.86	692.00	0.53%	1.22%	56.34%	0.69%
13	PG&E Corporation	$60.28	$33.69	1.79	492.03	525.00	1.31%	2.34%	44.11%	1.03%
14	Pinnacle West Capital Corporation	$75.02	$41.30	1.82	110.98	113.50	0.45%	0.82%	44.95%	0.37%
15	PNM Resources, Inc.	$32.45	$20.78	1.56	79.65	80.00	0.09%	0.14%	35.97%	0.05%
16	Portland General Electric Company	$42.27	$25.43	1.66	88.79	89.80	0.23%	0.38%	39.83%	0.15%
17	SCANA Corporation	$71.35	$38.09	1.87	142.90	148.00	0.70%	1.32%	46.61%	0.61%
18	Sempra Energy	$102.98	$47.56	2.17	248.30	242.00	- 0.51%	- 1.11%	53.82%	- 0.60%
19	Southern Company	$49.64	$22.59	2.20	911.72	1,019.00	2.25%	4.94%	54.50%	2.69%
20	Vectren Corporation	$49.41	$20.34	2.43	82.80	86.00	0.76%	1.85%	58.83%	1.09%
21	WEC Energy Group, Inc.	$57.90	$27.42	2.11	315.68	315.65	- 0.00%	- 0.00%	52.64%	- 0.00%
22	Xcel Energy Inc.	$40.23	$20.89	1.93	507.54	508.00	0.02%	0.03%	48.07%	0.02%
23	**Average**	**$55.89**	**$29.76**	**1.98**	**302.51**	**312.57**	**0.69%**	**1.42%**	**47.71%**	**0.73%**

Sources and Notes:

[1] SNL Financial, Downloaded on December 17, 2016.

[2] *The Value Line Investment Survey*, October 28, November 18, and December 16, 2016.

[3] Expected Growth in the Number of Shares, Column (3) * Column (6).

[4] Expected Profit of Stock Investment, [1 - 1 / Column (3)].

Gulf Power Company

Constant Growth DCF Model
(Sustainable Growth Rate)

Line	Company	13-Week AVG Stock Price[1] (1)	Sustainable Growth[2] (2)	Annualized Dividend[3] (3)	Adjusted Yield (4)	Constant Growth DCF (5)
1	ALLETE, Inc.	$60.61	3.70%	$2.08	3.56%	7.25%
2	Alliant Energy Corporation	$37.16	5.19%	$1.18	3.34%	8.53%
3	Ameren Corporation	$49.29	3.59%	$1.76	3.70%	7.29%
4	American Electric Power Company, Inc.	$62.03	4.28%	$2.36	3.97%	8.24%
5	Black Hills Corporation	$59.63	9.28%	$1.68	3.08%	12.36%
6	CenterPoint Energy, Inc.	$23.25	2.80%	$1.03	4.55%	7.35%
7	CMS Energy Corporation	$41.14	6.22%	$1.24	3.20%	9.42%
8	DTE Energy Company	$93.97	4.56%	$3.30	3.67%	8.23%
9	Duke Energy Corporation	$77.20	2.32%	$3.42	4.53%	6.85%
10	Eversource Energy	$53.42	4.00%	$1.78	3.47%	7.47%
11	NorthWestern Corporation	$56.57	4.66%	$2.00	3.70%	8.36%
12	PPL Corporation	$33.72	4.68%	$1.52	4.72%	9.40%
13	PG&E Corporation	$60.28	5.39%	$1.96	3.43%	8.81%
14	Pinnacle West Capital Corporation	$75.02	3.79%	$2.50	3.46%	7.25%
15	PNM Resources, Inc.	$32.45	4.25%	$0.88	2.83%	7.08%
16	Portland General Electric Company	$42.27	4.02%	$1.28	3.15%	7.17%
17	SCANA Corporation	$71.35	4.79%	$2.30	3.38%	8.17%
18	Sempra Energy	$102.98	6.48%	$3.02	3.12%	9.61%
19	Southern Company	$49.64	5.78%	$2.24	4.77%	10.55%
20	Vectren Corporation	$49.41	6.58%	$1.68	3.62%	10.20%
21	WEC Energy Group, Inc.	$57.90	3.44%	$1.98	3.54%	6.98%
22	Xcel Energy Inc.	$40.23	4.22%	$1.36	3.52%	7.74%
23	**Average**	**$55.89**	**4.73%**	**$1.93**	**3.65%**	**8.38%**
24	**Median**					**8.20%**

Sources:

[1] SNL Financial, Downloaded on December 17, 2016.

[2] Exhibit MPG-8, page 1.

[3] *The Value Line Investment Survey*, October 28, November 18, and December 16, 2016.

Gulf Power Company

Electricity Sales Are Linked to U.S. Economic Growth
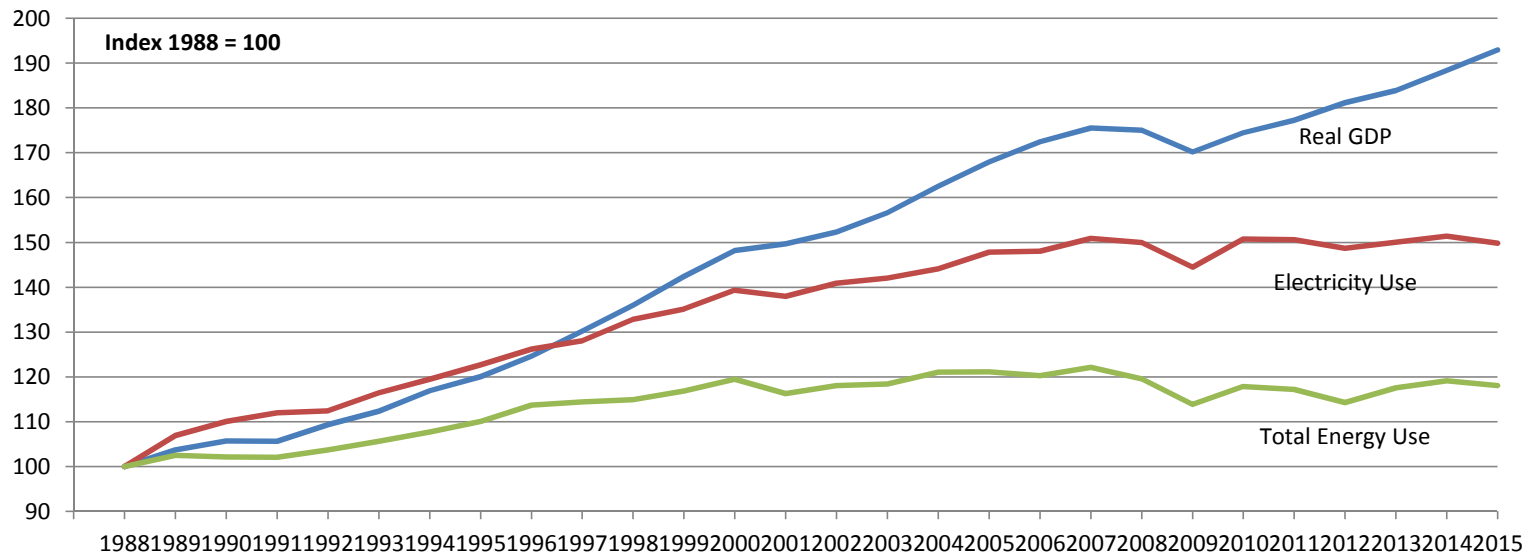
Note:
1988 represents the base year. Graph depicts increases or decreases from the base year.

