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Witness: David Murray
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Case No.: ER-2016-0285
Date Testimony Prepared: December 30, 2016

MISSOURI PUBLIC SERVICE COMMISSION

COMMISSION STAFF DIVISION

FINANCIAL ANALYSIS

FILED²

FEB 16 2017

Missouri Public
Service Commission

REBUTTAL TESTIMONY

OF

DAVID MURRAY

**KANSAS CITY POWER & LIGHT COMPANY
GREAT PLAINS ENERGY, INCORPORATED**

CASE NO. ER-2016-0285

Jefferson City, Missouri
December 2016

PSC Staff Exhibit No. 220
Date 2.7.17 Reporter MB
File No. ER-2016-0285

Rebuttal Testimony of
David Murray

1 Mr. Bryant's rationale for using the KCPL subsidiary capital structure in this case as
2 compared to the GMO subsidiary capital structure in the GMO rate case, there are many
3 overlapping issues in both cases. Consequently, my testimony should help inform the
4 Missouri Public Service Commission ("Commission") for purposes of its deliberations on the
5 capital structure issue.

6 In past rate cases, KCPL and GMO proposed the use of GPE's consolidated capital
7 structure for purposes of setting each subsidiary's allowed rate of return (ROR). However,
8 now both companies have proposed the use of a subsidiary-specific capital structure. This
9 change in approach is not logical considering the fact that Standard & Poor's (S&P) assigns
10 KCPL and GMO ("the Companies") credit ratings based on GPE's consolidated financial and
11 business risk profile. Staff will explain why this change in approach is not consistent with
12 matching capital costs with the financial risk that causes the capital costs. Staff will also
13 show how the Companies have been financially managed for GPE's best interest and not for
14 the best interest of each subsidiary. It is important to note that although GPE's proposed
15 acquisition of Westar may cause significant debate and possibly different approaches to
16 setting the Companies allowed rates of return in the future, at this point, it is not an issue in
17 this case.

18 **STAFF RESPONSE TO KEVIN E. BRYANT'S RECOMMENDED CAPITAL**
19 **STRUCTURE AND COST OF DEBT FOR KCPL**

20 Q. What capital structure does Mr. Bryant recommend the Commission use for
21 purposes of setting KCPL's allowed ROR?

22 A. Mr. Bryant recommends the use of KCPL's projected per books capital
23 structure as of the true-up period, December 31, 2016, to set KCPL's allowed ROR. This

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1 projected per books capital structure is expected to contain approximately 49.88% common
2 equity and 50.12% long-term debt.¹

3 Q. Did Mr. Bryant recommend the same subsidiary-specific approach in the GMO
4 rate case, Case No. ER-2016-0156?

5 A. Yes. Mr. Bryant's testimony in the GMO rate case recommended the
6 Commission set GMO's allowed ROR based on a more equity-rich capital structure of either
7 54.83% or 51.42%, depending on whether goodwill was adjusted out of the GMO
8 equity ratio.²

9 Q. Is Mr. Bryant's recommended use of subsidiary-specific capital structures
10 consistent with the Companies' past practice?

11 A. No. In the past, the Companies have recommended the use of GPE's
12 consolidated capital structure to set the allowed ROR for both KCPL and GMO.

13 Q. Why does Mr. Bryant now believe the best approach is to use subsidiary-
14 specific capital structures to set the allowed ROR for the Companies?

15 A. Mr. Bryant indicates that the preferred long-term approach is to base the
16 revenue requirement on the costs that are specific to that utility.³ While I agree with
17 Mr. Bryant that it is desirable to attempt to reconcile costs to each utility in setting the
18 revenue requirement, it is imperative that the costs be consistent with the risk-profile of the
19 regulated utility operations. If the financial management of the regulated subsidiaries is not
20 performed based on the individual financial interests and risk profiles of each subsidiary, the
21 costs, including capital structures and debt costs, are no longer consistent with what they
22 would be absent their affiliation with the consolidated entity. It should be noted that at times,

¹ Hevert Direct Testimony, p. 30, ll. 7-11.

² Bryant Rebuttal, p. 6, ll. 13-18, Case No. ER-2016-0156.

³ Bryant Direct, p. 4, ll. 3-4.

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1 a utility's affiliation with its holding company's financing activities may result in a lower cost
2 of capital because the holding company will issue debt to minimize capital costs at
3 the consolidated level, rather than at the subsidiary level. Being that shareholders own the
4 equity of the publicly-traded holding company, this is a method employed to increase
5 shareholder value.

6 Q. What does Mr. Bryant state as the reason for KCPL not recommending the use
7 of its subsidiary-specific capital structure in past rate cases?

8 A. Mr. Bryant states that KCPL's approach was designed to be consistent with
9 GMO's approach. Although Staff considered GPE's consolidated capital structure approach
10 to be appropriate for KCPL, Staff is concerned that the premise for KCPL's approach was
11 consistency with GMO's approach. If Mr. Bryant believed a stand-alone capital structure was
12 appropriate for KCPL, but not necessarily for GMO, then the Company should have made this
13 recommendation based purely on KCPL's circumstances.

