The Relationship Between Electricity Prices and Jobs in Missouri

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ABSTRACT

The relationship between electricity prices and employment has been a topic of interest for researchers in government, academia, and the private sector. Recent studies on this issue demonstrate that higher electricity prices are associated with job losses, particularly in economic sectors that are energy intensive. I investigated this issue as it pertains specifically to Missouri. To do so, I used a statistical technique called regression analysis to study the historical relationship between electricity prices and employment, controlling for other factors that may affect this relationship. The results of my analysis confirm the findings of previous researchers: an increase in electricity prices in Missouri (e.g., as a result of an infrastructure surcharge) have historically been associated with job losses across the state economy. My analysis suggests that a ten percent increase in electricity prices, for example, is likely to result in over 61,000 lost jobs in Missouri (approximately 1.8 percent of the workforce). Indeed, this may be a conservative estimate; a refinement to my first regression model – i.e., looking at the impact of changes in electricity prices on jobs in both the short-term and the long-term – suggests even larger job losses are possible. These job losses would be concentrated most heavily in the manufacturing sector, although job losses would be spread throughout the Missouri economy.

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I. INTRODUCTION

Over the past several years, researchers from government, academia, and the private sector have been interested in understanding the relationship between electricity prices and employment. There are several reasons for interest in the topic. First, while the recent recession has moderated electricity prices over the last few years, average prices have been growing over time, sometimes substantially year-to-year.[2] Second, proposed environmental policies, such as regulatory efforts to reduce emissions of greenhouse gases, are expected to increase electricity prices if implemented. Third, ongoing concerns about the health of the U.S. manufacturing sector has motivated research into the impacts of all types of costs, including the cost of electricity, that manufacturers face.

Research on the relationship between electricity prices and employment seeks to answer two fundamental and related questions. First, will the demand for labor go up or down as electricity prices rise? Theory does not provide an unambiguous answer to this question. Let me illustrate the point using manufacturing as an example for specificity. Higher electricity prices raise the cost of producing manufactured goods. This in turn reduces demand for those goods. As demand falls, there is less need for all inputs into manufacturing, including labor. But there is a potentially offsetting effect on labor used in manufacturing. The higher price of electricity makes the use of other inputs in production (including labor) more attractive.[3] Whether the demand for labor in the manufacturing sector goes up or down cannot be determined on the basis of economic theory alone. This observation is true for all economic sectors and the response of employment to higher electricity prices can differ across industries.[4]

Second, how strong is the relationship between electricity prices and employment levels? In other words, do employment levels react substantially to changes in electricity prices, or do they change little, if at all? Economists express the strength of this relationship using a concept known as *elasticity*. (See Box 1.) The larger the elasticity (in absolute value), the more responsive employment levels are to changes in electricity prices.

[2] For example, see average retail electricity prices provided by the U.S. Energy Information Administration (EIA), available online at http://www.eia.gov/cneaf/electricity/page/sales_revenue.xls.

[3] For example, businesses might use workers to perform some tasks that would otherwise require electricity powered equipment.

[4] Economists going back to Harberger (1962) have decomposed input price impacts such as increased energy costs in production into two components. The *substitution effect* measures the extent to which a price increase for one factor of production (e.g. energy) induces a shift towards other factors (such as labor) holding overall production constant. In addition, the higher production costs may lead to higher prices for the good under consideration leading to a decline in demand for that good. The decline in demand means reduced demand for all inputs in production (including labor). This is known as the *output effect*. In the statistical analysis described in this report, both effects are taken into account when considering how employment is affected by an increase in electricity prices.

Studies seek to answer these questions using a standard set of economic tools. Many studies – including this one – rely on a statistical technique called *regression analysis* to estimate the historical relationships between electricity prices and employment levels. These studies typically gather multiple years of data on average electricity prices and employment and then use variation in electricity prices over time and across states to estimate the effect that higher prices have on employment, taking into account other factors that may influence both electricity prices and employment.

Exhibit 1 summarizes a selection of recent studies examining this issue. Some of the studies in Exhibit 1 focus on employment in the manufacturing sector and/or specific industries, while other studies estimate employment impacts across the entire economy. Most of the studies in Exhibit 1 analyze years of data from across the United States using regression analysis.

The results of the studies summarized in Exhibit 1 are consistent: higher electricity prices are associated with job losses. Those studies that examine the U.S. economy as a whole find that higher electricity prices are associated with modest to sizable job losses.[5] Specifically, these studies find elasticities between -0.0045 and -0.363 – meaning that a 1 percent increase in the price of electricity is associated with a decline in employment of between 0.0045 percent and 0.363 percent.

Box 1. Elasticity

The elasticity of employment with respect to electricity prices measures the percentage change in employment associated with a one percent increase in the price of electricity. An elasticity of -0.3, for example, means that a one percent increase in the price of electricity is associated with a 0.3 percent decline in employment.

A positive elasticity indicates the demand for labor will go up as electricity prices rise. This would occur if the shift from higher-priced electricity into labor in the production process more than outweighed the fall in overall production due to higher electricity prices. A negative elasticity indicates that demand for labor falls as electricity prices rise. A larger elasticity (that is, an elasticity further away from zero) indicates that employment is more responsive to changes in electricity prices.

For small percentage changes in electricity prices, the change in employment can be scaled up or down proportionally. For example, if the elasticity is measured to be -0.3, it is reasonable to infer that a 2 percent increase in the price of electricity is associated with a 0.6 percent decline in employment.

The studies summarized in Exhibit 1 also demonstrate that elasticities are higher in economic sectors that are more energy intensive. In other words, industries that use more electricity per dollar value of production may be expected to be more sensitive to electricity prices. Research summarized in Exhibit 1 confirms this.

While there is some variation in the estimates of the relationship between electricity prices and jobs, none of the studies summarized in Exhibit 1 find that higher electricity prices lead to overall job

[5] Hamilton and Robison (2006); Garen, Jepsen, and Saunoris (2011); and Deschênes (2012).

gains.[6] In other words, the recent economic literature suggests that higher electricity prices appear to cause a fall in the demand for labor.

I understand that the Missouri legislature is currently debating a bill that would allow electric utilities to levy a surcharge to support infrastructure projects. All else equal, a higher surcharge would raise electricity prices in the state. My goal in this report is to replicate the type of analyses used in many of the studies summarized in Exhibit 1 to estimate the impact of a permanent increase in electricity prices on employment in Missouri.