Sources:
U.S. Energy Information Administration
Federal Reserve Bank of St. Louis

Gulf Power Company

Multi-Stage Growth DCF Model

Line	Company	13-Week AVG Stock Price[1] (1)	Annualized Dividend[2] (2)	First Stage Growth[3] (3)	Second Stage Growth Year 6 (4)	Year 7 (5)	Year 8 (6)	Year 9 (7)	Year 10 (8)	Third Stage Growth[4] (9)	Multi-Stage Growth DCF (10)
1	ALLETE, Inc.	$60.61	$2.08	5.50%	5.29%	5.08%	4.88%	4.67%	4.46%	4.25%	8.12%
2	Alliant Energy Corporation	$37.16	$1.18	6.47%	6.10%	5.73%	5.36%	4.99%	4.62%	4.25%	8.06%
3	Ameren Corporation	$49.29	$1.76	6.38%	6.03%	5.67%	5.32%	4.96%	4.61%	4.25%	8.50%
4	American Electric Power Company, Inc.	$62.03	$2.36	3.46%	3.59%	3.73%	3.86%	3.99%	4.12%	4.25%	8.02%
5	Black Hills Corporation	$59.63	$1.68	6.33%	5.99%	5.64%	5.29%	4.94%	4.60%	4.25%	7.60%
6	CenterPoint Energy, Inc.	$23.25	$1.03	5.29%	5.12%	4.94%	4.77%	4.60%	4.42%	4.25%	9.17%
7	CMS Energy Corporation	$41.14	$1.24	6.82%	6.39%	5.96%	5.54%	5.11%	4.68%	4.25%	7.95%
8	DTE Energy Company	$93.97	$3.30	5.61%	5.38%	5.16%	4.93%	4.70%	4.48%	4.25%	8.24%
9	Duke Energy Corporation	$77.20	$3.42	3.60%	3.71%	3.82%	3.93%	4.03%	4.14%	4.25%	8.68%
10	Eversource Energy	$53.42	$1.78	6.07%	5.77%	5.47%	5.16%	4.86%	4.55%	4.25%	8.15%
11	NorthWestern Corporation	$56.57	$2.00	4.73%	4.65%	4.57%	4.49%	4.41%	4.33%	4.25%	8.05%
12	PPL Corporation	$33.72	$1.52	3.55%	3.66%	3.78%	3.90%	4.02%	4.13%	4.25%	8.75%
13	PG&E Corporation	$60.28	$1.96	4.98%	4.86%	4.74%	4.62%	4.49%	4.37%	4.25%	7.80%
14	Pinnacle West Capital Corporation	$75.02	$2.50	4.74%	4.66%	4.58%	4.50%	4.41%	4.33%	4.25%	7.83%
15	PNM Resources, Inc.	$32.45	$0.88	6.88%	6.44%	6.01%	5.57%	5.13%	4.69%	4.25%	7.59%
16	Portland General Electric Company	$42.27	$1.28	6.29%	5.95%	5.61%	5.27%	4.93%	4.59%	4.25%	7.84%
17	SCANA Corporation	$71.35	$2.30	5.88%	5.61%	5.33%	5.06%	4.79%	4.52%	4.25%	7.97%
18	Sempra Energy	$102.98	$3.02	8.65%	7.92%	7.18%	6.45%	5.72%	4.98%	4.25%	8.28%
19	Southern Company	$49.64	$2.24	4.00%	4.04%	4.08%	4.13%	4.17%	4.21%	4.25%	8.88%
20	Vectren Corporation	$49.41	$1.68	4.96%	4.84%	4.72%	4.60%	4.49%	4.37%	4.25%	7.96%
21	WEC Energy Group, Inc.	$57.90	$1.98	6.58%	6.19%	5.80%	5.41%	5.03%	4.64%	4.25%	8.38%
22	Xcel Energy Inc.	$40.23	$1.36	5.38%	5.19%	5.01%	4.82%	4.63%	4.44%	4.25%	8.04%
23	**Average**	**$55.89**	**$1.93**	**5.55%**	**5.34%**	**5.12%**	**4.90%**	**4.68%**	**4.47%**	**4.25%**	**8.18%**
24	**Median**										**8.05%**

Sources:
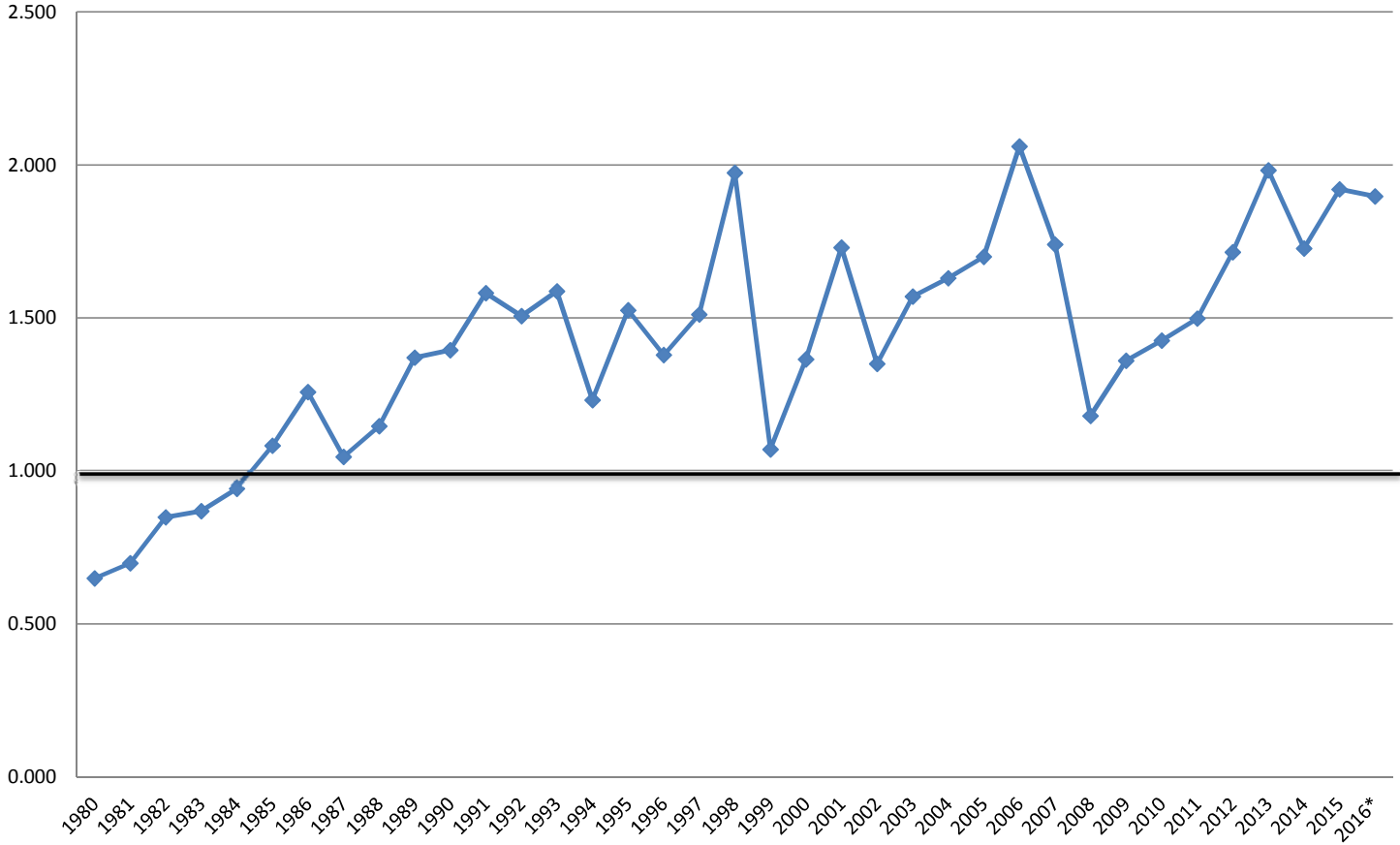[1] SNL Financial, Downloaded on December 17, 2016.
[2] *The Value Line Investment Survey*, October 28, November 18, and December 16, 2016.
[3] Exhibit MPG-5.
[4] Blue Chip Financial Forecasts, December 1, 2016 at 14.

