Exhibit No.:

Issue:

Witness:

Type of Exhibit:

Sponsoring Parties:

Case No.:

Date Testimony Prepared:

Revenue Requirement Michael Gorman Surrebuttal Testimony MEUA, MIEC and DOE

ER-2010-0355 January 5, 2011

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 Charges for Electric Service to Continue the Implementation of Its Regulatory Plan

Case No. ER-2010-0355

Surrebuttal Testimony and Schedules of

Michael Gorman

On behalf of

The Midwest Energy Users Association Missouri Industrial Energy Consumers United States Department of Energy

January 5, 2011

Tadustrials Exhibit No 1205

BRUBAKER & ASSOCIATES, Inc.

Date 1/18/11 Reporter Lm3 Chesterfield, MO 63017

File No ER-2010-0355

Project 9384

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 Charges for Electric Service to Continue the Implementation of Its Regulatory Plan

Case No. ER-2010-0355

STATE OF MISSOURI) SS COUNTY OF ST. LOUIS)

Affidavit of Michael Gorman

Michael Gorman, being first duly sworn, on his oath states:

- 1. My name is Michael Gorman. I am a consultant with Brubaker & Associates, Inc., having its principal place of business at 16690 Swingley Ridge Road, Suite 140, Chesterfield, MO 63017. We have been retained by the Midwest Energy Users Association ("MEUA"), Missouri Industrial Energy Consumers ("MIEC"), and the United States Department of Energy ("DOE") in this proceeding on their behalf.
- 2. Attached hereto and made a part hereof for all purposes are my surrebuttal testimony and schedules which were prepared in written form for introduction into evidence in Missouri Public Service Commission Case No. ER-2010-0355.
- 3. I hereby swear and affirm that the testimony and schedules are true and correct and that they show the matters and things they purport to show.

Michael Gorman

Subscribed and sworn to before me this 4th day of January, 2011.

MARIA E. DECKER
Notary Public - Notary Seat
STATE OF MISSOUR!
St. Louis City
My Commission Expires: May 5, 2013
Commission # 09706793

Notary Public

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 Charges for Electric Service to Continue the Implementation of Its Regulatory Plan

Case No. ER-2010-0355

Surrebuttal Testimony of Michael Gorman

1 Q PLEASE STATE YOUR NAME AND BUSINESS ADDRESS. 2 Α Michael Gorman. My business address is 16690 Swingley Ridge Road, Suite 140, Chesterfield, MO 63017. 3 ARE YOU THE SAME MICHAEL GORMAN WHO PREVIOUSLY FILED 4 Q **TESTIMONY IN THIS PROCEEDING?** 5 6 Α Yes. 7 PLEASE SUMMARIZE YOUR Q **EDUCATIONAL BACKGROUND** AND EXPERIENCE. 8 9 Α This information was provided in Appendix A of my direct testimony. 10 ON WHOSE BEHALF ARE YOU APPEARING IN THIS PROCEEDING? Q 11 Α This testimony is presented on behalf of the Midwest Energy Users Association 12 ("MEUA"), Missouri Industrial Energy Consumers ("MIEC"), and the United States Department of Energy ("DOE"). MEUA members, MIEC members and DOE are 13

| 1 | | large commercial and/or industrial users of electricity served by Kansas City |
|----------------------------|---|---|
| 2 | | Power & Light Company ("KCPL" or "Company"). |
| 3 | Q | WHAT IS THE PURPOSE OF YOUR SURREBUTTAL TESTIMONY IN THIS |
| 4 | | PROCEEDING? |
| 5 | Α | I will respond to certain positions taken in the rebuttal testimony of KCPL witness |
| 6 | | Dr. Samuel Hadaway. |
| 7 | Q | PLEASE IDENTIFY THE PORTIONS OF DR. HADAWAY'S REBUTTAL |
| 8 | | TESTIMONY TO WHICH YOU WILL RESPOND IN YOUR SURREBUTTAL |
| 9 | | TESTIMONY. |
| 10 | Α | Dr. Hadaway makes arguments that contest the reasonableness of my return on |
| 11 | | equity ("ROE") recommendation. He also updates all three of his DCF and two risk |
| 12 | | premium analyses. I will respond to Dr. Hadaway's assertions and show that they are |
| 13 | | erroneous or unreasonable. I will also comment on his updated DCF analyses, revise |
| 14 | | them by using more reasonable data, and show that an ROE of approximately 9.5% |
| 15 | | is reasonable for KCPL in this case. |
| 16 | Q | WHAT ELEMENTS OF YOUR ROE STUDIES DID DR. HADAWAY DISPUTE? |
| 17 | Α | At pages 16-17 of Dr. Hadaway's rebuttal testimony, he summarizes his |
| 18 | | disagreement with my ROE studies as follows: |
| 19 20 | | He states that I generally biased my constant growth DCF return studies by selecting data or results that decreased the ROE estimate. |
| 21 22 23 24 25 | | For my multi-stage DCF study, he contends that I was wrong to use a consensus GDP growth rate that takes account of current economic conditions; in his view that biased downward the determination of an appropriate ROE because it should reflect his own longer term GDP growth outlooks, which he derives from historical data. |

