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Revenue Requirement

Michael P. Gorman Surrebuttal Testimony

Midwest Energy Consumers Group ER-2018-0145 and ER-2018-0146

September 4, 2018

BEFORE THE PUBLIC SERVICE COMMISSION OF THE STATE OF MISSOURI

FILED October 24, 2018 **Data Center** Missouri Public Service Commission

In the Matter of Kansas City Power & Light Company's Request for Authority to Implement a General Rate Increase for **Electric Service**

Case No. ER-2018-0145

In the Matter of KCP&L Greater Missouri **Operations Company's Request for** Authority to Implement a General Rate Increase for Electric Service

Case No. ER-2018-0146

Surrebuttal Testimony and Schedules of

Michael P. Gorman MECG Exhibit No. 51 2

Date 92518 Reporter TT

File No. 12 R - 2018 - 014

On behalf of

Midwest Energy Consumers Group

September 4, 2018



BRUBAKER & ASSOCIATES, INC.

Projects 10551.1 and 10552.1

BEFORE THE PUBLIC SERVICE COMMISSION OF THE STATE OF MISSOURI

In the Matter of Kansas City Power & Light Company's Request for Authority to Implement a General Rate Increase for Electric Service) Case No. ER-2018-0145) .) .) .		
In the Matter of KCP&L Greater Missouri Operations Company's Request for Authority to Implement a General Rate Increase for Electric Service) Case No. ER-2018-0146))		
STATE OF MISSOURI)) SS COUNTY OF ST. LOUIS)			
Affidavit of Michael P. G	<u>Sorman</u>		
Michael P. Gorman, being first duly sworn, on his o	oath states:		
1. My name is Michael P. Gorman. I am a co Inc., having its principal place of business at 16690 Chesterfield, Missouri 63017. We have been retained Group in this proceeding on their behalf.	Swingley Ridge Road, Suite 140,		
 Attached hereto and made a part hereof testimony and schedules which were prepared in written Missouri Public Service Commission Case Nos. ER-2018- 	form for introduction into evidence in		
3. I hereby swear and affirm that the testimor and that they show the matters and things that they purpor	ny and schedules are true and correct rt to show.		
Michael	5. Gorman		
Subscribed and sworn to before me this 4 th day of Septem			
MARIA E. DECKER Notary Public - Notary Seal STATE OF MISSOURI St. Louis City My Commission Expires: May 5, 2021 Commission # 13706793	ublic		

BEFORE THE PUBLIC SERVICE COMMISSION OF THE STATE OF MISSOURI

In the Matter of Kansas City Power & Light Company's Request for Authority to Implement a General Rate Increase for Electric Service

11

Case No. ER-2018-0145

In the Matter of KCP&L Greater Missouri Operations Company's Request for Authority to Implement a General Rate Increase for Electric Service

Case No. ER-2018-0146

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BEFORE THE PUBLIC SERVICE COMMISSION OF THE STATE OF MISSOURI

In the Matter of Kansas City Power & Light Company's Request for Authority to Implement a General Rate Increase for Electric Service) Case No. ER-2018-0145)))))
In the Matter of KCP&L Greater Missouri Operations Company's Request for Authority to Implement a General Rate Increase for Electric Service)) Case No. ER-2018-0146))))

Surrebuttal Testimony of Michael P. Gorman

1	Q	PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.
2	Α	Michael P. Gorman. My business address is 16690 Swingley Ridge Road, Suite 140,
3		Chesterfield, MO 63017.
4	Q	ARE YOU THE SAME MICHAEL P. GORMAN WHO PREVIOUSLY FILED
5		TESTIMONY IN THIS CASE?
6	Α	Yes. I filed revenue requirement direct and rebuttal testimony on June 19, and
7		July 27, 2018, respectively, on behalf of the Midwest Energy Consumers Group
8		("MECG").
9	Q	WHAT IS THE PURPOSE OF YOUR SURREBUTTAL TESTIMONY?
10	Α	I respond to the rebuttal testimony of Kansas City Power & Light Company's ("KCPL"
11		or "Company") and KCP&L Greater Missouri Operations Company's ("GMO" or

"Company") (collectively, "Companies") witness Robert Hevert, and Staff witnesses

Jeffrey Smith and Natelle Dietrich.

While Staff witness Mr. Smith filed rebuttal testimony on return on equity, he notes that my recommended return on equity of 9.3% is within his recommended range of 9.0% to 10.0%. As such, Mr. Smith did not take issue with the reasonableness of my recommended return on equity. Given this Staff position, I will not have surrebuttal in response to Staff's return on equity rebuttal, but I will comment on Staff's capital structure and cost of debt positions.

My silence in regard to any issue should not be construed as an endorsement of KCPL / GMO's position.

11 Q PLEASE SUMMARIZE YOUR RECOMMENDATIONS AND FINDINGS.

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- 12 A I respond to many of the assertions and findings offered by KCPL / GMO witness
 13 Hevert in support of increasing the Companies' return on equity in this case relative to
 14 their last case in Missouri and in Kansas. I find Mr. Hevert's arguments to be
 15 misplaced or his facts deficient. In summary, I find the following:
 - 1. Observable market evidence shows that authorized returns on equity around 9.5% have been more than adequate to support investment grade credit standing, financial integrity and access to capital under reasonable terms and prices.
 - 2. The same finding is true for KCPL and GMO since their last rate proceeding before the Missouri Public Service Commission ("Commission").
 - Mr. Hevert's own analysis in this case, compared to KCPL's and GMO's last case shows that the cost of capital has decreased marginally since KCPL / GMO's last case, and an increase in the authorized return on equity in this case is not justified.
 - 4. Information from the Companies also shows that authorized returns on equity awarded to KCPL and GMO in Kansas and Missouri have been adequate to maintain their access to capital under reasonable terms and prices, and have supported their financial integrity.

- 5. Setting rates based on a reasonable return on equity in the range of 9.1% to 9.5% will accomplish the objectives of fair compensation, maintaining financial integrity and credit standing, but at much lower cost to retail customers than the Companies' proposal in this proceeding.
 - 6. I also respond to Mr. Hevert's updated analysis and demonstrate how it was flawed and resulted in inflation to the return on equity estimate for KCPL and GMO in this proceeding. Reasonable applications of Mr. Hevert's own analysis support a return on equity finding in the range of 9.1% to 9.5%.
 - 7. Mr. Hevert's criticisms of my financial integrity study of KCPL and GMO based on my return on equity recommendations and capital structure positions, are without merit. These financial integrity studies do demonstrate that my recommended return on equity and overall cost of capital meet the standards of fair compensation, which are: maintaining financial integrity, and investment grade bond ratings, preserving the utilities' access to capital, and doing so at the most reasonable prices to retail customers.

Hevert Updated Analysis

- 17 Q DID MR. HEVERT PROVIDE AN UPDATED ANALYSIS IN HIS REBUTTAL
- 18 **TESTIMONY?**

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- 19 A Yes. He describes the update at page 3 of his rebuttal testimony, however he never
- 20 describes the results of his updated study.
- 21 Q DID YOU CONSIDER THE NEED TO UPDATE YOUR RETURN ON EQUITY
- 22 ANALYSIS?
- 23 A As always, I review changes in economic conditions to determine whether an updated
- 24 return on equity analysis is necessary. In this case, I did not observe changes in
- 25 economic conditions that necessitate an update or modification to the return on equity
- 26 analysis provided in my direct testimony.

1	Q	DO YOU BELIEVE THAT MR. HEVERT'S UPDATED STUDY IS REASONABLE?
2	Α	No. By including additional companies in his proxy group, Mr. Hevert increases his
3		DCF return range from the 8.3% to 9.5% in his direct testimony to a range of 9.2% to
4		9.9%. As will be shown, the expansion of Mr. Hevert's proxy group is not reasonable
5		or appropriate. The inclusion of these companies serves no other purpose than to
6		inflate his updated return on equity estimates.
7	Q	DESPITE THE UNREASONABLE NATURE OF HIS PROXY GROUP, CAN MR.
8		HEVERT'S UPDATED ANALYSIS BE CORRECTED TO PROVIDE A
9		REASONABLE RESULT?
10	Α	Yes. As described in my rebuttal testimony (pages 13-37), by utilizing reasonable
11		growth rates and other inputs, Mr. Hevert's updated analysis can be corrected.

TABLE 1 **Hevert's Return on Equity Estimates**

			Hevert Mean		Adjusted	
Description	Yie	elds	Direct ¹	Update ²	Direct ³	Update⁴
			(1)	(2)	(3)	(4)
Constant Growth DCF			, ,			
30-Day Average			8.28%	9.24%	8.28%	8.85%
90-Day Average			8.31%	9.29%	8.31%	8.90%
180-Day Average			<u>8.38%</u>	<u>9.16%</u>	<u>8.38%</u>	<u>8.76%</u>
Average Constant Growth DCF			8.32%	9.23%	8.32%	8.84%
Multi-Stage DCF Gordon Model			2.700/	0.0004	0.0487	0.540/
30-Day Average			8.70%	9.23%	8.01%	8.51%
90-Day Average			8.74%	9.28%	8.05%	8.56%
180-Day Average			<u>8.81%</u>	<u>9.14%</u>	<u>8.13%</u>	<u>8.41%</u>
Average			8.75%	9.22%	8.06%	8.49%
Multi-Stage DCF Terminal P/E						
30-Day Average			9.36%	9.89%	8.01%	8.51%
90-Day Average			9.46%	10.02%	8.05%	8.56%
180-Day Average			<u>9.67%</u>	9.67%	<u>8.13%</u>	8.41%
Average			9.50%	9.86%	8.06%	8.49%
·						
DCF Range			8.3% to 9.5%	9.2% to 9.9%	8.1% to 8.3%	8.5% to 8.8%
CAPM Results (Bloomberg Beta)	<u>Direct</u>	Update				
Current 30-Yr Treasury (BL)	2.77%	3.11%	8.95%	10.13%	7.10%	7.45%
Current 30-Yr Treasury (VL)	2.77%	3.11%	9.45%	10.34%	7.10%	7.45%
Near-Term Projected 30-Yr Treasury (BL)	3.32%	3.48%	9.50%	10.50%	7.64%	7.83%
Near-Term Projected 30-Yr Treasury (VL)	3.32%	3.48%	9.99%	10.71%	7.64%	7.83%
CARM Provide (Volvo Line Role)						
CAPM Results (Value Line Beta)	2.77%	3,11%	10.61%	11.66%	8,25%	8.50%
Current 30-Yr Treasury (BL) Current 30-Yr Treasury (VL)	2.77%	3.11%	11.24%	11.91%	8.25%	8.50%
, , ,	3.32%	3.48%	11.15%	12.03%	8.80%	8.87%
Near-Term Projected 30-Yr Treasury (BL)	3.32%	3.48%	11.78%	12.03%	8.80%	8.87%
Near-Term Projected 30-Yr Treasury (VL)	3.3270	3.40%	11,7070	12.20%	0.00%	0.0170
Risk Premium						
Current 30-Yr Treasury	2.77%	3.11%	9.95%	9.96%	8.87%	9.21%
Near-Term Projected 30-Yr Treasury	3.32%	3.48%	10.01%	10.03%	9.42%	9.58%
Long-Term Projected 30-Yr Treasury	4.20%	4.30%	10.25%	10.28%	Reject	Reject
Alternative Piet Promism						
Alternative Risk Premium	2.77%	N/A	9,61%	N/A	Reject	N/A
Current 30-Yr Treasury	3.32%	N/A	9.59%	N/A N/A	Reject	N/A
Near-Term Projected 30-Yr Treasury	4.20%	N/A N/A	9.70%	N/A	•	N/A
Long-Term Projected 30-Yr Treasury	4.20%	INIA	9.10%	N/A	Reject	19775
Range			9.75% to 10.50%	9.75% to 10.50%	8.3% to 9.4%	8.5% to 9.5%

Range

¹Hevert Direct Testimony at 24, 32, 37 and 40; Schedules RBH-1 through RBH-7.

²Hevert Rebultal Schedules RBH-3 through RBH-18.

³Gorman Rebuttal Testimony at 15, Table 3.

⁴Id. and Schedule MPG-SR-3, excluding Avangrid, NextEra, and Southern Company.

As shown in Table 1 above, both Mr. Hevert's direct and rebuttal, with
reasonable adjustments, support a return on equity for KCPL and GMO in the range
of 8.5% to 9.5%. Also, the implied increases in Mr. Hevert's DCF results, excluding
the effects of three companies that should not have been included in his proxy group,
simply illustrate variations in stock price, up and down, and changes in growth
outlooks. These changes in DCF returns do not impact my finding on a reasonable
estimate of KCPL / GMO current market cost of equity capital. Importantly, both Mr.
Hevert's CAPM and equity risk premiums cost estimates have not changed from
direct to his rebuttal case. It is also significant that 30-year Treasury bond yields,
both current and projected, have not changed significantly between direct and
rebuttal.

Q

Α

In short, Mr. Hevert's initial and updated return on equity studies support my conclusion that a reasonable return on equity falls within the range of 9.1% to 9.5%.

DO THESE SLIGHT UPWARD MOVEMENTS IN DCF AND BOND YIELDS IN MR.
HEVERT'S UPDATED ANALYSIS SUPPORT A FINDING THAT KCPL'S AND
GMO'S RETURN ON EQUITY SHOULD BE HIGHER IN THIS CASE THAN IT WAS
IN THE LAST CASE?

No. As reflected on Schedule MPG-SR-1, I have compared Mr. Hevert's results from his studies in this case to those offered in the last case. As shown on that schedule, Mr. Hevert essentially performed the same models in the last case as he has in this case. Importantly, Mr. Hevert's DCF and risk premium studies in the last case supported higher returns on equity for KCPL and GMO than his studies do in this case. Again, this excludes his proposal to include three inappropriate companies in his updated proxy group. Other than what appears to be an obvious intention to

inflate his proxy group return on equity estimates, Mr. Hevert's cost of capital estimates in this case support a finding that KCPL's and GMO's return on equity is actually lower in this case than it was in the last case. Given this, the Commission should clearly conclude that the authorized return on equity should be no higher in this case than it was in the last case, and if anything should be a little lower.

Modified Proxy Group

Α

Α

Q PLEASE DESCRIBE HOW MR. HEVERT CHANGED HIS PROXY GROUP IN HIS UPDATED ANALYSIS.

Mr. Hevert inappropriately revised the proxy group used in his direct testimony by including three new companies: Avangrid, Inc. ("Avangrid"), NextEra Energy ("NextEra"), and the Southern Company. Interestingly, NextEra and Southern Company are involved in significant merger and acquisition ("M&A") activity. Furthermore, Avangrid is involved in the divestiture of certain business units. Given this, each of these newly included companies fails to meet the proxy group selection criteria expressed in Mr. Hevert's direct testimony. Specifically, at page 14 of his direct testimony, Mr. Hevert states that he eliminated companies that are known to be a party to a merger or other significant transactions. "I eliminated companies that are currently known to be a party to a merger, or other significant transaction."

Q WHY IS IT APPROPRIATE TO EXCLUDE COMPANIES THAT ARE ENGAGED IN M&A OR OTHER TRANSACTIONAL ACTIVITIES FROM A PROXY GROUP?

The DCF and risk parameters of the company can be materially impacted when the company is involved in M&A or major asset transactions. This results in inflation or erosion to the DCF measured cost of equity and can also impact its risk assessment

so as to not reflect the company-specific risk and growth outlook as the company
currently exists but rather reflect changes based on the proposed M&A transaction.
Hence, the DCF from such companies is not a reliable estimate of the current market
cost of equity.

Α

Q PLEASE DESCRIBE THE M&A OR MAJOR TRANSACTIONS IN WHICH MR. HEVERT'S NEW PROXY COMPANIES ARE CURRENTLY ENGAGED.

As reflected in its May 20, 2018 8-K filing with the Securities and Exchange Commission ("SEC"), NextEra is in the process of acquiring two utility companies from Southern Company: Gulf Power Company and Florida City Gas. This was a sale of major operating companies by Southern Company and a major acquisition of operating companies by NextEra.

Further, Avangrid (formerly known as Energy East and Iberdrola USA) is also involved in significant transactions. Specifically, as reflected in its most recent 10-K filling with the SEC, Avangrid is in the process of completing the sale of both its gas storage and gas trading business units. *Value Line* noted in its most recent report on Avangrid that it will "no longer book losses from gas storage and trading businesses it sold in the first half of 2018."

As such, all three of these companies are involved in mergers or significant transactions. The inclusion of these companies distorts the DCF parameters and, as Mr. Hevert initially recognized, these companies should be excluded from a proxy group used to estimate a reasonable and accurate estimate of KCPL's and GMO's current market cost of equity.

¹The Value Line Investment Survey, August 17, 2018.

Q	IS THERE	ANY	OTHER	REASON	ТО	EXCLUDE	AVANGRID	FROM	MR.
	HEVERT'S (JPDAT	ED PRO	XY GROUP	?				

Α

Yes. Avangrid is simply not an appropriate company to include in a proxy group for KCPL and GMO. About 81.5% of Avangrid stock is owned by a private entity, Iberdrola, and this stock is not publicly traded. Only approximately 18.5% of Avangrid stock is publicly traded. The market data used by Mr. Hevert reflects the minority interest ownership of Avangrid. Indeed, Mr. Hevert excluded Avangrid from his proxy companies in Case Nos. ER-2016-0285; ER-2016-0156; ER-2014-0370; and ER-2014-0371.

Avangrid's market price most likely reflects a control premium which is logically demanded by minority shareholders, because lberdrola has complete control of Avangrid and the minority shareholders simply have no ability to influence Board decisions and management decisions, apart from Iberdrola's influence. Therefore, the minority shareholders have limited ownership control of Avangrid, and most likely demand a return premium in exchange for accepting this minority interest risk. It is simply not appropriate to include companies in a proxy group where the publicly traded shares represent minority control of the publicly traded company.