In Section II below, I summarize the data and methods I used in my analysis. In Section III, I describe my results. In Section IV, I summarize my report and offer several conclusions. I provide further technical details in Appendix A.

II. EMPIRICAL APPROACH

A. Data

To conduct my analysis, I collected a variety of economic and demographic data for each of the 48 contiguous U.S. states for each of the years 1990 through 2010, the maximum time period for which all of the necessary data for my analysis were available. My data largely come from three sources: the Energy Information Administration (EIA), the Bureau of Economic Analysis (BEA), and the Census Bureau.

The most important variables in my analysis are employment and electricity price. I collected separate annual employment numbers for each economic sector in the 48 contiguous states from the BEA. I determined annual average electricity prices for each of the 48 states from data obtained from the EIA.[7]

I also collected data on other economic and demographic variables to serve as control variables in my analysis. As I explain in more detail below, control variables (or "covariates") are used to help isolate the specific relationship being examined (electricity prices and jobs, in this case). For example, an important influence on employment levels likely is the general state of the economy. By considering state

[6] While some studies summarized in Exhibit 1 (e.g., Deschênes (2012)) find that higher electricity prices are associated with higher employment in some less energy-intensive economic sectors, these effects are small and/or are not statistically significant and are overwhelmed by larger job losses in the remaining sectors. In other words, even these studies find that higher electricity prices are associated with net job losses when all the economic sectors are considered in aggregate.

[7] Annual electricity prices, in dollars per kWh, were calculated as the ratio of total electric utilities' revenue over the total kilowatt-hours of electricity consumed in that state and year. This variable was extracted from the State Energy Data System of the EIA, for each of the 48 states for years 1990 to 2010. I adjusted electricity prices for the effects of inflation and converted them into the real 2010 dollars using the Bureau of Labor Statistics (BLS) Consumer Price Index (CPI).

GDP in my analysis, I help to control for this confounding effect. Control variables used in my analysis include the state GDP, the percentage of the population with a bachelor's degree, and the population size.[8]

B. Methods

Like many of the studies summarized in Exhibit 1, I used a technique called *regression analysis* to estimate the relationship between electricity prices and employment. Regression analysis is a powerful tool for identifying relationships among variables in a dataset. Because both electricity prices and employment numbers have changed over time, both within and across states, I can use regression analysis to estimate the average change in employment that occurred when electricity prices went up (or down).

Regression analysis also provides the ability to adjust for other factors that might be associated with both electricity prices and employment. For example, when an economic boom hits a particular state, both electricity prices and employment may increase. In such a scenario, it would be important not to attribute the increase in employment to an increase in electricity prices. Regression analysis allows us to control (i.e., adjust) for the impacts of such confounding effects through the use of covariates. Covariates allow us to assess the effects of electricity prices on employment, holding other relevant factors constant.

The regression analysis I have conducted is similar to that in Patrick (2012), Garen, Jepsen, and Saunoris (2011), and several other studies summarized in Exhibit 1. More specifically, I use regression approaches to estimate elasticities for the top five economic sectors (by number of employees) in Missouri – Government, Health Care and Social Assistance, Retail Trade, Manufacturing, and Accommodation and Food Services, as shown in Figure 1 – as well as a sixth group of all other sectors combined.[9]

I estimate two different regression models, "Model 1" and "Model 2," which I describe in Appendix A. Model 1 is a standard fixed-effects model. Model 2 builds upon Model 1 but also

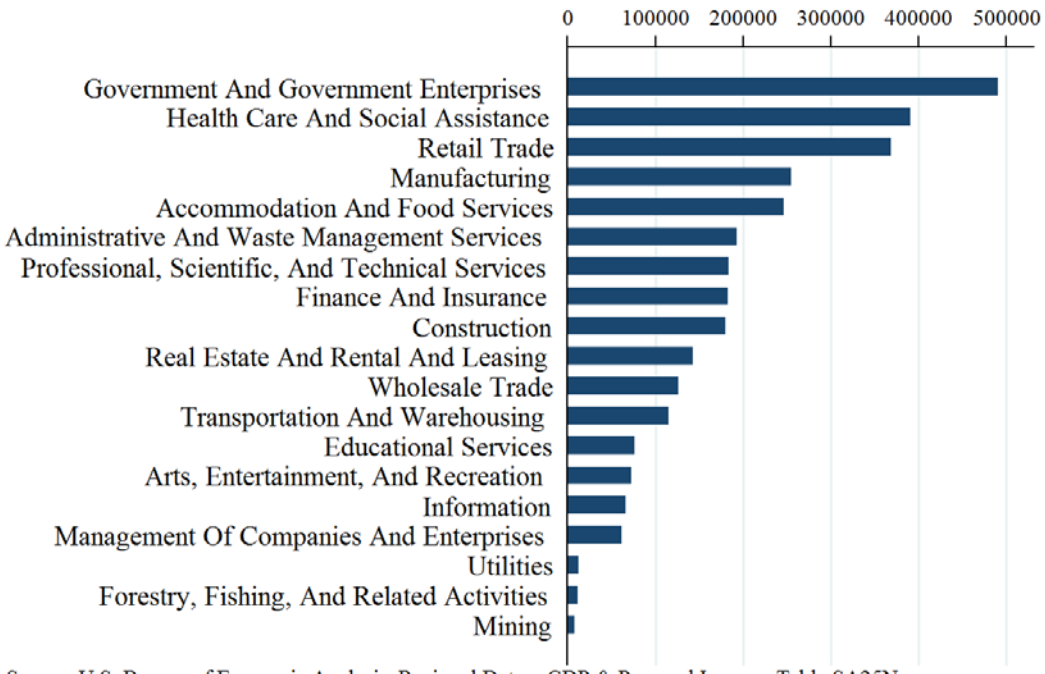
[8] The percentage of the population (age 25 years and older) with a bachelor's degree or higher (collected from the Census Bureau American Community Survey and Current Population Survey) allows me to control for the quality of labor. The state GDP (collected from the BEA) and population size (collected from the Census Bureau) are included to scale the regression to account for differences in size of different states. State GDP also serves as a control for general economic conditions in the state. Finally, since higher employment levels might be associated with lower energy intensities, I also use energy intensity (defined as the ratio of total energy consumption in the state to state GDP) in my analysis. I adjusted state GDP values for the effects of inflation just as I adjusted electricity prices (described above). I also tested but ultimately decided not to include labor force unionization and climate index (defined as the sum of heating degree days and cooling degree days) as control variables in my regressions. The effects of these variables were either small or statistically insignificant, and including them did not materially affect the estimated elasticity of employment with respect to energy prices.