| 1 2 3 | | He believes that my risk premium study understated a fair return for KCPL, because I did not adjust the estimated equity risk premium for a simplistic inverse relationship between equity risk premiums and interest rates. |
|-------------|---|--|
| 4 5 6 | | 4. He asserts that my CAPM return estimate was biased downward because I "cherry picked" certain data related to the market risk premium and estimate of the risk-free rate. |
| 7 | | For the reasons outlined below, all of Dr. Hadaway's arguments are without |
| 8 | | merit and should be dis regarded. |
| 9 | | I will also comment on Dr. Hadaway's updated ROE study. |
| | | |
| 10 | Q | WHY DOES DR. HADAWAY BELIEVE THAT YOU UNDERSTATED A FAIR ROE |
| 11 | | USING YOUR CONSTANT GROWTH DCF STUDY? |
| 12 | Α | My constant growth DCF study used consensus analysts' growth rates from three |
| 13 | | publications. For one of the utilities in my sample of comparable firms, Empire |
| 14 | | District, consensus analysts' growth rates were not available from my data sources. |
| 15 | | Dr. Hadaway asserts in his rebuttal testimony (at 17-18) that I should supplement my |
| 16 | | study with the use of Thomson Financial Network's consensus analysts' growth rate |
| 17 | | estimates (available at Yahoo.com) and growth rate projections made by The Value |
| 18 | | Line Investment Survey. |
| | | |
| 19 | Q | IS DR. HADAWAY'S PROPOSAL REASONABLE? |
| 20 | Α | No, not with respect to the Value Line data. My constant growth DCF model is based |
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on consensus analysts' growth rates. Value Line does not publish consensus

analysts' growth rate estimates. Rather, Value Line publishes a single analyst's

forecast. Therefore, it is not an appropriate source of inputs for use in my constant

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growth DCF model.

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As explained in my direct testimony (at 18-19), I used consensus analysts' growth rate estimates because it is not known whether any particular analyst has the most influence in the market. Therefore, it is reasonable to use the consensus of security analysts as the best measure of consensus investor outlooks over the period the growth rates were designed to reflect. In a constant growth DCF model, based on consensus analysts' growth rate estimates, growth rates from a single analyst like the *Value Line* data are not proper inputs.

IS DR. HADAWAY'S REVISION TO YOUR CONSTANT GROWTH DCF STUDY REASONABLE?

No. His use of *Value Line* data was a self-serving effort to increase my constant growth DCF return estimate by inserting data that did not meet the parameters of the model. Further, the *Value Line* growth rate estimate of 7.50% was clearly higher than the consensus analysts' growth rate estimate of 6.0% published by the Thomson Financial Network which he cited (Hadaway Rebuttal at 17). Dr. Hadaway used the average of these two growth rate estimates, which in effect used a growth rate estimate higher than his consensus analysts' growth rate projections. Therefore, his conclusion that my constant growth DCF model would have increased the proxy group median return to 10.41% from 10.39% is flawed and should be disregarded.

In any event, Dr. Hadaway's proposal to include Empire District in the results of my constant growth DCF study has a de minimis impact on the proxy group median estimate.

Q DID YOU AVOID THE USE OF VALUE LINE DATA IN YOUR DCF STUDIES?

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No. As explained above, I only excluded the *Value Line* data source in my constant growth DCF model because that model was designed to reflect consensus analysts' growth rate estimates. However, I did use *Value Line* data in my sustainable growth rate DCF study. Therefore, I did not ignore *Value Line* data in a DCF study. Rather, I used *Value Line* data appropriately, in a DCF study that was designed to use that type of data. I used *Value Line* data in my sustainable growth DCF analysis because it is the only data source that I am aware of that provides the proxy group information needed to forecast data from which one derives a sustainable growth rate.

DID DR. HADAWAY HAVE ANY COMMENTS RELATED TO YOUR SUSTAINABLE GROWTH RATE DCF STUDY?

Yes. At page 18 of his rebuttal testimony, he took issue with my decision to rely on the median (middle of the proxy group range) group estimate rather than the group mean (proxy group average) growth estimate. Dr. Hadaway does not take issue with my conclusion that the DPL Inc. DCF return of 19.97% is an outlier. Rather, he says that, instead of using a more representative statistical measure (i.e., group median) to remove the distortion an outlier would cause, I should have disregarded that firm's data entirely. Here, Dr. Hadaway recalculated the proxy group average DCF return, excluding the DPL Inc. return. According to Dr. Hadaway, the study thus would have yielded average and median proxy group DCF return estimates of 9.40% and 9.22%, respectively. Dr. Hadaway's results compare to those found in my direct testimony on Exhibit MPG-8 for the proxy group average and median returns of 9.74% and 9.38%, respectively.

