

KCP&L-234

Exhibit No.:

Issues: *Rate of Return*

Witness: *David Murray*

Sponsoring Party: *MoPSC Staff*

Type of Exhibit: *Rebuttal Testimony*

Case No.: *ER-2010-0355*

Date Testimony Prepared: *December 8, 2010*

MISSOURI PUBLIC SERVICE COMMISSION

UTILITY SERVICES DIVISION

REBUTTAL TESTIMONY

OF

DAVID MURRAY

**Great Plains Energy, Incorporated
KANSAS CITY POWER & LIGHT COMPANY**

CASE NO. ER-2010-0355

Jefferson City, Missouri
December 2010

** Denotes Highly Confidential Information **

Staff Exhibit No. KCP&L-234
Date 1/18/11 Reporter LMB
File No. ER-2010-0355

NP

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16

TABLE OF CONTENTS
OF THE REBUTTAL TESTIMONY OF
DAVID MURRAY
Great Plains Energy, Incorporated
KANSAS CITY POWER & LIGHT COMPANY
CASE NO. ER-2010-0355

EXECUTIVE SUMMARY2
STAFF RESPONSE TO DR. HADAWAY’S RECOMMENDED COST OF COMMON
EQUITY FOR KCPL.....4
STAFF RESPONSE TO MR. GORMAN’S RECOMMENDED COST OF COMMON
EQUITY FOR KCPL.....20
STAFF RESPONSE TO DR. HADAWAY’S AND MR. GORMAN’S RECOMMENDED
CAPITAL STRUCTURE FOR KCPL24
STAFF RESPONSE TO DR. HADAWAY’S AND MR. GORMAN’S RECOMMENDED
COST OF EQUITY UNITS.....25
SUMMARY AND CONCLUSIONS27

1 **EXECUTIVE SUMMARY**

2 Q. Please explain why the Missouri Public Service Commission Staff's (Staff)
3 recommended return on common equity ("ROE") is lower than those of Dr. Hadaway and
4 Mr. Gorman.

5 A. Model inputs. All of the experts in this case use multiple methodologies to
6 evaluate the estimated cost of KCPL's common equity; Staff gives primary weight to its
7 multi-stage discounted cash flow ("DCF") analysis, Dr. Hadaway appears to give primary
8 weight to his DCF analyses, and Mr. Gorman gives weight to his DCF, Capital Asset Pricing
9 Model ("CAPM") and Risk Premium analyses. It is clear from a comparison of the
10 commonly-used DCF methodology that Staff's lower cost of equity estimate is primarily
11 driven by Staff's position that investors do not project perpetual electric utility dividend
12 growth based on 5-year EPS estimates or GDP growth, but rather expect growth rates
13 consistent with past industry performance and that of an industry expected to maintain
14 relatively high dividend payout ratios due to lack of sustainable growth prospects. Staff's
15 perpetual growth rates closely reflect those that are used by investors, financial advisors and
16 equity analysts for purposes of determining a fair price to pay for an equity investment in
17 regulated electric utility properties.

18 Each rate-of-return ("ROR") witness in this case performed a multi-stage
19 DCF analysis. The main driver behind the results obtained from any multi-stage
20 DCF analysis is the perpetual growth rate. Consequently, to the extent the Commission
21 continues to accept the multi-stage DCF methodology, as it did in
22 the recent Union Electric Company d/b/a AmerenUE ("AmerenUE") rate case,
23 Case No. ER-2010-0036, the main issue before the Commission is the determination of a
24 reasonable perpetual growth rate.

David Murray
Rebuttal Testimony

1 Dr. Hadaway uses a perpetual growth rate of 6.0 percent, based on his
2 self-determined calculation of historical nominal GDP growth. Mr. Gorman relies upon a
3 perpetual growth rate of 4.75 percent, which is based upon the projected
4 nominal GDP growth rate provided in the October 10, 2010 edition of
5 *Blue Chip Economic Indicators*. Staff used a perpetual growth rate range of 3.0 percent to
6 4.0 percent, based upon long-term realized growth rates for the electric utility industry and
7 Staff's knowledge of perpetual growth rates used by independent investment analysts. Staff
8 believes that this growth rate is consistent, if not on the high end, of current expectations of
9 future growth and should be relied upon by the Commission in this proceeding.

10 Q. Is there currently a difference in the capital structure recommendations of the
11 ROR experts? If so, what are they?

12 A. Yes, there is currently a difference in recommended capital structures. Staff
13 uses Great Plains Energy, Inc.'s ("GPE") actual capital structure as of June 30, 2010.
14 Dr. Hadaway recommends the use of a pro-forma capital structure based on projected data
15 through December 31, 2010. Mr. Gorman adopts Dr. Hadaway's proposed capital structure.
16 Although Dr. Hadaway's capital structure is not significantly different from Staff's, Staff
17 advises the Commission to wait until actual true-up information is available before deciding
18 if the December 31, 2010 capital structure should be adopted.

19 Q. Are there any differences in opinion on the proper cost of equity units to
20 include in the ROR applied to KCPL's rate base?

21 A. Yes. Staff believes the cost of these equity units was higher as a result of the
22 additional financial risk GPE absorbed when it acquired Aquila, Inc.'s ("Aquila")

David Murray
Rebuttal Testimony

1 Missouri electric operations¹ on July 14, 2008. Consequently, Staff recommends a
2 downward adjustment to the cost of the equity units to ensure that KCPL's ratepayers do not
3 pay higher capital costs caused by GPE's strained credit quality due to Aquila's legacy debt.

4 **STAFF RESPONSE TO DR. HADAWAY'S RECOMMENDED COST OF COMMON**
5 **EQUITY FOR KCPL**

6 SUMMARY

7 Q. Please summarize Dr. Hadaway's cost of common equity estimates and final
8 recommended ROE.

9 A. Dr. Hadaway estimates KCPL's cost of common equity at 10.75 percent, but
10 ultimately recommends an ROE of 11.00 percent to include an additional 25 basis points for
11 KCPL's "reliability and customer satisfaction achievements." (See Staff witness
12 Lisa Kremer's Rebuttal Testimony in response to KCPL's request for this additional
13 increase). Dr. Hadaway's DCF estimates range from 10.50 percent to 11.00 percent and his
14 Risk Premium estimates range from 10.61 percent to 10.82 percent (see Table 6 on page 44
15 of Dr. Hadaway's Direct Testimony).

16 Although the timing of Dr. Hadaway's analysis for purposes of his recommended cost
17 of common equity was not under his control, it is very important to note that the market data
18 analyzed by Dr. Hadaway does not account for the significant decrease in utility bond yields
19 that has occurred since he filed his Direct Testimony. Staff is under the impression that
20 Dr. Hadaway plans on updating his cost of common equity recommendation. Consequently,
21 I will not dwell on Dr. Hadaway's overall estimate of 10.75 percent. Instead, I will evaluate
22 the assumptions that he uses in his methodologies in order to explain why those assumptions

¹ Now referred to as "the GMO properties".