[9] I used the North American Industry Classification System (NAICS) codes to identify economic sectors. Government is NAICS code 92. Health Care and Social Assistance is NAICS code 62. Retail Trade is NAICS codes 44 and 45. Manufacturing is NAICS codes 31, 32, and 33. Accommodation and Food Services is NAICS code 72.

introduces a partial-adjustment mechanism that allows me to estimate both the short-run as well as the long-run elasticity in each sector. "Short run" is the time horizon within which businesses have difficulty changing their electricity consumption in response to changes in electricity prices. In this report, the short run is within the same year. "Long run" is the time horizon long enough for businesses to adjust their behavior in response to changes in electricity prices. For example, they may implement energy efficiency measures to lower electricity consumption; substitute electricity with alternative energy sources; or, in the extreme case, shut down production or relocate to areas with lower electricity costs.[10]

Using both Model 1 and Model 2, I estimate elasticities for both the United States as a whole and for Missouri specifically.[11] Throughout my analysis, as explained above, I control for important economic and demographic phenomena that may also affect employment. Appendix A provides the technical details of my approach.

Figure 1. Missouri Employment by Economic Sector, 2010

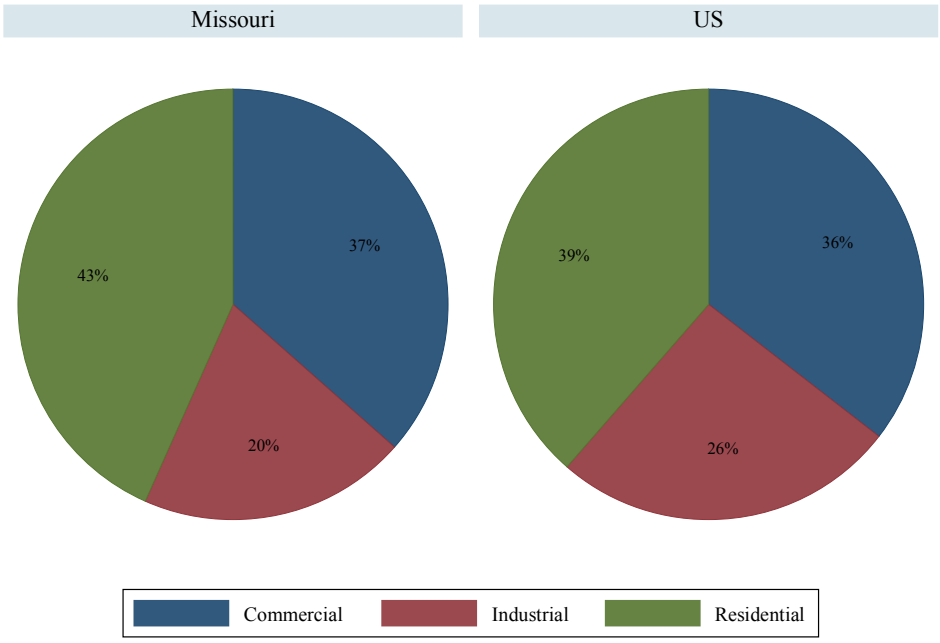


Source: U.S. Bureau of Economic Analysis, Regional Data – GDP & Personal Income, Table SA25N accessed at http://bea.gov/iTable/index_regional.cfm

[10] Given this flexibility in the long term that is not available to businesses in the short term, I would expect the elasticities I estimate to be larger in magnitude in the long term than in the short term. As shown below, this is what I find in my analysis.

[11] I note that electricity consumption by economic sector in Missouri closely approximates that of the United States as a whole. See Figure 2.

Figure 2. Electricity Consumption by Economic Sector, Missouri vs. the United States, 2010



Source: U.S. Energy Information Administration – State Energy Data System, accessed at www.eia.gov/state/seds

III. RESULTS

The results of my analysis are consistent with those found in the literature and summarized in Exhibit 1: higher electricity prices are associated with lower employment, across the economy generally and particularly within the manufacturing sector. My results are consistent across different regression models and are statistically precise, meaning the results are unlikely to be due to randomness in the data. In other words, the effects I see appear to be real.

In Table 1 below, I summarize the results of my analysis. Not surprisingly, I find that elasticities vary across economic sectors.[12] For example, the employment elasticity in the Manufacturing sector is consistently higher (in absolute value) than the corresponding elasticity in Food and Accommodations or

[12] I also estimated total employment elasticities for the 48 contiguous states as a whole, as well as for Missouri specifically. I found these to be between -0.005 and -0.016 for the 48 states and between -0.064 and -0.188 for Missouri specifically (results not shown). However, not differentiating among economic sectors obscures important variation across industries; as discussed above, industries that are heavy consumers of electricity could reasonably be expected to react differently to changes in electricity prices compared to industries for which electricity prices are not as important. Indeed, the sector-specific results I obtain demonstrate this to be the case. Total employment elasticities therefore become less useful, because one cannot confidently apply these to a specific sector. Hence, my main focus in this report is the analysis which considers the relevant economic sectors separately.

Government. More specifically, I estimate the Missouri-specific elasticity in the Manufacturing sector to be between -0.495 (in the short run) and -3.177 (in the long run). This means that, on average in the time period I studied, a one percent increase in electricity prices in Missouri was associated with a decrease in employment of between 0.495 percent and 3.177 percent. For the Government sector (which presumably is less dependent on energy), I find that the Missouri-specific elasticity to be between -0.182 (in the short run) and -0.340 (in the long run).

The elasticities are precisely estimated for the most part. All of the elasticities estimated in Model 1 for Missouri have p-values of at most 0.05, meaning there is less than a five percent probability that we are estimating a negative elasticity when the true elasticity is zero. Most of the estimates from Model 1, in fact, have p-values of 0.01 or less. For Model 2, I cannot reject the possibility that the true elasticity is zero for Retail Trade, Health Care and Social Assistance, and Other Sectors at a reasonable level. Exhibits 2 and 3 indicate the level of statistical precision for each of the elasticity estimates.