Moreover, Avangrid does not meet Mr. Hevert's criterion that all proxy companies will be vertically integrated. As its 10-K indicates, Avangrid's operations are primarily in the distribution of electricity and gas in New York, Connecticut and Maine. These are open access jurisdictions. Further, Avangrid is a major supplier of renewable energy across the U.S., and its business operations are not comparable to KCPL and GMO.

For these additional reasons, Avangrid should not be included in Mr. Hevert's proxy group.

DOES MR. HEVERT'S EVIDENCE SHOW THAT INCLUDING THESE THREE
COMPANIES IN HIS PROXY GROUP HAS THE EFFECT OF INFLATING THE
RETURN ON EQUITY ESTIMATES FOR KCPL AND GMO?

Q

Α

Yes. This is evident from a review of the constant growth DCF studies reflected in Schedule RBH-13, pages 1-3 of Mr. Hevert's rebuttal testimony. I have included below a table summarizing his proxy group median and the estimates for Avangrid, NextEra Energy, and Southern Company for the 30-day, 90-day and 180-day DCF studies, respectively. As shown in this schedule and as evident from a review of Schedule RBH-13, Avangrid and NextEra Energy reflect significant outliers from the results of his proxy group averages. This is true in all three (constant growth and two multi-stage) of his DCF studies.

	TABLE 2		
<u>Hev</u>	ert DCF Re	<u>sults</u>	
<u>Description</u>	<u>30-Day</u>	<u>90-Day</u>	<u>180-Day</u>
Proxy Mean	9.24%	9.26%	9.16%
Avangrid, Inc.	14.34%	14.43%	14.46%
NextEra Energy	11.87%	11.89%	11.93%
Southern Company	8.95%	8.92%	8.62%
Source: Schedule RBI	- H-3.		

Most significantly, Avangrid is more than 5 percentage points above the proxy group average, and more than 3 percentage points above the second highest company in the proxy group excluding NextEra Energy. NextEra Energy also is a clear high-end outlier because in each of the studies, it reflects a DCF return estimate that is more than 2 percentage points higher than the proxy group median, and

1	reflects a growth rate nearly 3 percentage points greater than the average of the
2	growth rates used in each of the DCF studies.

Trend in Authorized Returns on Equity

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- Q DID 4 MR. **HEVERT** RESPOND TO YOUR COMMENTS CONCERNING 5 **AUTHORIZED RETURNS ON EQUITY IN THE REGULATED UTILITY INDUSTRY?** 6 Α Yes. In my direct testimony I showed authorized returns on equity over the 12-year 7 period 2008-2017 for both gas and electric utilities. That evidence showed that there 8 was a clear and discernible downward trend in the authorized returns on equity over 9 this period. Mr. Hevert responded that he did not agree there was a downward trend. 10 To support this assertion, Mr. Hevert excluded authorized returns on equity for 11 periods 2008-2013, and focused only on equity returns during the period 2014-2018. Over the shorter period, Mr. Hevert concludes that authorized returns have been 12 13 relatively flat.2
- 14 Q IN YOUR TESTIMONY, DID YOU ASSERT THAT AUTHORIZED RETURNS ON
 15 EQUITY OVER THE 2014-2018 PERIOD DEMONSTRATED A DOWNWARD
 16 TREND?
- I did not, and Mr. Hevert's implication that I did is disingenuous. I did make, however,
 this statement based on observable trend over the period 2008-2017, which is an
 accurate description.

²Hevert Rebuttal Testimony at 5, 36 and 37.

1 Q DO YOU AGREE WITH MR. HEVERT THAT AUTHORIZED RETURN ON EQUITY 2 AND CAPITAL MARKET COSTS HAVE BEEN LEVEL DURING THE PERIOD 3 2014-2018? 4 Yes. I will agree with Table 1 included at page 38 of Mr. Hevert's testimony. Below I Α 5 expand Mr. Hevert's Table 1 and also include utility bond yields with authorized 6 returns on equity for electric utility companies. These capital returns are shown below 7

in Table 3.

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TABLE 3 **Capital Market Costs**

	Authorized ROE Year Return STDEV		A-U	tility	Baa-Utility		
<u>Year</u>			Yield STDEV		Yield	<u>STDEV</u>	
2014	9.75%	0.32%	4.28%	0.21%	4.80%	0.16%	
2015	9.60%	0.39%	4.12%	0.32%	5.03%	0.44%	
2016	9.60%	0.42%	3.93%	0.25%	4.67%	0.42%	
2017	9.68%	0.55%	4.00%	0.15%	4.38%	0.18%	
2018	9.58%	0.39%	4.03%	0.13%	4.37%	0.15%	

Source: Hevert Direct testimony at 38 and http://credittrends.moodys.com/.

As shown above in Table 3, authorized returns on equity did drop after the end of 2014, and have been relatively stable over 2015-2018. Indeed, the variation in the average authorized return on equity has been relatively stable over this time period as noted by the standard deviations of the average return on equity in each of the years.3

³The standard deviation of an average explains how much variability the data points are around the group average. If all the returns on equity have a low standard deviation this indicates that most of the observations used in the average are pretty close to the average. Conversely, if the standard deviation is larger, this would indicate that the individual components that comprise the average have significant variability around the average result. As such, a low standard deviation indicates that most observations included in the average are reasonably comparable to the average.

1	
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Just as significantly, Table 3 above shows that A-rated and Baa-rated utility bond yields have also been relatively stable over the 2015-2018 period, and the variation in monthly bond yields has been increasingly more stable over this time period, as evidenced by a reduction in the standard deviation in monthly average yields.

This observable market evidence clearly indicates that capital market costs have remained low over the last five years, and are more stable at these low capital market costs currently than they have been in the past. Indeed, as I outlined in my direct testimony, expectations of changes in capital market costs by consensus economists support a finding that today's low capital market costs are expected to stay low over the next five to ten years, at a minimum. (Gorman Direct Testimony at 10-17).

IS THERE EVIDENCE THAT THE AUTHORIZED RETURNS ON EQUITY OF KCPL AND GMO HAVE SUPPORTED THEIR FINANCIAL INTEGRITY, CREDIT STANDING AND ABILITY TO ATTRACT CAPITAL UNDER REASONABLE TERMS AND COSTS?

Yes. As reflected in my direct testimony, the Kansas Corporation Commission authorized KCPL a return on equity of 9.3% in September of 2015. In a data request response, KCPL indicated that it was not aware of any negative financial limitation to KCPL associated with Kansas authorizing a 9.3% return on equity. Moreover, KCPL and GMO indicated that they believed that the 9.3% return on equity agreed to for use in Kansas for the next five years is reasonable. The Company made these statements in response to data request MECG Questions 13-1 and 13-2, which are attached as Schedule MPG-SR-2.

Further, as stated at page 27 of my direct testimony, KCPL and GMO both
have stable credit rating outlooks from Standard & Poor's ("S&P") and Moody's.
Indeed, KCPL's bond ratings from S&P and Moody's are A- and Baa1, respectively,
where GMO's bond ratings from S&P and Moody's are A- and Baa2, respectively.
S&P recently upgraded its bond ratings for KCPL and GMO in part based on the
regulated utilities' ability to generate sufficient cash flow to sufficiently produce credit
metrics that support these bond ratings. Interestingly, S&P upgraded KCPL's bond
rating despite the commitment to use a 9.3% return on equity for the next five years in
Kansas. Moreover, when asked in discovery, Great Plains Energy ("GPE")
acknowledged that it had received no negative feedback from equity analysts
associated with its agreement to use a 9.3% return on equity for the next five years.
Clearly, GPE, KCPL, S&P, Moody's, and equity analysts all agree that capital costs
are likely to remain stable.

Q

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DID YOU PROVIDE OTHER EVIDENCE THAT AUTHORIZED RETURNS ON EQUITY HAVE SUPPORTED UTILITIES' FINANCIAL INTEGRITY, CREDIT STANDING AND ACCESS TO CAPITAL?

Yes. I went into great detail on this subject in my direct testimony. At pages 10-17, I demonstrated that authorized returns on equity for the industry, which have averaged around 9.5% to 9.6% over the last 24 months, have supported strong investment grade credit standing for utilities, access to significant amounts of capital, and very strong price performance for the publicly traded holding companies of utility companies. Specifically, despite the low cost of capital, there have been many more credit upgrades than downgrades over this time. All of this is clear and observable evidence that KCPL's / GMO's authorized return on equity is certainly no higher in

this case than it was in the last case, and their authorized return on equity should be no more than 9.5%.

Q

Α

DO YOU BELIEVE CUSTOMERS SHOULD ALSO BE PROTECTED BY THE STANDARDS OF FAIR AND REASONABLE RATE-SETTING IN MISSOURI?

Yes. As noted in my direct testimony, the *Hope* and *Bluefield* standards state that utilities should receive a level of compensation that is fair, maintains financial integrity and credit standing, but is no higher than necessary to achieve these objectives. In doing this, rates to retail customers would be just and reasonable and will provide fair compensation to investors.

Increasing the authorized return by 55 basis points, from the 9.3% that I recommend for use in Missouri, and agreed to by GPE for use in Kansas, to 9.85% as recommended by KCPL / GMO, will increase KCPL's and GMO's revenue requirement and charges to customers. This increased cost will unjustifiably increase rates to retail customers, and limit customers' ability to successfully operate their own businesses, and households because the rates they will pay to KCPL / GMO will be higher than they need to be to fairly compensate these utilities' investors. The practical effect of the Commission increasing the return on equity above that which is more than necessary to maintain financial integrity is to pay dividends that export money out of the Missouri economy to shareholders that are primarily located in other states or around the world. Indeed, in response to MECG Data Request 5.10, GPE acknowledged that only 0.57% of shareholders actually live in Missouri.

HAS THE	FEDEF	RAL RESERVE	MONETARY	POLICY AC	CTIONS,	OR TI	HE NEW
FEDERAL	TAX	REDUCTION,	INCREASED	UTILITIES	cost	OF	EQUITY
CAPITAL?							

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No. I would also note that the Federal Reserve impact on interest rates has changed significantly over the last several years. The Federal Reserve has gone from phasing in a normalized monetary policy, to where it exists now. As recognized by Mr. Hevert, and shown on my Schedule MPG-SR-3, the Federal Reserve has increased its Federal Funds Rate from approximately 0.25% in December 2015 to approximately 2% as of June 2018. Despite these increases in short-term Federal Funds Rates, long-term interest rates simply have not increased with short-term rates. This was specifically addressed in my direct testimony at pages 22-26. Hence, this change in Federal Reserve monetary policy has not resulted in an increased utility cost of capital.

Further, in June 2017, the Fed announced an intention to cease interactions in long-term interest rate markets.⁴ Hence, long-term markets are again driven completely by market forces. During the period 2008 through around 2015, the Fed accumulated approximately \$4.7 trillion of long-term interest rate securities. Since terminating the Quantitative Easing ("QE") program, the Fed has now started to unwind its balance sheet holdings of long-term Treasury and mortgage-backed securities ("MBS"). The Fed has announced that it will do this through a gradual unwind of its balance sheet position by not reinvesting maturing securities, and cash flows produced through the securities the Fed owns. The market is fully aware of this announced Fed normalization policy that includes the unwinding of the securities on its balance sheet position. The Fed's actions are fully known to market participants

⁴Federal Reserve press release, June 14, 2017.

and reflected in interest rate markets and outlooks. As such, the Federal Reserve's
change to a normalized monetary policy has not increased long-term interest rates of
equity capital costs.

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DOES MR. HEVERT CLAIM THAT THE RECENT FEDERAL CORPORATE INCOME TAX REDUCTION HAS INCREASED UTILITIES' COST OF CAPITAL?

Yes. That said, Mr. Hevert's claims concerning the Tax Cuts and Jobs Act ("TCJA") increasing utility cost of capital is based on the erroneous suggestion that the tax rate reduction is bad for credit quality. This claim is however without merit.

For the credit rating agencies, concerns about the impacts of the TCJA reflect more short-term impacts on utilities' cash flows than it does on the long-term credit standing or financial integrity of the industry. The TCJA has caused significant amounts of accumulated deferred income taxes ("ADIT") to be in excess of the utilities' tax obligations, and it is anticipated that regulatory commissions will require these excess ADIT balances to be refunded to customers. During the refunding period, particularly for unprotected excess ADIT balances, the refund of these excess ADIT balances will have temporary impacts on utilities' cash flows. As such, credit rating agencies have placed some utilities' credit rating on outlook with negative implications, because these excess ADIT refunds will have a temporary impact on the utilities' cash flows.

For the majority of the companies in the utility industry, however, cash flows of the industry in general are very strong and refunding excess ADIT balances is not expected to impact credit. Importantly, KCPL and GMO both fall into this category where their credit outlooks have not been placed on negative outlook. To the 1 contrary, S&P has upgraded KCPL and GMO's credit rating and provided them a 2 stable outlook.

Constant Growth DCF

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4 Q AT PAGES 20 AND 23 OF HIS REBUTTAL TESTIMONY, MR. HEVERT TAKES
5 ISSUE WITH THE REASONABLENESS OF YOUR CONSTANT GROWTH DCF
6 MODEL. PLEASE OUTLINE MR. HEVERT'S CRITICISMS.

Mr. Hevert takes critical issue with the DCF model assumptions and states that, based on current market capital costs, the results somehow are not reliable. Specifically, he points out that under the constant growth DCF model, the underlying assumptions include the dividend yield and the growth. He goes on to explain that when the growth increases, it should lead to higher stock prices and lower dividend yields. The converse would also be true. When growth slows, the stock price will decrease and dividend yields will increase. However, Mr. Hevert claims that these conditions simply are not prevalent in the current marketplace. Specifically, he states that price-to-earnings ("P-E") ratios for the utility industry have risen more recently, due to an expanding P-E ratio. He goes on to assert that despite the increased P-E ratio, stock prices are not exhibiting higher growth in earnings and dividends, and therefore DCF returns require adjustments as he states under lbbotson and Chen analyses. Ibbotson's and Chen's analyses observe that historically the market risk premium experiences an abnormally high period during the period market P-E ratio was abnormally at high levels, but it subsequently reverted to more normal levels. Based on this assessment, Mr. Hevert concludes that the DCF analysis requires adjustments which I have not made in interpreting the results of my models.

Q ARE MR. HEVERT'S CRITICISMS OF THE DCF ANALYSES ACCURATE?

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Α

No. Indeed, I provided material in my direct testimony showing that the DCF estimated return on equity is reasonable and comparable to observed market capital cost. For example, I referenced the robust valuation of utility securities and observed correctly, that this is an indication that utilities have access to significant amounts of equity and debt capital, under reasonable terms and prices. In reaching that conclusion, I referenced my Schedule MPG-2 (included with my direct testimony). On that schedule, I provided a critical review of the relative level of utility dividend yields, and the relative growth rate of utility outlooks currently. These factors can indicate whether or not stock prices are abnormally high and can be used to assess whether DCF returns are economically logical in comparison to returns on other investments of comparable risk.

CAN YOU EXPAND ON WHY YOU HAVE RELIED ON OBSERVABLE MARKET EVIDENCE TO SUPPORT THE REASONABLENESS OF YOUR DCF MODEL RESULTS?

I have updated the data I provided in my direct testimony on Schedule MPG-2, on my surrebuttal testimony Schedule MPG-SR-4. As shown on that schedule, a comparison can be made to whether or not the DCF return components (yield and growth) are reasonable in comparison to alternative investment options. For example, the yield component of a utility stock is an income return that competes for other income investments such as utility bond yields. A stock yield provides both income return and the prospects for future growth in dividends, earnings and stock price. A bond yield provides income return with the prospect for future growth. However, the yield component of a stock can be gauged against a utility bond yield to

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22 23 get a sense of whether or not stock yields reflect competitive income returns for the component of the stock which provides income returns to shareholders.

Indeed, a comparison of the yield component of the DCF return in the current market is very competitive when compared to the income return available for an A-rated utility bond. For example, during 2018, the electric utility stock industry followed by Value Line yielded about 3.56%. The A-rated utility bond yield during this time period averaged around 4.15%. The bond to stock yield "spread" was about 0.6% (60 basis points). As shown on this schedule on line 48, this utility bond-stock yield spread has been fairly flat since 2013. That is, utility stock yields have tracked utility bond yield spreads and have averaged a negative 60 basis points. These more recent stock-bond yield spreads are smaller than long-term average yield spread of 100 basis points, or 1 percentage point over the period 2002 to 2018. As such, utility stock yields are very competitive with utility bond yields currently, which indicates that DCF yields are tracking alternative investment returns, and are, therefore, economically logical in comparison to alternative, comparable risk, investments.

From a growth perspective, my short-term analyst growth projections for my proxy group are around 5.3%.5 This growth rate is higher than the long-term historical growth of earnings and dividends for the Value Line electric utility universe of around 4%.6

Based on these two observations, DCF returns while low, are very competitive with alternative investment options available to investors, and therefore the DCF returns are economically logical and reflect returns demanded by investors in the current low capital market cost environment.

⁵Gorman Direct Testimony, Schedule MPG-8.

⁶Id. at Schedule MPG-2, page 5.

CAPM Study

Α

2 Q DID MR. HEVERT CRITICIZE YOUR CAPM RETURN ESTIMATE?

A Yes. Mr. Hevert observed that I produced two CAPM return estimates, one reflecting a market return of 9.9% and a second reflecting a return of 11.5%. His criticisms largely focused on the low-end of my market return estimate. Concerning the 9.9% market return estimate, he states that the historical long-run average return on the market has been 12.06%. He also observes that on a 50-year rolling average basis the high-end range of 11.5% falls in the bottom of the 27% decile of these average returns. (Hevert Rebuttal Testimony at 26).