David Murray
Rebuttal Testimony

1 are not consistent with investor valuation methodologies for electric utility investments, and
2 therefore, not consistent with a return required by investors.

3 Q. Can you please explain your criticisms of Dr. Hadaway's DCF analyses?

4 A. Yes. Dr. Hadaway's DCF analyses consist of three variations of the DCF,
5 which Staff will identify as: (1) the "equity-analyst constant-growth DCF", (2) the
6 "GDP constant-growth DCF", and (3) the "GDP multi-stage DCF." All of these variations
7 are heavily dependent on the constant growth rate(s) he uses to estimate the future growth in
8 the stock price of his comparable companies. Consequently, his cost-of-common-equity
9 DCF estimates are very sensitive to the reasonableness of this growth rate.

10 Q. Why should the Commission dismiss the results of Dr. Hadaway's
11 "equity-analyst constant-growth DCF", which uses a projected growth rate derived from
12 equity analysts' projected 5-year earnings per share ("EPS") growth rates?

13 A. In this version of the DCF Dr. Hadaway assumes that his comparable
14 companies' stock prices will grow at the analysts' projected 5-year EPS growth rates
15 indefinitely into the future. EPS projections are intended to reflect expectations over a
16 5-year period. As a result, these growth rates are not sustainable into perpetuity and do not
17 reflect the long-term fundamentals of the electric utility industry (explained in further detail
18 in proceeding sections).

19 Q. Why should the Commission dismiss Dr. Hadaway's "GDP constant-growth
20 DCF" analysis, in which he assumes that his comparable companies' stock prices will grow
21 indefinitely at a constant annual compound growth rate of 6.0 percent?

22 A. Dr. Hadaway's assumption that electric utility companies will grow at the
23 same rate of the economy, is flawed. Staff will provide in a following section of this

David Murray
Rebuttal Testimony

1 testimony a simple example to show why this assumption defies logic regarding basic
2 risk/return principles. Even assuming *arguendo* that the expected nominal GDP growth is a
3 reasonable proxy for the perpetual growth rate of an electric utility company, his
4 self-calculated growth rate of 6.0 percent does not represent investors' expectations of future
5 domestic economic growth.

6 Q. Why should the Commission dismiss Dr. Hadaway's "GDP multi-stage DCF"
7 analysis, in which he assumes growth in dividends for the first five years based on
8 Value Line's dividend per share ("DPS") projections and then a perpetual growth rate based
9 on his self-calculated average annual nominal GDP growth of 6.0 percent?

10 A. This version of Dr. Hadaway's DCF analyses should be dismissed for the
11 same reason as his "GDP constant-growth DCF" analysis discussed above. Investors do not
12 expect electric utility companies to grow in perpetuity at the same rate as the
13 overall economy.

14 EQUITY ANALYSTS' EPS ESTIMATES FOR CONSTANT GROWTH

15 Q. What is the primary reason that Dr. Hadaway's "equity-analyst
16 constant-growth DCF" cost of equity estimate is unreliable?

17 A. Dr. Hadaway assumes that his proxy group can grow into perpetuity at an
18 unsustainable annual growth rate of 5.69 percent. It is not logical to expect electric utilities'
19 DPS to grow at a constant rate of 5.69 percent into the indefinite future. This growth rate is
20 not only above what is reasonable to expect for the regulated electric utility industry, but it is
21 also much higher than what investors expect for the growth in the overall economy.

22 While I do not believe the perpetual growth rate for the electric utility industry should
23 be equivalent to the expected growth in GDP, expected long-term growth in GDP does

David Murray
Rebuttal Testimony

1 influence expected growth for the electric utility industry. In this respect, an accurate
2 measure of GDP is relevant, but not determinative. Because the electric utility industry's
3 DPS, EPS and book value per share ("BVPS")² have not grown anywhere near the same rate
4 of GDP in the past, it would take a leap of faith from investors to anticipate this higher rate of
5 growth when determining a fair price to pay for electric utility stocks.

6 GDP AS A PROXY FOR ELECTRIC UTILITY INDUSTRY GROWTH

7 Q. Both the "GDP constant-growth DCF" and the "GDP multi-stage DCF"
8 assume that Dr. Hadaway's proxy group will grow at the same rate of the economy. Why is
9 this assumption unreasonable?

10 A. The simplest way to illustrate the fallacy of Dr. Hadaway's use of GDP
11 growth in his DCF analyses as a proxy for long-term growth of the electric utility industry is
12 to consider the impact of the appropriate application of this logic to the S&P 500 index.
13 Because the S&P 500 index is considered a proxy for the U.S. stock market, it intuitively
14 makes sense that the expected long-term growth of the S&P 500 may be consistent with the
15 expected growth in GDP. However, because on average, the companies in the S&P 500 tend
16 to have better growth prospects than the electric utility industry, the dividend payout ratio
17 and the dividend yield is lower than that of the electric utility industry. This would seem to
18 imply that the growth rate for the electric utility industry would have to be lower than an
19 aggregate growth rate, i.e. GDP, used for the U.S. market, i.e. the S&P 500. Adding
20 Dr. Hadaway's expected GDP growth rate of 6.0 percent to the current S&P 500 dividend
21 yield of 2.08 percent³, results in a cost of common equity of 8.08 percent. Dr. Hadaway's
22 "GDP constant-growth DCF" analysis of the electric utility industry results in an estimated

² Per share figures that are often analyzed to determine a sustainable long-term growth rate for the DCF methodology.

³ <http://www.standardandpoors.com/indices/sp-500/en/us/?indexId=spusa-500-usduf--p-us-l--> (Index Earnings)

David Murray
Rebuttal Testimony

1 cost of equity of 11.0 percent. Considering that electric utilities stocks are approximately
2 30 percent less volatile than the S&P 500, these illogical results illustrate the problem with
3 using a generic GDP growth rate for specific industries rather than the aggregate market.

4 Q. Are there other reasons to be skeptical of Dr. Hadaway's use of GDP growth
5 as a proxy for electric utility industry growth?