Q IS DR. HADAWAY CORRECT IN HIS ASSERTION THAT USE OF A PROXY

GROUP MEDIAN REDUCED YOUR DCF ESTIMATE?

A I do not contest Dr. Hadaway's math. I do disagree y

Q

Α

I do not contest Dr. Hadaway's math. I do disagree with his logic. My use of the group median gives consideration to all DCF estimates in the sample group Dr. Hadaway defined. Dr. Hadaway simply ignores the result for DPL Inc. Regardless, the DCF return estimates produced from Dr. Hadaway's recalculation of results for this DCF study (in a manner I reject) produces, as he acknowledges (Id. at 18) "not a large effect" in the models and only "a slightly lower overall DCF estimate." The range of DCF estimates from Dr. Hadaway's unwarranted modification of my study, still supports my DCF ROE estimate for KCPL in this case.

In any event, Dr. Hadaway's proposed changes to my sustainable growth DCF return would result in a decrease in the results of the proxy group using this methodology. For example, on my Schedule MPG-8, I estimated a proxy group average return of 9.74%, and a median return of 9.38%. Dr. Hadaway's proposal to exclude DPL Inc., results in a proxy group average return of 9.40%, and a group median return of 9.22%. As a result, Dr. Hadaway's proposal shows that my ROE from this model is overstated, and not understated as he asserts in his testimony.

WHAT IS DR. HADAWAY'S DISAGREEMENT WITH YOUR MULTI-STAGE DCF ANALYSIS?

Dr. Hadaway asserts at pages 18-19 of his rebuttal testimony that I should not have relied on the consensus published economists' GDP growth forecast over the next 5 and 10 years. He states the consensus forecast of the GDP growth rate published and available to investors today, understates long-term outlooks for future inflation. Therefore, he believes the consensus *Blue Chip Economic Indicators*' outlook of GDP

| i | growth rate out over the next 5 and 10 years is too low. Instead, he continues to |
|---|--|
| 2 | support use of the GDP growth rate forecast he developed especially for this case in |
| 3 | a long-term multi-stage growth DCF study, because he believes it reflects a higher |
| ‡ | inflation outlook, which, in his view, is more likely to prevail over time. |
| | |

Q

ARE YOU AWARE OF ANY INSTANCE WHERE DR. HADAWAY'S GROWTH RATE ESTIMATES AND DCF ANALYSES HAVE BEEN ADOPTED BY REGULATORY COMMISSIONS?

No. I cited several regulatory commissions' findings on the unreasonableness of Dr. Hadaway's GDP growth rate assessments in my direct testimony. I recommend that the Missouri Public Service Commission continue to reject Dr. Hadaway's DCF analyses in this case.

DOES DR. HADAWAY MAKE REASONABLE ASSERTIONS IN SUPPORT OF HIS USE OF A HIGHER GDP GROWTH OUTLOOK IN A MULTI-STAGE GROWTH DCF STUDY?

No. The information that should be used in such a DCF study should be information that is available to investors, since it likely reflects consensus investors' outlooks. Dr. Hadaway has not provided any information that refutes my conclusion that such published analyst growth rate data is more likely influential and reflective of investors' outlooks than his growth rate data derived from historical data by Dr. Hadaway and specifically for this proceeding. My GDP growth rate forecast reflects published consensus economists' projections of future long-term GDP growth. In significant contrast, the GDP growth forecast recommended by Dr. Hadaway reflects his singular

| 1 | | assessment of historical GDP growth rates and is based on his private calculations |
|----|---|---|
| 2 | | and outlooks. |
| 3 | | Dr. Hadaway has provided no evidence that any market participant, much less |
| 4 | | a consensus of market participants, shares his belief that the GDP growth rate will |
| 5 | | increase over the long-term to reflect an increase in inflation outlooks relative to that |
| 6 | | included in published consensus economists' projections of future inflation. |
| 7 | | Dr. Hadaway's GDP growth rate forecast is a self-serving projection designed |
| 8 | | to inflate the DCF return estimate. For this reason, it should be rejected. |
| | | |
| 9 | Q | PLEASE DESCRIBE DR. HADAWAY'S CRITICISMS OF YOUR RISK PREMIUM |
| 10 | | ANALYSES. |
| 11 | Α | Dr. Hadaway argues that my equity risk premiums used in my analyses are |
| 12 | | understated because they were not adjusted by the simplistic assessment that he |
| 13 | | endorses that equity risk premiums will move inversely with interest rates. |
| | | |
| 14 | Q | ARE DR. HADAWAY'S CRITICISMS OF YOUR RISK PREMIUM STUDIES |
| 15 | | REASONABLE? |
| 16 | Α | No. As outlined in my direct testimony at pages 30-31, the market risk premium |
| 17 | | should be measured relative to current perception of the risk of debt versus equity |
| 18 | | securities, and not simply movements to nominal interest rates. |
| 19 | | As I discussed at pages 12-14 of my rebuttal testimony, Dr. Hadaway's use of |
| 20 | | a simplistic inverse relationship between interest rates and equity risk premiums is |
| 21 | | inconsistent with academic literature and does not properly estimate an appropriate |
| 22 | | equity risk premium. I will not repeat my disagreements and arguments in support of |
| 23 | | my position as outlined in my rebuttal testimony. It is sufficient to state, that |