Gulf Power Company

Common Stock Market/Book Ratio

* through June 2016

Source:
1980 - 2000: Mergent Public Utility Manual.
2001 - 2016: AUS Utility Reports, various dates.

Gulf Power Company

Equity Risk Premium - Treasury Bond

Line	Year	Authorized Electric Returns[1] (1)	30 yr. Treasury Bond Yield[2] (2)	Indicated Risk Premium (3)	Rolling 5 - Year Average (4)	Rolling 10 - Year Average (5)
1	1986	13.93%	7.80%	6.13%		
2	1987	12.99%	8.58%	4.41%		
3	1988	12.79%	8.96%	3.83%		
4	1989	12.97%	8.45%	4.52%		
5	1990	12.70%	8.61%	4.09%	4.60%	
6	1991	12.55%	8.14%	4.41%	4.25%	
7	1992	12.09%	7.67%	4.42%	4.26%	
8	1993	11.41%	6.60%	4.81%	4.45%	
9	1994	11.34%	7.37%	3.97%	4.34%	
10	1995	11.55%	6.88%	4.67%	4.46%	4.53%
11	1996	11.39%	6.70%	4.69%	4.51%	4.38%
12	1997	11.40%	6.61%	4.79%	4.59%	4.42%
13	1998	11.66%	5.58%	6.08%	4.84%	4.65%
14	1999	10.77%	5.87%	4.90%	5.03%	4.68%
15	2000	11.43%	5.94%	5.49%	5.19%	4.82%
16	2001	11.09%	5.49%	5.60%	5.37%	4.94%
17	2002	11.16%	5.43%	5.73%	5.56%	5.07%
18	2003	10.97%	4.96%	6.01%	5.55%	5.19%
19	2004	10.75%	5.05%	5.70%	5.71%	5.37%
20	2005	10.54%	4.65%	5.89%	5.79%	5.49%
21	2006	10.34%	4.99%	5.35%	5.74%	5.56%
22	2007	10.31%	4.83%	5.48%	5.69%	5.62%
23	2008	10.37%	4.28%	6.09%	5.70%	5.62%
24	2009	10.52%	4.07%	6.45%	5.85%	5.78%
25	2010	10.29%	4.25%	6.04%	5.88%	5.83%
26	2011	10.19%	3.91%	6.28%	6.07%	5.90%
27	2012	10.01%	2.92%	7.09%	6.39%	6.04%
28	2013	9.81%	3.45%	6.36%	6.44%	6.07%
29	2014	9.75%	3.34%	6.41%	6.44%	6.14%
30	2015	9.60%	2.84%	6.76%	6.58%	6.23%
31	2016 [3]	9.64%	2.52%	7.12%	6.75%	6.41%
32	Average	11.17%	5.70%	5.47%	5.41%	5.40%
33	Minimum				4.25%	4.38%
34	Maximum				6.75%	6.41%

Sources:

[1] *Regulatory Research Associates, Inc*., Regulatory Focus, Major Rate Case Decisions, January 1997 page 5, January 2011 page 3, and October 2016 page 6.

[2] St. Louis Federal Reserve: Economic Research, http://research.stlouisfed.org/. The yields from 2002 to 2005 represent the 20-Year Treasury yields obtained from the Federal Reserve Bank.

[3] The data includes the period Jan - Sep 2016.

Gulf Power Company

<u>Equity Risk Premium - Utility Bond</u>

Line	Year	Authorized Electric Returns[1] (1)	Average "A" Rated Utility Bond Yield[2] (2)	Indicated Risk Premium (3)	Rolling 5 - Year Average (4)	Rolling 10 - Year Average (5)
1	1986	13.93%	9.58%	4.35%		
2	1987	12.99%	10.10%	2.89%		
3	1988	12.79%	10.49%	2.30%		
4	1989	12.97%	9.77%	3.20%		
5	1990	12.70%	9.86%	2.84%	3.12%	
6	1991	12.55%	9.36%	3.19%	2.88%	
7	1992	12.09%	8.69%	3.40%	2.99%	
8	1993	11.41%	7.59%	3.82%	3.29%	
9	1994	11.34%	8.31%	3.03%	3.26%	
10	1995	11.55%	7.89%	3.66%	3.42%	3.27%
11	1996	11.39%	7.75%	3.64%	3.51%	3.20%
12	1997	11.40%	7.60%	3.80%	3.59%	3.29%
13	1998	11.66%	7.04%	4.62%	3.75%	3.52%
14	1999	10.77%	7.62%	3.15%	3.77%	3.52%
15	2000	11.43%	8.24%	3.19%	3.68%	3.55%
16	2001	11.09%	7.76%	3.33%	3.62%	3.56%
17	2002	11.16%	7.37%	3.79%	3.61%	3.60%
18	2003	10.97%	6.58%	4.39%	3.57%	3.66%
19	2004	10.75%	6.16%	4.59%	3.86%	3.81%
20	2005	10.54%	5.65%	4.89%	4.20%	3.94%
21	2006	10.34%	6.07%	4.27%	4.39%	4.00%
22	2007	10.31%	6.07%	4.24%	4.48%	4.04%
23	2008	10.37%	6.53%	3.84%	4.37%	3.97%
24	2009	10.52%	6.04%	4.48%	4.34%	4.10%
25	2010	10.29%	5.46%	4.83%	4.33%	4.26%
26	2011	10.19%	5.04%	5.15%	4.51%	4.45%
27	2012	10.01%	4.13%	5.88%	4.84%	4.66%
28	2013	9.81%	4.48%	5.33%	5.13%	4.75%
29	2014	9.75%	4.28%	5.47%	5.33%	4.84%
30	2015	9.60%	4.12%	5.48%	5.46%	4.90%
31	2016 [3]	9.64%	3.89%	5.75%	5.58%	5.05%
32	**Average**	**11.17%**	**7.08%**	**4.09%**	**4.03%**	**4.00%**
33	**Minimum**				**2.88%**	**3.20%**
34	**Maximum**				**5.58%**	**5.05%**

Sources:

[1] *Regulatory Research Associates, Inc* ., Regulatory Focus, Major Rate Case Decisions,
January 1997 page 5, January 2011 page 3, and October 2016 page 6.