Table 1. Estimated Elasticities of Employment with Respect to Electricity Prices

	Missouri Elasticity		
	Model 1	Model 2	
Sector		Short Run	Long Run
Manufacturing	-0.591	-0.495	-3.177
Retail Trade	-0.420	-0.078	-0.619
Health Care and Social Assistance	-0.049	0.034	0.109
Food and Accommodation	-0.131	-0.160	-1.528
Government	-0.146	-0.182	-0.340
Other Sectors	-0.107	-0.115	-0.243

I used my estimated elasticities to calculate the expected effects of an increase in electricity prices on employment in Missouri. Table 2 shows the results for various permanent hypothetical increases in electricity prices. (Exhibit 4 provides more details.) To generate these estimates, I used the Missouri-specific elasticities shown in Table 1. I find that most sectors (except perhaps Health Care and Social Assistance) would be expected to lose thousands of jobs under such a scenario. Focusing on the Fixed Effect regressions (Model 1), across the Missouri economy, I estimate that a permanent 10 percent increase in electricity prices would be associated with losses of over 61,000 jobs (approximately 1.8 percent of the Missouri workforce in 2010). The partial adjustment model (Model 2) suggests an even larger impact in the long run with a potential loss of 195,000 jobs in the adjustment to a new long-run equilibrium. I also report estimated job losses for larger price increases in Table 2 but note that one should not put too much stock in the specific estimate for very large price changes given the risk of

predicting too far out of sample. Suffice it to say, however, that job losses are likely to be larger the larger the increase in the price of electricity.

Table 2. Estimated Effects on Missouri Employment of a Permanent 5, 10, 15, 20, or 25 Percent Increase in Electricity Prices

	Model 1				
	% Change in Electricity Price				
Sector	**5%**	**10%**	**15%**	**20%**	**25%**
Manufacturing	-7,523	-15,046	-22,569	-30,092	-37,614
Retail Trade	-7,734	-15,469	-23,203	-30,937	-38,671
Health Care and Social Assistance	-967	-1,934	-2,901	-3,868	-4,835
Food and Accommodation	-1,616	-3,232	-4,848	-6,464	-8,080
Government	-3,579	-7,159	-10,738	-14,318	-17,897
Other Sectors	-9,252	-18,505	-27,757	-37,010	-46,262
Total	**-30,672**	**-61,344**	**-92,017**	**-122,689**	**-153,361**
	Model 2, Short Run				
	% Change in Electricity Price				
Sector	**5%**	**10%**	**15%**	**20%**	**25%**
Manufacturing	-6,300	-12,600	-18,899	-25,199	-31,499
Retail Trade	-1,436	-2,871	-4,307	-5,742	-7,178
Health Care and Social Assistance	662	1,325	1,987	2,649	3,312
Food and Accommodation	-1,977	-3,955	-5,932	-7,910	-9,887
Government	-4,476	-8,951	-13,427	-17,902	-22,378
Other Sectors	-9,897	-19,794	-29,691	-39,588	-49,485
Total	**-23,423**	**-46,846**	**-70,269**	**-93,692**	**-117,115**
	Model 2, Long Run				
	% Change in Electricity Price				
Sector	**5%**	**10%**	**15%**	**20%**	**25%**
Manufacturing	-40,416	-80,832	-121,249	-161,665	-202,081
Retail Trade	-11,392	-22,783	-34,175	-45,566	-56,958
Health Care and Social Assistance	2,127	4,253	6,380	8,506	10,633
Food and Accommodation	-18,841	-37,681	-56,522	-75,363	-94,203
Government	-8,343	-16,687	-25,030	-33,373	-41,717
Other Sectors	-20,989	-41,977	-62,966	-83,955	-104,944
Total	**-97,854**	**-195,708**	**-293,562**	**-391,416**	**-489,270**

IV. CONCLUSIONS

Recent research on the relationship between electricity prices and employment demonstrates that higher electricity prices are associated with job losses, particularly in economic sectors that are energy intensive. The results of my analysis confirm these findings. The direct implication of my analysis is that an increase in electricity prices as a result of an infrastructure surcharge in Missouri would be expected to result in statewide job losses. For example, as shown in Table 2 and focusing on Model 1, my regression analysis indicates that a permanent ten percent increase in electricity prices would be expected to result in losses of over 61,000 jobs. This may be a conservative estimate. Assuming a partial adjustment process (Model 2) suggests even larger losses in the adjustment to a new equilibrium. These job losses would be concentrated most heavily in the manufacturing sector, although job losses would be spread throughout the Missouri economy.

APPENDIX A – METHODOLOGICAL DETAILS

Model 1 – Fixed Effects Model

I used a fixed effects model to study the effect of changes in the real price of electricity from 1990 to 2010 on employment in the top five economic sectors in Missouri (manufacturing, retail trade, food and accommodation, health care and social assistance, and government) as well as a sixth group of all other sectors combined.

The fixed effects model can be generally written as $Y_{it} = \beta_0 + \sum_j \beta_j X_{jit} + \alpha_i + \varepsilon_{it}$, where Y_{it} is the employment by industry, in state i and year t; β_0 is the constant intercept across all states; X is a vector of controls (i.e., electricity prices, population, GDP, and energy intensity) affecting state-level employment; α_i is the time-invariant state fixed effect; and ε_{it} is the random disturbance term. The state fixed effects can be interpreted as any unmeasured characteristic of a given state that leads the state to have a particular level of employment that does not vary over time. I also included state specific time trends to allow for employment trends to vary across states in ways unrelated to the vector of controls in the regression.

I converted the dependent variable Y_{it} and the control variables X to their natural logarithms, so the resulting coefficients β_j may be simply interpreted as elasticities, i.e., the percentage change in the dependent variable given a percentage change in one of the independent variables. To obtain Missouri-specific price elasticities, I added to the regression the interaction of the electricity price with a binary variable equal to one if the state is Missouri.

Results of the estimation are presented in Exhibit 2. Note that I estimated several variations on this model. For example, I tested the results using data from all 50 U.S. states and the District of Columbia. I also ran regressions in which I employed industrial, commercial, or industrial and commercial electricity prices (rather than electricity prices determined by dividing total electric utilities' revenue by total kilowatt-hours of electricity consumed in that state and year, as described above) depending on which economic sector I was analyzing. These various model runs, though not reported here, showed similar results to those reported here, indicating the estimated elasticities are not sensitive to the choice of sample size or construction of electricity price variables.

Model 2 – Fixed Effects with Partial Adjustment

Next I explored the potential impact of electricity prices on employment in both the short run and the long run since the response to a change in electricity prices may be different in the short run because some factors may be difficult to modify over a short period.