14 Q. On page 5, lines 13-17 of his direct testimony, Mr. Bryant indicates that setting
15 KCPL's rates based on its individual capital structure would be "consistent with the
16 rate-making construct used previously by KCP&L and with other Missouri electric utilities
17 throughout the state." Is this an accurate statement?

18 A. No. First, it is not accurate to state that KCPL previously used its capital
19 structure before it acquired GMO. KCPL recommended the use of GPE's consolidated
20 capital structure to set its rates since at least its 2006 rate case, Case No. ER-2006-0314.

21 Second, the only situation in recent history in which Staff had recommended the use of
22 an electric utility's subsidiary-specific capital structure is for purposes of Union Electric
23 Company d/b/a Ameren Missouri's ("Ameren Missouri") rate cases. Staff had always clearly

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1 explained that the reason it considered Ameren Missouri's capital structure appropriate for
2 ratemaking is because its parent company, Ameren Corporation ("Ameren"), was not issuing
3 much, if any debt, for purposes of investments in either Ameren Missouri or any of Ameren's
4 other operations. Additionally, Ameren's and Ameren Missouri's consolidated capital
5 structures consistently had similar equity ratios. This had alleviated Staff's concern about any
6 potential manipulation of Ameren Missouri's capital structure for ratemaking purposes.
7 However, in Ameren Missouri's current rate case, Case No. ER-2016-0179, Staff has
8 recommended the use of Ameren's consolidated capital structure and capital costs to set
9 Ameren Missouri's ROR because Ameren issued \$700 million of long-term debt in
10 November 2015, causing Ameren's consolidated capital structure to be more leveraged than
11 Ameren Missouri's.

12 Staff has always recommended the use of The Empire District Electric Company's
13 ("Empire") consolidated capital structure for purposes of setting Empire's allowed ROR. It is
14 important to understand that Empire directly owns its electric utility assets rather than a
15 subsidiary. It is also relevant for the Commission to be aware that Staff has recommended
16 using Empire's consolidated capital structure and capital costs for Empire's gas utility assets,
17 even though they are held in a separate subsidiary, as well as Empire's water utility assets,
18 which are also directly owned by Empire.

19 Q. What has Staff's approach been as it relates to Missouri natural gas distribution
20 utilities?

21 A. Staff has always recommended the use of either the gas utility's ultimate
22 parent company capital structure or the intermediate holding company. For purposes of
23 Laclede Gas Company, Staff and Laclede Gas have recommended the use of The Laclede

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1 Group's capital structure. For purposes of the Liberty Utility Midstates ("Midstates") natural
2 gas utility rate case, Case No. GR-2014-0152, Staff recommended the use of Midstates'
3 intermediate holding company's, Liberty Utilities Company, capital structure because this
4 was the entity that issued all of the debt on behalf of its regulated utility subsidiaries. The
5 Commission adopted Liberty Utilities Company's capital structure in its *Report and Order* in
6 that case.

7 Q. What has Staff's approach been as it relates to Missouri-American Water
8 Company (MAWC)?

9 A. Staff has recommended the use of American Water Works Company, Inc.'s
10 ("American Water") consolidated capital structure and capital costs for purposes of setting
11 MAWC's allowed ROR for over 10 years. Staff started recommending the use of
12 American Water's capital structure for MAWC when American Water decided to consolidate
13 the financing functions of its subsidiaries at the holding company level and make affiliate loan
14 transactions to the parent and its subsidiaries.

15 Q. Has the Commission issued decisions on capital structure other than the
16 Liberty Utility Midstates gas case discussed above?

17 A. Yes, but because capital structure was not a contested issue in most of the
18 cases involving Ameren Missouri, KCPL, GMO, Empire, and Laclede Gas, the Commission
19 simply adopted the capital structure that the parties had agreed to use in their testimonies.
20 Although Staff has consistently had a difference in opinion on the appropriate capital structure
21 to use for purposes of setting MAWC's rates, the Commission has not had to hear the issue of
22 capital structure and rate of return in at least 15 years, which preceded American Water's
23 consolidation of its financing activities. In the most recent Laclede Gas rate cases involving

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1 the Laclede Gas Division and Missouri Gas Energy Division (“MGE”), the parties did not
2 agree on whether the holding company or subsidiary capital structure should be used, but
3 because the revenue requirement in these cases settled, the Commission did not have to hear
4 this issue. Before Southern Union Company (“Southern Union”) sold MGE to Laclede Gas,
5 the appropriate capital structure and embedded capital costs were highly contested and the
6 Commission consistently used Southern Union’s consolidated capital structure to set MGE’s
7 rates. However, MGE was a division of Southern Union rather than a subsidiary, so this is
8 not directly comparable to KCPL’s situation.