10 Q DO YOU BELIEVE YOUR PROJECTED RETURNS ON THE MARKET ARE LOW 11 IN RELATIONSHIP TO HISTORICAL RETURNS?

Not when a full consideration is given to market factors that produced historical returns, and the current consensus outlook for future market factors. Most specifically, and notably, historically inflation has averaged around 3.0%. This coincides with the historical arithmetic average market return of 12.1% recognized by Mr. Hevert. (*Id.*). This is what drives the historical real return on the market of 9.19% which I used in my study. Significantly, consensus economists are projecting long-term inflation to be around 2.0%, considerably lower than the historical inflation rate of 3.0%. Hence, a comparable market return going forward, recognizing reduced inflation outlooks, would be 11.0%, which economically is equivalent to the historical market return estimate of 12.1% adjusted for reduced inflation outlook now compared to historical inflation.

1	Q	DID YOU GIVE CONSIDERATION TO THE MARKET RISK PREMIUM IMPLIED							
2		FROM YOUR LOW MARKET RISK PREMIUM RESULT OF 9.9% WHICH MR.							
3		HEVERT PRIMARILY TAKES ISSUE WITH?							
4	Α	Not in the current market conditions, no. As noted at page 61 of my direct testimony,							
5		my estimated CAPM return ranged from approximately 8.07% up to 9.19%. The							
6		high-end of that range was based on a market risk premium estimate of 7.7% which							
7		was the difference between the 11.5% return on the market and a 3.8% risk-free rate.							
8		Holding Mr. Hevert to his contention that the market return going forward							
9		should reasonably reflect the parameters that drove market returns in the past, then							
10		my 11.5% return on the market is the most accurate outlook for future market returns,							
11		because it more accurately reflects the continuation of market factors that produce							
12		market returns going forward, that have been realized by market participants in the							
13		past. It also more accurately reflects changes in returns based on changes to future							
14		market factors, most notably inflation.							
15	Q	MR. HEVERT ALSO DERIVES A MARKET RISK PREMIUM BASED ON AN							
16		ASSUMED RELATIONSHIP OF INTEREST RATES TO MARKET RISK							
17		PREMIUMS. PLEASE COMMENT.							
18	Α	Mr. Hevert introduces a brand new concept which states that market risk premiums							
19		are directly related to the level of interest rates. He cites no academic study for this							
20		principle, nor investment practitioner results. Rather, it is largely based on his							
21		incomplete understanding that academic research supports an ability to accurately							
22		gauge an equity risk premium based on only changes in nominal interest rates. As I							
23		have outlined many times in this testimony, and in many proceedings before the							

Missouri Public Service Commission, Mr. Hevert simply is not accurately quoting

academic studies. Changes in interest rates are one factor which help explains changes in equity risk premiums but they are not the only factor. Rather, academic research is quite clear. The relationship between interest rates and equity risk premiums can change over time, but the relative magnitude of an equity risk premium is largely driven by changes in market perceptions of the risk of equity investment versus debt investment. That risk perception can reflect expected changes in interest rates, but that is simply not the only factor that explains risk premiums. The same is true for his new methodology of assuming the same relationship between interest rates and market risk premiums, which is simply not based on any independent academic or practitioner outlook.

Equity Risk Premium

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- Q DID MR. HEVERT MAKE ANY COMMENTS CONCERNING YOUR EQUITY RISK
- 13 PREMIUM ANALYSIS?
- Yes. Mr. Hevert's primary argument is that equity risk premiums should be made simply based on changes in nominal interest rates. He demonstrates that there is a relationship between changes in nominal interest rates and equity risk premiums, and he believes this is an appropriate and only factor that should be considered.
- 18 Q PLEASE RESPOND.
- The relationship between equity risk premiums is driven by changes in perceptions of levels of investment risk between equity and debt securities. Changes in interest rates are one component that describes this equity versus debt investment risk outlook but it is not the only factor. Indeed, academic research clearly finds that relationships between interest rates and equity risk premiums can change based on

changes in market conditions, and that the relationships that existed in prior periods cannot be used to accurately predict relationships in any other market.

As an example, the level of interest rates can change simply based on the fact that historical inflation has been around 3%, and future inflation is expected to be around 2%. This drop in inflation outlook explains at least a full percentage point of reduction in utility and Treasury bond yields today compared to historical periods. Equity returns, like bond returns, reflect both an inflation outlook and a real return. The real return compensates investors for the relative risk, and produces the opportunity return that allows an investor's money to grow relative to the current spending power of its capital at the time the investment was made. If no other market factors change, and inflation outlooks decrease by 1 percentage point prospectively, compared to 3 percentage points historically, then it is reasonable to believe that a 1 percentage point reduction in interest rates would not impact the equity risk premium at all. Both debt and equity expected returns would decline by a percentage point. Despite this common sense and academic and fundamental aspect of security investments, Mr. Hevert's simplistic analysis would ignore this straight-forward principle.

Financial Integrity

- 19 Q WHAT CRITICISMS DOES MR. HEVERT OFFER CONCERNING YOUR
 20 FINANCIAL INTEGRITY ANALYSIS?
 - A Mr. Hevert claims that a credit rating review is related to more than just the impact on cost of service of a particular return on equity and overall cost of service from the utility. It is based on a more detailed and complete assessment performed by the credit rating agencies to assign bond ratings. Second, Mr. Hevert claims that I should

have more accurately gauged my pro forma credit metrics to determine whether or not they fall within credit rating guidelines that will support KCPL and GMO's bond rating.

Q DO YOU HAVE ANY GENERAL COMMENTS?

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Α

As an initial matter, it is important to recognize two facts. First, KCPL has agreed that a 9.3% return on equity, as agreed to in Kansas, is a reasonable return on equity. By agreeing that the 9.3% return on equity is reasonable, KCPL is agreeing that it will preserve its financial integrity. Otherwise, if it will not maintain KCPL's financial integrity, the Commission should mandate that KCPL take fundamental steps to shield Missouri ratepayers from the return on equity agreed to in Kansas. Clearly, despite Mr. Hevert's criticisms, KCPL itself has agreed that a 9.3% return on equity will maintain its financial integrity.

Second, while Mr. Hevert has raised criticisms of my approach for analyzing financial integrity, he has failed to run his own financial integrity analysis. This failure is undoubtedly due to the fact that Mr. Hevert recognizes that a 9.3% equity return does support KCPL's credit rating, as confirmed by credit rating analysts, and that his 9.85% return on equity will be shown to be inflated and more than is needed to preserve KCPL and GMO's financial integrity.

PLEASE PROVIDE SPECIFIC COMMENTS ON MR. HEVERT'S CLAIM THAT FINANCIAL INTEGRITY AND CREDIT RATING ARE BASED ON MORE DETAILS THAN YOU HAVE REFLECTED IN YOUR ANALYSIS.

I agree. However, credit rating analysis of KCPL and GMO is not the objective of my testimony in this case. Rather, I am providing information that helps the Commission

determine whether my recommended return on equity meets the *Hope* and *Bluefield* standards of awarding a return on equity that: (a) reflects fair compensation that is comparable to returns in other enterprises of comparable risk; (b) supports KCPL / GMO's financial integrity and access to capital; and (c) accomplishes these objectives at fair and reasonable prices to retail customers.

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The only aspects of the credit rating review that is impacted by my return on equity and capital structure adjustments are the cash flow credit metrics realized in KCPL's / GMO's cost of service. Therefore, my intention was, and is, to provide evidence so the Commission can find that my 9.3% return on equity will provide an opportunity, but not a guarantee, that KCPL and GMO will be fairly compensated, will preserve financial integrity and credit rating, so as to support their access to external capital, and these financial objectives will be met at fair and reasonable prices to their retail customers.

BASED ON S&P'S CORPORATE CREDIT RATING GUIDES, AND ASSESSMENT OF BUSINESS AND FINANCIAL RISK FOR KCPL AND GMO, WILL YOUR 9.3% RECOMMENDED RETURN ON EQUITY AND RATE OF RETURN RECOMMENDATIONS FOR THESE UTILITIES SUPPORT THEIR CURRENT BOND RATINGS?

Yes. I went into detail on this in my direct testimony on my Schedule MPG-21, pages 1 and 5. On page 1, I show that KCPL has a financial risk profile score from S&P of "Significant" and an "Excellent" business position ranking. Hence, for the "Significant" category, my rate of return will produce credit metrics that are at the strong end for debt-to-EBITDA ratios, and toward the high-end for FFO-to-debt metrics. I also observed that the adjusted total debt ratio is consistent with industry

medians for utilities with A- bond ratings. The same is true for GMO as shown on Schedule MPG-21, page 5. There, GMO has a financial risk profile score of "Significant" and a business risk profile score of "Strong." With these ratings, GMO's credit metrics will be at the strong end of the "Significant" financial risk category for debt-to-EBITDA, and again toward the high end for FFO-to-debt. These ratings will reflect a strong BBB to an A- bond rating criterion. This reasonably aligns with GMO's bond rating.

For these reasons, my recommended overall rate of return I conclude represents fair compensation, will maintain KCPL's and GMO's financial integrity and credit standing, and preserve their access to capital. However, my recommended rate of return will accomplish these objectives at more reasonable rates to retail customers, than the Companies' proposed rate of return.

Response to Staff Witnesses Jeffrey Smith and Natelle Dietrich

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14 Q DO YOU HAVE ANY COMMENTS IN RESPONSE TO STAFF WITNESS JEFFREY 15 SMITH'S REBUTTAL TESTIMONY?

Yes. I will respond to two assertions Mr. Smith made in his rebuttal testimony. First, I will respond to his contention that I removed the amount of goodwill reflected on GPE's balance sheet, and not the amount reflected on GMO's balance sheet (Smith Rebuttal at 5). Second, I will respond to his assertion that my recommended embedded debt cost for GMO is "not based on known and measurable costs." (Id. at 8).

1	Q	DID YOU	J REMOVE	THE	AMOUNT	OF	GOODWILL	RECORDED	ON	GPE'S
2		BALANC	E SHEET OF	R GMC	O'S BALAN	CE S	SHEET?			

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I removed the amount of goodwill which GMO listed on its FERC Form 1 balance sheet. In Schedule MPG-SR-5, I am attaching several pages of GMO's 2017 FERC Form 1 as proof of the accuracy of my adjustment. GMO asserts the following concerning its annual impairment test of its balance sheet goodwill asset:

Accounting rules require goodwill to be tested for impairment annually and when an event occurs indicating the possibility that an impairment exists. The annual impairment test for the \$169.0 million of GMO acquisition goodwill was conducted on September 1, 2017.⁷

This amount of goodwill is recorded on GMO's balance sheet as a component of Miscellaneous Deferred Debt Account 186 (GMO's FERC Form 1 at page 233) as recorded on GMO's balance sheet (GMO's FERC Form 1 stated at page 111).⁸ As GMO's FERC Form 1 makes clear, I did not use GPE's goodwill asset in my capital structure adjustment, and I disagree with Mr. Smith that the amount of common equity I removed from GMO's capital structure was that recorded by GPE. Mr. Smith is simply incorrect in this assertion.

Q DO YOU AGREE THAT YOUR ADJUSTMENT TO GMO'S COST OF DEBT IS NOT KNOWN AND MEASURABLE?

No. It is known that both of these affiliate loans are priced above prevailing market conditions. GMO has an option to call and reprice these affiliate loans at the current market cost. However, there are repricing costs, so GMO needs to prove a call and reprice is not economic. Because GMO debt is large affiliate loan transactions, there should be a requirement for GMO to prove its affiliate loans are priced at the current

⁷GMO FERC Form No. 1, page 123.6 (See Schedule MPG-SR-5, page 6, emphasis added). ⁸*Id.*, pages 3 and 7, emphasis added.

market cost. This requirement, which is part of the Commission's affiliate transaction rule, will protect customers from paying inappropriate charges between affiliate companies.

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Because the loans in question are affiliate loan transactions, a requirement to ensure that customers are not detrimentally harmed by these transactions is incumbent on GMO.

IN REBUTTAL TESTIMONY, STAFF WITNESS NATELLE DIETRICH INDICATES THAT STAFF DID NOT CONSIDER THE IMPACT ASSOCIATED WITH THE IMPLEMENTATION OF SENATE BILL 564 ("SB564") IN THE PREPARATION OF ITS CASE. STAFF EXPLAINS THAT IT IS NOT KNOWN WHETHER KCPL / GMO WOULD OPT INTO THE PLANT IN SERVICE ACCOUNTING ("PISA") PROVISIONS OF SB564. DO YOU BELIEVE THAT THIS IS APPROPRIATE? No. As I mentioned at page 8 of my direct testimony, "I believe [SB564] does clearly reduce risk and a reduction in return on equity to reflect that risk reduction would be appropriate." I believe that this is true regardless of whether KCPL / GMO have expressly indicated their intention to opt into the PISA provisions of SB564. In this regard, the mere fact that SB564 was enacted provides a risk reduction tool that is available to KCPL and GMO. KCPL and GMO can assess their individual situation at any time and, without any need for Commission approval, may opt into those PISA provisions. Therefore, whether KCPL / GMO actually opt into PISA, the fact is that KCPL / GMO's risk profile has already been reduced simply by the fact that the risk reducing tool is available for their use at any time.

- 1 Q DOES THIS CONCLUDE YOUR SURREBUTTAL TESTIMONY?
- 2 A Yes, it does.

\lconsultbai.local\documents\prolawdocs\sdw\10551.1\testimony-bai\351113.doc

KCPL / GMO

Comparison of Hevert's Return on Equity Estimates

			ER-2016-0284		ER-2018-0144				
Description	Yields		<u>Direct¹</u>	<u>Update</u> ²	Yields		Direct ³	<u>Update⁴</u>	
			(1)	(2)			(3)	(4)	
Constant Growth DCF:									
30-Day Average			8.76%	8.99%			8.28%		
90-Day Average			8.82%	8.94%			8.31%		
180-Day Average			9.00%	<u>8.96%</u>			<u>8.38%</u>		
Average Constant Growth DCF			8.86%	8.96%			8,32%		
Multi-Stage Growth DCF:									
30-Day Average			9.45%	9.18%			8.70%		
90-Day Average			9.60%	9.13%			8.74%		
180-Day Average			10.08%	9.14%			8.81%		
Average Multi-Stage Growth DCF			9.71%	9.15%			8.75%		
morago man omgo oroma zo:			*******						
DCF Range			8.9% to 9.7%	9.0% to 9.2%			8.3% to 8.8%		
CAPM Results (Bloomberg Bela)	Direct	<u>Update</u>			<u>Direct</u>	<u>Update</u>			
Current 30-Yr Treasury (BL)	2.65%	2.75%	9.11%	8.77%	2.77%	3.11%	8.95%	10.13%	
Current 30-Yr Treasury (VL)	2.65%	2.75%	9.49%	9.37%	2.77%	3.11%	9.45%	10.34%	
Near-Term Projected 30-Yr Treasury (BL)	3.08%	3.13%	9.55%	9.15%	3.32%	3.48%	9.50%	10.50%	
Near-Term Projected 30-Yr Treasury (VL)	3.08%	3.13%	9.92%	9.75%	3.32%	3.48%	9.99%	10.71%	
CAPM Results (Value Line Beta)									
Current 30-Yr Treasury (BL)	2.65%	2.75%	10.72%	10.17%	2.77%	3.11%	10.61%	11.66%	
Current 30-Yr Treasury (VL)	2.65%	2.75%	11.18%	10.91%	2.77%	3.11%	11.24%	11.91%	
Near-Term Projected 30-Yr Treasury (BL)	3.08%	3.13%	11.15%	10.55%	3.32%	3.48%	11.15%	12.03%	
Near-Term Projected 30-Yr Treasury (VL)	3.08%	3.13%	11.62%	11.29%	3.32%	3.48%	11.78%	12.28%	
Risk Premium				40.0494	0.774		0.0504	0.000	
Current 30-Yr Treasury	2.65%	2.75%	10.04%	10.01%	2.77%	3.11%	9.95%	9.96%	
Near-Term Projected 30-Yr Treasury	3.08%	3.13%	10.05%	10.03%	3.32%	3.48%	10.01%	10.03%	
Long-Term Projected 30-Yr Treasury	4.45%	4.35%	10.39%	10.34%	4.20%	4.30%	10.25%	10.28%	
Alternative Risk Premium	0.050/		0.7404	24/2	0.338	NIZA	0.04%	NIA	
Current 30-Yr Treasury	2.65%	N/A	9.74%	N/A	2.77% 3.32%	N/A N/A	9.61% 9.59%	N/A N/A	
Near-Term Projected 30-Yr Treasury	3.08%	N/A	9.75%	N/A		N/A N/A	9.59% 9.70%	N/A N/A	
Long-Term Projected 30-Yr Treasury	4.45%	N/A	10.04%	N/A	4.20%	IV/A	9.70%	IWA	
Range	9.75% to 10.50% 9.75% to 10.50%			9.75% to 10.50% 9.75% to 10.50%					

Sources

¹ER-2016-0285 Hevert Direct Testimony at 22, 32, 38, 41 and 42.

²ER-2016-0285 Hevert Rebuttal Schedules RBH-13, RBH-14, RBH-17, and RBH-18.

³Schedules RBH-1 through RBH-7.

⁴Hevert Rebuttal Schedules RBH-3 through RBH-18.