| 1 | Dr. Hadaway's proposed inverse relationship does nothing more than inflate the |
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| 2 | equity risk premium estimate, and does not produce a reasonable ROE for KCPL in |
| 3 | this proceeding. |

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Q PLEASE DESCRIBE DR. HADAWAY'S CRITICISMS OF YOUR CAPM 4 5 ANALYSES.

Dr. Hadaway asserts that the market risk premium I used was based on historical Treasury bond yields, which is inconsistent with the Treasury bond yield I used as a risk-free rate in my CAPM. He asserts that, had I used current Treasury bond yields, the market risk premiums would have been higher which would have increased my CAPM return estimate.

Q ARE DR. HADAWAY'S CRITICISMS OF YOUR CAPM RETURN ESTIMATE **ACCURATE?**

No. Dr. Hadaway's arguments are erroneous. First, I incorporated two measures of a market risk premium in my CAPM analyses. One measure of the market risk premium was derived from historical data and is based on the premium investors actually achieved by investing in the stock market rather than Treasury bonds. Hence, from a historical perspective, market investors have earned a premium of approximately 5.2% to 6.7% by investing in the stock market rather than Treasury bond investments over the period 1929-2009. Incorporating this historical perspective mitigates the effect of what Dr. Hadaway describes as "the current, artificially low government interest rates." Further, it provides the actual historical realized risk premium results that can be used to form expectations of forward-looking risk premiums.

| In my other CAPM study, I derived a forward-looking expected return on the |
|--|
| market of 10.77%. I used this projected market return to derive an expected market |
| risk premium by subtracting my risk-free rate from the projected market return. This |
| produced a market risk premium of 6.07% (10.77% - 4.7%). Contrary to |
| Dr. Hadaway's erroneous contention, this market risk premium was derived using the |
| same risk-free rate that I used as the risk-free input to my CAPM analysis. This |
| market risk premium is developed in a manner very similar to Staff witness McNally's |
| development of his market risk premium, which Dr. Hadaway adopts in his |
| inappropriate revision of my CAPM study. Dr. Hadaway's criticism appears more |
| result-oriented than focused on my study's analytical approach. |

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Dr. Hadaway's suggestion that my use of historical data to measure a market risk premium was the result of an intentional downward bias of the market risk premium is unfounded.

ARE DR. HADAWAY'S ADJUSTMENTS TO YOUR ROE ESTIMATES, SHOWN AT PAGE 21 OF HIS REBUTTAL TESTIMONY, BASED ON REASONABLE **APPLICATIONS OF DCF AND CAPM STUDIES?**

No. His adjustments to my consensus analysts' growth rate DCF study included Value Line data for Empire District Company. Value Line is not a consensus analysts' growth rate estimate, and therefore is not appropriate to include in this particular study. His adjustments to my consensus analysts' growth rate DCF study do not support his overall assertion that my DCF estimates are understated. As shown on page 21, his adjustments to my DCF (sustainable growth) results actually decreased my DCF estimate.

| Dr. Hadaway's adjustment to my multi-stage DCF study to increase the 4.75% |
|---|
| consensus economists GDP growth outlook published in the Blue Chip Economic |
| Indicators up to his historical data derived GDP growth outlook of 6.0% is a more |
| significant error. His assessment is not reflective of current market expectations, nor |
| investors' outlooks, and as a result overstates investors' return requirements. |

Finally, Dr. Hadaway's proposal to reject my CAPM return estimate in favor of Staff's is without merit and unsupported. Indeed, his arguments to reject my CAPM return estimates are based on the erroneous evaluations of my CAPM study discussed above.

DID DR. HADAWAY UPDATE HIS DCF STUDIES IN THIS CASE?

Q

11 A Yes, his rebuttal testimony presents updated elements of his earlier ROE studies in 12 his Schedule SCH2010-11 and Schedule SCH2010-12.

DID YOU CORRECT DR. HADAWAY'S UPDATED STUDIES?