6 A. Yes. This assumption is often used for a company or an industry that is in its
7 "growth phase," i.e., experiencing "supernormal" growth. In these cases, many finance
8 textbooks recommend that the perpetual growth rate be based on the expected growth in the
9 economy if and only if this approach is consistent with expected sustainable growth.⁴
10 However, this assumption is not generally made for companies or industries that have
11 reached maturity, such as the regulated electric industry, unless the overall industry growth
12 rate is similar to that of the overall economy. Schedule 14 of Appendix 2 provided with
13 Staff's Cost of Service Report shows that the electric utility industry's growth rate has been
14 approximately *half* of the growth of the overall economy for the period 1948 through 2000.
15 Although the average EPS, DPS and BVPS growth rates for the electric utility industry were
16 approximately half of the growth in GDP over this period, this is due to much higher growth
17 rates in the early part of this period. Schedule 1 attached to this testimony shows that per
18 share growth rate data for the electric utility industry have been steadily declining in relation
19 to GDP growth rates. Schedule 2 shows that except for a brief upswing between the 1970s
20 and 1980s, the growth in the electric utility per share data has been steadily declining when

⁴ John D. Stowe, Thomas R. Robinson, Jerald E. Pinto and Dennis W. McLeavey, *Analysis of Equity Investments: Valuation*, 2002, Association for Investment Management and Research.
Aswath Damodaran, *Investment Valuation: Tools and techniques for determining the value of any asset*, 1996, John Wiley & Sons, Inc.

David Murray
Rebuttal Testimony

1 compared to GDP growth. Consequently, an assumption that electric utilities will grow at
2 half of the economic growth rate may even be too optimistic.

3 Information provided by the Energy Information Administration's ("EIA") regarding
4 historical electricity demand growth explains the declining growth in electric utilities over
5 last half of the 20th century (*see* Schedule 3). Not only does this data support the historical
6 trend for declining growth rates in the electric utility industry, but it also projects continued
7 low growth for electricity consumption through 2035. Unless the electric utility industry can
8 achieve growth through significant investments in rate base for reasons other than to support
9 demand growth, then it would seem illogical for investors to project perpetual growth for the
10 electric utility industry much if any higher than inflationary growth.

11 PERPETUAL GROWTH RATES USED IN VALUATION ANALYSIS

12 Q. In the Staff's Cost of Service Report you indicated that you would pursue the
13 assumed perpetual growth rates of certain DCF analyses performed by other financial
14 consultants hired by GPE and Aquila to provide "Fairness Opinions" on the proposed
15 acquisition price for the current GMO properties. Has KCPL provided this information
16 to you?

17 A. Yes. In response to Staff Data Request No. 0514, KCPL provided the
18 perpetual growth rates used by Sagent Advisors, Inc. ("Sagent") and Credit Suisse Securities
19 (USA), LLC ("Credit Suisse"). Sagent assumed a perpetual growth rate of 1.79 percent and
20 Credit Suisse assumed a perpetual growth rate range of 1.0 percent to 1.7 percent.

21 Q. These perpetual growth rates seem rather low. Do you know why these
22 investment firms would assume such low perpetual growth rates when estimating the fair
23 value of the GMO properties?

David Murray
Rebuttal Testimony

1 A. No. Staff has not had a chance to review the specifics of Sagent's and
2 Credit Suisse's analysis, but it has been Staff's general experience that investment analysts
3 project discrete cash flows over the first five to ten years and then a terminal value for the
4 final cash flow. This terminal value is often estimated based on the constant-growth DCF
5 formula. The constant-growth stage assumes that the company is in a steady-state, i.e.
6 neither growing nor contracting. Consequently, it is rare for a perpetual growth rate to be
7 much higher than the expected inflation rate.

8 Q. Does a "Fairness Opinion" discount dividends to estimate a fair value of the
9 equity invested in the company?

10 A. No. Free cash flows are discounted.

11 Q. If dividends are not discounted, why would the assumptions used in this type
12 of DCF analysis be relevant to the discounting of dividends for purposes of estimating a
13 utility's cost of common equity?

14 A. The amount of free cash flow produced by the company's operations
15 determines the amount of cash that can be distributed as dividends and the ability to grow
16 the dividends.

17 Q. Would this mean that a projected perpetual growth rate contained in a
18 "Fairness Opinion" may be indicative of a reasonable perpetual growth rate for DPS?

19 A. Yes.

20 Q. How would these lower perpetual growth rates impact your cost of common
21 equity estimate using the multi-stage DCF approach?

22 A. It would reduce it considerably. If Staff used the low end of Credit Suisse's
23 perpetual growth rate range, Staff's cost of equity estimate would be 7.26 percent. If Staff

David Murray
Rebuttal Testimony

1 used Sagent's 1.79 percent perpetual growth rate, Staff's cost of equity estimate would be
2 7.81 percent.

3 Q. Is it possible that required returns on utility stocks are this low?

4 A. Yes. This is possible because current low bond yields imply a fairly low cost
5 of capital environment.

6 Q. Are there any assumptions that could have been made by the financial
7 advisors that would cause the need to assume a different perpetual growth rate for purposes
8 of discounting dividends?

9 A. Yes. It is possible that their models make assumptions about the timing and
10 amounts of cash flows that may impact their assumed perpetual growth rates.

11 Q. Would this type of information help further the debate on a fair and
12 reasonable estimate of the cost of common equity?

13 A. Absolutely. Valuation analyses are done for the purpose of determining a fair
14 market price of an asset or a business enterprise. In fact, after determining the fair value of a
15 business enterprise, the amount of debt outstanding is subtracted from the total business
16 enterprise value to estimate the equity value. Common equity investors perform the same
17 type of analysis, except on a per share basis. Whether a company is being valued on an
18 aggregate or a per share basis, the financial fundamentals are the same and require using a
19 cost of equity discount rate commensurate with the risks of expected cash flows.
20 Considering that an allowed ROE is supposed to be a fair and objective estimate of the cost
21 of common equity, it would seem worthwhile to delve into information that estimates the
22 cost of equity for purposes other than requesting an increase in rates.

David Murray
Rebuttal Testimony

1 Q. Has Staff requested KCPL provide additional information regarding the
2 analysis in which these perpetual growth rates were used?

3 A. Yes. Staff has submitted the necessary data request and will update the
4 Commission on its findings in its surrebuttal testimony.

5 Q. Are you aware of any other information that supports the use of lower
6 perpetual growth rates when estimating the value of electric utility assets?

7 A. Yes. In addition to the "Fair Opinions" discussed above, Staff recently
8 became aware of a valuation analysis performed by PriceWaterhouseCoopers ("PwC") on
9 November 3, 2008. This valuation analysis was conducted for the purpose of estimating the
10 Fair Value of the then newly-acquired Aquila assets. This analysis was made in order to
11 allocate the total purchase price among the various assets and liabilities for purposes of
12 ensuring compliance with financial statement reporting requirements set forth in Statement of
13 Financial Accounting Standards No. 141, which is now contained under ASC 805. In this
14 analysis PwC used a long-term growth rate of ** __ ** percent to project GPE's pre-tax
15 income through 2026. While Staff is not sure of how PwC developed this ** __ ** percent
16 growth rate, this assumed growth rate in income over the long-term certainly supports the
17 reasonableness of Staff's assumed perpetual growth rate.

18 Q. What is pre-tax income?

19 A. Pre-tax income is defined exactly as it is titled. It is income before the
20 payment of taxes.

21 Q. Is there any logical reason why the growth in after-tax income would be
22 greater than pre-tax income over the long-term?