KCPL

Case Name: 2018 KCPL Rate Case Case Number: ER-2018-0145

Response to Woods David Interrogatories - MECG_20180813
Date of Response: 8/27/2018

Question:13-1

- (a) Does KCPL / GMO / Great Plains Energy believe that the 9.3% return on equity agreed to by KCPL and Westar in Kansas is reasonable?
- (b) If KCPL / GMO / Great Plains Energy does not believe that the 9.3% return on equity agreed to in Kansas is reasonable, please identify all of the potential financial implications associated with KCPL / Westar agreeing to a 9.3% return on equity?
- (c) If KCPL / GMO / Great Plains Energy do not believe that the 9.3% return on equity is reasonable, please identify all steps that KCPL / GMO / Great Plains Energy have taken to protect Missouri ratepayers from the potential financial implications associated with KCPL / Westar agreeing to a 9.3% return on equity in Kansas.

Response:

a- Yes. See the supplemental Direct testimony of Darrin Ives in KCC Docket No. 18-KCPE-480-RTS.

b. N/A

c. N/A

Information provided by Robert B. Hevert, ScottMadden, Inc.

Attachment: Q13-1_Verification.pdf

KCPL

Case Name: 2018 KCPL Rate Case Case Number: ER-2018-0145

Response to Woods David Interrogatories - MECG_20180813

Date of Response: 8/27/2018

Question:13-2

- (a) In its last case in Kansas (15-KCPE-116-RTS), KCPL asserted that a reasonable return on equity was 10.0 to 10.6 (with a recommended point of 10.3%). In that case, the Commission authorized a return on equity of 9.30% (Order dated September 10, 2015). Does KCPL believe that the 9.3% return on equity authorized by Kansas in that last case was reasonable?
- (b) If KCPL / Great Plains Energy does not believe that the 9.30% return on equity authorized by the Kansas Commission was reasonable, please identify all financial implications that resulted from the Kansas Commission authorizing an unreasonable return on equity?
- (c) If KCPL / Great Plains Energy does not believe that the 9.30% return on equity authorized by the Kansas Commission was reasonable, how were KCPL and GMO ratepayers in Missouri protected from the financial implications of the Kansas Commission authorizing an unreasonable return on equity?

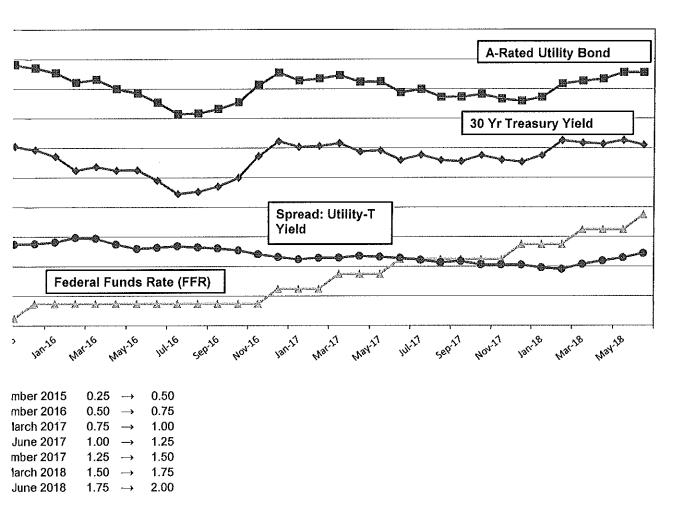
Response:

- (a) No.
- (b) The 9.3% ROE adopted by the KCC for KCP&L in docket No. 15-KCPE-116-RTS produced lower authorized rates and resulting revenues than if a higher ROE had been used.
- (c) KCP&L and GMO are not aware of any financial implications to GMO or KCP&L-MO customers from the adoption of a 9.3% ROE in KCC Docket No. 15-KCPE-116-RTS. Also see the response to DR 13-1(a).

Information provided by Robert B. Hevert, ScottMadden, Inc.

Attachment: Q13-2 Verification.pdf

Timeline of Federal Funds Rate Increases



nk of New York, https://apps.newyorkfed.org/markets/autorates/fed-funds-search-page of the Federal Reserve System, https://www.federalreserve.gov/datadownload/ds, https://credittrends.moodys.com/

Schedule MPG-SR-3

Electric Utilities (Valuation Metrics)

Price to Earnings (P/E) Ratio ¹																	
17-Year																	
Average	2018 2	2017	2016	<u>2015</u>	<u>2014</u>	2013	2012	<u>2011</u>	2010	2009	2008	2007	2006	2005	2004	2003	2002
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
17.71	22.10	23.05	18.63	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
15.98	18.90	20.60	22.30	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
15.65	18.80	20.60	18.29	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
14.03	17.00	19.33	15.18	15.77	15.88	14.49	13.77	11.92	13.42	10.03	13.06	16.27	12.91	13.70	12.42	10.68	12.68
27.90	22.90	27.27	20.49	40.94	N/A	N/A	₩A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<i>N</i> 3	N/A	WA
18.47	26,60	23.37	18,80	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
17.66	17.40	19.48	22.29	16.14	19.03	18.24	17.13	31,13	1B.10	9.93	N/A	15.02	15.77	17.27	17.13	15.95	12.52
14.75	17.10	17.91	21.91	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
16.84	18.80	21,32	20.94	18.29	17.30	16.32	15.07	13.62	12.48	13.58	10.87	26.84	22.18	12,60	12,39	N/A	N/A
15.38	17.90	19.77	18.80	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
18.00	17.30	22.17	21.33	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
15,41	17.00	18,59	18.97	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
16,80	18.20	19.93	21.25	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
13.98	14.90	17.23	17.92	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
17,55	24.60	21,78	18,66	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
13.78	19.00	15.01	10.92	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
17.57	17.60	19.47	18.69	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	18.07
14.47	15.70	13,41	18,68	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
18.22	33.20	11.41	15,91	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
18.89	15.10	16.81	21.60	18.00	24.29	19.97	20.12	18,79	18.22	16.36	17.48	21.14	17.68	N/A	<i>N</i> A	N/A	N/A
15.52	N/A	NMF	17.98	19.37	16.47	14.19	15.53	16.11	12.10	16.03	20.55	18.35	18,30	13.96	12,59	12.23	11.09
18.00	18.20	20.69	13.56	20.40	15.88	16.21	15.81	17.09	18,59	19.79	23.16	21.57	20.33	18.27	19.18	13.76	13.47
16.27	21.80	20,60	19.06	16.22	14.87	13.45	12.41	11.54	11.83	10.20	13.93	18.19	15.07	16.70	15.49	26.51	18.88
18.55	24.40	29.36	24.90	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
16,11	20.60	21.65	20.71	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
16.75	16.60	17.85	17.19	18.38	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
14.99	16,70	18.32	17.68	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
24,18	22.30	22.06	20.19	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
16.79	MAE	18.28	21.13	26.40	15.00	23.67	20.70	15.46	15.80	13.01	12.08	16.65	14.84	15.37	13.81	9.50	N/A
15.67	17.80	19.28	18.74	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
17,97	20.50	20,43	19.83	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
16.38	19.60	20.03	19.06	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
14.17	12.20	17.65	12.83	13.92	14.08	12.84	10.88	10.52	11.93	25.69	17.84	17.26	14.10	15,12	12.51	10.59	11.06
13.52	16.50	16.31	15.35	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
13.71	9.70	14.46	16.80	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
15.01	21.00	24.33	24.37	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
15.65	15.20	15.48	17.76	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
17.50	24.70	23.54	19.18	17.92	19.98	20.68	15.02	15.83	15.10	12.89	16.79	15.33	18.92	15.11	17.57	14.80	14.16
16.08	18.40	20.01	19.95	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
15.58	N/A	23.40	21.59	18.45	15.36	14.04	13.43	14,78	12.96	14.95	16.96	14.10	12.18	14.79	17.44	10.78	14.02
16.87	18.70	20.20	18.48	16.54	15.44	15.04	14.82	14.24	14.13	12.66	13.69	16.65	14.80	15.38	13.65	11.62	40.80
												,					
16.41	19.03	19.81	18.97	18.00	17.39	16,38	15.69	15.30	14.28	13.56	15.18	17.74	16.47	16.52	16.57	13.70	14.31
15.73	18.30	19,97	18.80	17.71	16.54	16.27	15.04	14.31	12.91	12.82	14.21	18.41	15.88	15.92	15.29	13.60	13.47

Survey Investment Analyzer Software, downloaded on June 21, 2018. Survey, May 18, June 15, and July 27, 2018.

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Electric Utilities (Valuation Metrics)

17-Year							market Pf1	ce to Cash	FIOW IMPR	LI Kano .							
A <u>verage</u> (1)	2018 ^{2/2} (2)	2017 (3)	<u>2016</u> (4)	<u>2015</u> (5)	2014 (6)	<u>2013</u> (7)	2012 (8)	<u>2011</u> (9)	<u>2010</u> (10)	<u>2009</u> (11)	<u>2008</u> (12)	<u>2007</u> (13)	2006 (14)	<u>2005</u> (15)	2004 (16)	<u>2003</u> (17)	<u>2002</u> (18)
9.44	10.69	10.95	8.26	7.49	8.80	9.15	8.18	7.91	8.04	8,51	9.29	10,30	11.06	11,54	11.48	N/A	N/A
7.62	9.45	13.21	10.67	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
6.88	7.55	8.38	7.44	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
6.25	8.09	8.81	7.57	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
9.90	9.60	10.14	8.56	11.30	N/A	N/A	N/A	N/A	N/A	WA	WA	N/A	N/A	N/A	N/A	₩A	N/A
6.70	10.04	9.35	7.63	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
7.59	8.43	9.20	9.33	8.06	8.81	8.03	6.04	7.85	6.16	4.25	11.28	7.62	6.92	7.57	6.69	6.89	5.92
4.92	8.27	6.97	5.96	5.75	6.25	6.58	5.15	5.39	4.70	4.05	4.29	5.17	3.94	4.70	4.26	2.08	2.16
5.59	7.79	8.75	8.50	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
8.21	9.06	9.64	9.39	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
9.36	10.12	11.35	11.59	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
6.19	8.43	9.05	8.64	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
7.55	7.05	8.40	8.57	7.95	8.12	8.11	9.53	6.56	6.01	5.96	7,13	7.16	N/A	N/A	N/A	NA	N/A
5.30	5.54	7.05	6.77	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
5.89	8.59	8.54	7.46	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
5.71	4.98	4.66	4.01	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
5.67	9.37	10.36	10.14	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
6.09	4.31	4.45	4.80	4.70	5.09	4.61	5.54	5.88	5.10	5.98	9.65	9.89	8.62	7.97	6.29	5.71	4.97
6.39	9.41	4.76	5.12	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
8.16	7.62	8.23	10.48	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
6.89	N/A	14.62	8.63	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
7.96	8.49	9.21	7.44	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
8.10	11.33	11.56	10.95	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
11.09	14.67	17.33	15.66	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
7.51	10.20	11.62	9.23	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
7.55	7.79	8,82	8.65	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
7.74	9.15	10.52	9.03	9.25	10.65	9.93	7.35	7.48	8.61	5.37	6.43	7.58	7.50	7.04	6.73	5.62	5.39
9.20	10.78	11.09	9,38	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
6.42	9.07	7.09	7.26	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
6.10	7.87	8.73	7.89	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
6.69	7.03	7.40	7.64	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
5.70	6.61	7.45	7.12	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
7.51	8.04	10.11	8.37	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
7.38	8.49	8.67	8.56	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
7.03	6.01	8.26	9.59	8.33	7.50	7.49	7.40	6.75	6.52	5,88	6.38	7.15	7.03	5.40	6.88	6.59	6.36
7.73	9.97	10.65	10.88	9.99	10.77	9.37	7.26	8.13	6.53	6.07	7.07	8.61	7.22	6,96	5.16	4.85	4.00
8.14	7.13	7.49	8.83	8.23	8.42	8.30	8.75	8.22	7.79	7.08	8.18	8.62	8.47	8.41	8.28	8.28	7,83
7.26	10.15	10.32	8.60	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
8.37	10.36	11.04	10.95	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
6.91	N/A	10.87	10.86	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
6.45	7.68	8.50	8.10	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
7.19	B.54	9.36	8.65	8.05	7.85	7.39	6.98	6.53	6.00	5.59	6.95	7.72	7.12	7.13	6.77	5.70	5.85
7.06	8.49	9.05	8.57	7.93	7.54	7.12	6.85	6.27	5.80	5.35	7.09	7.76	7.37	7.04	6.71	5,62	5,52

Survey Investment Analyzer Software, downloaded on June 21, 2018. Survey, May 18, June 15, and July 27, 2018.

high and low price for 2018 and the projected 2018 Cash Flow per share, e investment Survey, May 18, June 15, and July 27, 2018.

Electric Utilities (Valuation Metrics)