Yes. I reproduce his updated results in the following table. I also show the results of revising Dr. Hadaway's DCF studies to reflect the consensus economists' outlook of GDP growth, rather than the use of Dr. Hadaway's derivation of a GDP growth rate estimate strictly from historical data. My revised results, I believe, are more accurate than Dr. Hadaway's updated results because they better reflect investor outlooks.

TABLE 1

Revisions to Dr. Hadaway's Updated DCF Studies

| Description | Hadaway Updated DCF <u>Estimates</u> | Revised Hadaway Updated DCF <u>Estimates</u> |
|--|--|---|
| Constant Growth (Analysts' Growth) | 10.4% - 10.2% | 10.4% - 10.2% |
| Constant Growth (Long-Term GDP Growth) | 10.7% - 10.8% | 9.5% - 9.6% |
| Two-Stage Growth DCF | <u> 10.5% - 10.5%</u> | <u>9.4% - 9.4%</u> |
| Range | 10.5% - 10.5% | 9.8% - 9.7% |

This one data adjustment (GDP) reduces Dr. Hadaway's DCF return from 10.5% to 9.75%, and supports my DCF study results and recommended ROE for KCPL.

4 Q DO DR. HADAWAY'S UPDATED RISK PREMIUM STUDIES YIELD REASONABLE

RESULTS?

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No. The equity risk premiums Dr. Hadaway uses to derive his ROE (as shown on his Schedule SCH2010-12) range from 4.8% to 4.67%. However, a review of that same schedule shows that risk premiums over the last five years fall in the range of approximately 3.8% up to 4.8%, and reasonably reflect current capital market costs. Using the midpoint of this range, or 4.3%, along with Dr. Hadaway's current and forecasted "BBB" bond yields of 5.25% and 5.57%, respectively, would indicate an ROE in the range of 9.05% to 10.37%. This equity return range supports my recommended ROE of 9.5% for KCPL.

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

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Summary of Adjusted Hadaway DCF

| <u>Line</u> | <u>Description</u> | <u>Hadaway</u> (1) | Hadaway <u>Adjusted*</u> (2) |
|-------------|--|-----------------------|------------------------------------|
| | Constant Growth DCF (Analysts' Growth Rates) | | |
| 1 | Average | 10.4% | 10.4% |
| 2 | Median | 10.2% | 10.2% |
| | Constant Growth DCF (Long-Term GDP Growth) | | |
| 3 | Average | 10.7% | 9.5% |
| 4 | Median | 10.8% | 9.6% |
| | Two-Stage Growth DCF | | |
| 5 | Average | 10.5% | 9.4% |
| 6 | Median | 10.5% | 9.4% |

Sources:

Pages 2 to 4.

^{*} The adjustment reflects changing the GDP Growth Rate to 4.75%.

Adjusted Hadaway Constant Growth DCF Model (Analysts' Growth Rates)