23 A. No.

David Murray
Rebuttal Testimony

1 Q. How is the Fair Value opinion rendered by PwC relevant to the estimation of
2 KCPL's cost of common equity?

3 A. It is at the very least proof that independent experts conducting valuation
4 analyses do not assume that EPS can grow at a 5-year projected rate in the long-term, as does
5 Dr. Hadaway in his "equity-analyst constant-growth DCF". In addition, this long-term
6 earnings growth rate is less than ** _ ** percent of the 6.0 percent perpetual growth rate
7 assumed by Dr. Hadaway in his "GDP constant-growth DCF" and "GDP multi-stage DCF
8 and is less than ** _ ** of the 5-year EPS growth rate assumed to grow in perpetuity in
9 Dr. Hadaway's "equity-analyst constant-growth DCF."

10 Q. If Staff used a ** _ ** percent perpetual growth rate in its multi-stage DCF
11 analysis, what cost of equity would be implied in Staff's methodology?

12 A. ** _ ** percent.

13 INVESTORS' GDP GROWTH EXPECTATIONS

14 Q. Assuming *arguendo* that electric utility companies can grow in perpetuity at
15 the same rate of expected GDP growth, do you believe investors expect GDP to grow at a
16 rate of 6.0 percent for the long-term?

17 A. No. Several sources relied upon by investors indicate that the expected
18 long-term growth in nominal GDP is in the 4 to 5 percent range.

19 According to the Congressional Budget Office's August 2010 *The Budget and*
20 *Economic Outlook: Fiscal Years 2010-2020*, the projected compound annual growth in
21 nominal GDP for 2010 to 2020 is expected to be approximately 4.60 percent.⁵ According to
22 the Energy Information Administration (EIA), based on the "reference case," the expected
23 compound annual growth in real GDP is expected to be 2.4 percent for the period from

⁵ <http://www.cbo.gov/doc.cfm?index=11705>

David Murray
Rebuttal Testimony

1 2008 through 2035. After factoring in EIA's expected GDP inflation factor of 1.9 percent,
2 the expected nominal GDP growth rate is approximately 4.3 percent.⁶ According to the
3 Federal Reserve's minutes from its meeting on November 2-3, 2010, the
4 Federal Open Market Committee's ("FOMC") participants' central tendency long-run
5 projections for growth in real GDP is expected to be 2.5 to 2.8 percent. If you add the
6 FOMC's expected inflation of 1.7 to 2.0 percent over the long-run to expected real GDP
7 growth, the expected nominal GDP growth rate is expected to be approximately
8 4.2 to 4.8 percent. However, it is important to note that the inflation projection provided by
9 the FOMC is not based directly on expected inflation in GDP, but that of the personal
10 consumption expenditures ("PCE") index. Most projected GDP inflation factors are fairly
11 similar to the projected inflation for the PCE index. According to Mr. Gorman's
12 Direct Testimony, private economists surveyed by *Blue Chip Economic Indicators* project
13 GDP growth rates to be approximately 4.80 percent over the period 2012 through 2016 and
14 4.70 percent for the period 2017 through 2021. Consequently, no source is expecting
15 long-run nominal GDP growth to exceed 4.80 percent for periods greater than 5 years, which
16 is typically at least the transition period of a multi-stage DCF analysis.

17 Q. Would the use of the lower growth rate in nominal GDP affect Dr. Hadaway's
18 estimate of KCPL's cost of equity in this case?

19 A. Yes. If Dr. Hadaway had relied on a more realistic projected nominal
20 GDP growth rate—in the 4 to 5 percent range—his mid-point cost of common equity
21 estimate would have been approximately 9.5 percent.

22 Q. Are you aware of any internal DCF analysis performed by GPE that uses
23 some of these same sources to estimate long-term perpetual growth rates?

⁶ http://www.eia.doe.gov/oiaff/aco/azoref_tab.html

David Murray
Rebuttal Testimony

1 A. Yes. GPE's own 2009 goodwill impairment analysis, which requires an
2 estimate of the "fair value" of utility assets, used Congressional Budget Office ("CBO")
3 projected inflation data as a proxy for perpetual growth in its own internal DCF analysis.

4 Q. Why did GPE use this source for purposes of its own internal
5 valuation analysis?

6 A. Because they considered the CBO information to be "...one of the best
7 published views of go forward growth and inflation."⁷

8 Q. Did GPE use any of the other aforementioned sources in previous goodwill
9 impairment tests?

10 A. Yes. GPE used *Blue Chip Economic Indicator* data for purposes of estimating
11 future economic data for its 2008 goodwill impairment analysis.

12 Q. Did GPE provide a reason as to why it relied on the CBO projections in the
13 2009 study rather than the *Blue Chip Economic Indicator* consensus economic forecasts that
14 it had used in the 2008 study?

15 A. No. In a deposition taken of Mr. Darren Ives, KCPL's assistant controller, he
16 indicated he was not sure why they switched sources and he indicated that he would not
17 necessarily ascribe more credibility to one over the other.⁸

18 Q. What source does GPE plan to use for its 2010 goodwill impairment test?

19 A. CBO.

20 Q. Why is this information pertinent to the estimation of the cost of common
21 equity in this case?

⁷ Darren Ives' September 27, 2010 Deposition, p. 69, ll. 9-11.

⁸ Ives Deposition, p. 82, ll. 5-6.

David Murray
Rebuttal Testimony

1 A. Because it is Dr. Hadaway's position that investors rely on his calculations of
2 historical GDP growth to project growth rates in his DCF analysis rather than relying on the
3 previously mentioned sources. This assumption has a major impact on his cost of equity
4 estimate. If Dr. Hadaway relied on the same sources that GPE used for its own internal DCF
5 analyses, then his cost of equity estimate would have been approximately 9.5 percent for both
6 his "GDP constant-growth DCF" and his "GDP multi-stage DCF" analysis.

7 Q. What if Dr. Hadaway had used the *Blue Chip Economic Indicator* consensus
8 economic forecast of 4.7 percent?

9 A. His "GDP constant-growth DCF" cost of equity would have been 9.7 percent
10 and his "GDP multi-stage DCF" estimated cost of equity would have been 9.63 percent.

11 Q. What perpetual growth rates did GPE use when estimating the fair value of its
12 utility assets using a DCF approach?