I relied on a partial adjustment model: $Y_{it} - Y_{it-1} = \lambda(Y^* - Y_{it-1})$, where Y^* is the equilibrium level of employment, and parameter λ is a measure of the adjustment process in moving from the desired to actual level of employment. When $\lambda = 1$, there is instantaneous adjustment and when $\lambda = 0$, there is no adjustment.

Solving for Y_{it} we get: $Y_{it} = (1-\lambda)Y_{it-1} + \lambda Y^*$. Assuming that the equilibrium value of employment is a function of electricity prices and other covariates (state GDP, educational attainment, etc.) and is given by $Y^* = \beta_0 + \beta X_{it}$, we get the following: $Y_{it} = \lambda\beta_0 + (1-\lambda)Y_{it-1} + \lambda\beta X_{it} = \alpha + \gamma Y_{it-1} + \delta X_{it}$. In this specification, the short-run elasticities are the coefficients δ, and the long-run elasticities: $\frac{\delta}{1-\gamma}$.

Results comparing the short-run and long-run elasticities are presented in Exhibit 3. These regressions were run using Arellano-Bond estimator. The Arellano-Bond estimator provides consistent (e.g. unbiased in large sample) estimates of the coefficients in regressions with lagged dependent variables and state fixed effects. As with Model 1, I estimated several variations on this model and found the results to be robust to model specification.

Calculations of Changes in Employment

I used my estimated elasticities from Models 1 and 2 to calculate the expected employment effects in each of the manufacturing sectors given different permanent increases in the price of electricity. The calculation was straightforward: for each sector in each state, I multiplied the elasticity estimate by the assumed percent change in electricity prices by the number of employees in that sector in 2010. Results are presented in Exhibit 4.

APPENDIX B – REFERENCES

Aldy, Joseph E. and William A. Pizer, "The Competitiveness Impacts of Climate Change Mitigation Policies," Pew Center on Global Climate Change, May 2009.

Bae, Suho, "The Responses of Manufacturing Businesses to Geographical Differences in Electricity Prices," *The Annals of Regional Science*, Vol. 43, 2009, pp. 453-472.

Deschênes, Olivier, "Climate Policy and Labor Markets," Chapter 2 in *The Design and Implementation of US Climate Policy*, Don Fullerton and Catherine Wolfram, Editors, The University of Chicago Press, 2012.

Carlton, Dennis, "The Location and Employment Choices of New Firms: An Econometric Model with Discrete and Continuous Endogenous Variables," *The Review of Economics and Statistics*, Vol. 65, No. 3, 1983.

Garen, John, Christopher Jepsen, and James Saunoris, "The Relationship between Electricity Prices and Electricity Demand, Economic Growth, and Employment," Report Prepared for the Kentucky Department for Energy Development and Independence, Gatton College of Economics, University of Kentucky, October 19, 2011.

Hamilton, Joel R. and M. Henry Robison, "Economic Impacts from Rate Increases to Non-DSI Federal Power Customers Resulting from Concessional Rates to the DSIs," Hamilton Water Economics and Economic Modeling Specialists Inc., May 31, 2006.

Harberger, Arnold C., "The Incidence of the Corporation Income Tax," *The Journal of Political Economy*, Vol. 70, Issue 3, June 1962, pp. 215-240.

Kahn, Matthew E. and Erin T. Mansur, "Do Local Energy Prices and Regulation Affect the Geographic Concentration of Employment?", Working Paper, January 14, 2013.

Kahn, Mathew E. and Erin T. Mansur, "How Do Energy Prices, and Labor and Environmental Regulations Affect Local Manufacturing Employment Dynamics? A Regression Discontinuity Approach," NBER Working Paper 16538, November 2010.

Patrick, Aron, "The Vulnerability of Kentucky's Manufacturing Economy to Increasing Electricity Prices," Kentucky Energy and Environment Cabinet, October 2012.

Tuerck, David G., Paul Bachman, and Michael Head, "The Economic Impact of Missouri's Renewable Energy Standard," The Beacon Hill Institute at Suffolk University, November 2012.

U.S. Bureau of Labor Statistics Consumer Price Index, 2011, available online at http://www.bls.gov/cpi/.

U.S. Bureau of Economic Analysis, GDP and Total Employment by Industry, available online at http://bea.gov/regional/index.htm.

U.S. Energy Information Administration – State Energy Data System, available online at www.eia.gov/state/seds/.

Exhibit 1. Selected Studies of the Relationship Between Electricity Prices and Employment in the United States

Study	Purpose	Methodology	Relevant Findings
"Economic Impacts from Rate Increases to Non-DSI Federal Power Customers Resulting from Concessional Rates to the DSIs" Joel R. Hamilton and M. Henry Robison Hamilton Water Economics and Economic Modeling Specialists Inc. May 31, 2006	To estimate the impacts on employment and value added of an electricity rate increase on certain electricity customers in the Pacific Northwest.	Input-output model of the U.S. economy.	An electricity rate increase of 1 percent is expected to result in job losses of 0.0045 percent in the short term and 0.0057 percent in the long term across the regional economy in the Pacific Northwest.
"The Competitiveness Impacts of Climate Change Mitigation Policies" Joseph E. Aldy and William A. Pizer Pew Center on Global Climate Change May 2009	To estimate the relationship between electricity prices and production, consumption, and employment in over 400 manufacturing industries.	Regression-based methodology. Data from 1986 to 1994 from the U.S. manufacturing sector.	Higher electricity prices are associated with lower employment in more energy-intensive industries. A 1 percent increase in electricity prices is associated with reduction in employment of approximately 0.3 percent in primary aluminum production and select other industries. No discernible relationship between electricity prices and employment for the manufacturing sector as a whole.
"How Do Energy Prices, and Labor and Environmental Regulations Affect Local Manufacturing Employment Dynamics? A Regression Discontinuity Approach" Matthew E. Kahn and Erin T. Mansur NBER Working Paper 16538 November 2010	To estimate how electricity prices, labor regulations, and environmental regulations affect employment in different manufacturing sectors.	Regression-based methodology. Data from 1998 to 2006 from the U.S. manufacturing sector.	Based on the main regression model, an increase in the electricity price of 1.1 cents per kWh (from a hypothetical carbon tax of $15 per ton) would result in 4,133 jobs lost in Missouri. Updated estimates of job losses may be higher based on revised analysis (see below).