9 Q. In what situation would Staff recommend the use of a subsidiary-specific
10 capital structure?

11 A. If the subsidiary’s capital structure is fair and reasonable and is directly
12 consequential to raising debt capital at reasonable costs, Staff may recommend its use. The
13 company would have to prove that the subsidiary’s capital costs are not being detrimentally
14 impacted by the parent company’s and/or its affiliates’ other business and financial risks. The
15 company would also have to prove why the subsidiary’s capital structure is more economical
16 than the consolidated capital structure. If it is not more economical, the company would have
17 to prove why it’s in the company’s best interest to maintain a less economical capital structure
18 for the utility.

19 Q. What should be the primary determinant of the appropriate capital structure to
20 use to set KCPL’s rate of return?

21 A. Because it is impossible to know what KCPL’s capital structure and capital
22 costs would have been absent the acquisition of GMO, the capital structure and capital costs
23 that is most economical to KCPL ratepayers should be used. As discussed in the Staff Report,

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1 the use of GPE's consolidated capital structure and capital costs produces approximately a
2 \$1 million lower revenue requirement as compared to that produced using KCPL's capital
3 structure and capital costs.⁴

4 Q. What is Staff's basis for its position that the most economical capital structure
5 must be used to set KCPL's rates?

6 A. In past testimonies involving the Companies' rate cases, Staff has consistently
7 explained and supported its arguments that the affiliated loan transactions between GPE and
8 GMO were detrimental to KCPL's ratepayers. KCPL was able to maintain a strong
9 investment grade credit rating during the period of KCPL's Experimental Alternative
10 Regulatory Plan ("Regulatory Plan"), Case No. EO-2005-0329, which allowed for higher
11 rates during the period of the plan (2005-2010) than otherwise was possible under traditional
12 ratemaking. GPE's credit rating benefited from the Regulatory Plan. Because GPE issued
13 shorter-term tenor debt and loaned the funds to GMO, GMO's embedded cost of debt actually
14 dropped below that of KCPL. In Staff's view, this was inherently unfair to KCPL ratepayers
15 because KCPL's ratepayers provided GPE the strong credit rating that allowed it to
16 financially support GMO.

17 Q. What was Staff's proposed solution to allow for a fair and reasonable allowed
18 ROR for the Companies?

19 A. Because it was obvious that GPE was financially managing the two
20 subsidiaries to achieve the lowest overall capital cost for GPE as a consolidated entity, Staff

⁴ The magnitude of the difference depends on the amount of rate base assumed as well as whether the debt costs are adjusted as Staff recommends. Using Staff's updated test-year rate base of \$2,518,098,891 and Staff's recommended debt costs, the difference calculated at the time of rebuttal was \$786,406.

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1 simply recommended the Commission determine each company's allowed ROR by using
2 GPE's consolidated capital structure and consolidated cost of debt.

3 Q. Has Staff always recommended KCPL's allowed ROR be set based on GPE's
4 consolidated capital structure?

5 A. Yes. Staff recommended this approach before GPE acquired Aquila and
6 assumed its legacy debt.

7 Q. Has Staff always recommended that the consolidated debt costs be applied to
8 both the Companies after GPE acquired GMO?

9 A. No. Because GPE's acquisition of Aquila included the assumption of
10 non-investment grade cost Aquila legacy debt, which remained on GMO's books for the first
11 couple of rate cases after the transaction, *see* Case Nos. ER-2009-0090 and ER-2010-0356,
12 and this debt still carried a very high cost due to Aquila's troubled past non-regulated
13 investments, Staff recommended GMO's allowed debt return be based on Empire's cost of
14 debt. Staff recommended KCPL's cost of debt be based on GPE's consolidated cost of debt,
15 net of any of the assumed GMO debt, since at that time its inclusion would have caused
16 KCPL ratepayers to pay a higher ROR than would have been the case absent the acquisition
17 of Aquila.

18 Q. Does GMO still have any debt outstanding that carries higher-than-reasonable
19 costs due to Aquila's failed non-regulated investments?

20 A. No. The last of these high-cost debt issuances was retired on July 1, 2012.
21 GMO still has four legacy debt issues that were issued prior to Aquila's financial troubles.
22 This debt was issued at fixed rates so the historical cost of these debt issuances was not

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1 affected by Aquila's financial distress. The percentage of debt on GMO's books that was
2 assumed by GPE now accounts for less than 10% of total GMO debt.

3 Q. How much of the debt currently on GMO's books did GPE issue directly and
4 then loan to GMO?

5 A. As of December 31, 2015, slightly less than 60% of the debt assigned to
6 GMO was issued by GPE. GPE has been providing capital to GMO, since it acquired it in
7 July 2008. It has also guaranteed and continues to guarantee GMO's debt, credit facilities,
8 and commercial paper program.⁵

9 Q. What percentage of debt assigned to GMO was issued directly to third party
10 investors by GMO since it was acquired by GPE?