REAGE 2015 2017 2016 2014 2013 2012 2011 2019 2009 2009 2009 2007 2008 2008 2008 2008 2007 2008 217 1.86 1.87 1.48 1.55 1.34 1.35 1.28 1.18 1.55 1.44 1.45 1.29 1.18 0.90 0.83 0.78 1.25 1.67 1.48 1.50 1.62 1.18 1.53 1.73 1.85 1.73 1.85 1.73 1.85 1.73 1.85 1.73 1.85 1.73 1.85 1.73 1.85 1.73 1.85 1.73 1.85 1.73 1.85 1.73 1.85 1.73 1.85 1.73 1.85 1.74 <th< th=""><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th>Market Pric</th><th>e to Book</th><th>Value (MP/</th><th>BV) Ralio ¹</th><th></th><th></th><th></th><th></th></th<>								Market Pric	e to Book	Value (MP/	BV) Ralio ¹				
1.59	14-Year														
189 1.75 1.78 1.53 1.37 1.42 1.51 1.34 1.35 1.28 1.15 1.55 1.89 2.09 2.21 1.67 2.11 2.38 2.17 1.86 1.80 1.70 1.57 1.46 1.31 1.04 1.33 1.67 1.52 1.81 1.39 1.60 1.93 1.67 1.46 1.46 1.46 1.31 1.04 1.33 1.67 1.52 1.81 1.39 1.60 1.93 1.67 1.46 1.46 1.46 1.31 1.04 1.33 1.67 1.52 1.81 1.55 1.52 1.81 1.55 1.56 1.57 1.60 1.52 1.81 1.52 1.77 1.88 1.81 1.55 1.54 1.40 1.31 1.23 1.23 1.08 1.48 1.55 1.56 1.55 1.58 1.82 1.77 1.88 1.81 1.55 1.54 1.40 1.31 1.23 1.23 1.08 1.48 1.55 1.56 1.55 1.57 1.38 1.33 1.25 1.21 1.19 1.07 0.94 1.11 1.29 1.30 1.31 1.48 1.85 1.23 1.57 1.47 1.38 1.33 1.25 1.21 1.19 1.07 0.94 1.11 1.29 1.30 1.31 1.48 1.59 1.20 1.34 1.35 1.28 1.21 1.19 1.07 0.94 1.11 1.29 1.30 1.31 1.48 1.59 1.20 1.39 1.62 1.21 1.19 1.07 0.94 1.11 1.29 1.30 1.31 1.33 1.25 1.22 1.21 1.19 1.07 0.94 1.12 1.15 1.29 1.30 1.31 1.33 1.25 1.21 1.19 1.07 0.94 1.10 1.29 1.30 1.31 1.33 1.25 1.21 1.19 1.07 0.94 1.12 1.13 1.29 1.30 1.31 1.33 1.25 1.21 1.19 1.07 0.94 1.10 1.29 1.30 1.31 1.33 1.25 1.29 1.34 1.34 1.35 1.53 1.53 1.53 1.53 1.53 1.53 1.53	Average														2005
1.67	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
167	1.59	1.75	1.78	1.53	1.37	1.42	1.51	1.34	1,35	1.28	1.15	1.55	1,89	2.09	2 22
189														1,52	1,33
1.52 1.77 1.88 1.81 1.55 1.54 1.40 1.31 1.23 1.23 1.08 1.48 1.85 1.55 1.56 1.57 1.30 1.72 1.10 0.93 0.83 0.83 0.72 NIA	1.39										0.78	1.25	1.60	1.62	1.68
1.01											1.08	1.48	1.85	1.56	1.57
1.85	0.87							N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1.48 1.59 2.06 1.94 1.59 1.79 1.62 1.21 1.14 1.07 0.83 1.22 1.67 1.47 1.65 2.41 2.38 2.59 2.73 2.43 2.27 2.30 1.99 1.87 1.96 1.77 2.49 3.13 2.75 3.04 1.83 1.63 1.58 1.42 1.34 1.38 1.47 1.38 1.22 1.08 1.17 1.47 1.52 1.49 1.33 1.47 1.38 1.22 1.08 1.17 1.47 1.52 1.20 1.60 1.57 1.53 1.20 1.16 0.89 1.10 1.35 1.29 1.34 1.57 1.53 1.24 1.07 <												1.11	1.29	1.30	1.13
2.41 2.38 2.59 2.73 2.43 2.27 2.30 1.99 1.87 1.96 1.77 2.49 3.13 2.75 3.08 1.80 2.50 2.93 2.72 2.43 2.26 2.09 1.91 1.86 1.48 1.10 1.23 1.82 1.42 1.34 1.81 1.83 1.58 1.42 1.34 1.38 1.47 1.80 1.17 1.47 1.52 1.11 1.60 0.99 1.10 1.10 1.10 1.50 1.20 1.13 1.51 1.10 1.50 1.22 1.00 1.20 1.43 1.52 1.49 1.59 1.64 <	1.48												1.57	1.47	1.63
183 260 293 272 243 226 209 191 1.66 1.48 1.10 123 1.82 142 1.34 1.38 1.47 1.38 1.22 1.08 1.17 1.48 1.42 1.57 1.58 1.20 1.10 1.10 0.98 1.30 1.15 1.15 1.15 1.15 1.15 1.15 1.10 0.98 1.30 1.10 1.15 1.20 1.10 1.16 0.89 1.10 1.35 1.29 1.26 1.44 1.83 1.24 1.10 1.01 1.04 1.56 2.05 1.80 0.05<	2.41											2.49	3.13	2.75	3.06
1.40 1.53 1.63 1.58 1.42 1.34 1.38 1.47 1.38 1.22 1.08 1.17 1.47 1.47 1.47 1.52 2.65 2.49 2.94 3.15 3.34 3.55 2.97 2.84 2.37 2.01 1.80 2.42 2.29 2.07 2.56 1.14 1.86 2.01 1.82 1.65 1.62 1.51 1.55 1.20 1.16 0.89 1.10 1.35 1.29 1.38 1.18 1.29 1.41 1.35 1.29 1.28 1.19 1.12 1.11 1.00 0.91 1.06 1.15 N/A N/A 1.64 1.69 2.14 1.26 1.68 1.57 1.53 1.24 1.07 1.04 1.55 2.05 1.80 1.34 1.77 1.76 1.66 1.68 1.57 1.59 1.64 1.17 0.98 1.33 1.69 1.71 1.77 1.76 1.69 1.01 1.77 1.76 1.68 1.52 1.59 1.69 1	1.93												1.82	1.42	1.32
2.85 2.49 2.94 3.15 3.34 3.55 2.97 2.84 2.37 2.01 1.80 2.42 2.99 2.07 2.56 1.14 1.86 2.01 1.82 1.65 1.62 1.51 1.35 1.20 1.16 0.89 1.10 1.35 1.29 1.31 1.18 1.29 1.41 1.35 1.29 1.28 1.19 1.12 1.11 1.00 0.91 1.06 1.15 N/A N/A 1.66 1.67 1.62 1.68 1.57 1.53 1.24 1.07 1.04 1.55 2.05 1.80 1.93 1.67 1.67 1.60 1.40 1.33 1.21 1.31 1.35 1.62 1.66 2.44 2.65 1.89 2.01 1.20 1.20 1.14 1.28 1.17 1.46 1.95 2.07 2.67 4.99 4.79 3.89 3.06 1.83 1.82 1.05 1.22	1.40						1.38	1.47	1.38	1.22	1.08	1.17	1.47	1,47	1.52
1.44 1.86 2.01 1.82 1.65 1.62 1.51 1.35 1.20 1.16 0.89 1.10 1.35 1.28 1.31 1.18 1.29 1.41 1.35 1.28 1.19 1.12 1.11 1.00 0.91 1.06 1.15 N/A N/A 1.64 1.69 2.17 1.92 1.76 1.68 1.57 1.53 1.24 1.07 1.04 1.56 2.05 1.80 1.33 1.58 1.87 1.87 1.68 1.48 1.52 1.49 1.59 1.64 1.17 0.98 1.33 1.69 1.71 1.76 1.71 1.70 1.76 1.67 1.60 1.33 1.21 1.31 1.35 1.24 2.64 2.63 1.33 1.60 1.21 1.71 1.76 1.66 2.44 2.65 1.89 2.00 1.41 1.70 1.76 1.63 1.47 1.38 1.28 1.50 1.31 1.12 1.31 1.60 1.22 1.05 1.8	2.65										1,80	2.42	2.69	2.07	2.50
1.18	1.44										0.89	1.10	1.35	1.29	1.39
1.64 1.69 2.17 1.92 1.76 1.68 1.57 1.53 1.24 1.07 1.04 1.56 2.05 1.80 1.81 1.68 1.48 1.52 1.49 1.59 1.64 1.17 0.98 1.33 1.69 1.71 1.76 1.67 1.40 1.33 1.21 1.31 1.35 1.62 1.66 2.44 2.65 1.89 2.07 1.41 1.67 1.73 1.64 1.53 1.47 1.38 1.28 1.60 1.31 1.12 1.31 1.60 1.22 1.00 1.22 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.03 3.66 2.64 3.53 2.37 1.16 1.15 1.28 1.44 1.33 1.36 1.54 1.59 1.58 1.56 1.33 1.47 1.48 1.62 1.	1.18							1.12	1,11	1.00	0.91	1.06	1.15	N/A	N/A
1.56 1.87 1.88 1.68 1.48 1.52 1.49 1.59 1.64 1.17 0.98 1.33 1.69 1.71 1.76 1.71 1.70 1.76 1.67 1.40 1.33 1.21 1.31 1.35 1.62 1.66 2.44 2.85 1.89 2.01 1.41 1.67 1.73 1.64 1.53 1.47 1.38 1.22 1.50 1.31 1.10 1.31 1.60 1.22 1.00 2.28 1.20 1.20 1.14 1.28 1.17 1.46 1.95 2.07 2.67 4.39 4.79 3.89 3.63 1.68 2.24 3.53 2.37 1.16 1.15 1.28 1.44 1.33 1.38 1.54 2.52 2.23 1.92 1.64 1.48 1.27 1.41 1.28 1.47 1.62 1.59 1.59 1.56 1.58 1.56 1.53 1.48 1.63 1.90 1.64 1.44 1.33 1.48 1.63 1.77 1.88	1.64									1.07	1.04	1.56	2.05	1.80	1.93
1.71	1.56							1.59	1.64	1.17	0.98	1.33	1.69	1.71	1.76
1.41 1.67 1.73 1.84 1.53 1.47 1.38 1.28 1.50 1.31 1.12 1.31 1.60 1.22 1.06 2.28 1.20 1.20 1.14 1.28 1.17 1.46 1.95 2.07 2.67 4.39 4.79 3.89 3.60 1.80 2.64 3.53 2.37 1.16 1.15 1.26 1.44 1.33 1.38 1.54 2.52 223 1.92 1.84 1.48 1.27 1.41 1.26 1.33 1.35 1.45 1.59 1.56 1.33 1.48 1.63 1.90 N/A 1.21 N/A 1.33 1.17 1.12 1.11 1.02 0.96 0.93 0.87 0.80 1.11 1.66 1.77 1.88 1.21 N/A 1.33 1.19 1.54 1.44 1.16 1.61 1.57 2.01 1.75 1.54 1.44 1.16 1.61 1.57 2.01 1.76 1.38 1.89 1.94 1.76 1.52<	1.71						1.21	1.31	1.35	1,62	1.66	2.44	2.65	1.89	2,01
2.28 1.20 1.20 1.20 1.14 1.28 1.17 1.46 1.95 2.07 2.67 4.39 4.79 3.89 3.66 1.88 2.64 3.53 2.37 1.15 1.15 1.28 1.44 1.33 1.36 1.54 2.52 2.23 1.92 1.84 1.21 N/A 1.33 1.17 1.12 1.11 1.02 0.96 0.93 0.87 0.80 1.11 1.66 1.77 1.86 1.61 1.70 1.76 1.63 1.71 1.49 1.54 1.62 1.54 1.44 1.16 1.67 1.57 2.01 1.76 1.88 1.94 1.76 1.54 1.45 1.33 1.19 1.17 1.13 0.92 1.09 1.26 1.37 1.22 2.02 2.43 2.88 2.60 2.10 2.06 1.93 1.76 1.55 1.65 1.54 1.62 1.75 1.83	1.41										1.12		1.60	1.22	1.05
1.88 2.84 3.53 2.37 1.15 1.16 1.28 1.44 1.33 1.38 1.54 2.52 2.23 1.92 1.64 1.48 1.27 1.41 1.28 1.33 1.35 1.45 1.59 1.59 1.56 1.33 1.48 1.63 1.96 N/A 1.21 N/A 1.33 1.17 1.12 1.11 1.02 0.96 0.93 0.87 0.80 1.11 1.66 1.77 1.88 1.61 1.70 1.76 1.63 1.71 1.49 1.54 1.62 1.54 1.44 1.16 1.61 1.57 2.01 1.75 1.33 1.89 1.94 1.76 1.54 1.44 1.16 1.64 1.62 1.54 1.44 1.16 1.61 1.57 2.01 1.75 1.98 2.25 2.35 2.30 2.09 2.15 1.93 1.74 1.55 1.49 1.70 2.06 2.34 1.80 1.93 1.44 1.44 1.44 1.64 1.6	2.28						1.17	1.46	1.95	2.07	2.57	4.39	4.79	3.89	3.60
1.48 1.27 1.41 1.28 1.33 1.35 1.45 1.59 1.59 1.56 1.33 1.48 1.63 1.89 N/A 1.21 N/A 1.33 1.17 1.12 1.11 1.02 0.96 0.93 0.87 0.80 1.11 1.66 1.77 1.86 1.61 1.70 1.76 1.63 1.71 1.49 1.54 1.64 1.14 1.16 1.61 1.57 2.01 1.77 1.88 1.89 1.94 1.76 1.54 1.45 1.33 1.19 1.17 1.13 0.92 1.09 1.26 1.37 1.22 2.02 2.43 2.88 2.60 2.10 2.10 2.06 1.92 1.75 1.65 1.64 1.62 1.75 1.83 2.09 2.15 1.93 1.74 1.55 1.49 1.70 2.06 2.34 1.80 1.94 1.90 1.76 1.65 1.42 1.56 1.42 1.35 1.22 1.07 1.15 1.48 1.80 1.54 1.56 1.42 <td< td=""><td>1.88</td><td></td><td></td><td></td><td></td><td></td><td></td><td>1.44</td><td>1.33</td><td>1,38</td><td>1.54</td><td>2.52</td><td>2 23</td><td>1.92</td><td>1.64</td></td<>	1.88							1.44	1.33	1,38	1.54	2.52	2 23	1.92	1.64
1.21 N/A 1.33 1.17 1.12 1.11 1.02 0.96 0.93 0.87 0.80 1.11 1.66 1.77 1.88 1.61 1.70 1.76 1.54 1.54 1.62 1.54 1.44 1.16 1.61 1.57 2.01 1.78 1.88 1.94 1.76 1.54 1.45 1.33 1.19 1.17 1.13 0.92 1.09 1.26 1.37 1.22 2.02 2.43 2.88 2.60 2.10 2.06 1.92 1.75 1.65 1.54 1.62 1.75 1.83 2.06 1.88 2.25 2.35 2.30 2.09 2.15 1.93 1.74 1.55 1.49 1.70 2.06 2.34 1.80 1.93 1.74 1.55 1.49 1.70 2.06 2.34 1.80 1.93 1.74 1.55 1.49 1.70 2.06 2.34 1.80 1.91 1.63 1.42	1.48							1.59	1.59	1.56	1.33	1.48	1.63	1.96	N/A
1.61 1.70 1.76 1.83 1.71 1.49 1.54 1.62 1.54 1.44 1.16 1.67 2.01 1.76 1.38 1.89 1.94 1.76 1.54 1.45 1.33 1.19 1.17 1.13 0.92 1.09 1.26 1.37 1.22 2.02 2.43 2.88 2.60 2.10 2.00 2.06 1.75 1.65 1.54 1.62 1.75 1.65 1.54 1.62 1.75 1.65 1.54 1.62 1.75 1.65 1.54 1.62 1.75 1.65 1.54 1.62 1.75 1.65 1.54 1.62 1.75 1.65 1.54 1.62 1.75 1.65 1.54 1.62 1.75 1.65 1.54 1.62 1.75 1.65 1.42 1.70 2.06 2.34 1.80 1.93 1.74 1.55 1.49 1.70 2.06 2.34 1.80 1.93 1.44 1.44 1.44 1.44 1.44 1.44 1.44 1.44 1.44 1.46 1.65 <	1.21							0.96	0.93	0.87	0.80	1.11	1.66	1.77	1.66
1.88 1.89 1.94 1.76 1.54 1.45 1.33 1.19 1.17 1.13 0.92 1.09 1.26 1.37 1.22 2.02 2.43 2.88 2.60 2.10 2.10 2.06 1.92 1.75 1.65 1.64 1.62 1.75 1.83 2.09 1.88 2.25 2.35 2.30 2.09 2.15 1.93 1.74 1.55 1.49 1.70 2.06 2.34 1.80 1.93 1.74 1.55 1.49 1.70 2.06 2.34 1.80 1.93 1.74 1.55 1.49 1.70 2.06 2.34 1.80 1.93 1.74 1.55 1.49 1.70 2.06 2.34 1.80 1.93 1.76 1.42 1.35 1.22 1.07 1.15 1.48 1.85 1.42 1.35 1.22 1.07 1.15 1.48 1.85 1.42 1.37 1.22 2.24 1.94 1.90 1.70 1.37 1.52 1.98 1.91 1.80 1.71 1.80 1.76 <	1.61	1.70	1.76	1.63	1.71	1.49	1.54	1.62	1.54	1.44	1.16	1.61	1.57	2.01	1.78
1.98 2.25 2.35 2.30 2.09 2.15 1.93 1.74 1.55 1.49 1.70 2.06 2.34 1.80 1.93 1.44 1.44 1.64 1.68 1.60 1.54 1.56 1.42 1.35 1.22 1.07 1.15 1.48 1.65 1.42 1.83 1.63 1.82 1.73 1.79 2.22 2.24 1.94 1.90 1.70 1.37 1.52 1.98 1.91 1.62 1.76 2.33 2.33 1.90 1.78 1.90 1.96 1.58 1.35 1.19 1.18 1.71 1.93 1.76 1.74 1.58 1.18 1.71 1.69 1.57 1.39 1.38 1.41 1.46 1.56 1.41 1.50 1.94 1.83 1.84 1.58 1.72 1.91 1.72 1.55 1.44 1.47 1.46 1.56 1.41 1.50 1.94 1.83	1.38	1.89	1.94	1.76	1.54	1.45	1.33	1.19	1.17	1.13	0.92	1.09	1.26	1.37	1.22
1.98 2.25 2.35 2.30 2.09 2.15 1.93 1.74 1.55 1.49 1.70 2.06 2.34 1.80 1.93 1.44 1.44 1.64 1.64 1.66 1.54 1.56 1.42 1.35 1.22 1.07 1.15 1.48 1.65 1.42 1.83 1.63 1.82 1.73 1.79 2.22 2.24 1.94 1.90 1.70 1.37 1.52 1.98 1.91 1.86 1.76 2.33 2.33 1.90 1.78 1.90 1.96 1.58 1.35 1.19 1.18 1.71 1.93 1.76 1.74 1.58 1.18 1.71 1.69 1.57 1.39 1.38 1.41 1.46 1.56 1.41 1.50 1.94 1.83 1.48 1.38 1.72 1.91 1.72 1.55 1.44 1.47 1.49 0.95 1.00 1.26 1.24 1.84 1.83 1.24 1.47 1.49 0.95 1.00 1.26 1.24	2.02					2.10	2.08	1.92	1.75	1.65	1.54	1.62	1.75	1.83	2.09
1.44 1.64 1.68 1.68 1.54 1.56 1.42 1.35 1.22 1.07 1.15 1.48 1.85 1.42 1.83 1.63 1.63 1.82 1.73 1.79 2.22 2.24 1.94 1.90 1.70 1.37 1.52 1.98 1.91 1.86 1.76 2.33 2.33 1.90 1.78 1.90 1.96 1.58 1.35 1.19 1.16 1.71 1.93 1.76 1.74 1.56 1.18 1.71 1.69 1.57 1.39 1.38 1.41 1.46 1.56 1.41 1.50 1.94 1.83 1.84 1.38 1.72 1.91 1.72 1.52 1.44 1.47 1.39 1.25 1.14 0.95 1.00 1.26 1.26 1.28 1.16 1.70 1.84 1.56 1.33 1.21 1.09 0.80 0.80 0.69 0.56 0.66 1.23 1.21 1.45 1.28 1.52 1.69 1.56 1.42 1	1.98	2 25	2.35	2.30	2,09	2.15	1.93	1.74	1.55	1.49	1.70	2.06	2.34	1.80	1.93
1.76	1.44	1.44	1.64	1.68	1.60	1.54	1,56	1.42	1.35	1.22	1.07	1.15	1.48	1.65	1.42
1.76 2.33 2.33 1.90 1.78 1.90 1.96 1.58 1.35 1.19 1.18 1.71 1.93 1.76 1.74 1.56 1.18 1.71 1.93 1.78 1.90 1.96 1.58 1.35 1.19 1.18 1.71 1.93 1.76 1.74 1.56 1.18 1.71 1.99 1.57 1.39 1.38 1.41 1.46 1.50 1.44 1.50 1.94 1.83 1.81 1.16 1.70 1.84 1.58 1.33 1.21 1.09 0.98 0.80 0.69 0.56 0.66 1.23 1.21 1.45 1.28 1.52 1.69 1.58 1.42 1.37 1.28 1.14 1.09 0.94 0.92 1.05 1.32 1.38 1.21 1.49 1.03 1.82 1.69 1.67 1.58 1.57 1.44 1.69 1.67 1.78 2.58 2.99 2.46 2.44 1.44 1.46 1.59 1.67 1.78 2.58	1.83	1.63	1.82	1.73	1.79	2 22	2 24	1.94	1.90	1.70	1.37	1.52	1.98	1.91	1.80
1.38	1.76	2.33	2.33	1.90	1.78		1.96	1.58	1.35	1.19		1.71	1.93	1.76	1.74
1.38 1.72 1.91 1.72 1.52 1.44 1.47 1.39 1.25 1.14 0.95 1.00 1.26 1.26 1.26 1.25 1.14 0.95 1.00 1.26 1.26 1.26 1.25 1.14 0.95 1.00 1.26 1.26 1.26 1.25 1.69 1.60 1.58 1.33 1.21 1.09 0.98 0.80 0.69 0.66 0.66 1.23 1.21 1.44 1.40 1.09 0.94 0.92 1.05 1.32 1.21 1.48 1.09 0.94 0.92 1.05 1.32 1.21 1.48 1.09 0.94 0.92 1.05 1.32 1.21 1.48 1.09 0.94 0.92 1.05 1.32 1.21 1.45 1.62 1.84 1.80 1.67 1.84 1.46 1.55 1.58 1.47 1.61 2.10 3.19 3.05 2.43 2.50 1.84 1.48 1.48 1.56 1.67 1.78 2.58 2.99 2.48 2.45 1.44 1.46 1.59	1.56						1,38	1,41	1.46	1.56	1.41	1.50	1.94	1.83	1.84
1.16 1.70 1.84 1.58 1.33 1.21 1.09 0.98 0.80 0.69 0.56 0.66 1.23 1.21 1.45 1.28 1.52 1.69 1.56 1.42 1.37 1.28 1.14 1.09 0.94 0.92 1.05 1.32 1.36 N/A 1.03 0.18 2.40 2.46 2.24 1.64 1.55 1.58 1.47 1.61 2.10 3.18 3.05 2.43 2.50 1.90 1.72 1.68 1.67 1.58 1.57 1.44 1.46 1.59 1.67 1.78 2.58 2.99 2.46 2.43 1.44 1.09 1.69 1.67 1.78 2.58 2.99 2.46 2.45 1.48 1.06 1.65 1.74 1.48 1.48 1.36 1.33 1.20 1.45 1.62 1.64 1.72 1.70 1.72 2.01 2.24 2.00 2.17 2.02 1.84 1.53 1.28 1.35 1.22 1.60 1.	1.38	1.72	1.91	1.72	1.52	1.44	1.47	1.39	1.25	1.14	0.95	1.00	1.26	1.26	1.25
2.03 0.18 2.40 2.46 2.24 1.64 1.55 1.58 1.47 1.61 2.10 3.19 3.05 2.43 2.50 1.90 1.72 1.68 1.67 1.58 1.57 1.44 1.46 1.59 1.67 1.78 2.58 2.99 2.48 2.45 1.81 1.06 1.65 1.74 1.47 1.48 1.48 1.36 1.33 1.20 1.45 1.62 1.64 1.77 1.77 2.01 2.24 2.00 2.17 2.20 1.84 1.88 1.35 1.32 1.60 1.87 1.70 1.73 2.04 1.81 2.07 2.01 1.99 2.02 2.04 2.15 1.99 1.83 1.73 2.12 2.24 2.23 2.35 1.90 2.73 2.75 2.29 2.11 2.08 1.82 1.57 1.53 1.41 1.34 1.64 1.74 1.77 1.82	1.16	1.70	1.84	1.58	1.33		1.09	0.98	0.80	0.69					1.45
1.72	1.28	1.52	1.69	1.56	1.42	1.37	1.28	1.14	1.09	0.94	0.92	1.05	1.32	1.36	N∕A
1.48 1.06 1.65 1.74 1.47 1.48 1.48 1.48 1.36 1.33 1.20 1.45 1.62 1.64 1.72 1.77 2.01 2.24 2.00 2.17 2.20 1.84 1.53 1.28 1.35 1.32 1.80 1.87 1.70 1.73 2.04 1.81 2.07 2.01 1.99 2.02 2.04 2.15 1.99 1.83 1.73 2.12 2.24 2.23 2.35 1.90 2.73 2.75 2.29 2.11 2.08 1.82 1.57 1.53 1.41 1.34 1.64 1.77 1.71 1.62 1.87 2.02 2.10 2.09 1.82 2.34 2.21 2.05 1.81 1.65 1.40 1.57 1.77 1.71 1.62 1.87 1.74 1.94 1.95 1.49 1.44 1.33 1.26 1.20 1.10 0.93 1.10 1.36 1.30 1.41 1.54 1.89 2.06 1.88 1.68 1.55 1.50 1.51 1.41 1.32 1.19 1.30 1.53 1.40 1.38 1.68 1.78 <t< td=""><td>2.03</td><td>0.18</td><td>2.40</td><td>2.46</td><td>2 24</td><td></td><td>1.55</td><td>1.58</td><td>1.47</td><td>1.61</td><td></td><td></td><td></td><td></td><td>2.50</td></t<>	2.03	0.18	2.40	2.46	2 24		1.55	1.58	1.47	1.61					2.50
1.77 2.01 2.24 2.00 2.17 2.20 1.84 1.53 1.28 1.35 1.32 1.80 1.87 1.70 1.73 2.04 1.81 2.07 2.01 1.99 2.02 2.04 2.15 1.99 1.83 1.73 2.12 2.24 2.23 2.35 1.90 2.73 2.75 2.29 2.11 2.08 1.82 1.57 1.53 1.41 1.34 1.64 1.74 1.77 1.82 1.87 2.02 2.10 2.09 1.82 2.34 2.21 2.05 1.81 1.65 1.40 1.57 1.71 1.72 1.37 N/A 1.94 1.95 1.49 1.44 1.33 1.26 1.20 1.10 0.93 1.10 1.36 1.30 1.41 1.54 1.89 2.06 1.88 1.68 1.55 1.50 1.51 1.41 1.32 1.19 1.30 1.53 1.40	1.90	1.72	1.68	1.67	1,58	1.57	1.44	1.46	1.59	1.67	1.78	2.58	2.99	2.46	2.45
2.04 1.81 2.07 2.01 1.99 2.02 2.04 2.15 1.99 1.83 1.73 2.12 2.24 2.23 2.35 1.90 2.73 2.75 2.99 2.11 2.08 1.82 1.57 1.53 1.41 1.34 1.64 1.74 1.77 1.82 1.87 2.02 2.10 2.09 1.82 2.34 2.21 2.05 1.81 1.65 1.40 1.57 1.77 1.71 1.82 1.37 N/A 1.94 1.95 1.49 1.44 1.33 1.26 1.20 1.10 0.93 1.10 1.36 1.30 1.41 1.54 1.89 2.06 1.88 1.68 1.55 1.50 1.51 1.41 1.32 1.19 1.30 1.53 1.40 1.38 1.68 1.78 2.00 1.85 1.67 1.68 1.60 1.61 1.43 1.35 1.25 1.63 1.90 1.78 1.80	1.48	1.06	1.65	1.74	1.47	1.48	1.48	1.48	1.36	1.33	1.20	1.45	1.62	1.64	1.72
1.90 2.73 2.75 2.29 2.11 2.08 1.82 1.57 1.53 1.41 1.34 1.64 1.74 1.77 1.82 1.87 2.02 2.10 2.09 1.82 2.34 2.21 2.05 1.81 1.65 1.40 1.57 1.77 1.71 1.62 1.37 N/A 1.94 1.95 1.49 1.44 1.33 1.26 1.20 1.10 0.93 1.10 1.36 1.30 1.41 1.54 1.89 2.06 1.88 1.66 1.55 1.50 1.51 1.41 1.32 1.19 1.30 1.53 1.40 1.38 1.66 1.78 2.00 1.85 1.67 1.68 1.60 1.51 1.43 1.35 1.25 1.63 1.90 1.78 1.80	1.77	2.01	2.24	2.00	2.17										1,73
.87 2.02 2.10 2.09 1.82 2.34 2.21 2.05 1.81 1.65 1.40 1.57 1.77 1.71 1.62 1.37 N/A 1.94 1.95 1.49 1.44 1.33 1.26 1.20 1.10 0.93 1.10 1.36 1.30 1.41 1.54 1.89 2.06 1.88 1.68 1.55 1.50 1.51 1.41 1.32 1.19 1.30 1.53 1.40 1.38 1.68 1.78 2.00 1.85 1.67 1.68 1.60 1.61 1.43 1.35 1.25 1.63 1.90 1.78 1.80	2.04	1.81				2.02	2.04	2.15	1.99	1.83					2.35
.37 N/A 1.94 1.95 1.49 1.44 1.33 1.26 1.20 1.10 0.93 1.10 1.36 1.30 1.41 1.54 1.89 2.06 1.88 1.68 1.55 1.50 1.51 1.41 1.32 1.19 1.30 1.53 1.40 1.38 1.68 1.78 2.00 1.85 1.67 1.68 1.60 1.51 1.43 1.35 1.25 1.63 1.90 1.78 1.80	1.90		2.75		2.11										
1.54 1.89 2.06 1.88 1.68 1.55 1.50 1.51 1.41 1.32 1.19 1.30 1.53 1.40 1.38 1.66 1.78 2.00 1.85 1.67 1.68 1.60 1.51 1.43 1.35 1.25 1.63 1.90 1.78 1.80	1.87		2.10	2.09											1.62
1.66 1.78 2.00 1.85 1.67 1.68 1.60 1.51 1.43 1.35 1.25 1.63 1.90 1.78 1.80	1.37														1.41
	1.54	1.89	2.06	1.88	1.68	1.55	1.50	1.51	1.41	1.32	1.19	1.30	1.53	1.40	1.38
	1.66	178	200	1 85	1.67	1.68	1.60	1.51	1.43	1.35	1.25	1.63	1.90	1.78	1.80
	1.57	1.75	1,91	1.74	1.57	1.53	1.49	1.47	1.37	1.31	1,15	1.4B	1.71	1.71	1.73