| <u>Line</u> | <u>Company</u> | Recent Stock <u>Price</u> (1) | Next Year's <u>Dividend</u> (2) | Dividend <u>Yield</u> (3) | Average Analyst Growth <u>Rate</u> (4) | Constant Growth DCF (5) |
|-------------|---------------------|--|--|---------------------------------|--|-------------------------------|
| 1 | ALLETE | \$36.41 | \$1.76 | 4.83% | 3.83% | 8.7% |
| 2 | Alliant Energy Co. | \$35.78 | \$1.65 | 4.61% | 7.30% | 11.9% |
| 3 | American Elec. Pwr. | \$36.12 | \$1.70 | 4.71% | 3.63% | 8.3% |
| 4 | Avista Corp. | \$21.06 | \$1.08 | 5.13% | 5.73% | 10.9% |
| 5 | Black Hills Corp | \$31.48 | \$1.48 | 4.70% | 5.50% | 10.2% |
| 6 | Cleco Corporation | \$29.39 | \$1.08 | 3.67% | 6.50% | 10.2% |
| 7 | Con. Edison | \$48.15 | \$2.40 | 4.98% | 3.90% | 8.9% |
| 8 | DPL Inc. | \$26.09 | \$1.28 | 4.91% | 6.45% | 11.4% |
| 9 | DTE Energy Co. | \$46.74 | \$2.30 | 4.92% | 5.50% | 10.4% |
| 10 | Duke Energy | \$17.61 | \$0.99 | 5.62% | 3.43% | 9.1% |
| 11 | Edison Internat. | \$34.54 | \$1.34 | 3.88% | 3.01% | 6.9% |
| 12 | Empire District | \$20.09 | \$1.28 | 6.37% | 6.75% | 13.1% |
| 13 | Entergy Corp. | \$77.33 | \$3.53 | 4.56% | 4.51% | 9.1% |
| 14 | Hawaiian Electric | \$23.33 | \$1.24 | 5.32% | 9.68% | 15.0% |
| 15 | IDACORP | \$35.89 | \$1.20 | 3.34% | 4.50% | 7.8% |
| 16 | NextEra Energy | \$54.20 | \$2.10 | 3.87% | 6.08% | 10.0% |
| 17 | Northeast Utilities | \$29.62 | \$1.10 | 3.71% | 7.06% | 10.8% |
| 18 | NSTAR | \$39.12 | \$1.72 | 4.40% | 6.12% | 10.5% |
| 19 | PG&E Corp. | \$46.21 | \$1.92 | 4.15% | 6.50% | 10.7% |
| 20 | Pinnacle West | \$40.69 | \$2.10 | 5.16% | 6.10% | 11.3% |
| 21 | Portland General | \$20.20 | \$1.07 | 5.30% | 6.12% | 11.4% |
| 22 | Progress Energy | \$42.97 | \$2.52 | 5.86% | 3.71% | 9.6% |
| 23 | SCANA Corp. | \$40.06 | \$1.92 | 4.79% | 4.23% | 9.0% |
| 24 | Sempra Energy | \$52.47 | \$1.68 | 3.20% | 6.13% | 9.3% |
| 25 | Southern Co. | \$37.03 | \$1.88 | 5.08% | 4.97% | 10.1% |
| 26 | Teco Energy, Inc. | \$17.20 | \$0.84 | 4.88% | 6.52% | 11.4% |
| 27 | UIL Holdings Co. | \$27.49 | \$1.73 | 6.29% | 3.49% | 9.8% |
| 28 | Vectren Corp. | \$25.65 | \$1.39 | 5.42% | 4.78% | 10.2% |
| 29 | Westar Energy | \$24.35 | \$1.28 | 5.26% | 8.50% | 13.8% |
| 30 | Wisconsin Energy | \$57.21 | \$1.80 | 3.15% | 9.42% | 12.6% |
| 31 | Xcel Energy Inc. | \$22.80 | \$1.03 | 4.52% | 5.98% | 10.5% |
| 32 | Average | \$35.40 | \$1.63 | 4.73% | 5.68% | 10.4% |
| 33 | Median | | | 4.83% | 5.98% | 10.2% |