11 A. A little over 30%.

12 Q. When GMO issued this debt, what credit rating did S&P assign to GMO?

13 A. "BBB."

14 Q. Did S&P assign GMO's credit rating based on the financial risk implied in its
15 capital structure?

16 A. No.

17 Q. What capital structure did S&P evaluate for purposes of assigning GMO a
18 'BBB' credit rating?

19 A. GPE's consolidated capital structure.

20 Q. What capital structure does S&P evaluate for purposes of assigning KCPL a
21 credit rating?

22 A. GPE's consolidated capital structure.

⁵ Great Plains Energy's 2015 SEC Form 10-K filing, p. 16.

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1 Q. What has been a typical common equity ratio for GPE's consolidated
2 operations?

3 A. As shown in Schedule DM-r1, GPE typically targets a common equity ratio of
4 approximately 47% when short-term debt is included. As seen in Schedule DM-r2, if only
5 long-term capital components are considered, GPE's consolidated common equity ratio is
6 approximately 50%.

7 Q. How does this compare to KCPL's historical per books capital structures?

8 A. As can be seen in Schedules DMr-3 and DMr-4, it is fairly similar, with KCPL
9 having a slightly more leveraged capital structure in the last three years.

10 Q. As of June 30, 2016, were KCPL's and GPE's capital structures significantly
11 different?

12 A. No. In fact, coincidentally, they were exactly the same after short-term debt is
13 removed from the capital structures.

14 Q. Then why does the use of GPE's capital structure cause a lower revenue
15 requirement?

16 A. Because GPE's debt costs are lower than KCPL's debt costs. GPE's
17 consolidated cost of debt is lower because GPE and/or GMO issued approximately 90% of
18 GMO's outstanding debt since 2009. The need to have this much debt issued for GMO's
19 operations in this short amount of time was a function of unwinding GMO's attachment to
20 significant amounts of debt issued by Aquila.

21 Q. What entity made it possible for GPE to refinance this significant amount
22 of debt?

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1 A. KCPL. Consequently, KCPL ratepayers should at least be allowed to have
2 some of this lower cost debt assigned to it for purposes of ratemaking. Staff seeks to allow
3 this to occur by recommending the use of GPE's consolidated cost of debt to set KCPL's
4 ROR.

5 Q. What cost of debt does Mr. Bryant recommend for purposes of setting KCPL's
6 allowed ROR?

7 A. He recommends KCPL's projected cost of debt of 5.51% as of December 31,
8 2016, be applied to KCPL's projected debt ratio as of the same date.

9 Q. Did Mr. Bryant attach the calculation of KCPL's projected debt cost to his
10 direct testimony?

11 A. No. This calculation was attached to KCPL witness Robert B. Hevert's direct
12 testimony and is labeled Schedule RBH-10.

13 Q. Although Staff is not recommending the use of KCPL's capital structure and
14 cost of debt, do you have any concerns with the mechanics of KCPL's embedded cost of debt
15 calculation?

16 A. Yes. KCPL's embedded cost of debt calculation method double-counts debt
17 issuance expenses and discounts. There are two primary methods used in determining an
18 embedded cost of debt, the yield-to-maturity (YTM) method and the simple
19 interest/amortization method.⁶ KCPL has typically used the YTM method and the Staff has
20 typically accepted this method for determining KCPL's cost of debt. However, for purposes
21 of this case, KCPL added an additional step to its YTM method, which provides an inflated

⁶ David C. Parcell, "The Cost of Capital – A Practitioner's Guide," 1997 Edition, pp. 5-2 through 5-4.

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1 and inaccurate cost of debt result. KCPL's additional step results in a blending of the YTM
2 and simple interest method.

3 Q. How did KCPL's additional step cause a double counting of issuance
4 expenses?

5 A. On page 3 of Schedule RBH-10, column (h) provides the effective cost of each
6 individual issuance by considering the coupon rate, the net proceeds of the issuance
7 (essentially the face value of the debt, net of issuance expenses, discounts, and premiums), the
8 number of periods until maturity and the amount due when the debt is redeemed. Because the
9 YTM is determined for each debt issuance on an individual basis, the gross issuance
10 expenses, discounts, and premiums are already considered in the effective cost for each debt
11 item. However, on lines 16 and 17 of page 3 of Schedule RBH-10, the Company's
12 calculation sums the individual debt issuances' costs that were already considered in the YTM
13 calculation and includes them in the aggregate calculation. This extra and inappropriate step
14 causes the Company's cost of debt estimate to be three (3) basis points higher. The accurate
15 cost of debt using the YTM method is 5.48% (*see* Schedule DMr-5).

16 Q. Did the Company explain why it added this additional step to its YTM
17 calculation for purposes of this rate case?

18 A. No.

19 Q. How do other Missouri utility companies typically calculate their embedded
20 costs of debt?

21 A. Most Missouri utility companies follow the simple interest/amortization
22 method. This method essentially calculates the embedded cost of all of the debt issuances as
23 of a point in time rather than the average cost of each debt issuance over their maturities.