Exhibit 1. Selected Studies of the Relationship Between Electricity Prices and Employment in the United States

Study	Purpose	Methodology	Relevant Findings
"The Relationship Between Electricity Prices and Electricity Demand, Economic Growth, and Employment" John Garen, Christopher Jepsen, and James Saunoris Center for Business and Economic Research Department of Economics University of Kentucky October 19, 2011	To estimate the effects of increased electricity prices on the demand for electricity, Gross State Product (GSP), and employment in Kentucky.	Regression-based methodology. Data from 1970 to 2010 from all sectors of the U.S. economy.	A permanent electricity price increase of 1 percent is expected to reduce employment by 0.012 percent in the short term and 0.363 percent in the long term.
"The Vulnerability of Kentucky's Manufacturing Economy to Increasing Electricity Prices" Aron Patrick Kentucky Energy and Environment Cabinet, Department for Energy Development and Independence October 2012	To estimate the relationship between electricity prices and employment in five sectors important to the economy of Kentucky.	Regression-based methodology. Data from 1990 to 2010 from five sectors (manufacturing, retail services, hospitality, health care, and government) across the United States.	Higher electricity prices are associated with lower employment in the manufacturing, retail services, and hospitality sectors. A 1 percent increase in electricity prices is associated with a decline in employment of 0.337 percent in the manufacturing sector, 0.157 percent in the retail services sector, and 0.142 percent in the hospitality sector. No discernible relationship between electricity prices and employment in the health care and government sectors.
"The Economic Impact of Missouri's Renewable Energy Standard" David G. Tuerck, Paul Bachman, and Michael Head The Beacon Hill Institute at Suffolk University November 2012	To estimate the possible impact of Missouri's Renewable Energy Standard on electricity prices and employment in the state.	A customized "computable general equilibrium" model of state economies calibrated with economic data, parameters from the literature, and professional judgment.	Generally, a 1 percent increase in electricity prices is expected to result in a 0.022 percent decrease in state-wide employment in the long-term. Specifically, an electricity price increase of 1.27 cents per kWh starting in 2012 is expected to result in 6,065 lost jobs in 2021 in Missouri.

Exhibit 1. Selected Studies of the Relationship Between Electricity Prices and Employment in the United States

Study	Purpose	Methodology	Relevant Findings
"Climate Policy and Labor Markets" Olivier Deschênes Chapter 2 in *The Design and Implementation of US Climate Policy* , Don Fullerton and Catherine Wolfram, Editors, The Univerisity of Chicago Press 2012	To estimate the relationship between electricity prices and economy-wide employment.	Regression-based methodology. Data from 1976 to 2007 from all sectors of the U.S. economy.	Higher electricity prices lead to reductions in employment overall. A 1 percent increase in electricity prices leads to a decline in FTE employment of between 0.10 and 0.16 percent. Higher electricity prices lead to reductions in employment in most industries, with the greatest effects in the agriculture and transportation industries.
"Do Local Energy Prices and Regulation Affect the Geographic Concentration of Employment?" Matthew E. Kahn and Erin T. Mansur Working Paper January 14, 2013	To estimate how electricity prices, labor regulations, and environmental regulations affect employment in different manufacturing sectors. Update of Kahn and Mansur (2010). See above.	Regression-based methodology. Data from 1998 to 2009 from the U.S. manufacturing sector.	Higher electricity prices are associated with lower employment in 18 of 21 manufacturing industries. The largest negative relationship between electricity prices and employment is in primary metals manufacturing. Based on the main regression model, a 1 percent increase in electricity prices is associated with a decline of 2.17 percent in employment in primary metals manufacturing. Across all manufacturing industries, a 1 percent increase in electricity prices is associated with 0.204 percent decline in employment, and the association is only weakly significant statistically.

Exhibit 2. Models of Electricity Prices and Employment by Economic Sector: Fixed-Effects Model

	Manufacturing	Retail Trade	Health Care and Social Assistance	Food and Accommodation	Government	Other Sectors
Variable (Log)	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se
Electricity Price	**-0.455*** **	**-0.283*** **	**-0.094*** **	**-0.144*** **	**-0.016**	**-0.056**
	(0.050)	(0.031)	(0.020)	(0.037)	(0.013)	(0.039)
MO=1 x Electricity Price	**-0.136** **	**-0.137*** **	**0.044** **	**0.013**	**-0.129*** **	**-0.051** **
	(0.055)	(0.029)	(0.022)	(0.037)	(0.013)	(0.025)
Population with Bachelor Degree	-0.019	0.024	-0.002	0.038	0.018*	-0.022
	(0.043)	(0.026)	(0.015)	(0.032)	(0.010)	(0.015)
State GDP	0.157***	0.129***	0.255***	0.018***	0.273***	0.399***
	(0.040)	(0.020)	(0.038)	(0.005)	(0.035)	(0.061)
Population	0.911**	0.741***	-0.040	1.165***	0.571***	0.581***
	(0.431)	(0.206)	(0.167)	(0.204)	(0.086)	(0.141)
Energy Intensity	-0.123	-0.163***	-0.010	-0.064	0.003	0.064
	(0.083)	(0.052)	(0.042)	(0.059)	(0.028)	(0.039)
State Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
State-Specific Time Trend	Yes	Yes	Yes	Yes	Yes	Yes
N	1,007	1,008	1,008	1,007	1,008	1,008
r2	0.863	0.872	0.988	0.952	0.971	0.976
National-Level Elasticities	**-0.455*** **	**-0.283*** **	**-0.094*** **	**-0.144*** **	**-0.016**	**-0.056**
Missouri-Specific Elasticities	**-0.591*** **	**-0.420*** **	**-0.049*** **	**-0.131*** **	**-0.146*** **	**-0.107** **

*** p<0.01, ** p<0.05, * p<0.1

Notes:
[A] Data are for the contiguous 48 states, from 1990 to 2010.
[B] Standard errors of Missouri-specific elasticities are obtained using delta method.