Source:

Schedule SCH2010-11, page 2 of 5.

Adjusted Hadaway Constant Growth DCF Model (Long-Term GDP Growth)

| <u>Line</u> | <u>Company</u> | Recent Stock <u>Price</u> (1) | Next Year's <u>Dividend</u> (2) | Dividend <u>Yield</u> (3) | GDP Growth* (4) | Long-Term Constant Growth DCF (5) |
|-------------|---------------------|--|--|---------------------------------|-----------------------|--|
| 1 | ALLETE | \$36.41 | \$1.76 | 4.83% | 4.75% | 9.6% |
| 2 | Alliant Energy Co. | \$35.78 | \$1.65 | 4.61% | 4.75% | 9.4% |
| 3 | American Elec. Pwr. | \$36.12 | \$1.70 | 4.71% | 4.75% | 9.5% |
| 4 | Avista Corp. | \$21.06 | \$1.08 | 5.13% | 4.75% | 9.9% |
| 5 | Black Hills Corp | \$31.48 | \$1.48 | 4.70% | 4.75% | 9.5% |
| 6 | Cleco Corporation | \$29.39 | \$1.08 | 3.67% | 4.75% | 8.4% |
| 7 | Con. Edison | \$48.15 | \$2.40 | 4.98% | 4.75% | 9.7% |
| 8 | DPL Inc. | \$26.09 | \$1.28 | 4.91% | 4.75% | 9.7% |
| 9 | DTE Energy Co. | \$46.74 | \$2.30 | 4.92% | 4.75% | 9.7% |
| 10 | Duke Energy | \$17.61 | \$0.99 | 5.62% | 4.75% | 10.4% |
| 11 | Edison Internat. | \$34.54 | \$1.34 | 3.88% | 4.75% | 8.6% |
| 12 | Empire District | \$20.09 | \$1.28 | 6.37% | 4.75% | 11.1% |
| 13 | Entergy Corp. | \$77.33 | \$3.53 | 4.56% | 4.75% | 9.3% |
| 14 | Hawaiian Electric | \$23.33 | \$1.24 | 5.32% | 4.75% | 10.1% |
| 15 | IDACORP | \$35.89 | \$1.20 | 3.34% | 4.75% | 8.1% |
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| 18 | NSTAR | \$39.12 | \$1.72 | 4.40% | 4.75% | 9.1% |
| 19 | PG&E Corp. | \$46.21 | \$1.92 | 4.15% | 4.75% | 8.9% |
| 20 | Pinnacle West | \$40.69 | \$2.10 | 5.16% | 4.75% | 9.9% |
| 21 | Portland General | \$20.20 | \$1.07 | 5.30% | 4.75% | 10.0% |
| 22 | Progress Energy | \$42.97 | \$2.52 | 5.86% | 4.75% | 10.6% |
| 23 | SCANA Corp. | \$40.06 | \$1.92 | 4.79% | 4.75% | 9.5% |
| 24 | Sempra Energy | \$52.47 | \$1.68 | 3.20% | 4.75% | 8.0% |
| 25 | Southern Co. | \$37.03 | \$1.88 | 5.08% | 4.75% | 9.8% |
| 26 | Teco Energy, Inc. | \$17.20 | \$0.84 | 4.88% | 4.75% | 9.6% |
| 27 | UIL Holdings Co. | \$27.49 | \$1.73 | 6.29% | 4.75% | 11.0% |
| 28 | Vectren Corp. | \$25.65 | \$1.39 | 5.42% | 4.75% | 10.2% |
| 29 | Westar Energy | \$24.35 | \$1.28 | 5.26% | 4.75% | 10.0% |
| 30 | Wisconsin Energy | \$57.21 | \$1.80 | 3.15% | 4.75% | 7.9% |
| 31 | Xcel Energy Inc. | \$22.80 | \$1.03 | 4.52% | 4.75% | 9.3% |
| 32 | Average | \$35.40 | \$1.63 | 4.73% | 4.75% | 9.5% |
| 33 | Median | | | 4.83% | | 9.6% |