[2] Mergent Public Utility Manual, Mergent Weekly News Reports, 2003. The utility yields
for the period 2001-2009 were obtained from the Mergent Bond Record. The utility
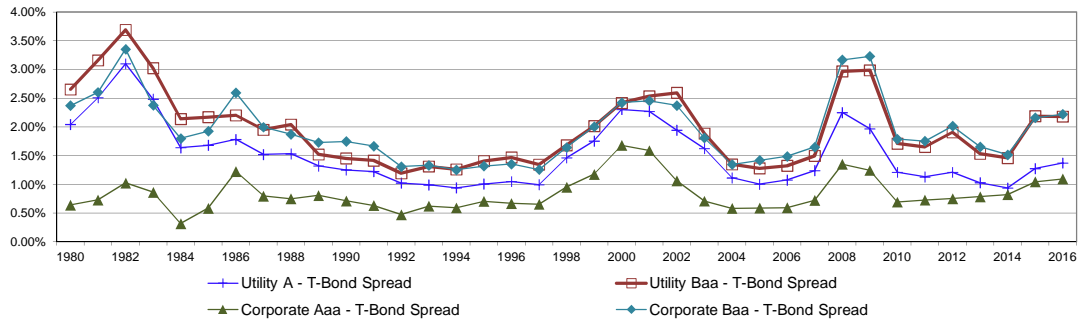yields from 2010-2016 were obtained from http://credittrends.moodys.com/.

[3] The data includes the period Jan - Sep 2016.

Gulf Power Company

Bond Yield Spreads

			Public Utility Bond				Corporate Bond				Utility to Corporate	
Line	Year	T-Bond Yield[1] (1)	A[2] (2)	Baa[2] (3)	A-T-Bond Spread (4)	Baa-T-Bond Spread (5)	Aaa[1] (6)	Baa[1] (7)	Aaa-T-Bond Spread (8)	Baa-T-Bond Spread (9)	Baa Spread (10)	A-Aaa Spread (11)
1	1980	11.30%	13.34%	13.95%	2.04%	2.65%	11.94%	13.67%	0.64%	2.37%	0.28%	1.40%
2	1981	13.44%	15.95%	16.60%	2.51%	3.16%	14.17%	16.04%	0.73%	2.60%	0.56%	1.78%
3	1982	12.76%	15.86%	16.45%	3.10%	3.69%	13.79%	16.11%	1.03%	3.35%	0.34%	2.07%
4	1983	11.18%	13.66%	14.20%	2.48%	3.02%	12.04%	13.55%	0.86%	2.38%	0.65%	1.62%
5	1984	12.39%	14.03%	14.53%	1.64%	2.14%	12.71%	14.19%	0.32%	1.80%	0.34%	1.32%
6	1985	10.79%	12.47%	12.96%	1.68%	2.17%	11.37%	12.72%	0.58%	1.93%	0.24%	1.10%
7	1986	7.80%	9.58%	10.00%	1.78%	2.20%	9.02%	10.39%	1.22%	2.59%	-0.39%	0.56%
8	1987	8.58%	10.10%	10.53%	1.52%	1.95%	9.38%	10.58%	0.80%	2.00%	-0.05%	0.72%
9	1988	8.96%	10.49%	11.00%	1.53%	2.04%	9.71%	10.83%	0.75%	1.87%	0.17%	0.78%
10	1989	8.45%	9.77%	9.97%	1.32%	1.52%	9.26%	10.18%	0.81%	1.73%	-0.21%	0.51%
11	1990	8.61%	9.86%	10.06%	1.25%	1.45%	9.32%	10.36%	0.71%	1.75%	-0.29%	0.54%
12	1991	8.14%	9.36%	9.55%	1.22%	1.41%	8.77%	9.80%	0.63%	1.67%	-0.25%	0.59%
13	1992	7.67%	8.69%	8.86%	1.02%	1.19%	8.14%	8.98%	0.47%	1.31%	-0.12%	0.55%
14	1993	6.60%	7.59%	7.91%	0.99%	1.31%	7.22%	7.93%	0.62%	1.33%	-0.02%	0.37%
15	1994	7.37%	8.31%	8.63%	0.94%	1.26%	7.96%	8.62%	0.59%	1.25%	0.01%	0.35%
16	1995	6.88%	7.89%	8.29%	1.01%	1.41%	7.59%	8.20%	0.71%	1.32%	0.09%	0.30%
17	1996	6.70%	7.75%	8.17%	1.05%	1.47%	7.37%	8.05%	0.67%	1.35%	0.12%	0.38%
18	1997	6.61%	7.60%	7.95%	0.99%	1.34%	7.26%	7.86%	0.66%	1.26%	0.09%	0.34%
19	1998	5.58%	7.04%	7.26%	1.46%	1.68%	6.53%	7.22%	0.95%	1.64%	0.04%	0.51%
20	1999	5.87%	7.62%	7.88%	1.75%	2.01%	7.04%	7.87%	1.18%	2.01%	0.01%	0.58%
21	2000	5.94%	8.24%	8.36%	2.30%	2.42%	7.62%	8.36%	1.68%	2.42%	-0.01%	0.62%
22	2001	5.49%	7.76%	8.03%	2.27%	2.54%	7.08%	7.95%	1.59%	2.45%	0.08%	0.68%
23	2002	5.43%	7.37%	8.02%	1.94%	2.59%	6.49%	7.80%	1.06%	2.37%	0.22%	0.88%
24	2003	4.96%	6.58%	6.84%	1.62%	1.89%	5.67%	6.77%	0.71%	1.81%	0.08%	0.91%
25	2004	5.05%	6.16%	6.40%	1.11%	1.35%	5.63%	6.39%	0.58%	1.35%	0.00%	0.53%
26	2005	4.65%	5.65%	5.93%	1.00%	1.28%	5.24%	6.06%	0.59%	1.42%	-0.14%	0.41%
27	2006	4.99%	6.07%	6.32%	1.08%	1.32%	5.59%	6.48%	0.60%	1.49%	-0.16%	0.48%
28	2007	4.83%	6.07%	6.33%	1.24%	1.50%	5.56%	6.48%	0.72%	1.65%	-0.15%	0.52%
29	2008	4.28%	6.53%	7.25%	2.25%	2.97%	5.63%	7.45%	1.35%	3.17%	-0.20%	0.90%
30	2009	4.07%	6.04%	7.06%	1.97%	2.99%	5.31%	7.30%	1.24%	3.23%	-0.24%	0.72%
31	2010	4.25%	5.46%	5.96%	1.21%	1.71%	4.94%	6.04%	0.69%	1.79%	-0.08%	0.52%
32	2011	3.91%	5.04%	5.56%	1.13%	1.65%	4.64%	5.66%	0.73%	1.75%	-0.10%	0.40%
33	2012	2.92%	4.13%	4.83%	1.21%	1.91%	3.67%	4.94%	0.75%	2.01%	-0.11%	0.46%
34	2013	3.45%	4.48%	4.98%	1.03%	1.53%	4.24%	5.10%	0.79%	1.65%	-0.12%	0.24%
35	2014	3.34%	4.28%	4.80%	0.94%	1.46%	4.16%	4.85%	0.82%	1.51%	-0.06%	0.11%
36	2015	2.84%	4.12%	5.03%	1.27%	2.19%	3.89%	5.00%	1.05%	2.16%	0.03%	0.23%
37	2016 [3]	2.52%	3.89%	4.70%	1.37%	2.18%	3.62%	4.74%	1.10%	2.22%	-0.04%	0.28%
38	**Average**	**6.72%**	**8.24%**	**8.68%**	**1.52%**	**1.96%**	**7.56%**	**8.66%**	**0.84%**	**1.94%**	**0.02%**	**0.68%**