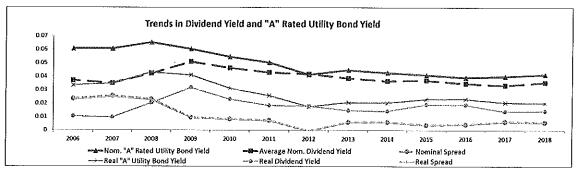
Survey Investment Analyzer Software, downloaded on June 21, 2018. Survey, May 18, June 15, and July 27, 2018.

high and low price for 2018 and the projected 2018 Book Value per share, e Investment Survey, May 18, June 15, and July 27, 2018.

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Electric Utilities (Valuation Metrics)

								Divide	nd Yield ¹						
		13-Year	>>												
Line	<u>Company</u>	Average	2018 22	2017	2016	2015	2014	2013	2012	<u>2011</u>	2010	2009	2008	2007	2006
		(1)	(2)	(3)	(4)	(5)	{5}	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1	ALLETE	4 03%	3.06%	297%	3 56%	3 97%	3 92%	3 69%	4.49%	4 58%	5 03%	5 79%	4.37%	3 60%	3.16%
2	Aliant Energy	3.83%	3.34%	3 07%	3 21%	3 60%	3 53%	3.74%	4 07%	4 28%	461%	5.73%	4.10%	3.13%	3 32%
3	Ameren Corp.	4.66%	3 31%	3.12%	3 50%	3 96%	4.02%	4 61%	4 97%	5 28%	5 76%	5 98%	6 21%	4.88%	4 93%
4	American Electric Power	4.16%	3 67%	3.42%	3.54%	3.80%	3 83%	4 23%	4 55%	4 96%	4 90%	5 50%	4 20%	3.40%	4 05%
5	Avangrid, Inc.	3 85%	3.49%	3.79%	4 26%	WA	₩A.	IVA	N/A	A41	IVA	N/A	N/A	N/A	₩A
6 7	Avista Corp. Black Hills	3.76%	2 97%	3 14%	3.39%	3 97%	3 99%	4.51%	4 55%	4.54%	4 76%	4 49%	3.39%	268%	2 52%
8	CenterPoint Energy	3 84% 4.57%	3 32% 4 17%	2.75% 4.79%	2 87% 4.70%	3 55% 5.06%	2.84% 3.94%	3.19%	4 39%	4 64%	4 79%	6.17%	4 21%	3.40%	3.79%
9	CMS Energy Corp.	3.34%	3 25%	2.85%	2 99%	3.36%	3 59%	3 57% 3 76%	4 04% 4.16%	4 27% 4 25%	5 29%	6.37%	4 95%	3 87%	4.39%
10	Consol Edson	4.51%	361%	3.40%	3.52%	4.12%	4.35%	4 25%	4.10%	4.46%	3 95% 5 16%	3 97% 5 99%	2.69% 5.67%	1.16% 4.84%	N/A 5 04%
11	Dominion Resources	3.98%	4 62%	3 86%	3 82%	3 66%	3.43%	3.76%	4 06%	4.13%	4 41%	5 20%	3.77%	3 32%	3.60%
12	DTE Energy	4 25%	3.45%	3.15%	3.34%	3 53%	3.54%	3.64%	4.19%	4 65%	4.75%	6 29%	5 24%	4 36%	4 86%
13	Duke Energy	4.79%	4 63%	4.15%	4 26%	4 34%	4 26%	4.45%	4 68%	5 21%	5.71%	6 25%	5.16%	4.44%	N/A
14	Edison Intil	3 03%	3.91%	287%	281%	2.83%	2 52%	2 85%	297%	3 37%	3 66%	3 95%	269%	2 21%	2 58%
15	El Paso Electric	275%	2 60%	2 49%	2.75%	3.13%	2 97 %	2 99%	2.97%	2.11%	N/A	AV4	N/A	N/A	N/A
16	Entergy Corp	4.14%	4 62%	4.49%	4 55%	4 59%	4 47%	5.07%	4 91%	4 65%	4 20%	3 97%	292%	2 39%	2 82%
17	Eversource Energy	3.35%	3 34%	3.14%	3 22%	3 34%	3 40%	3.46%	3 52%	3 23%	3 64%	4.16%	3 25%	2 60%	3 27%
18 19	Exelon Corp.	3 93% 4.37%	3 56%	3.51%	3.75%	3 88%	3 69%	4.69%	5.73%	4 96%	4 95%	4 26 %	276%	2.45%	2 83%
20	FirstEnergy Corp. Fortis Inc.	3 68%	4 44%	4 62% 3 69%	4.31% 3.50%	4 23% 3.76%	4 26% 3 85%	4 26% 3.84%	4 90%	5.23%	5.76%	5 09%	3 21%	3.12%	3.40%
21	Great Plains Energy	4.52%	N/A	3 56%	3 64%	3.76%	362%	3.04%	3 64% 4.06%	3 56% 4.15%	3 80% 4 49%	4 21% 5.03%	3.76% 6.96%	3.01%	279%
22	Hawaiian Elec	4.75%	3 65%	3 65%	3.99%	4 05%	4 76%	4.72%	4.70%	5 04%	5 51%	5.03% 6.69%	5 00%	5.49% 5.16%	5.60% 4.59%
23	IDACORP, Inc.	3 26%	273%	2 58%	277%	3 06%	3.12%	3 21%	3 26%	3.10%	3.44%	4.46%	3 95%	3.55%	3 39%
24	MGE Energy	3 29%	2.31%	1.95%	2 23%	276%	278%	291%	3 25%	3 63%	3 95%	4 36%	4 24%	4.14%	4 25%
25	NextEra Energy, Inc.	3 23%	2 85%	279%	2 91%	3 01%	3 00%	3.30%	3 65%	3 96%	3 90%	3 55%	3 02%	2 65%	3.40%
26	NorthWestern Corp	4.15%	4 01%	3 52%	3.43%	361%	3 30%	3.66%	4.17%	4 51%	4 93%	5.75%	5 36%	4 09%	3 65%
27	OGE Energy	3 64%	4 31%	3.61%	3 87%	3 51%	263%	2 48%	2 94%	3 06%	3 68%	4 96%	4 52%	377%	3 99%
28	Otter Tast Corp.	4 27 %	3 07%	3.12%	3 87%	4 33%	4.14%	4.11%	521%	5 57%	5 68%	5.38%	3 63%	3.46%	3 92%
29 30	PGSE Corp	3.70%	łyA	2 42%	3 22%	3.45%	3 96%	4 20%	4 25%	4 24%	4 06%	4 26 %	4 01%	3.07%	3 22%
31	Pinnade West Capital PNM Resources	4 62%	3 60%	3.15%	3.46%	3 66%	4 09%	3.98%	5 32%	4 81%	5.43%	6.76%	6.17%	4.75%	4 67%
32	Portland General	3 32% 3.76%	2 90% 3 35%	2 53% 2 92%	2 69% 3 06%	2.90% 3.27%	279% 334%	2 99% 3 67%	2.96% 4.11%	3.19% 4.37%	4 09%	4.76%	4 85%	3 36%	3 21%
33	PPL Corp.	4.37%	5 51%	4 24%	4 25%	4 55%	4.45%	4 81%	5 07%	5.10%	5 20% 5.12%	5.36% 4.51%	4 26% 3.10%	3 34%	2 54%
34	Public Serv. Enterprise	3,65%	3 65%	3 74%	3.76%	3.81%	3 92%	4 35%	4 55%	4 24%	4 30%	4 30%	3.10%	269% 273%	3 41% 3 47%
35	SCANA Corp.	4.15%	1.45%	4 03%	3 29%	3 90%	4 05%	4 15%	4 25%	4.75%	4 93%	5.67%	4 92%	4 29%	421%
36	Sempra Energy	2 94%	3 25%	2 92%	2 92%	2.71%	261%	3.03%	3.71%	3 65%	3.08%	3 23%	2 62%	2.08%	2 47%
37	Southern Co.	4.73%	5 26%	4 63%	4.42%	4.78%	4 65%	4 61%	429%	4 63%	5.13%	5.52%	4 58%	4 39%	4 52%
38	Vectren Corp.	4.26%	284%	279%	3.31%	3.60%	3 62%	4.15%	4 82%	5 06%	5.53%	5 85%	4.79%	4 53%	4 52%
39	WEC Energy Group	3 06%	3 53%	3.31%	3.35%	3.49%	3.40%	3.49%	3 24%	3 35%	2 97%	3.16%	241%	2 14%	2 16%
40	Westar Energy	4 37%	IVA	3.00%	2 90%	3.73%	3 88%	4 27%	4 57%	4 84%	5.32%	6 27%	5 22%	4.16%	4 28%
41	Xoel Energy Inc.	4 01%	3.35%	3.10%	3.33%	3 69%	3 83%	3.66%	3 90%	4 20%	4 54%	5.14%	4.70%	4 05%	4.40%
	Stock Yields														
42	Average	3.94%	3.56%	3.34%	3,49%	3,71%	3,66%	3.87%	4.18%	4 2057	4.0314	2000			
43	Medan	3 53%	3.47%	3,15%	3.43%	3.71%	3,76%	3.65%	4.15%	4.30% 4.42%	4.63% 4.76%	5.09% 5.14%	4.21%	3.51%	3.71%
44	Implied Inflation ³	2.15%	206%	1.59%	1.56%	1.75%	2.19%	2 35%	233%	240%	2 26%	1.85%	4 2155	3.40%	3.60%
	mpos macon	2.1373	2008	1.0373	1.00%	1.75%	2192	2 3373	233%	Zもいわ	2 20%	1.65%	2.13%	249%	2 62%
45	Real Dividend Yield	1.76%	1.45%	1.42%	1.90%	1.93%	1.44%	1.49%	1.81%	1.86%	2.32%	3.18%	2.04%	0.99%	1.06%
	Bond Yields														
	Nominal "A" Rated Utility														
46		4.95%	4.15%	4.00%	3.93%	4.12%	4.28%	4.45%	4.13%	5.04%	5.46%	6.04%	6.53%	6.07%	6.07%
	Bond Yield ⁴				J					2.0174	J.7V/II	J.07 //	3.00 /4	J.07 70	2.01 A
47	Real "A" Utility Bond Yield	2.74%	2.03%	2.07%	2.34%	2.33%	2.04%	2.08%	1.76%	2.58%	3.13%	4.11%	4.31%	3.49%	3.36%
	Spread														
48	Rominal Spread	1.00%	0.60%	0.66%	0.44%	0.40%	0.61%	0.61%	-0.05%	0.74%	0.84%	0.95%	2.32%	2.57%	2.36%
49	Real Spread	0.98%	0.58%	0.65%	0.44%	0.40%	0.60%	0.59%	0.05%	0.72%	0.82%	0.93%	2.27%	2.50%	2.30%



Sources

Sources

1 The Value Line Investment Survey Investment Analyzer Software, downloaded on June 21, 2018.

2 The Value Line Investment Survey, Itay 18, June 15, and July 27, 2018.

3 St. Louis Federal Reserve: Economic Research, http://research.stbouisfed.org

4 www.moodys.com, Bond Yields and Key Indicators, through July 31, 2018.