Exhibit 3. Models of Electricity Prices and Employment by Economic Sector: Fixed-Effects Model
Short-Run vs. Long-Run Elasticities

	Manufacturing	Retail Trade	Health Care and Social Assistance	Food and Accommodation	Government	Other Sectors
Variable (Log)	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se
Electricity Price	**-0.126*** **	**-0.105*** **	**-0.026*** **	**-0.131*** **	**-0.015*** **	**-0.008**
	(0.016)	(0.009)	(0.006)	(0.011)	(0.004)	(0.009)
MO=1 x Electricity Price	**-0.369** **	**0.027**	**0.060**	**-0.029**	**-0.167*** **	**-0.106**
	(0.151)	(0.084)	(0.058)	(0.088)	(0.038)	(0.079)
Lag of Employment	0.844***	0.874***	0.689***	0.895***	0.464***	0.528***
	(0.020)	(0.019)	(0.022)	(0.024)	(0.029)	(0.022)
Population with Bachelor Degree	-0.082***	-0.038***	-0.020***	0.004	-0.005	-0.045***
	(0.019)	(0.011)	(0.008)	(0.014)	(0.005)	(0.010)
State GDP	0.158***	0.192***	0.106***	-0.012***	0.105***	0.388***
	(0.010)	(0.010)	(0.014)	(0.002)	(0.013)	(0.016)
Population	-0.412***	-0.244***	0.017	0.069	0.473***	-0.123**
	(0.102)	(0.060)	(0.043)	(0.073)	(0.034)	(0.058)
Energy Intensity	-0.023	-0.050***	-0.007	-0.119***	-0.023***	0.098***
	(0.031)	(0.018)	(0.012)	(0.022)	(0.009)	(0.020)
State Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
State-Specific Time Trend	Yes	Yes	Yes	Yes	Yes	Yes
N	909	912	912	909	912	912
National-Level Elasticities						
Short-Run Elasticity	**-0.126*** **	**-0.105*** **	**-0.026*** **	**-0.131*** **	**-0.015*** **	**-0.008**
Long-Run Elasticity	**-0.808*** **	**-0.835*** **	**-0.083*** **	**-1.253*** **	**-0.029*** **	**-0.017**
Missouri-Specific Elasticities						
Short-Run Elasticity	**-0.495*** **	**-0.078**	**0.034**	**-0.160***	**-0.182*** **	**-0.115**
Long-Run Elasticity	**-3.177*** **	**-0.619**	**0.109**	**-1.528***	**-0.340*** **	**-0.243**

*** p<0.01, ** p<0.05, * p<0.1

Notes:
[A] Data are for the contiguous 48 states, from 1990 to 2010.
[B] Regressions with lagged dependent variable are run using Arellano-Bond estimator.
[C] Standard errors of Missouri-specific and long-run elasticities are obtained using delta method.

Exhibit 4. Resulting Job Losses by Economic Sector

Manufacturing

	Elasticity of Employment with Respect to Electricity Price	5%	10%	15%	20%	25%
		Number of Employees in 2010				
		254,464				
		% Change in Electricity Price				
		Estimated Employment Loss				
Estimates from Exhibit 2. Fixed-Effects Model with Missouri Dummy Interacted with Electricity Price, national-level	-0.455	-5,794	-11,589	-17,383	-23,178	-28,972
Estimates from Exhibit 2. Fixed-Effects Model with Missouri Dummy Interacted with Electricity Price, Missouri-specific	-0.591	-7,523	-15,046	-22,569	-30,092	-37,614
Estimates from Exhibit 3. Fixed-Effects Model with Missouri Dummy Interacted with Electricity Price, national-level						
Short-Run	-0.126	-1,602	-3,203	-4,805	-6,407	-8,008
Long-Run	-0.808	-10,275	-20,550	-30,826	-41,101	-51,376
Estimates from Exhibit 3. Fixed-Effects Model with Missouri Dummy Interacted with Electricity Price, Missouri-specific						
Short-Run	-0.495	-6,300	-12,600	-18,899	-25,199	-31,499
Long-Run	-3.177	-40,416	-80,832	-121,249	-161,665	-202,081

Retail Trade

	Elasticity of Employment with Respect to Electricity Price	5%	10%	15%	20%	25%
		Number of Employees in 2010				
		368,284				
		% Change in Electricity Price				
		Estimated Employment Loss				
Estimates from Exhibit 2. Fixed-Effects Model with Missouri Dummy Interacted with Electricity Price, national-level	-0.283	-5,210	-10,421	-15,631	-20,842	-26,052
Estimates from Exhibit 2. Fixed-Effects Model with Missouri Dummy Interacted with Electricity Price, Missouri-specific	-0.420	-7,734	-15,469	-23,203	-30,937	-38,671
Estimates from Exhibit 3. Fixed-Effects Model with Missouri Dummy Interacted with Electricity Price, national-level						
Short-Run	-0.105	-1,938	-3,877	-5,815	-7,754	-9,692
Long-Run	-0.835	-15,383	-30,766	-46,149	-61,532	-76,915
Estimates from Exhibit 3. Fixed-Effects Model with Missouri Dummy Interacted with Electricity Price, Missouri-specific						
Short-Run	-0.078	-1,436	-2,871	-4,307	-5,742	-7,178
Long-Run	-0.619	-11,392	-22,783	-34,175	-45,566	-56,958

Health Care & Social Assistance

	Elasticity of Employment with Respect to Electricity Price	5%	10%	15%	20%	25%
		Number of Employees in 2010				
		390,950				
		% Change in Electricity Price				
		Estimated Employment Loss				
Estimates from Exhibit 2. Fixed-Effects Model with Missouri Dummy Interacted with Electricity Price, national-level	-0.094	-1,834	-3,667	-5,501	-7,334	-9,168
Estimates from Exhibit 2. Fixed-Effects Model with Missouri Dummy Interacted with Electricity Price, Missouri-specific	-0.049	-967	-1,934	-2,901	-3,868	-4,835
Estimates from Exhibit 3. Fixed-Effects Model with Missouri Dummy Interacted with Electricity Price, national-level						
Short-Run	-0.026	-506	-1,012	-1,518	-2,024	-2,530
Long-Run	-0.083	-1,624	-3,249	-4,873	-6,497	-8,122
Estimates from Exhibit 3. Fixed-Effects Model with Missouri Dummy Interacted with Electricity Price, Missouri-specific						
Short-Run	0.034	662	1,325	1,987	2,649	3,312
Long-Run	0.109	2,127	4,253	6,380	8,506	10,633