13 A. The perpetual growth rates used by GPE were ** ___ ** percent in 2008
14 and ** ___ ** percent in 2009.

15 Q. What was the basis for these growth rates?

16 A. Projected inflation rates from the two sources Staff mentioned previously.

17 Q. Why would GPE use projected inflation rates for the perpetual growth rates?

18 A. Because according to the accounting principles governing the estimation of a
19 fair value, a company in a "steady-state" should not be expected to grow much higher than
20 expected inflation in perpetuity. In fact, in a document provided by KCPL at the time of
21 Staff's deposition of Mr. Ives, PwC indicated the following about the reasonableness of
22 perpetual growth rates:

David Murray
Rebuttal Testimony

1 The terminal value represents the present value in the last year
2 of the projection period of all subsequent cash flows in
3 perpetuity. A long-term growth rate in excess of a projected
4 inflation rate should be viewed with skepticism and adequately
5 supported and explained in the valuation analysis.⁹
6

7 A key assumption made for purposes of determining the residual value of a business
8 unit in the terminal year of the analysis is that the unit will grow at a constant rate into
9 perpetuity because the company has reached a state of maturity. Dr. Hadaway's assumed
10 perpetual growth rate is approximately 3 times that of expected inflation rates and
11 Dr. Hadaway's only support for this assumption are some generic academic references. Staff
12 has provided many examples of practical investment analysis that demonstrate that this
13 assumption is not made in practice when discounting electric utility cash flows.

14 Q. What cost of equity did GPE use in its 2008 and 2009 goodwill
15 impairment analysis?

16 A. GPE used a cost of capital consistent with ** _____ ** for its
17 utility properties.

18 Q. Is this consistent with how GPE's financial consultants have estimated the
19 cost of capital when estimating the fair value of its utility properties, whether for purposes of
20 testing goodwill for impairment or providing a "fairness opinion" for purposes of advising
21 the GPE Board of Directors on the acquisition of the Aquila Missouri electric utility
22 properties?

23 A. No. In KCPL's last rate case, Case No. ER-2009-0089, in the
24 Staff Cost of Service Report, Staff discussed the fact that GPE hired two financial advisors
25 and Aquila hired three financial advisors to provide "fairness opinions" on the proposed

⁹ Document 3. B provided at Darren Ives' September 27, 2010 Deposition. P. 30, PriceWaterhouseCoopers
Dataline 2008-35: Nonfinancial Asset Impairment Considerations (*Updated March 26, 2009*).

David Murray
Rebuttal Testimony

1 acquisition price of the Aquila Missouri electric utility properties. While the SEC Form
2 S4 Filing (prospectus) filed on June 26, 2007, revealed only one of the advisor's cost of
3 equity estimate of 9 to 10 percent, this cost of equity estimate
4 ** _____

5 _____
6 _____ **

7 Additionally, in the November 3, 2008 PwC valuation analysis mentioned above,
8 PwC estimated a cost of common equity of ** ___ ** percent for purposes of discounting
9 anticipated cash flows from the Aquila Missouri electric utility properties. PwC estimated
10 this cost of equity in spite of assuming an ** _____ ** percent in the
11 projected cash flows. Clearly PwC did not equate ** _____
12 _____ ** it used for purposes of discounting cash flows in its DCF analysis.

13 Q. Considering that the financial consultants provided these cost of equity
14 estimates prior to the financial crisis that occurred in late 2008 through early 2009, is this
15 information helpful for determining the reasonableness of an estimated cost of common
16 equity for KCPL in the current capital market environment?

17 A. Absolutely. As Staff discussed in the Staff Cost of Service Report, utility
18 bond yields are at levels not experienced in at least 40 years. While utility bond yields did
19 spike during the financial crisis, they are now approximately 100 basis points lower than they
20 were before the financial crisis. This clearly indicates that the cost of capital is lower than it
21 was at the time these financial consultants provided their estimates of the fair value of the
22 Aquila electric utility properties.

1 RISK PREMIUM ANALYSES

2 Q. What are your primary concerns regarding Dr. Hadaway's risk
3 premium analyses?

4 A. Dr. Hadaway's risk premium analysis assumes that allowed ROE's represent
5 market-determined costs of equity for electric utility companies. He compounds the problem
6 with this assumption by suggesting that the cost of equity should be adjusted due to his
7 observation that allowed ROEs are negatively correlated with changes in utility bond yields.
8 While Staff believes it is safe to conclude that risk premiums are not constant over time, Staff
9 also believes that the use of actual or allowed ROE data to interpret the market's required
10 risk premium is of questionable value. For example, Eugene Fama and Kenneth French
11 concluded that *earned* ROEs over the period of 1950 through 2000 were not consistent with
12 *required* ROEs over the same period.¹⁰ Fama and French arrived at this conclusion by using
13 the DCF method to compare the cost of equity to the return on equity over the same period.
14 Fama and French's conclusions are very similar to that discussed by Mr. Gorman when he
15 indicates that the returns achieved in the stock market for the period covered in the
16 Ibbotson and Associates' data reflects an abnormal appreciation of the price-to-earnings ratio
17 in the U.S. markets.

18 Dr. Hadaway also added his estimated risk premium to projected bond yields. This is
19 inappropriate because it is akin to using projected stock prices in a DCF analysis. A rate of
20 return witness should not attempt to estimate where he thinks stock prices and bond yields
21 will be in the future because then he is substituting his judgment for that of the market.

¹⁰ Eugene F. Fama and Kenneth R. French, "The Equity Premium," *The Journal of Finance*, (April 2002).

David Murray
Rebuttal Testimony

1 Staff's concerns notwithstanding, if the Commission desires to incorporate this
2 methodology in estimating a fair ROE, then Staff advises the Commission to use actual
3 utility bond yields and an unadjusted risk premium to estimate an "allowed ROE risk
4 premium" cost of equity estimate.

5 **STAFF RESPONSE TO MR. GORMAN'S RECOMMENDED COST OF COMMON**
6 **EQUITY FOR KCPL**

7 Q. What is Mr. Gorman's recommended ROE in this case?

8 A. His ROE recommendation in this case is 9.65 percent.

9 Q. How did Mr. Gorman arrive at a recommended ROE of 9.65 percent?

10 A. Mr. Gorman calculated a simple average of his indicated cost of equity using
11 three different methodologies; the DCF, the CAPM, and the Risk Premium. His DCF
12 indicated cost of common equity was 9.88 percent; his Risk Premium indicated cost of
13 common equity was 9.68 percent; and his CAPM cost of common equity was 9.40 percent.

14 Q. Did Mr. Gorman recommend a range of cost of common equity based on
15 his methodologies?

16 A. Yes. He recommended a cost of equity range of 9.40 percent to 9.90 percent,
17 which partially overlaps the high end of my estimated cost of equity range.

18 Q. What are the primary causes of Mr. Gorman's higher cost of equity estimates
19 compared to your estimated cost of equity?

20 A. Mr. Gorman gives weight to his CAPM and risk premium methodologies,
21 whereas I used these methods to test the reasonableness of my DCF cost of equity estimate.
22 All of Mr. Gorman's methodologies indicate a cost of equity estimate that is higher than my
23 estimated cost of equity. Consequently, it is not the methodologies in and of themselves that
24 cause the difference in our estimates, it is the assumptions we use in those methodologies.