Yield Spreads
Treasury Vs. Corporate & Treasury Vs. Utility

Legend: Utility A - T-Bond Spread; Utility Baa - T-Bond Spread; Corporate Aaa - T-Bond Spread; Corporate Baa - T-Bond Spread

Sources:
[1] St. Louis Federal Reserve: Economic Research, http://research.stlouisfed.org/.
[2] Mergent Public Utility Manual, Mergent Weekly News Reports, 2003. The utility yields
for the period 2001-2009 were obtained from the Mergent Bond Record. The utility
yields from 2010-2016 were obtained from http://credittrends.moodys.com/.
[3] The data includes the period Jan - Sep 2016.

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Treasury and Utility Bond Yields

Line	Date	Treasury Bond Yield[1] (1)	"A" Rated Utility Bond Yield[2] (2)	"Baa" Rated Utility Bond Yield[2] (3)
1	12/16/16	3.19%	4.33%	4.85%
2	12/09/16	3.16%	4.32%	4.86%
3	12/02/16	3.08%	4.26%	4.79%
4	11/25/16	3.01%	4.22%	4.79%
5	11/18/16	3.01%	4.22%	4.79%
6	11/10/16	2.94%	4.12%	4.70%
7	11/04/16	2.56%	3.81%	4.38%
8	10/28/16	2.62%	3.86%	4.40%
9	10/21/16	2.48%	3.75%	4.30%
10	10/14/16	2.55%	3.83%	4.41%
11	10/07/16	2.46%	3.76%	4.33%
12	09/30/16	2.32%	3.64%	4.26%
13	09/23/16	2.34%	3.65%	4.26%
14	**Average**	**2.75%**	**3.98%**	**4.55%**
15	**Spread To Treasury**		**1.23%**	**1.80%**

Sources:

[1] St. Louis Federal Reserve: Economic Research, http://research.stlouisfed.org.

[2] http://credittrends.moodys.com/.

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Trends in Bond Yields
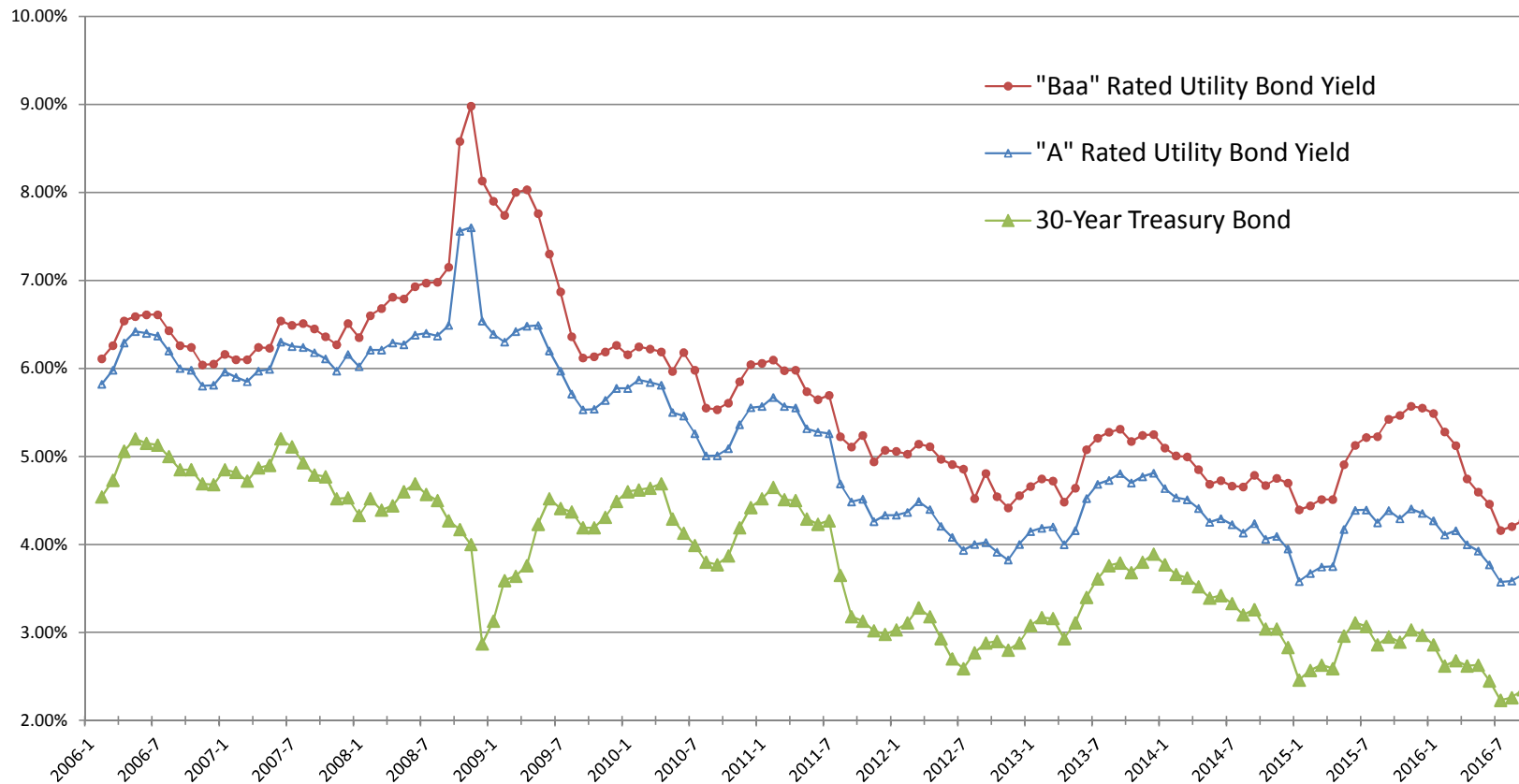
Sources:
Mergent Bond Record.
www.moodys.com, Bond Yields and Key Indicators.
St. Louis Federal Reserve: Economic Research, http://research.stlouisfed.org/