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1 Q. Has Staff taken a position on which method is the most appropriate for
2 ensuring a fair and reasonable allowed rate of return?

3 A. No. Staff has generally accepted either method proposed by companies, but it
4 is definitely inappropriate to combine the two as KCPL has done.

5 Q. Did KCPL perform an embedded cost of debt calculation using the simple
6 interest/amortization method?

7 A. Yes.

8 Q. Why?

9 A. In order to test the reasonableness of the YTM calculation.

10 Q. What was the projected cost of debt as of December 31, 2016 using this
11 method?

12 A. 5.48% (*see* Schedule DM-r6).

13 Q. What is your recommended cost of debt?

14 A. 5.42%, as shown in Dr. Woolridge's Exhibit JRW-1, attached to Staff Report,
15 but also attached to my rebuttal testimony as Schedule DM-r7.

16 Q. What method did you use to determine this cost of debt?

17 A. As I discussed in the capital structure section of this testimony, I used GPE's
18 consolidated capital structure and cost of debt. For purposes of determining GPE's cost of
19 debt, I used the YTM method but did not double count issuance expenses and discounts.

20 Q. What was GPE's cost of debt as of June 30, 2016, using the simple
21 interest/amortization method?

22 A. 5.42%.

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1 Q. What was GPE's indicated cost of debt when the two methods were blended as
2 KCPL has done for its recommended cost of debt in its testimony?

3 A. 5.44%.

4 Q. What does this demonstrate?

5 A. KCPL's additional step causes a higher cost of debt than the method it had
6 used to test the reasonableness of its calculation.

7 Q. Does this conclude your Rebuttal Testimony?

8 A. Yes, it does.

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI


In the Matter of Kansas City Power & Light)
Company's Request for Authority to) Case No. ER-2016-0285
Implement A General Rate Increase for)
Electric Service)

AFFIDAVIT OF DAVID MURRAY

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

COMES NOW DAVID MURRAY and on his oath declares that he is of sound mind and lawful age; that he contributed to the foregoing Rebuttal; and that the same is true and correct according to his best knowledge and belief.

Further the Affiant sayeth not.

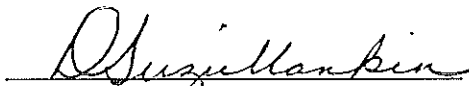


DAVID MURRAY

JURAT

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Cole, State of Missouri, at my office in Jefferson City, on this 29th day of December, 2016.

D. SUZIE MANKIN
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: December 12, 2020
Commission Number: 12412070



Notary Public

Kansas City Power & Light Company
Case No. ER-2016-0285

Historical Consolidated Capital Structures for Great Plains Energy

Capital Components	2011	2012	2013	2014	2015	5-Year Average	3-Year Average
Common Equity	\$2,960.9	\$3,340.0	\$3,474.4	\$3,586.1	\$3,656.5	\$3,340.4	\$3,572.3
Preferred Stock	39.0	39.0	39.0	39.0	39.0	\$39.0	\$39.0
Long-Term Debt	3,543.7 *	3,019.9 *	3,516.8 *	3,480.8 *	3,746.2 *	\$3,390.3	\$3,581.3
Short-Term Debt	384.0	716.1	292.2	533.3	409.0	\$481.4	\$411.5
Total	<u>\$6,927.6</u>	<u>\$7,115.0</u>	<u>\$7,322.4</u>	<u>\$7,639.2</u>	<u>\$7,850.7</u>	<u>\$7,251.1</u>	<u>\$7,604.1</u>

Capital Components	2011	2012	2013	2014	2015	5-Year Average	3-Year Average
Common Equity	42.74%	46.94%	47.45%	46.94%	46.58%	46.02%	46.99%
Preferred Stock	0.56%	0.55%	0.53%	0.51%	0.50%	0.54%	0.51%
Long-Term Debt	51.15%	42.44%	48.03%	45.56%	47.72%	46.80%	47.10%
Short-Term Debt	5.54%	10.06%	3.99%	6.98%	5.21%	6.64%	5.39%
Total	<u>100.00%</u>	<u>100.00%</u>	<u>100.00%</u>	<u>100.00%</u>	<u>100.00%</u>	<u>100.00%</u>	<u>100.00%</u>

Sources: SEC 10-K Filings

Kansas City Power & Light Company
Case No. ER-2016-0285

Historical Consolidated Capital Structures for Great Plains Energy
Excluding Short-Term Debt