David Murray
Rebuttal Testimony

1 Q. What are the primary reasons for the differences in your DCF estimated cost
2 of equity?

3 A. With respect to Mr. Gorman's constant-growth DCF estimate of
4 10.39 percent, assumed equity analysts' 5-year EPS growth rate projections are applied to
5 DPS in perpetuity to determine an expected return. This accounts for the high end of
6 Mr. Gorman's range of DCF cost of equity estimates. Staff has reviewed equity analyst
7 reports and discovered that equity analysts' that use the DCF method for purposes of
8 providing investment recommendations do not use their EPS forecasts to estimate the growth
9 in DPS in the short-term, let alone in perpetuity. Consequently, Staff is convinced that
10 because investment advice is not based on the assumption that 5-year EPS growth rate
11 forecasts are representative of long-term sustainable DPS growth, stock prices do not reflect
12 this assumption. Consequently, a constant-growth DCF estimated cost of equity that is based
13 on this simplifying assumption is not reliable, unless the 5-year EPS growth rate forecasts are
14 consistent with long-term expected DPS growth.

15 Q. What are your concerns regarding Mr. Gorman's constant-growth DCF
16 analysis using his estimate of a sustainable growth rate?

17 A. Although Mr. Gorman's estimated sustainable growth rates are more
18 reasonable for purposes of the constant-growth DCF than that of equity analysts' 5-year EPS
19 growth rate projections, they are still above what investors would reasonably expect for
20 long-term perpetual growth for the electric utility industry. The sustainable growth rates
21 Mr. Gorman calculated are fairly similar to long-term projected economic growth rates. The
22 information that Staff provided in Schedule 14 attached to the Cost of Service Report shows
23 that electric utilities' EPS, DPS and BVPS growth rates for the period 1948 through 2000

David Murray
Rebuttal Testimony

1 were approximately *half* that of the GDP growth rate for this period and were steadily
2 declining below 50% of GDP growth in the last 25 years. Therefore, there is no plausible
3 reason to believe that investors expect electric utilities to grow at the same rate as GDP.

4 Q. What is the primary reason for the difference in results between your
5 multi-stage DCF analysis and Mr. Gorman's multi-stage DCF analysis?

6 A. The assumed perpetual growth rate causes the difference in results. Although
7 Mr. Gorman uses the same proxy group selected by Dr. Hadaway, the main cause for
8 Mr. Gorman's higher cost of equity estimate of 9.86 percent compared to my estimate of
9 9.00 percent is his assumed perpetual growth rate of 4.75 percent compared to my assumed
10 perpetual growth rate of 3.50 percent. As I indicated earlier, Schedule 14 attached to the
11 Staff's Cost of Service Report shows that the electric utility industry has not been growing
12 anywhere near the rate of the overall economy. Furthermore, because projected demand
13 growth for electricity is expected to remain low, there is no plausible reason to expect electric
14 utility companies to be able to achieve growth rates similar such growth rates. However,
15 Staff does note that certain policy changes that may allow electric utility companies to tie
16 their earnings to investments in demand response programs and environmental upgrades may
17 cause some disconnect in the correlation of electric utility companies' earnings to that
18 of usage.

19 Q. What are the primary reasons for the differences in the results between your
20 CAPM analysis and Mr. Gorman's CAPM analysis?

21 A. Approximately 85 basis points can be attributed to Mr. Gorman's use of
22 projected 30-year Treasury bond (T-bond) yields rather than current 30-year T-bond yields.
23 This is inappropriate because it is akin to using projected stock prices in a DCF analysis. A

David Murray
Rebuttal Testimony

1 rate of return witness should not attempt to estimate what he thinks stock prices and bond
2 prices will be in the future because then he or she is substituting his or her judgment for that
3 of the market.

4 An additional 70 basis points can be attributed to Mr. Gorman's decision to rely on
5 the high-end of his estimated equity risk premiums, which was 6.70 percent. Mr. Gorman
6 relied on this high-end estimate even though he indicated that Morningstar indicated that this
7 higher risk premium was based on an "abnormal expansion of price-to-earnings ("P/E")
8 ratios relative to earnings and dividend growth during the period 1980 through 2001."¹¹
9 Consequently, although Mr. Gorman qualifies his concerns with this higher risk premium
10 estimate, he still used it in his analysis, increasing his cost of equity estimate by an additional
11 70 basis points.

12 Taken together, these two decisions in and of themselves increase Mr. Gorman's
13 CAPM cost of equity estimate by 155 basis points. Mr. Gorman admits that he chose the
14 high-end estimate of his CAPM analysis even though the mid-point was 8.86 percent.

15 Q. What are your primary concerns regarding Mr. Gorman's risk premium
16 analyses?

17 A. Mr. Gorman's risk premium analyses assume allowed ROE's represent
18 market-determined costs of equity for electric utility companies. Based on my review and
19 understanding of capital markets, I do not believe that allowed ROE's have been consistent
20 with market-based costs of common equity. However, to the extent that the Commission
21 may believe that a fair rate of return should be something higher than the cost of equity, then
22 this methodology may have appeal. If the Commission decides to consider this methodology
23 for purposes of establishing an allowed ROE, then, for purposes of Mr. Gorman's first risk

¹¹ Gorman Direct Testimony, p. 36, ll. 16-17.

David Murray
Rebuttal Testimony

1 premium analysis, I recommend the Commission use current 30-year T-bond yields rather
2 than an expected bond yield as Mr. Gorman proposes. This would reduce Mr. Gorman's risk
3 premium estimate using 30-year T-bonds by approximately 90 basis points, which would
4 lower his cost of equity estimate to 9.04 percent.

5 Mr. Gorman's second risk premium analysis compares allowed ROEs to 'A' rated
6 utility bond yields for the period 1986 through 2010. However, Mr. Gorman then adds this
7 risk premium to a 'Baa' bond yield to estimate the cost of equity. When performing a risk
8 premium analysis it is proper to add the risk premium to the same bond category as was used
9 to estimate the risk premium. If Mr. Gorman had used average 'Baa' utility bond yields, his
10 risk premium range would have been 2.71 percent to 4.36 percent, with a mid-point of
11 3.54 percent. Adding this risk premium to the current 'Baa' bond yield of 5.60 percent,
12 results in a cost of equity estimate of 9.14 percent.

13 **STAFF RESPONSE TO DR. HADAWAY'S AND MR. GORMAN'S**
14 **RECOMMENDED CAPITAL STRUCTURE FOR KCPL**

15 Q. Please summarize Dr. Hadaway's and Mr. Gorman's recommended capital
16 structure for KCPL.

17 A. Dr. Hadaway's recommended capital structure is based on GPE's projected
18 capital structure as of December 31, 2010. Mr. Gorman also adopts this recommendation.
19 Because a true-up is planned for this case through the period ending December 31, 2010, the
20 Commission should wait until the true-up date to determine the appropriate capital structure
21 in this case.