Notes

www.modays.com, bothal treas and key successes, precegal usy 51, 2016.
Notes

Based on the average of the high and low price for 2017 and the projected 2017 Dividends Declared per share, published in the Value Line Investment Survey. May 18, June 15, and July 27, 2018.

The spread being measured here is the nominal Arrated ubity bond yield over the average nominal ubity dividend yield. Line 46 - Line 42).

^{*} The spread being measured here is the real A-rated utility bond yield over the average real utility dividend yield, (Line 47 - Line 45)

Electric Utilities (Valuation Metrics)

	-1210						Dividend	per Share	ſ					
'Amazou	13-Year Average	2018 2	2017	2015	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006
Ompany	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
	1.87	2.24	2.14	2.08	2.02	1.96	1.90	1.84	1.78	1.76	1.76	1.72	1.64	1.45
nergy	0.93	1.34	1.26	1.18	1.10	1.02	0.94	0.90	0.85	0.79	0.75	0.70	0.64	0.58
Corp.	1.85	1.85	1.78	1.72	1.66	1.61	1,60	1.60	1.56	1.54	1.54	2.54	2.54	2.54
1 Electric Power	1.93	2.51	2.39	2.27	2.15	2.03	1.95	1.88	1.85	1.71	1.64	1.64	1.58	1.50
I, Inc.	1.73	1.74	1.73	1,73	N/A	N/A	ŀΰA	WA	NΑ	N/A	N/A	N/A	N/A	N/A
эгр.	1.08	1.49	1.43	1.37	1.32	1.27	1.22	1.16	1.10	1.00	0.81	0.69	0.60	0.57
Is	1.54	1.90	1,81	1.68	1.62	1.56	1.52	1.48	1.46	1.44	1.42	1.40	1.37	1.32
oint Energy	0.88	1.11	1.35	1.03	0.99	0,95	0.83	0.81	0.79	0.78	0.76	0.73	0.68	0.60
argy Corp.	0.90	1,43	1.33	1.24	1.16	1.08	1.02	0.96	0.84	0.66	0.50	0.36	0.20	WA
Edison	2.49	2.86	2.76	2.68	2.60	2.52	2.46	2.42	2.40	2.38	2.36	2.34	2.32	2.30
1 Resources	2.19	3.34	3.04	2.80	2.59	2.40	2.25	2.11	1.97	1.83	1.75	1.58	1.46	1.38
жgy	2.58	3.59	3.36	3.06	2.84	2.69	2.59	2.42	2.32	2.18	2.12	2.12	2.12	2.08
ergy	3.08	3.64	3,49	3.36	3.24	3.15	3.09	3.03	2.97	2.91	2.82	2.70	2.58	N/A
ıtl	1,53	2.45	2 23	1.98	1.73	1.48	1.37	1.31	1.29	1.27	1.25	1.23	1,18	1.10
Electric	1.11	1.42	1.32	1.23	1.17	1.11	1.05	0.97	0.66	N/A	N/A	N/A	N/A	N/A
Corp.	3.16	3.58	3.50	3.42	3.34	3.32	3.32	3.32	3.32	3.24	3.00	3.00	2.58	2.16
te Energy	1.32	2.02	1.90	1.78	1.67	1,57	1.47	1.32	1.10	1.03	0.95	0,83	0.78	0.73
lorp.	1,68	1.38	1.31	1.26	1.24	1.24	1,46	2.10	2.10	2.10	2.10	2.05	1.82	1.64
гру Согр.	1.83	1.44	1.44	1.44	1.44	1.44	1.65	2.20	2.20	2.20	2.20	2.20	2.05	1.85
,	1.23	1.75	1.65	1.55	1.43	1.30	1.25	1.21	1.17	1.12	1.04	1.00	0.82	0.67
ains Energy	1.11	N/A	1.10	1.06	1.00	0.94	0.88	0.86	0.84	0.83	0.83	1,68	1.66	1.66
1 Elec.	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24
P. Inc.	1.58	2.40	2 24	2.08	1.92	1.76	1.57	1.37	1.20	1.20	1.20	1.20	1.20	1.20
ergy	1.07	1.32	1,26	1.21	1.16	1.11	1.07	1.04	1.01	0.99	0.97	0.96	0.94	0.93
Energy, Inc.	2.61	4.44	3,93	3.48	3,08	2.90	2.64	2.40	2.20	2.00	1.89	1.78	1.64	1.50
stern Corp	1.60	2 20	2.10	2.00	1.92	1,60	1.52	1.48	1.44	1.36	1.34	1.32	1.28	1.24
argy	0,90	1.40	1.27	1.16	1.05	0.95	0.85	0.80	0.76	0.73	0.71	0.70	0.68	0.67
l Corp.	1.21	1.34	1.28	1.25	1.23	1.21	1.19	1.19	1.19	1.19	1.19	1.19	1.17	1.15
отр.	1.70	NA	1.55	1.93	1.82	1.82	1,82	1.82	1.82	1.82	1.68	1.56	1.44	1.32
West Capital	2.33	2.86	2.70	2.56	2.44	2.33	2.23	2.67	2.10	2.10	2.10	2.10	2.10	2.03
sources	0.74	1.08	0.99	0.88	0.80	0.76	0.68	0.58	0.50	0.50	0.50	0.61	0.91	0.86
General	1.09	1.43	1.34	1.26	1.18	1.12	1.10	1.08	1.06	1.04	1.01	0.97	0.93	0.68
	1.42	1.64	1.58	1.52	1.50	1.49	1.47	1.44	1.40	1.40	1.38	1.34	1.22	1.10
p. erv. Enterprise	1.44	1.80	1.72	1.64	1.56	1.48	1.44	1.42	1.37	1.37	1.33	1.29	1.17	1.14
Corp.	1.90	18.0	2.45	2.30	2.18	2,10	2.03	1,98	1.94	1.90	1.88	1.84	1.76	1.68
Energy	2.24	3.58	3.29	3.02	2.80	2.64	2.52	2.40	1,92	1.56	1.56	1.37	1.24	1.20
i Co.	1.95	2.38	2.30	2.22	2.15	2.08	2.01	1.94	1.87	1.80	1.73	1.66	1.60	1.54
Corp.	1.45	1.83	1.71	1.62	1.54	1.48	1.43	1.41	1.39	1.37	1.35	1.31	1.27	1.23
	1.45	2.21	2.08	1.98	1.74	1.56	1.45	1.20	1.04	0.80	0.68	0.54	0.50	0.46
ergy Group	1.30	N/A	1.60	1.52	1.44	1.40	1.36	1.32	1.28	1.24	1.20	1.16	1.08	0.98
inergy	1.30	1.52	1.60	1.32	1.28	1.20	1.11	1.07	1.03	1.00	0.97	0.94	0.91	0.88
rgy Inc.	1,13	1.52	1.49	1.50	1.20			1.03						
Averes Court	1.61 4.12%	2.05 4.64%	1.97 6.14%	1.86 5.60%	1.76 5.24%	1.67 3.58%	1.61 1.23%	1.59 5.69%	1.51 2.49%	1.47 3.36%	1.42 -0.08%	1.42 5.06%	1.38 6.45%	1.27
Average Growth	4.1270	4.047	0.14%	3.007s	9.2476	3.0070	1.2378	3.0779	2.40%	3.30%	-0.00 /s	3.007	0.70	

alue Line Investment Survey Investment Analyzer Software, downloaded on June 21, 2018, slue Line Investment Survey, May 18, June 15, and July 27, 2018.

excluded from 2017 and 2018 average calculations due to their Dividend Suspension.

Electric Utilities (Valuation Metrics)

	Eamings per Share 1													
	13-Year													•
<u>ompany</u>	Average (1)	2018 ² {2}	2017 (3)	<u>2016</u> (4)	<u>2015</u> (5)	2014 (6)	<u>2013</u> (7)	2012 (8)	<u>2011</u> (9)	<u>2010</u> (10)	2009 (11)	<u>2008</u> (12)	2007 (13)	2006 (14)
	2.81	3.40	3.13	3.14	3,38	2.90	2.63	2.58	2.65	2.19	1.89	2.82	3.08	2.77
nergy	1,51	2.10	1.99	1.65	1.69	1.74	1.65	1.53	1.38	1.38	0.95	1.27	1.35	1.03
Corp.	2.64	3.05	2.77	2.68	2.38	2.40	2.10	2.41	2.47	2.77	2.78	2.88	2.98	2.66
) Electric Power	3.25	3.85	3.62	4.23	3.59	3.34	3.18	2.98	3.13	2.60	2.97	2.99	2.86	2.86
, Inc.	1.70	2.30	1.67	1.98	0.86	N/A	NVA	N/A	NA	N/A	N/A	N/A	1.00 N/A	2.00 N/A
жр.	1.65	1.90	1.95	2.15	1.89	1.84	1.85	1.32	1.72	1.65	1.58	1.36	0.72	1.47
ls .	2.30	3.50	3.38	2.63	2.83	2.89	261	1.97	1.01	1.66	2.32	0.18	2.68	2.21
Ynt Energy	1.25	1.50	1.57	1.00	1.08	1.42	1.24	1.35	1.27	1.07	1.01	1.30	1.17	1.33
argy Corp.	1.50	2.35	2.17	1.98	1.89	1.74	1.66	1.53	1.45	1.33	0.93	1.23	0.64	0.64
Edison	3.67	4 25	4.10	3.94	4.05	3.62	3.93	3.86	3.57	3.47	3.14	3.36	3.48	
1 Resources	2.97	3.65	3,53	3.44	3.20	3.05	3.09	2.75	2.76	2.89	2.64	3.04	2.13	2.95 2.40
rgy	4.01	5.85	5.73	4.83	4.44	5.10	3.76	3.68	3.67	3,74	3 24	2.73	2.13 2.66	2.40
ergy	3.81	4.80	4.22	3.71	4.10	4.13	3.98	3.71	4.14	4.02	3.39	3.03	3,60	
ıt1	3.83	4.40	4.51	3.94	4.15	4.33	3.78	4.55	3.23	3.35	3.24	3.68		2.73
Electric	2.05	2.45	2.42	2.39	2.03	2.27	2 20	2.26	2.48	2.07	1.50	1.73	3,32 1,63	3.28
Corp.	5.88	4.10	5.19	6.88	5.81	5.77	4.96	6.02	7.55	6.66	6.30	6.20	5.60	1.27
ce Energy	2.27	3 25	3.11	2.96	2.76	2.58	2.49	1.89	2.22	2.10	1.91	1.86	1.59	5.36
orp.	3.05	260	2.78	1.80	2.54	2.10	2.31	1.92	3.75	3.87	4.29	4.10	4.03	0.82 3.50
g/ Corp.	2.67	1.00	2.73	2.10	2.00	0.85	2.97	2.13	1.88	3.25	3.32	4.38	4.22	3.82
j.	1.77	2.70	2.66	1.89	2.11	1.38	1.63	1.65	1.74	1.62	1.51	1.52	1.22	
¥ins Energy	1.33	N/A	-0.06	1.61	1.37	1.57	1.62	1.35	1.25	1.53	1.03	1.16		1.36
ı Eec.	1.49	1.90	1.64	2.29	1.50	1.64	1.62	1.67	1.44	1.21	0.91	1.10	1.85	1.62
P, inc.	3.27	4.25	4.21	3.94	3.87	3.85	3.64	3.37	3.36	2.95	2.64	2.18	1.11 1.86	1.33
ergy	1.88	2.35	2.20	2.18	2.06	2.32	2.16	1.86	1.76	1.67	1.47	1.59	1.51	2.35
Energy, Inc.	5,01	7.75	6.50	5.78	6.06	5.60	4.83	4.56	4.82	4.74	3.97	4.07		1.37
stern Corp	2.47	3.50	3.34	3.39	2.90	2.99	2.46	2.26	2.53	2.14	2.02	1.77	3 27 1.44	3.23
3rgy	1,65	2.05	1.92	1.69	1.69	1.98	1.94	1.79	1.73	1.50	1.33	1.25	1.32	1.31 1.23
I Corp.	1.32	2.05	1.86	1.60	1.56	1.55	1.37	1.05	0.45	0.38	0.71	1.25		
orp.	2.44	-1.00	3.50	2.83	2.00	3.06	1.83	2.07	2.78	2.82	3.03	3.22	1.78 2.78	1.69
West Capital	3.39	4.50	4.43	3.95	3.92	3.58	3.66	3.50	2.78	3.08	2 26	2.12	2.78	2.76
Tources	1.26	1.85	1.92	1.65	1.64	1.45	1.41	1.31	1.08	0.87	D.58	0.11	0.76	3.17
General	1.87	2 20	2 29	2.16	2.04	2.18	1.77	1.87	1.95	1.66	1.31	1.39		1.72
3 .	2.33	2.25	2.11	2.79	2.37	2.38	2.38	2.61	2.61	2.29	1.19	2.45	2.33 2.63	1.14 2.29
arv. Enterprise	2.81	3.10	2.82	2.83	3.30	2.99	2.45	2.44	3.11	3.07	3.08	2.90	2.59	
Corp.	3.33	3.65	4.20	4.16	3.81	3.79	3.39	3.15	2.97	2.98	2.85	2.95	2.59	1.85
Energy	4.54	5.50	4.63	4 24	5.23	4.63	4.22	4.35	4.47	4.02	4.78	4.43	4.26	2.59
Co.	2.60	2.90	3.21	2.83	2.84	2.77	2.70	2.67	2.55	2.36	2.32	2.25	2.28	4.23
Corp.	2.01	2.85	2.60	2.55	2.39	2.02	1.66	1.94	1.73	1.64	1.79	1.63		2.10
ergy Group	2.24	3.30	3.14	2.96	2.34	2.59	2.51	2.35	2.18	1.92	1.60	1.52	1.83 1.42	1.44
inergy	1.96	N/A	2 27	2.43	2.09	2.35	2.31	2.15	1.79	1.82	1.60			1.32
rgy Inc.	1.83	2.45	2.30	221	2.10	2.03	1.91	1.85	1.72	1.56	1.49	1.31 1.46	1.84 1.35	1.88 1.35
	2,60	3.19	3.02	2.91	2.78	2.77	2.60	2.51	2.53	2.45	2.26	2.29	2.32	2,17
Average Growth	3.32%	5.82%	3.68%	4.85%	0.28%	6.70%	3.34%	-0.86%	3.54%	8.08%	-1.11%	-1.47%	6.98%	6.11

tive Line Investment Survey Investment Analyzer Software, downloaded on June 21, 2018, tive Line Investment Survey, May 18, June 15, and July 27, 2018.

excluded from 2017 and 2018 average calculations due to their Dividend Suspension.

20180418-8023 FERC PDF	(Unofficial) 04/18/2018
THIS	FILING IS
Item 1: X An Initial (Original) Submission	OR Resubmission No.