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Yield Spread Between Utility Bonds and 30-Year Treasury Bonds

Sources:
Mergent Bond Record.
www.moodys.com, Bond Yields and Key Indicators.
St. Louis Federal Reserve: Economic Research, http://research.stlouisfed.org/

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Value Line Beta

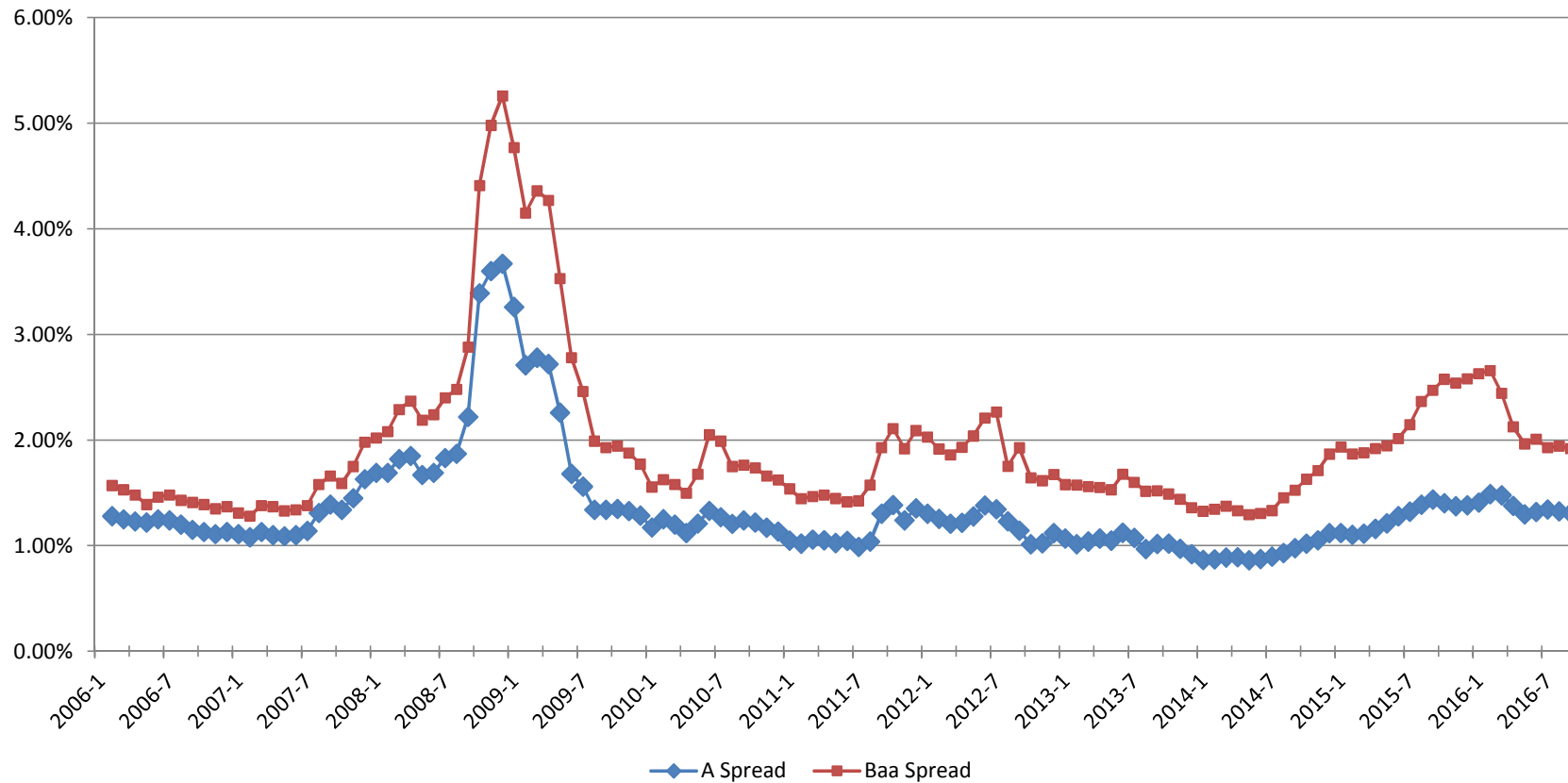| Line	Company	Beta
1	ALLETE, Inc.	0.75
2	Alliant Energy Corporation	0.70
3	Ameren Corporation	0.65
4	American Electric Power Company, Inc.	0.65
5	Black Hills Corporation	0.90
6	CenterPoint Energy, Inc.	0.85
7	CMS Energy Corporation	0.65
8	DTE Energy Company	0.65
9	Duke Energy Corporation	0.60
10	Eversource Energy	0.70
11	NorthWestern Corporation	0.70
12	PPL Corporation	0.70
13	PG&E Corporation	0.65
14	Pinnacle West Capital Corporation	0.70
15	PNM Resources, Inc.	0.75
16	Portland General Electric Company	0.70
17	SCANA Corporation	0.70
18	Sempra Energy	0.80
19	Southern Company	0.55
20	Vectren Corporation	0.75
21	WEC Energy Group, Inc.	0.60
22	Xcel Energy Inc.	0.60
23	**Average**	**0.70**

Source:
The Value Line Investment Survey,
October 28, November 18, and December 16, 2016.

Gulf Power Company

<u>CAPM Return</u>

<u>Line</u>	<u>Description</u>	High Market Risk <u>Premium</u> (1)	Low Market Risk <u>Premium</u> (2)
1	Risk-Free Rate[1]	3.40%	3.40%
2	Risk Premium[2]	7.80%	6.00%
3	Beta[3]	0.70	0.70
4	**CAPM**	**8.82%**	**7.57%**

Sources:

[1] Blue Chip Financial Forecasts; December 1, 2016, at 2.

[2] *Duff & Phelps, 2016 Valuation Handbook Guide to Cost of Capital*
   at 2-4, 3-31, and 3-40.

[3] Exhibit MPG-17.