1 **STAFF RESPONSE TO DR. HADAWAY'S AND MR. GORMAN'S**
2 **RECOMMENDED COST OF EQUITY UNITS**

3 Q. Did Dr. Hadaway or Mr. Gorman make any adjustments to the embedded cost
4 of the equity units issued by GPE?

5 A. No.

6 Q. Assuming that the cost of the equity units were higher due to GPE's
7 acquisition of the GMO properties, do you believe the full pass through of these costs
8 violates a past Commission Order?

9 A. Yes. In Case No. EM-2007-0374, the case authorizing the merger between
10 KCPL and Aquila, the Commission's Report and Order specifically states the following in
11 Paragraph 8 of the section entitled "Ordered Conditions":

12 In addition to the conditions outlined in Ordered Paragraph
13 Number Three, the Commission conditions its authorization of
14 the transactions described in the Ordered Paragraph Number
15 One of this Report and Order upon a requirement that any
16 post-merger financial effect of a credit downgrade of Great
17 Plains Energy Incorporated, Kansas City Power & Light
18 Company, and/or Aquila, Inc., that occurs as a result of the
19 merger, shall be borne by the shareholders of said companies
20 and not the ratepayers.

21
22 Q. How do you interpret the term "credit downgrade"?

23 A. I interpret the term to signify any increased strain that the acquisition of the
24 GMO properties has had on KCPL's and GPE's credit rating and/or its credit quality.

25 Q. Has GPE's and/or KCPL's credit rating been downgraded since GPE acquired
26 the GMO properties?

27 A. Yes. Moody's downgraded GPE's and KCPL's credit rating on
28 March 11, 2009.

David Murray
Rebuttal Testimony

1 Q. Have GPE's credit metrics been impacted by the acquisition of the
2 GMO properties?

3 A. Yes. GPE's consolidated credit rating metrics are weaker than KCPL's
4 stand-alone credit metrics due to GMO's weaker credit metrics.

5 Q. Have KCPL ratepayers provided additional cash flow through higher rates to
6 specifically assist KCPL with targeting a 'BBB+' S&P credit rating?

7 A. Yes. This was a specific provision contained in the Stipulation and
8 Agreement in Case No. EO-2005-0329. Ratepayers paid higher rates during the period of
9 KCPL's construction of Iatan 2 to allow KCPL the ability to meet specific S&P credit metric
10 benchmarks consistent with a 'BBB+' credit rating.

11 Q. Has S&P downgraded GPE's and/or KCPL's credit rating since GPE's
12 acquisition of the GMO properties?

13 A. No.

14 Q. Could KCPL have had a better credit rating if the GPE consolidated credit
15 metrics had not been strained by the GMO credit metrics?

16 A. Yes, assuming S&P used its published benchmarks to determine its credit
17 rating and GPE's credit metrics were consistent with that of KCPL's.

18 Q. How much lower could the cost of the GPE equity units had been if GPE's
19 credit quality had not been suppressed by the Aquila legacy debt held by GMO?

20 A. It is difficult to quantify this value with absolute certainty, but in the
21 Staff's Cost of Service Report I estimated it could have been 2.42% lower. Staff believes it
22 could have been even lower, but is not aware of any other methodology that would allow
23 determination of an additional objective adjustment.

1 **SUMMARY AND CONCLUSIONS**

2 Q. Please summarize the conclusions of your Rebuttal Testimony.

3 A. My conclusions are:

4 1. There is no practical information that supports the use of GDP as a
5 proxy for perpetual growth in electric utility industry;

6 2. Equity analysts' 5-year EPS growth estimates are not intended to be
7 used as a proxy for constant-growth in a single-stage DCF analysis.
8 This growth rate is a 5-year projected growth rate for EPS and
9 historical experience has shown that it is highly unlikely that the
10 current 5-year projections are achievable and/or sustainable
11 into perpetuity;

12 3. Financial consultants hired by GPE for purposes other than
13 recommending a ROR for a rate case do not use inputs that are
14 consistent with Dr. Hadaway's assumptions;

15 4. Both Dr. Hadaway's Risk Premium analysis and Mr. Gorman's
16 Risk Premium and CAPM analysis inappropriately use projected
17 bond yields;

18 5. Neither Dr. Hadaway nor Mr. Gorman give consideration to higher
19 capital costs embedded in KCPL's requested ROR due to GPE's
20 acquisition of the GMO properties.

21 Q. Have you attached to this testimony all of the reports and external documents
22 referenced herein?

23 A. No, I have not, due mainly to large amount and highly confidential nature of
24 the material referenced. Staff would be happy to provide these additional documents upon
25 request by the Commission or any individual Commissioner.

26 Q. Does this conclude your Rebuttal Testimony?

27 A. Yes, it does.

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of the Application of)
Kansas City Power & Light Company for)
Approval to Make Certain Changes in its) File No. ER-2010-0355
Charges for Electric Service to Continue the)
Implementation of Its Regulatory Plan)

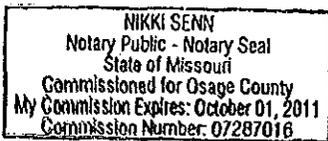
AFFIDAVIT OF DAVID MURRAY

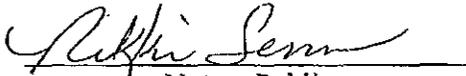
STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

David Murray, of lawful age, on his oath states: that he has participated in the preparation of the foregoing Rebuttal Testimony in question and answer form, consisting of 27 pages to be presented in the above case; that the answers in the foregoing Rebuttal Testimony were given by him; that he has knowledge of the matters set forth in such answers; and that such matters are true and correct to the best of his knowledge and belief.