Sources:

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^{*} Blue Chip Economic Indicators, October 10, 2010 at 15.

Adjusted Hadaway Low Near-Term Growth (Two-Stage Growth DCF Model)

| | | Recent | Next | 2014 | Annual | | | | | | | |
|------|---------------------|---------|----------|------------|---------|-----------------|-----------------|-----------------|-----------------|-----------------|---------------|------------|
| | | Stock | Year's | Forecasted | Change | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | GDP | Two-Stage |
| Line | Company | Price | Dividend | Dividend | to 2014 | <u>Dividend</u> | <u>Dividend</u> | <u>Dividend</u> | <u>Dividend</u> | <u>Dividend</u> | <u>Growth</u> | Growth DCF |
| | | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) |
| 1 | ALLETE | \$36,41 | \$1.76 | \$1,85 | \$0.03 | \$1.76 | \$1,79 | \$1.82 | \$1,85 | \$1.94 | 4.75% | 9.2% |
| 2 | Alliant Energy Co. | \$35.78 | \$1.65 | \$1.92 | \$0.09 | \$1.65 | \$1.74 | \$1.83 | \$1.92 | \$2.01 | 4.75% | 9.4% |
| 3 | American Elec. Pwr. | \$36.12 | \$1.70 | \$1.90 | \$0.07 | \$1.70 | \$1.77 | \$1.83 | \$1.90 | \$1,99 | 4.75% | 9.3% |
| 4 | Avista Corp. | \$21,06 | \$1.08 | \$1,30 | \$0.07 | \$1.08 | \$1.15 | \$1.23 | \$1,30 | \$1,36 | 4.75% | 10.1% |
| 5 | Black Hills Corp | \$31.48 | \$1.48 | \$1.60 | \$0.04 | \$1.48 | \$1.52 | \$1.56 | \$1.60 | \$1,68 | 4.75% | 9.2% |
| 6 | Cleco Corporation | \$29.39 | \$1.08 | \$1.45 | \$0.12 | \$1.08 | \$1.20 | \$1.33 | \$1.45 | \$1,52 | 4,75% | 9.0% |
| 7 | Con, Edison | \$48.15 | \$2.40 | \$2,46 | \$0.02 | \$2.40 | \$2.42 | \$2.44 | \$2.46 | \$2.58 | 4.75% | 9.2% |
| 8 | DPL Inc. | \$26.09 | \$1.28 | \$1.50 | \$0.07 | \$1.28 | \$1.35 | \$1.43 | \$1.50 | \$1.57 | 4.75% | 9.7% |
| 9 | DTE Energy Co. | \$46.74 | \$2.30 | \$2.70 | \$0,13 | \$2.30 | \$2,43 | \$2.57 | \$2.70 | \$2,83 | 4.75% | 9.8% |
| 10 | Duke Energy | \$17.61 | \$0.99 | \$1.05 | \$0.02 | \$0.99 | \$1,01 | \$1,03 | \$1.05 | \$1.10 | 4.75% | 10.0% |
| 11 | Edison Internat. | \$34.54 | \$1.34 | \$1.50 | \$0.05 | \$1.34 | \$1.39 | \$1.45 | \$1,50 | \$1.57 | 4.75% | 8.5% |
| 12 | Empire District | \$20.09 | \$1.28 | \$1.35 | \$0.02 | \$1.28 | \$1,30 | \$1,33 | \$1,35 | \$1.41 | 4.75% | 10.6% |
| 13 | Entergy Corp. | \$77.33 | \$3.53 | \$4.15 | \$0.21 | \$3.53 | \$3.74 | \$3.94 | \$4.15 | \$4.35 | 4.75% | 9.4% |
| 14 | Hawaiian Electric | \$23,33 | \$1.24 | \$1.30 | \$0.02 | \$1.24 | \$1,26 | \$1.28 | \$1.30 | \$1.36 | 4.75% | 9.6% |
| 15 | IDACORP | \$35,89 | \$1.20 | \$1.40 | \$0.07 | \$1.20 | \$1.27 | \$1.33 | \$1.40 | \$1,47 | 4,75% | 8,1% |
| 16 | NextEra Energy | \$54.20 | \$2.10 | \$2.40 | \$0.10 | \$2.10 | \$2.20 | \$2.30 | \$2.40 | \$2.51 | 4.75% | 8.6% |
| 17 | Northeast Utilities | \$29.62 | \$1.10 | \$1.30 | \$0.07 | \$1.10 | \$1,17 | \$1.23 | \$1,30 | \$1.36 | 4.75% | 8.5% |
| 18 | NSTAR | \$39.12 | \$1.72 | \$2.05 | \$0.11 | \$1.72 | \$1.83 | \$1.94 | \$2,05 | \$2,15 | 4.75% | 9,3% |
| 19 | PG&E Corp. | \$46.21 | \$1.92 | \$2.20 | \$0.09 | \$1.92 | \$2.01 | \$2.11 | \$2.20 | \$2.3D | 4.75% | 8.9% |
| 20 | Pinnacle West | \$40.69 | \$2.10 | \$2.30 | \$0.07 | \$2.10 | \$2,17 | \$2.23 | \$2,30 | \$2,41 | 4.75% | 9.7% |
| 21 | Portland General | \$20,20 | \$1.07 | \$1.20 | \$0.04 | \$1.07 | \$1.11 | \$1.16 | \$1,20 | \$1,26 | 4,75% | 9.9% |
| 22 | Progress Energy | \$42.97 | \$2.52 | \$2.58 | \$0.02 | \$2.52 | \$2.54 | \$2.56 | \$2.58 | \$2.70 | 4.75% | 10.0% |
| 23 | SCANA Corp. | \$40.06 | \$1.92 | \$2.00 | \$0.03 | \$1.92 | \$1,95 | \$1.97 | \$2,00 | \$2,10 | 4.75% | 9.1% |
| 24 | Sempra Energy | \$52.47 | \$1.68 | \$2.05 | \$0.12 | \$1.68 | \$1.80 | \$1.93 | \$2,05 | \$2.15 | 4.75% | 8.1% |
| 25 | Southern Co. | \$37.03 | \$1.88 | \$2.10 | \$0.07 | \$1.88 | \$1.95 | \$2.03 | \$2.10 | \$2.20 | 4.75% | 9.7% |
| 26 | Teco Energy, Inc. | \$17,20 | \$0.84 | \$0.95 | \$0.04 | . \$D.84 | \$0.88 | \$0.91 | \$0,95 | \$1,00 | 4.75% | 9.6% |
| 27 | UIL Holdings Co. | \$27.49 | \$1.73 | \$1.73 | \$0.00 | \$1.73 | \$1.73 | \$1.73 | \$1.73 | \$1.81 | 4,75% | 10.3% |
| 28 | Vectren Corp. | \$25.65 | \$1.39 | \$1.50 | \$0.04 | \$1.39 | \$1.43 | \$1.46 | \$1.50 | \$1.57 | 4.75% | 9.9% |
| 29 | Westar Energy | \$24.35 | \$1.28 | \$1.40 | \$0.04 | \$1.28 | \$1.32 | \$1,36 | \$1.40 | \$1.47 | 4.75% | 9.8% |
| 30 | Wisconsin Energy | \$57.21 | \$1,80 | \$2.40 | \$0.20 | \$1.80 | \$2.00 | \$2.20 | \$2.40 | \$2.51 | 4.75% | 8.3% |
| 31 | Xcel Energy Inc. | \$22.80 | \$1.03 | \$1.15 | \$0.04 | \$1.03 | \$1.07 | \$1.11 | \$1.15 | \$1.20 | 4.75% | 9.1% |
| 32 | Average | \$35.40 | \$1.63 | \$1.83 | \$0.07 | \$1.63 | \$1.69 | \$1.76 | \$1,83 | \$1,92 | 4,75% | 9.4% |
| 33 | Median | | | | | | | | | | | 9.4% |

Sources:

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^{*} Blue Chip Economic Indicators, October 10, 2010 at 15.