Gulf Power Company

Standard & Poor's Credit Metrics

Line	Description	Retail Cost of Service Amount (1)	S&P Benchmark (Medial Volatility)[1][2] Intermediate (2)	Significant (3)	Aggressive (4)	Reference (5)
1	Rate Base	$ 2,418,917				Exhibit SDR-1, Schedule 16.
2	Weighted Common Return	3.46%				Page 3, Line 3, Col. 3.
3	Pre-Tax Rate of Return	7.55%				Page 3, Line 8, Col. 4.
4	Income to Common	$ 83,740				Line 1 x Line 2.
5	EBIT	$ 182,516				Line 1 x Line 3.
6	Depreciation & Amortization	$ 136,278				Exhibit SDR-1, Schedule 4
7	Imputed Amortization	$ 12,472				CreditStats, www.globalcreditportal.com, January 5, 2017.
8	Deferred Income Taxes & ITC	$ 14,498				Exhibit SDR-1, Schedule 4
9	Funds from Operations (FFO)	$ 246,988				Sum of Line 4 and Lines 6 through 8.
10	Imputed & Capitalized Interest Expense	$ 9,752				CreditStats, www.globalcreditportal.com, January 5, 2017.
11	EBITDA	$ 341,018				Sum of Lines 5 through 7 and Line 10.
12	Total Adjusted Debt Ratio	47.1%				Exhibit MPG-3, page 2, Col. 4, Ln. 4.
13	Debt to EBITDA	3.3x	2.5x - 3.5x	3.5x - 4.5x	4.5x - 5.5x	(Line 1 x Line 12) / Line 11.
14	FFO to Total Debt	22%	23% - 35%	13% - 23%	9% - 13%	Line 9 / (Line 1 x Line 12).

Sources:

[1] Standard & Poor's: "Criteria: Corporate Methodology," November 19, 2013.

[2] Standard & Poor's, Ratings Direct: "Summary: Gulf Power Co.," June 16, 2015.

Note:

Based on the June 2015 S&P report, Gulf has an "Excellent" business profile and a "Significant" financial profile, and falls under the 'Medial Volatility' matrix.

Gulf Power Company

S&P Adjusted Debt Ratio
(Operating Subsidiaries)

11 Quarter Average

							Distribution of Quarterly Average		
Line	**Rating**	**Count**	**Average**	**Median**	**High**	**Low**	**< 50**	**50 to 55**	**> 55**
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	AA-	1	42.63	42.63	42.63	42.63	1	-	-
2	A	9	52.47	51.52	57.18	50.34	-	7	2
3	A-	31	50.80	51.65	63.93	38.36	12	11	8
4	BBB+	28	53.25	54.34	59.37	43.71	5	10	13
5	BBB	8	52.60	52.91	57.04	47.31	2	3	3
6	BBB-	9	56.51	56.74	61.41	51.11	-	3	6
7	BB	1	43.18	43.18	43.18	43.18	1	-	-
8	**Total**	**87**					**21**	**34**	**32**
9	**Average**		**50.20**	**50.42**	**54.96**	**45.23**			

Quarter Results - 2013Q4 through 2016Q2

							Distribution of Quarterly Results		
Line	**Rating**	**Count**	**Average**	**Median**	**High**	**Low**	**< 50**	**50 to 55**	**> 55**
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
10	AA-	11	42.63	42.79	44.98	40.78	11	-	-
11	A	91	52.50	51.50	60.02	47.70	16	56	19
12	A-	323	50.70	51.43	64.53	31.05	137	118	68
13	BBB+	296	53.33	53.81	63.58	42.12	57	122	117
14	BBB	88	52.60	52.61	60.01	44.64	27	36	25
15	BBB-	98	56.52	56.30	67.82	45.83	4	37	57
16	BB	10	43.18	43.36	45.70	40.02	10	-	-
17	**Total**	**917**					**262**	**369**	**286**
18	**Average**		**50.21**	**50.26**	**58.09**	**41.73**			

Source:
Standard and Poors Global Credit Portal, downloaded November 18, 2016.

Gulf Power Company

Standard & Poor's Credit Metrics
(Pre-Tax Rate of Return)

Line	Description	Weight[1] (1)	Cost (2)	Weighted Cost (3)	Pre-Tax Weighted Cost (4)
1	Long-Term Debt	32.71%	4.40%	1.44%	1.44%
2	Preference Stock	3.91%	6.15%	0.24%	0.39%
3	Common Equity	37.63%	9.20%	3.46%	5.65%
4	Short-Term Debt	1.18%	3.02%	0.04%	0.04%
5	Customer Deposits	1.01%	2.30%	0.02%	0.02%
6	Net Deferred Taxes	23.52%	0.00%	0.00%	0.00%
7	Investment Credit	0.03%	0.00%	0.00%	0.00%
8	**Total**	**100.00%**		**5.20%**	**7.55%**
9	Tax Conversion Factor[2]				1.63326

Sources:
[1]Exhibit MPG-1.
[2]Exhibit SDR-1, Schedule 17.

Gulf Power Company

Vander Weide DCF

Line	Company	Next Year's Dividend	Average Stock Price	Growth Rate	DCF
		(1)	(2)	(3)	(4)
1	ALLETE	$ 2.20	$ 52.90	6.00%	10.17%
2	Alliant Energy	$ 2.51	$ 67.00	6.65%	10.39%
3	Amer. Elec. Power	$ 2.34	$ 61.45	4.25%	8.05%
4	Ameren Corp.	$ 1.80	$ 45.85	5.60%	9.52%
5	Black Hills	$ 1.76	$ 52.72	5.00%	8.35%
6	CenterPoint Energy	$ 1.08	$ 18.56	4.22%	10.01%
7	CMS Energy Corp.	$ 1.33	$ 38.87	7.24%	10.66%
8	Dominion Resources	$ 2.97	$ 70.26	6.00%	10.22%
9	DTE Energy	$ 3.06	$ 84.45	4.95%	8.58%
10	Duke Energy	$ 3.41	$ 75.44	3.29%	7.81%
11	Eversource Energy	$ 1.89	$ 54.24	5.98%	9.46%
12	G't Plains Energy	$ 1.12	$ 28.76	6.87%	10.78%
13	NextEra Energy	$ 3.72	$ 111.73	6.77%	10.10%
14	NorthWestern Corp.	$ 2.10	$ 57.32	5.00%	8.66%
15	PG&E Corp.	$ 1.94	$ 55.54	6.60%	10.09%
16	Pinnacle West Capital	$ 2.60	$ 67.99	4.13%	7.96%
17	PNM Resources	$ 0.96	$ 31.76	8.91%	11.93%
18	Portland General	$ 1.27	$ 38.18	6.16%	9.50%
19	PPL Corp.	$ 1.58	$ 35.22	4.16%	8.66%
20	SCANA Corp.	$ 2.42	$ 64.25	5.40%	9.17%
21	Sempra Energy	$ 3.28	$ 95.60	8.58%	12.01%
22	Southern Co.	$ 2.25	$ 48.47	3.48%	8.12%
23	Vectren Corp.	$ 1.68	$ 44.34	5.00%	8.79%
24	WEC Energy Group	$ 2.11	$ 55.68	6.80%	10.60%
25	Westar Energy	$ 1.61	$ 44.25	6.00%	9.64%
26	Xcel Energy Inc.	$ 1.43	$ 38.37	4.84%	8.56%
27	Average			**5.69%**	**9.53%**
28	Median			**5.79%**	**9.51%**

Source:
Exhibit No.___(JVW-1), Schedule 1.