<u>Capital Components</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>5-Year Average</u>	<u>3-Year Average</u>
Common Equity	\$2,960.9	\$3,340.0	\$3,474.4	\$3,586.1	\$3,656.5	\$3,340.4	\$3,572.3
Preferred Stock	39.0	39.0	39.0	39.0	39.0	\$39.0	\$39.0
Long-Term Debt	3,543.7 *	3,019.9 *	3,516.8 *	3,480.8 *	3,746.2 *	\$3,390.3	\$3,581.3
Short-Term Debt	0.0	0.0	0.0	0.0	0.0	\$0.0	\$0.0
Total	<u>\$6,543.6</u>	<u>\$6,398.9</u>	<u>\$7,030.2</u>	<u>\$7,105.9</u>	<u>\$7,441.7</u>	<u>\$6,769.7</u>	<u>\$7,192.6</u>

<u>Capital Components</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>5-Year Average</u>	<u>3-Year Average</u>
Common Equity	45.25%	52.20%	49.42%	50.47%	49.14%	49.33%	49.67%
Preferred Stock	0.60%	0.61%	0.55%	0.55%	0.52%	0.58%	0.54%
Long-Term Debt	54.16%	47.19%	50.02%	48.98%	50.34%	50.09%	49.78%
Short-Term Debt	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total	<u>100.00%</u>	<u>100.00%</u>	<u>100.00%</u>	<u>100.00%</u>	<u>100.00%</u>	<u>100.00%</u>	<u>100.00%</u>

Sources: SEC 10-K Filings

**Kansas City Power & Light Company
Case No. ER-2016-0285**

Historical Consolidated Capital Structures for KCPL

Capital Components	2011	2012	2013	2014	2015	5-Year Average	3-Year Average
Common Equity	\$2,045.5	\$2,096.7	\$2,179.3	\$2,275.0	\$2,433.1	\$2,205.9	\$2,295.8
Long-Term Debt	1,914.6 *	1,902.1 *	2,312.2 *	2,296.8 *	2,563.1 *	\$2,197.8	\$2,390.7
Short-Term Debt	227.0	361.0	93.2	358.3	180.3	\$244.0	\$210.6
Total	4,187.1	4,359.8	4,584.7	4,930.1	5,176.5	\$4,647.6	\$4,897.1

Capital Components	2011	2012	2013	2014	2015	5-Year Average	3-Year Average
Common Equity	48.85%	48.09%	47.53%	46.15%	47.00%	47.53%	46.89%
Long-Term Debt	45.73%	43.63%	50.43%	46.59%	49.51%	47.18%	48.84%
Short-Term Debt	5.42%	8.28%	2.03%	7.27%	3.48%	5.30%	4.26%
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Source: SEC 10-K Filings

Kansas City Power & Light Company
Case No. ER-2016-0285

Historical Consolidated Capital Structures for KCP&L
Excluding Short-Term Debt

Capital Components	2011	2012	2013	2014	2015	5-Year Average	3-Year Average
Common Equity	\$2,045.5	\$2,096.7	\$2,179.3	\$2,275.0	\$2,433.1	\$2,205.9	\$2,295.8
Long-Term Debt	1,914.6 *	1,902.1 *	2,312.2 *	2,296.8 *	2,563.1 *	\$2,197.8	\$2,390.7
Short-Term Debt	0.0	0.0	0.0	0.0	0.0	\$0.0	\$0.0
Total	<u>3,960.1</u>	<u>3,998.8</u>	<u>4,491.5</u>	<u>4,571.8</u>	<u>4,996.2</u>	<u>\$4,403.7</u>	<u>\$4,686.5</u>

Capital Components	2011	2012	2013	2014	2015	5-Year Average	3-Year Average
Common Equity	51.65%	52.43%	48.52%	49.76%	48.70%	50.21%	48.99%
Long-Term Debt	48.35%	47.57%	51.48%	50.24%	51.30%	49.79%	51.01%
Short-Term Debt	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total	<u>100.00%</u>	<u>100.00%</u>	<u>100.00%</u>	<u>100.00%</u>	<u>100.00%</u>	<u>100.00%</u>	<u>100.00%</u>

Source: SEC 10-K Filings

Kansas City Power & Light Company
Case No. ER-2016-0285

Weighted Average Cost of Long-Term Debt Capital
December 31, 2016 (Projected)