David Murray

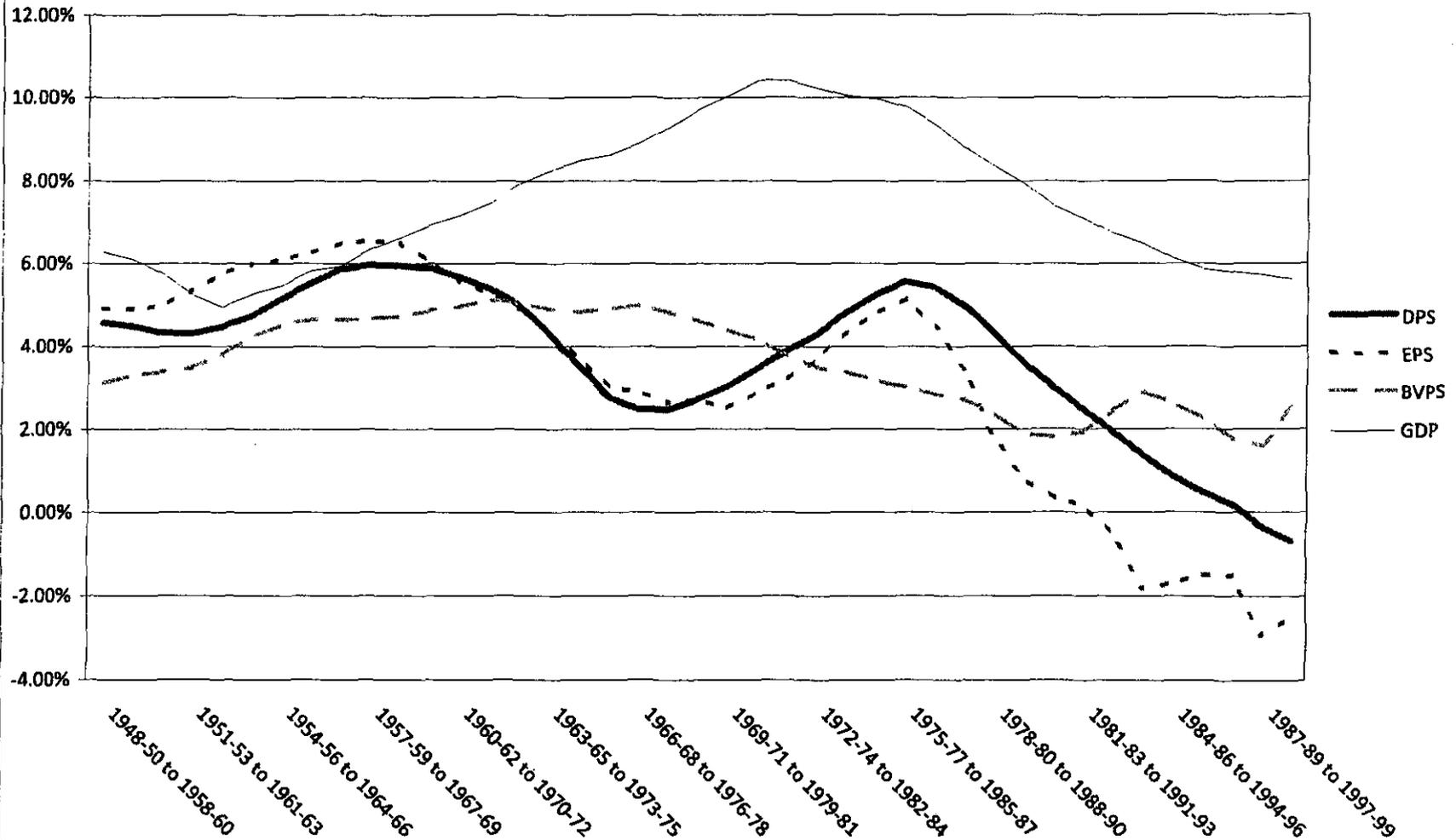
Subscribed and sworn to before me this 8th day of December, 2010.




Notary Public

NP

Comparison of Electric Utility Growth to GDP Growth



Average DPS, EPS and BVPS Electric Utility Growth as Compared to GDP Growth

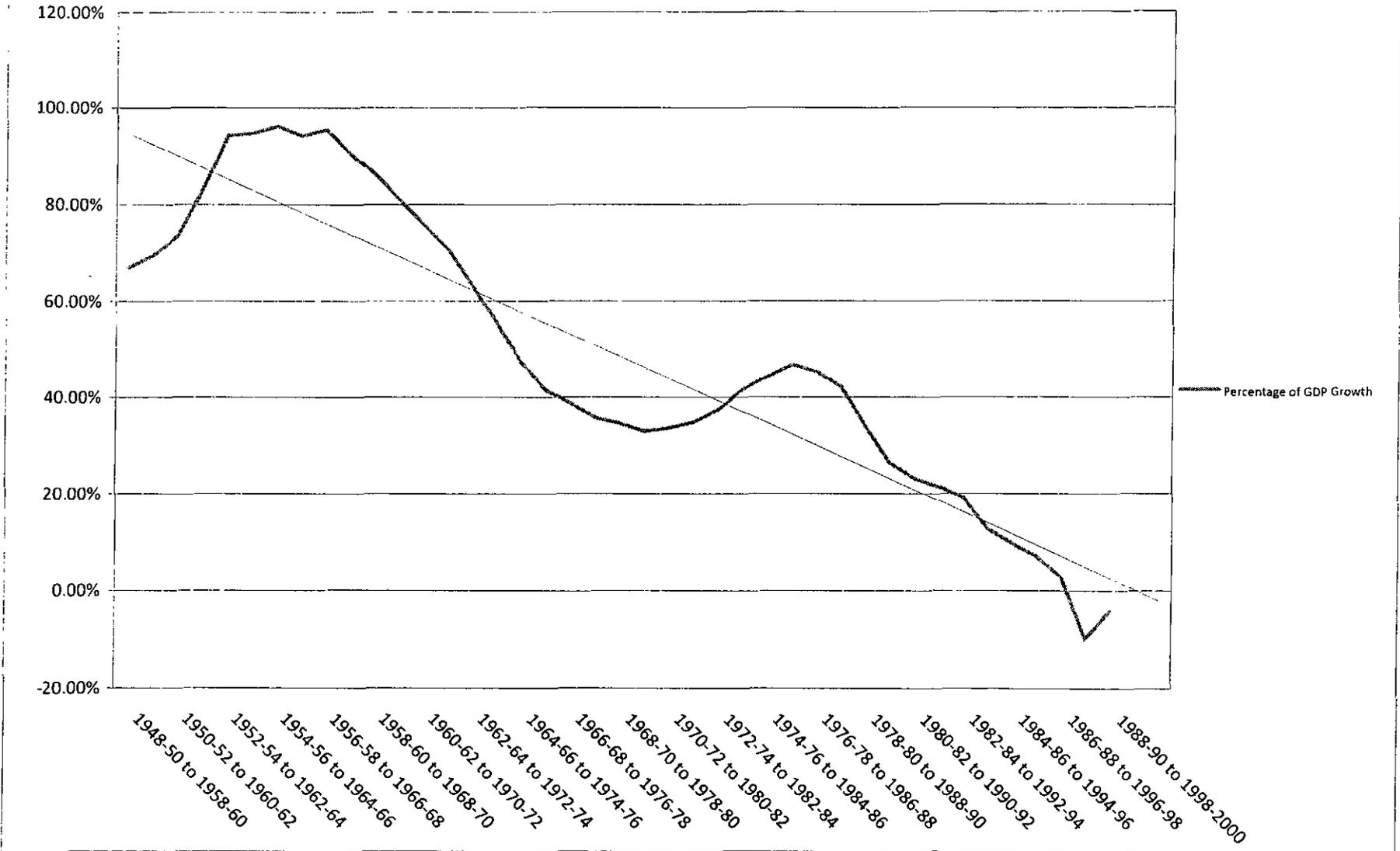


Figure 59. U.S. electricity demand growth 1950-2035
percent, 3-year moving average