Gulf Power Company

Accuracy of Interest Rate Forecasts
(Long-Term Treasury Bond Yields - Projected Vs. Actual)

Line	Date	Publication Data Prior Quarter Actual Yield (1)	Projected Yield (2)	Projected Quarter (3)	Actual Yield in Projected Quarter (4)	Projected Yield Higher (Lower) Than Actual Yield* (5)
1	Dec-00	5.8%	5.8%	1Q, 02	5.6%	0.2%
2	Mar-01	5.7%	5.6%	2Q, 02	5.8%	-0.2%
3	Jun-01	5.4%	5.8%	3Q, 02	5.2%	0.6%
4	Sep-01	5.7%	5.9%	4Q, 02	5.1%	0.8%
5	Dec-01	5.5%	5.7%	1Q, 03	5.0%	0.7%
6	Mar-02	5.3%	5.9%	2Q, 03	4.7%	1.2%
7	Jun-02	5.6%	6.2%	3Q, 03	5.2%	1.0%
8	Sep-02	5.8%	5.9%	4Q, 03	5.2%	0.7%
9	Dec-02	5.2%	5.7%	1Q, 04	4.9%	0.8%
10	Mar-03	5.1%	5.7%	2Q, 04	5.4%	0.3%
11	Jun-03	5.0%	5.4%	3Q, 04	5.1%	0.3%
12	Sep-03	4.7%	5.8%	4Q, 04	4.9%	0.9%
13	Dec-03	5.2%	5.9%	1Q, 05	4.8%	1.1%
14	Mar-04	5.2%	5.9%	2Q, 05	4.6%	1.4%
15	Jun-04	4.9%	6.2%	3Q, 05	4.5%	1.7%
16	Sep-04	5.4%	6.0%	4Q, 05	4.8%	1.2%
17	Dec-04	5.1%	5.8%	1Q, 06	4.6%	1.2%
18	Mar-05	4.9%	5.6%	2Q, 06	5.1%	0.5%
19	Jun-05	4.8%	5.5%	3Q, 06	5.0%	0.5%
20	Sep-05	4.6%	5.2%	4Q, 06	4.7%	0.5%
21	Dec-05	4.5%	5.3%	1Q, 07	4.8%	0.5%
22	Mar-06	4.8%	5.1%	2Q, 07	5.0%	0.1%
23	Jun-06	4.6%	5.3%	3Q, 07	4.9%	0.4%
24	Sep-06	5.1%	5.2%	4Q, 07	4.6%	0.6%
25	Dec-06	5.0%	5.0%	1Q, 08	4.4%	0.6%
26	Mar-07	4.7%	5.1%	2Q, 08	4.6%	0.5%
27	Jun-07	4.8%	5.1%	3Q, 08	4.5%	0.7%
28	Sep-07	5.0%	5.2%	4Q, 08	3.7%	1.5%
29	Dec-07	4.9%	4.8%	1Q, 09	3.5%	1.4%
30	Mar-08	4.6%	4.8%	2Q, 09	4.0%	0.8%
31	Jun-08	4.4%	4.9%	3Q, 09	4.3%	0.6%
32	Sep-08	4.6%	5.1%	4Q, 09	4.3%	0.8%
33	Dec-08	4.5%	4.6%	1Q, 10	4.6%	0.0%
34	Mar-09	3.7%	4.1%	2Q, 10	4.4%	-0.3%
35	Jun-09	3.5%	4.6%	3Q, 10	3.9%	0.8%
36	Sep-09	4.0%	5.0%	4Q, 10	4.2%	0.8%
37	Dec-09	4.3%	5.0%	1Q, 11	4.6%	0.4%
38	Mar-10	4.3%	5.2%	2Q, 11	4.3%	0.9%
39	Jun-10	4.6%	5.2%	3Q, 11	3.7%	1.5%
40	Sep-10	4.4%	4.7%	4Q, 11	3.0%	1.7%
41	Dec-10	3.9%	4.6%	1Q, 12	3.1%	1.5%
42	Mar-11	4.2%	5.1%	2Q, 12	2.9%	2.2%
43	Jun-11	4.6%	5.2%	3Q, 12	2.8%	2.5%
44	Sep-11	4.3%	4.2%	4Q, 12	2.9%	1.3%
45	Dec-11	3.7%	3.8%	1Q, 13	3.1%	0.7%
46	Mar-12	3.0%	3.8%	2Q, 13	3.2%	0.7%
47	Jun-12	3.1%	3.7%	3Q, 13	3.7%	0.0%
48	Sep-12	2.9%	3.4%	4Q, 13	3.8%	-0.4%
49	Dec-12	2.8%	3.4%	1Q, 14	3.7%	-0.3%
50	Mar-13	2.9%	3.6%	2Q, 14	3.4%	0.2%
51	Jun-13	3.1%	3.7%	3Q, 14	3.3%	0.4%
52	Sep-13	3.2%	4.2%	4Q, 14	3.0%	1.2%
53	Dec-13	3.7%	4.2%	1Q, 15	2.6%	1.7%
54	Mar-14	3.8%	4.4%	2Q 15	2.9%	1.5%
55	Jun-14	3.7%	4.3%	3Q 15	2.8%	1.5%
56	Sep-14	3.4%	4.3%	4Q 15	3.0%	1.3%
57	Dec-14	3.3%	4.0%	1Q 16	2.7%	1.3%
58	Mar-15	3.0%	3.7%	2Q 16	2.6%	1.1%
59	Jun-15	2.6%	3.7%	3Q 16	2.3%	1.4%
60	Jul-15	2.7%	4.0%	4Q 16		
61	Aug-15	2.9%	3.9%	4Q 16		
62	Sep-15	2.9%	3.8%	4Q 16		
63	Oct-15	2.8%	3.9%	1Q 17		
64	Nov-15	2.8%	3.8%	1Q 17		
65	Dec-15	2.8%	3.7%	1Q 17		
66	Jan-15	3.0%	3.8%	2Q 17		
67	Feb-16	3.0%	3.7%	2Q 17		
68	Mar-16	3.0%	3.5%	2Q 17		
69	Apr-16	2.7%	3.6%	3Q 17		
70	May-16	2.7%	3.5%	3Q 17		
71	Jun-16	2.7%	3.4%	3Q 17		
72	Jul-16	2.7%	3.4%	4Q 17		
73	Aug-16	2.6%	3.1%	4Q 17		
74	Sep-16	2.6%	3.1%	4Q 17		
75	Oct-16	2.3%	3.1%	1Q 18		
76	Nov-16	2.3%	3.1%	1Q 18		
77	Dec-16	2.3%	3.4%	1Q 18		

Source:
Blue Chip Financial Forecasts, Various Dates.
* Col. 2 - Col. 4.

I **HEREBY CERTIFY** that a true and correct copy of the foregoing Direct Testimony of

Michael P. Gorman, Amanda M. Alderson, and Brian C. Andrews has been furnished by

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