Line	Issue	(a) Initial Offering	(b) Date of Offering	(c) Date of Maturity	(d) Price to Public	(e) Original Discount (Premium)	(f) Underwriting & Issuance Expense	(g) Net Proceeds to Company	(h) Cost to Company	(i) Long-term Debt Capital Outstanding	(j) Annual Cost of Long-term Debt Capital
Pledged General Mortgage Bonds											
1	EIRR 1992 Series	\$31,000,000	9/15/1992	7/1/2017	\$31,000,000		\$334,408	\$30,665,594	1.499%	\$31,000,000	\$464,625
2	MATES Series 1993-A	\$40,000,000	12/7/1993	12/1/2023	\$40,000,000		\$362,326	\$39,637,674	3.051%	\$40,000,000	\$1,220,580
3	MATES Series 1993-B	\$39,480,000	12/7/1993	12/1/2023	\$39,480,000		\$364,531	\$39,115,469	3.053%	\$39,480,000	\$1,205,502
4	EIRR La Cygne 2005 Series - 4.65% Coupon	\$21,940,000	2/23/1994	9/1/2035	\$21,940,000			\$21,940,000	4.650%	\$21,940,000	\$1,020,210
5	Mortgage Bonds Series 2008A - 7.15%	\$400,000,000	3/24/2009	3/24/2019	\$400,000,000	\$432,000	\$4,023,316	\$395,544,684	7.309%	\$400,000,000	\$29,235,757
Unsecured Notes											
6	Senior Notes Due 2017 - 5.85% Coupon (1)	\$250,000,000	5/30/2007	6/15/2017	\$250,000,000	\$420,000	\$1,843,906	\$247,736,094	5.972%	\$250,000,000	\$14,928,940
7	Senior Notes Due 2035 - 6.05% Coupon (2)	\$250,000,000	11/17/2005	11/15/2035	\$250,000,000	\$1,505,000	\$2,443,109	\$246,051,891	6.166%	\$250,000,000	\$15,415,411
8	Senior Notes Due 2018 - 6.375% Coupon (3)	\$350,000,000	3/6/2008	3/1/2018	\$350,000,000		\$2,566,730	\$347,433,270	6.476%	\$350,000,000	\$22,665,182
9	Senior Notes Due 2041 - 5.30% Coupon (4)	\$400,000,000	9/20/2011	10/1/2041	\$400,000,000	\$2,568,000	\$3,876,569	\$393,555,431	5.400%	\$400,000,000	\$21,836,850
10	Senior Notes Due 2023 - 3.15% Coupon (1)	\$300,000,000	3/14/2013	3/15/2023	\$300,000,000	\$282,000	\$2,339,941	\$297,378,059	3.253%	\$300,000,000	\$9,759,257
11	Senior Notes Due 2023 - 3.65% Coupon (1)	\$350,000,000	8/13/2015	8/15/2025	\$350,000,000	\$1,246,000	\$2,925,379	\$345,828,621	3.794%	\$350,000,000	\$13,280,167
Environmental Improvement Revenue Refunding Bonds											
12	2005 Series Due 2035 - 4.85% Coupon	\$50,000,000	9/1/05	9/1/2035	\$50,000,000			\$50,000,000	4.850%	\$50,000,000	\$2,325,000
13	2007 Series A Due 2035	\$73,250,000	9/19/07	9/1/2035	\$73,250,000		\$130,278	\$73,119,722	1.127%	\$73,250,000	\$625,514
14	2007 Series B Due 2035	\$73,250,000	9/19/07	9/1/2035	\$73,250,000		\$130,278	\$73,119,722	1.127%	\$73,250,000	\$625,514
15	2008 Series Due 2038	\$23,400,000	5/28/08	5/1/2038	\$23,400,000		\$213,055	\$23,186,945	3.108%	\$23,400,000	\$727,332
Other Long-Term Debt											
16	Unamortized Discount on Senior Notes						Amount Removed from Calculation	\$4,430,364			
17	Unamortized Debt Expense							\$10,773,469			
18	Loss/(Gain) on reacquired Debt										\$ 704,148
19	Weighted Cost of Interest Rate Management Products										\$8,535,948
20	Tax-exempt Debt Repurchased (lines 4 and 12)								4.85%	(\$71,940,000)	(\$3,345,210)
21	Total KCP&L Long-Term Debt Capital									\$2,580,380,000	\$141,430,539
22	KCP&L Weighted Avg. Cost of Long-Term Debt Capital										5.481%

Notes:

- (1) Expenses associated with the Senior Notes are being amortized over a 10 year period.
- (2) Expenses associated with the Senior Notes are being amortized over a 30 year period.
- (3) Expenses associated with the Senior Notes are being amortized over a 10 year period.
- (4) Expenses associated with the Senior Notes are being amortized over a 30 year period.

Source: Robert B. Hevert Direct Testimony, Schedule RBH-10, p. 3.