Form 1 Approved OMB No.1902-0021 (Expires 12/31/2019) Form 1-F Approved OMB No.1902-0029 (Expires 12/31/2019) Form 3-Q Approved OMB No.1902-0205 (Expires 12/31/2019)



FERC FINANCIAL REPORT FERC FORM No. 1: Annual Report of Major Electric Utilities, Licensees and Others and Supplemental Form 3-Q: Quarterly Financial Report

These reports are mandatory under the Federal Power Act, Sections 3, 4(a), 304 and 309, and 18 CFR 141.1 and 141.400. Failure to report may result in criminal fines, civil penalties and other sanctions as provided by law. The Federal Energy Regulatory Commission does not consider these reports to be of confidential nature

Exact Legal Name of Respondent (Company)
KCP&L Greater Missouri Operations Company

Year/Period of Report

End of 2017/Q4

Name of Report September of Report (Unoffic Lath)s Report (Mo, Da, Yr) Name of Report (Mo, Da, Yr)					
KCP8	L Greater Missouri Operations Company (1) X An Original (2) A Resubmission	04/18/2	-	End	of <u>2017/Q4</u>
	COMPARATIVE BALANCE SHEET (ASSETS	S AND OTHE	R DEBITS)	
Line No.	Title of Account (a)	Ref. Page No. (b)	Curren End of Qu Bala (c	arter/Year nce	Prior Year End Balance 12/31 (d)
1	UTILITY PLANT				8.16
2	Utility Plant (101-106, 114)	200-201		3,969,212	3,672,678,599
3	Construction Work in Progress (107)	200-201	+	8,540,353	103,508,665
4 5	TOTAL Utility Plant (Enter Total of lines 2 and 3) (Less) Accum. Prov. for Depr. Amort. Depl. (108, 110, 111, 115)	200-201		2,509,565 0,823,172	3,776,187,264 1,313,596,167
6	Net Utility Plant (Enter Total of line 4 less 5)	200-201		1,686,393	2,462,591,097
7	Nuclear Fuel in Process of Ref., Conv., Enrich., and Fab. (120.1)	202-203	2,00	0	0
8	Nuclear Fuel Materials and Assemblies-Stock Account (120.2)		1	0	0
9	Nuclear Fuel Assemblies in Reactor (120.3)			0	0
10	Spent Nuclear Fuel (120,4)			0	0
11	Nuclear Fuel Under Capital Leases (120.6)			0	0
12	(Less) Accum. Prov. for Amort. of Nucl. Fuel Assemblies (120.5)	202-203		0	0
13	Net Nuclear Fuel (Enter Total of lines 7-11 less 12)		ļ	0	0
14	Net Utility Plant (Enter Total of lines 6 and 13)		2,50	1,686,393	2,462,591,097
15 16	Utility Plant Adjustments (116)		<u> </u>	0	0
17	Gas Stored Underground - Noncurrent (117) OTHER PROPERTY AND INVESTMENTS			<u>U</u>	U
18	Nonutility Property (121)			7,374,347	9,005,292
19	(Less) Accum. Prov. for Depr. and Amort. (122)			5,458,634	5,075,904
20	Investments in Associated Companies (123)			0	0
21	Investment in Subsidiary Companies (123.1)	224-225	-86-	1,632,327	-867,997,979
22	(For Cost of Account 123.1, See Footnote Page 224, line 42)				
23	Noncurrent Portion of Allowances	228-229		0	0
24	Other Investments (124)			. 0	0
25	Sinking Funds (125)		ļ	0	0
26	Depreciation Fund (126)			0	0
27 28	Amortization Fund - Federal (127) Other Special Funds (128)		45	7,269,612	18,280,272
29	Special Funds (Non Major Only) (129)		1	0	10,200,272
30	Long-Term Portion of Derivative Assets (175)			0	0
31	Long-Term Portion of Derivative Assets – Hedges (176)			0	0
32	TOTAL Other Property and Investments (Lines 18-21 and 23-31)		-845	,447,002	-845,788,319
33	CURRENT AND ACCRUED ASSETS				
34	Cash and Working Funds (Non-major Only) (130)			0	0
35	Cash (131)			865,033	1,040,622
36	Special Deposits (132-134)			0	0
37 38	Working Fund (135) Temporary Cash Investments (136)		2	454,385	2,064,385
39	Notes Receivable (141)			0	0
40	Customer Accounts Receivable (142)			0	0
41	Other Accounts Receivable (143)		4	,502,977	4,272,227
42	(Less) Accum. Prov. for Uncollectible AcctCredit (144)			0	0
43	Notes Receivable from Associated Companies (145)		885	,687,592	867,053,107
_	Accounts Receivable from Assoc. Companies (146)			,578,752	12,519,176
	Fuel Stock (151)	227	31	,779,466	35,516,465
	Fuel Stock Expenses Undistributed (152)	227		0	0
+	Residuals (Elec) and Extracted Products (153)	227	10	060 400	41 152 677
	Plant Materials and Operating Supplies (154) Merchandise (155)	227 227	43	,060,429 0	41,153,677
_	Other Materials and Supplies (156)	227		0	0
	Nuclear Materials Held for Sale (157)	202-203/227		0	0
	Allowances (158.1 and 158.2)	228-229		344,215	339,820
	2 FORMANO 4 (DEV 42.00)				
FER(C FORM NO. 1 (REV. 12-03) Page 110				

Nam	entAcepandentero pdf (unofficiaths Repanteio18	Date of R		ar/Period of Report
	L Greater Missouri Operations Company (1) ☒ An Original	(Mo, Da,		. 0047404
	(2) A Resubmission	04/18/20		
	COMPARATIVE BALANCE SHEET (ASSETS	AND OTHER		
Line		Ref.	Current Year End of Quarter/Yea	Prior Year r End Balance
No.	Title of Account	Page No.	Balance	12/31
	(a)	(b)	(c)	(d)
53	(Less) Noncurrent Portion of Allowances			0 0
54	Stores Expense Undistributed (163)	227	2,079,57	
55	Gas Stored Underground - Current (164.1)			0 0
56 57	Liquefied Natural Gas Stored and Held for Processing (164.2-164.3) Prepayments (165)		3,290,88	
58	Advances for Gas (166-167)			0 2,000,402
59	Interest and Dividends Receivable (171)			0 0
60	Rents Receivable (172)		304,54	5 30,943
61	Accrued Utility Revenues (173)		1,812,17	2 1,721,842
62	Miscellaneous Current and Accrued Assets (174)		192,32	9 0
63	Derivative Instrument Assets (175)			0 0
64	(Less) Long-Term Portion of Derivative Instrument Assets (175)			0 0
65	Derivative Instrument Assets - Hedges (176)		214,52	
66	(Less) Long-Term Portion of Derivative Instrument Assets - Hedges (176		004 400 00	0 0
67 68	Total Current and Accrued Assets (Lines 34 through 66) DEFERRED DEBITS		994,166,88	970,961,429
	Unamortized Debt Expenses (181)		2,202,68	2,491,714
	Extraordinary Property Losses (182.1)	230a		0 0
71	Unrecovered Plant and Regulatory Study Costs (182.2)	230b		0 0
72	Other Regulatory Assets (182.3)	232	295,941,08	5 249,715,728
73	Prelim. Survey and Investigation Charges (Electric) (183)		451,43	7 453,821
74	Preliminary Natural Gas Survey and Investigation Charges 183.1)			0 0
75	Other Preliminary Survey and Investigation Charges (183.2)		ı	0
	Clearing Accounts (184)			612
	Temporary Facilities (185)		11:	<u> </u>
	Miscellaneous Deferred Debits (186)	233	174,692,21	
	Def. Losses from Disposition of Utility Ptt. (187) Research, Devel. and Demonstration Expend. (188)	352-353		0 0
	Unamortized Loss on Reaquired Debt (189)	302-300	1,157,330	1
	Accumulated Deferred Income Taxes (190)	234	486,380,10	
	Unrecovered Purchased Gas Costs (191)		(0
84	Total Deferred Debits (lines 69 through 83)		960,824,972	1,021,528,051
85	TOTAL ASSETS (lines 14-16, 32, 67, and 84)		3,611,231,24	3,609,292,258
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Nag	real Acapendentero PDF (Unofficiaties Repait is) 018	Date of F		Year/P	eriod of Repo
KCP	BL Greater Missouri Operations Company (1) X An Original	(mo, da,			
	(2) A Resubmission	04/18/20		end of	2017/Q4
	COMPARATIVE BALANCE SHEET (LIABILITIE	S AND OTHE			
Line No.	Title of Account	Ref. Page No.	Current Y End of Quarte Balance	er/Year	Prior Year End Balance 12/31
<u> </u>	(a)	(b)	(c)		(d)
1	PROPRIETARY CAPITAL				
3	Common Stock Issued (201) Preferred Stock Issued (204)	250-251		0	
4	Capital Stock Subscribed (202, 205)	250-251		0	
5	Stock Liability for Conversion (203, 206)			0	
6	Premium on Capital Stock (207)			- 0	
7	Other Paid-In Capital (208-211)	253	1,276,9		1,276,949,28
8	Installments Received on Capital Stock (212)	252	,,,	0	1,2,0,0,10,20
9	(Less) Discount on Capital Stock (213)	254		0	
10	(Less) Capital Stock Expense (214)	254b		0	
11	Retained Earnings (215, 215.1, 216)	118-119	-103,9	35,001	3,325,76
12	Unappropriated Undistributed Subsidiary Earnings (216.1)	118-119	18,6	88,063	15,322,41
13	(Less) Reaquired Capital Stock (217)	250-251		0	
14 15	Noncorporate Proprietorship (Non-major only) (218) Accumulated Other Comprehensive Income (219)	4006-191	·	0	
16	Total Proprietary Capital (lines 2 through 15)	122(a)(b)		41,994	-2,111,74
17	LONG-TERM DEBT		1,189,16	00,3551	1,293,485,711
18	Bonds (221)	256-257	354.50	00,000	355,625,000
19	(Less) Reaquired Bonds (222)	256-257	004,00	00,000	333,023,00
20	Advances from Associated Companies (223)	256-257	634,88	39,000	634,889,000
21	Other Long-Term Debt (224)	256-257		50,000	90,850,000
22	Unamortized Premium on Long-Term Debt (225)			0	
23	(Less) Unamortized Discount on Long-Term Debt-Debit (226)			0	(
24	Total Long-Term Debt (lines 18 through 23)		1,080,23	39,000	1,081,364,000
25	OTHER NONCURRENT LIABILITIES				
26 27	Obligations Under Capital Leases - Noncurrent (227) Accumulated Provision for Property Insurance (228.1)		1,45	57,278	1,554,008
28	Accumulated Provision for Injuries and Damages (228.2)		4.50	0	0
29	Accumulated Provision for Pensions and Benefits (228.3)			0,273	979,675
30	Accumulated Miscellaneous Operating Provisions (228.4)		22,02	6,001	22,509,894
31	Accumulated Provision for Rate Refunds (229)			0	0
32	Long-Term Portion of Derivative Instrument Liabilities			0	0
	Long-Term Portion of Derivative Instrument Liabilities - Hedges			0	0
	Asset Retirement Obligations (230)		34,77	1,565	37,997,864
	Total Other Noncurrent Liabilities (lines 26 through 34)		60,63	5,117	63,041,441
	CURRENT AND ACCRUED LIABILITIES				
	Notes Payable (231)		209,30		201,900,000
	Accounts Payable (232) Notes Payable to Associated Companies (233)		82,42		77,757,064
	Accounts Payable to Associated Companies (233)		22,33		16,859,375
	Customer Deposits (235)		76,69	0,284 2,450	63,347,821
	Taxes Accrued (236)	262-263	10,95		7,231,066 10,875,279
$\overline{}$	Interest Accrued (237)	202 200		5,986	8,217,934
44	Dividends Declared (238)		-1	0	0:
45	Matured Long-Term Debt (239)			0	0
FERO	FORM NO. 1 (rev. 12-03) Page 112			1	

Nam	ent Respondentere pof (unofficialtis Reportisions	Date of F		Year/l	Period of Report
KCP&	L Greater Missouri Operations Company (1) X An Original (2) A Resubmission	(mo, da, 04/18/20		end of	f 2017/Q4
	COMPARATIVE BALANCE SHEET (LIABILITIE	S AND OTHE	R CREDIT®		
1:		<u> </u>	Current Ye		Prior Year
Line No.		Ref.	End of Quarte		End Balance
	Title of Account (a)	Page No. (b)	Balance (c)		12/31 (d)
46	Matured Interest (240)	(-)	1-7	0	· · · · · · · · · · · · · · · · · · ·
47	Tax Collections Payable (241)		9	70,982	925,916
48	Miscellaneous Current and Accrued Liabilities (242)		1,4:	38,564	1,492,784
49	Obligations Under Capital Leases-Current (243)		(96,729	89,405
50	Derivative Instrument Liabilities (244)			0	C
51	(Less) Long-Term Portion of Derivative Instrument Liabilities			0	<u>C</u>
52	Derivative Instrument Liabilities - Hedges (245)			0	<u>C</u>
53	(Less) Long-Term Portion of Derivative Instrument Liabilities-Hedges		440.7	0	200 000 044
54	Total Current and Accrued Liabilities (lines 37 through 53)		419,72	25,853	388,696,644
55	DEFERRED CREDITS Customer Advances for Construction (252)		5.51	32,530	4,970,570
56 57	Accumulated Deferred Investment Tax Credits (255)	266-267		30,847	3,375,524
58	Deferred Gains from Disposition of Utility Plant (256)	200 201	0,00	0	0,5,5,52
59	Other Deferred Credits (253)	269	9.10	01,874	9,367,639
60	Other Regulatory Liabilities (254)	278	ļ	19,258	62,630,056
61	Unamortized Gain on Reaquired Debt (257)			0	C
62	Accum, Deferred Income Taxes-Accel, Amort.(281)	272-277	56,13	30,678	55,842,964
63	Accum. Deferred Income Taxes-Other Property (282)		369,76		562,816,010
64	Accum. Deferred Income Taxes-Other (283)		73,02	28,856	83,701,691
65	Total Deferred Credits (lines 56 through 64)		861,47	70,919	782,704,454
66	TOTAL LIABILITIES AND STOCKHOLDER EQUITY (lines 16, 24, 35, 54 and 65)		3,611,23	31,244	3,609,292,258
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Name of Respondent	This Report is:	Date of Report	Year/Period of Report
	(1) <u>X</u> An Original	(Mo, Da, Yr)	
KCP&L Greater Missouri Operations Company	(2) A Resubmission	04/18/2018	2017/Q4
NOTES T	O FINANCIAL STATEMENTS (Continued	1)	

	December 31		
	2017		2016
Regulatory Assets	(millions)		
Taxes recoverable through future rates	\$ 75.1		\$ 30.0
Asset retirement obligations	24.2		24.9
Pension and post-retirement costs	108.2	(a)	104.7
Deferred customer programs	19.4	(b)	27.4
Fuel recovery mechanism	12.0	(e)	
latan No. 1 and common facilities depreciation and carrying costs	4.7	(c)	5.0
latan No. 2 construction accounting costs	13.7	(d)	16.1
Solar rebates	37.0	(e)	41.6
Other	1.6		•
Total	\$295.9		\$249.7
Regulatory Liabilities			
Taxes refundable through future rates	\$295.7		\$ 5.2
Fuel recovery mechanism	3.9		11.6
Pension and post-retirement costs	8.2		7.4
Other	37.0		38.4
Total	\$344.8		\$ 62.6

⁽a) GMO does not have pension and post-retirement plans; however, GMO receives its share of Great Plains Energy's pension and post-retirement plan costs. Pension and post-retirement costs represents unrecognized gains and losses, prior service and transition costs that will be recognized in future net periodic pension and post-retirement costs, pension settlements amortized over various periods and financial and regulatory accounting method differences that will be eliminated over the life of the pension plans. Of this amount, \$61.4 million is not included in rate base and is amortized over various periods.

- (b) \$10.9 million not included in rate base and amortized over various periods.
- (c) Included in rate base and amortized through 2038.
- (d) Included in rate base and amortized through 2059.
- (e) Not included in rate base and amortized over various periods.

5. GOODWILL AND INTANGIBLE ASSETS

Accounting rules require goodwill to be tested for impairment annually and when an event occurs indicating the possibility that an impairment exists. The annual impairment test for the \$169.0 million of GMO acquisition goodwill was conducted on September 1, 2017. The goodwill impairment test consists of comparing the fair value of a reporting unit to its carrying amount, including goodwill, to identify potential impairment. In the event that the carrying amount exceeds the fair value of the reporting unit, an impairment loss is recognized for the difference between the carrying amount of the reporting unit and its fair value. GMO's regulated electric utility operations are considered one reporting unit for assessment of impairment, as they have similar economic characteristics. The determination of fair value of the reporting unit consisted of two valuation techniques: an income approach consisting of a discounted cash flow analysis and a market approach consisting of a determination of reporting unit invested capital using market multiples derived from the historical revenue; earnings before interest, income taxes, depreciation and amortization; net utility asset values and market prices of stock of peer companies. The results of the two techniques were evaluated and weighted to determine a point within the range that management considered representative of fair value for the reporting unit. Fair value of the reporting unit exceeded the carrying amount, including goodwill; therefore, there was no impairment of goodwill.

GMO's intangible assets are included in utility plant on the balance sheets and are detailed in the following table.

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Name of Respondent 20180418-8023 FERC PDF (Un KCP&L Greater Missouri Operations Compar		(4)		(Mo, E 04/18/	9a, Yr) 2018	Year/Period of Report End of2017/Q4	
2. F	eport below the particulars (details) or any deferred debit being amortiza linor item (1% of the Balance at End ses.	called for concerning	nortization in colum	erred debits. n (a)		ess) may be grouped by	
Line No.	Description of Miscellaneous Deferred Debits	Balance at Beginning of Year	Debits	Account Charged (d)	CREDITS Amount	Balance at End of Year	
	(a)	(b)	(c)	(d)	(e)	(f)	
1	Goodvill	168,969,590				168,969,590	
2		1,816,960		456,457	593,0		
3		2,158	15,171		17,3	600,174	
4	Miscellaneous MEEIA Performance Incentive	-479,658	1,079,832	various		000,17-	
5 6	Award	2,782,274	2,153,145	various	4,684,3	224 251,195	
7	Awaid	2,702,214	2,100,110	1011000	3,55.17		
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46						-	
47	Misc. Work in Progress					3,023,591	
48	Deferred Regulatory Comm. Expenses (See pages 350 - 351)						
49	TOTAL	173,091,324	1			174,692,217	
+5	IVIAL	1,0,001,024		Backing Comment			