Kansas City Power & Light Company
Case No. ER-2016-0285

Simple Interest/Amortization Method for Embedded Cost of Debt

Line	Issue	Long-term Debt Capital Outstanding	Embedded Interest Expense
<u>Pledged General Mortgage Bonds</u>			
1	EIRR 1992 Series	\$31,000,000	\$468,006
2	MATES Series 1993-A	\$40,000,000	\$1,214,080
3	MATES Series 1993-B	\$39,480,000	\$1,198,957
4	EIRR La Cygne 2005 Series - 4.65% Coupon	\$21,940,000	\$1,020,210
5	Mortgage Bonds Series 2009A - 7.15%	\$400,000,000	\$34,365,338
<u>Unsecured Notes</u>			
6	Senior Notes Due 2017 - 5.85% Coupon (1)	\$250,000,000	\$14,527,162
7	Senior Notes Due 2035 - 6.05% Coupon (2)	\$250,000,000	\$14,858,859
8	Senior Notes Due 2018 - 6.375% Coupon (3)	\$350,000,000	\$26,737,558
9	Senior Notes Due 2041 - 5.30% Coupon (4)	\$400,000,000	\$21,415,066
10	Senior Notes Due 2023 - 3.15% Coupon (1)	\$300,000,000	\$9,710,189
11	Senior Notes Due 2023 - 3.65% Coupon (1)	\$350,000,000	\$13,191,367
<u>Environmental Improvement Revenue Refunding Bonds</u>			
12	2005 Series Due 2035 - 4.65% Coupon	\$50,000,000	\$2,325,000
13	2007 Series A Due 2035	\$73,250,000	\$820,664
14	2007 Series B Due 2035	\$73,250,000	\$820,664
15	2008 Series Due 2038	\$23,400,000	\$681,343
<u>Other Long-Term Debt</u>			
16	Unamortized Discount on Senior Notes	(\$4,430,364)	
17	Unamortized Debt Expense	(\$10,773,469)	
18	Loss/(Gain) on Reacquired Debt		\$ 704,148
19	Weighted Cost of Interest Rate Management Products		
20	Tax-exempt Debt Repurchased (lines 4 and 12)	<u>(\$71,940,000)</u>	<u>(3,345,210)</u>
21	Total	<u>\$2,565,176,168</u>	<u>\$140,713,402</u>
22	KCP&L Weighted Avg. Cost of Long-Term Debt		5.486%

Source: Robert B. Hevert Direct Testimony, Schedule RBH-10, p. 3 and KCPL workpapers.

Kansas City Power & Light Company
Case No. ER-2015-0285

Weighted Average Cost of Long-Term Debt Capital
June 30, 2018

Line	Issue	Rating	Term	Rate	Quantity	Par Value	Original Premium	Unamortized Premium	Carrying Amount	Market Value	Yield	Weighted Average Cost
UNAMORTIZED PREMIUM												
1	Senior Notes Due 2017 - 4.875% Coupon 10		10/29/2017	4.875%	3,109,000,000	\$3,109,000,000	\$1,160,000	\$1,160,000	\$3,110,160,000	\$2,705,782	4.875%	4.875%
2	Senior Notes Due 2024 - 4.85% Coupon		7/16/2011	4.850%	3,520,000,000	\$3,520,000,000	\$1,610,000	\$1,610,000	\$3,521,610,000	\$17,351,475	4.850%	4.850%
3	Senior Notes Due 2022 - 5.200% Coupon		3/16/2012	5.200%	3,297,000,000	\$3,297,000,000	\$1,569,913	\$1,569,913	\$3,298,569,913	\$14,082,005	5.200%	5.200%
OTHER LONG-TERM DEBT												
4	Unamortized Discount on Senior Notes											
5	Unamortized Premium on Senior Notes											
6	Unamortized Debt Premium											
7	Unamortized Cost of Interest Rate Management Products											
8	Total OPE Only Long-Term Debt Capital											
9	OPE Only Weighted Avg. Cost of Long-Term Debt Capital											
DISTRIBUTION OF INTERCOMPANY DEBT												
10	Intercompany Debt - OPE Senior Notes due 2024		5/16/11	4.125%	(\$547,200,000)	(\$547,200,000)			(\$547,200,000)	4.870%	4.870%	4.870%
11	Intercompany Debt - OPE Senior Notes due 2022		6/15/12	6.150%	(\$287,500,000)	(\$287,500,000)			(\$287,500,000)	5.120%	5.120%	5.120%
12	OPE Only Long-Term Debt Capital net of Intercompany Debt											
OP&AT PLANTS, ENERGY, KANSAS CITY POWER & LIGHT AND GNO												
13	Total OPE, KCP&L and GNO Long-Term Debt Capital											
14	OPE, KCP&L and GNO Weighted Avg. Cost of Long-Term Debt Capital											

(1) Premiums associated with the Senior Notes are being amortized over a 10-year period.
 (2) Premiums associated with the Senior Notes are being amortized over a 20-year period.
 (3) Premiums associated with the Senior Notes are being amortized over a 10-year period.
 (4) Premiums associated with the Senior Notes are being amortized over a 20-year period.
 (5) Premiums associated with the Senior Notes are being amortized over a 10-year period.
 (6) Premiums associated with the Senior Notes are being amortized over a 20-year period.
 (7) Premiums associated with the Senior Notes are being amortized over a 10-year period.
 (8) Premiums associated with the Senior Notes are being amortized over a 20-year period.
 (9) Premiums associated with the Senior Notes are being amortized over a 10-year period.
 (10) Premiums associated with the Senior Notes are being amortized over a 20-year period.
 (11) Premiums associated with the Senior Notes are being amortized over a 10-year period.
 (12) Premiums associated with the Senior Notes are being amortized over a 20-year period.
 (13) Premiums associated with the Senior Notes are being amortized over a 10-year period.
 (14) Premiums associated with the Senior Notes are being amortized over a 20-year period.