Food & Accommodation

	Elasticity of Employment with Respect to Electricity Price	5%	10%	15%	20%	25%
		Number of Employees in 2010				
		246,626				
		% Change in Electricity Price				
		Estimated Employment Loss				
Estimates from Exhibit 2. Fixed-Effects Model with Missouri Dummy Interacted with Electricity Price, national-level	-0.144	-1,777	-3,553	-5,330	-7,107	-8,884
Estimates from Exhibit 2. Fixed-Effects Model with Missouri Dummy Interacted with Electricity Price, Missouri-specific	-0.131	-1,616	-3,232	-4,848	-6,464	-8,080
Estimates from Exhibit 3. Fixed-Effects Model with Missouri Dummy Interacted with Electricity Price, national-level						
Short-Run	-0.131	-1,621	-3,242	-4,864	-6,485	-8,106
Long-Run	-1.253	-15,447	-30,894	-46,341	-61,787	-77,234
Estimates from Exhibit 3. Fixed-Effects Model with Missouri Dummy Interacted with Electricity Price, Missouri-specific						
Short-Run	-0.160	-1,977	-3,955	-5,932	-7,910	-9,887
Long-Run	-1.528	-18,841	-37,681	-56,522	-75,363	-94,203

Exhibit 4. Resulting Job Losses by Economic Sector, continued

Government

	Elasticity of Employment with Respect to Electricity Price	5%	10%	15%	20%	25%
		Number of Employees in 2010: **490,751**				
		% Change in Electricity Price				
		Estimated Employment Loss				
Estimates from Exhibit 2. Fixed-Effects Model with Missouri Dummy Interacted with Electricity Price, national-level	-0.016	-404	-808	-1,213	-1,617	-2,021
Estimates from Exhibit 2. Fixed-Effects Model with Missouri Dummy Interacted with Electricity Price, Missouri-specific	-0.146	-3,579	-7,159	-10,738	-14,318	-17,897
Estimates from Exhibit 3. Fixed-Effects Model with Missouri Dummy Interacted with Electricity Price, national-level						
Short-Run	-0.015	-376	-753	-1,129	-1,506	-1,882
Long-Run	-0.029	-702	-1,403	-2,105	-2,807	-3,508
Estimates from Exhibit 3. Fixed-Effects Model with Missouri Dummy Interacted with Electricity Price, Missouri-specific						
Short-Run	-0.182	-4,476	-8,951	-13,427	-17,902	-22,378
Long-Run	-0.340	-8,343	-16,687	-25,030	-33,373	-41,717

Other Sectors

	Elasticity of Employment with Respect to Electricity Price	5%	10%	15%	20%	25%
		Number of Employees in 2010: **1,727,391**				
		% Change in Electricity Price				
		Estimated Employment Loss				
Estimates from Exhibit 2. Fixed-Effects Model with Missouri Dummy Interacted with Electricity Price, national-level	-0.056	-4,842	-9,685	-14,527	-19,369	-24,212
Estimates from Exhibit 2. Fixed-Effects Model with Missouri Dummy Interacted with Electricity Price, Missouri-specific	-0.107	-9,252	-18,505	-27,757	-37,010	-46,262
Estimates from Exhibit 3. Fixed-Effects Model with Missouri Dummy Interacted with Electricity Price, national-level						
Short-Run	-0.008	-712	-1,424	-2,136	-2,848	-3,561
Long-Run	-0.017	-1,510	-3,020	-4,531	-6,041	-7,551
Estimates from Exhibit 3. Fixed-Effects Model with Missouri Dummy Interacted with Electricity Price, Missouri-specific						
Short-Run	-0.115	-9,897	-19,794	-29,691	-39,588	-49,485
Long-Run	-0.243	-20,989	-41,977	-62,966	-83,955	-104,944

Total Economy

	5%	10%	15%	20%	25%
	Number of Employees in 2010: **3,478,466**				
	% Change in Electricity Price				
	Estimated Employment Loss				
Estimates from Exhibit 2. Fixed-Effects Model with Missouri Dummy Interacted with Electricity Price, national-level	-19,862	-39,724	-59,585	-79,447	-99,309
Estimates from Exhibit 2. Fixed-Effects Model with Missouri Dummy Interacted with Electricity Price, Missouri-specific	-30,672	-61,344	-92,017	-122,689	-153,361
Estimates from Exhibit 3. Fixed-Effects Model with Missouri Dummy Interacted with Electricity Price, national-level					
Short-Run	-6,756	-13,512	-20,267	-27,023	-33,779
Long-Run	-44,941	-89,882	-134,823	-179,765	-224,706
Estimates from Exhibit 3. Fixed-Effects Model with Missouri Dummy Interacted with Electricity Price, Missouri-specific					
Short-Run	-23,423	-46,846	-70,269	-93,692	-117,115
Long-Run	-97,854	-195,708	-293,562	-391,416	-489,270

PUBLIC UTILITIES FORTNIGHTLY ENERGY, MONEY, POWER
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Let's admit one thing right off the bat. Rate of return is one of the most arcane subjects in utility regulation's ocean of arcania.

But one thing that makes rate of return interesting is the amount of money involved. It's roughly $58 billion each year for electric utilities.[1]

Now you may be thinking, OK, so there's big money involved. But what's in it for me? In the spirit of BLUF, Bottom Line Up Front, let me tackle that question.

There is mounting evidence that investment in utility stocks has outperformed the broader market in the past, and will continue to do so. This is a conundrum. Regulated utilities are less risky than competitive industries, and therefore are supposed to produce a lower total return over time. But instead the opposite is happening.

We'll get into the evidence for this, and then speculate as to how this can be so. But if you want actionable intelligence up front, here it is: invest in regulated utilities.

Vanguard Group gives you low-cost index-fund options for utility investment. The symbol for the mutual fund is VUIAX and for the ETF is VPU. You may now skip the rest of this column if so inclined.

By the way, if your interest is the welfare of utility customers, there is more at stake than just higher than needed equity rates. When allowed equity returns exceed the true cost of equity, utilities have an artificial incentive to expand utility facilities upon which they can earn that extra return, including favoring themselves over others in resource procurement. This is the well-known Averch-Johnson effect first described in 1962.

OK, for those sticking around for the substance here it is. The historical evidence of outperformance comes in three data points:

1. A study released by PJM showing lower-risk regulated generation outperforming higher-risk, market-based generation over a long-term horizon.[2]

2. Broader studies of markets showing lower-beta, lower-risk stocks outperforming higher-beta, higher-risk stocks over a long-term horizon.[3]

3. Utility stocks outperforming the broader market over the last 12 years, the longest period tracked in Google Finance, with the Dow Jones Utility Average at a total return of 161 percent and the Dow Jones Industrial Average at a total return of 133 percent.[4]

These are astounding, counter-intuitive results.

This counter-intuitive past seems destined to continue into the future. Three data points point the way:

1. Jack Bogle, the founder of Vanguard Group and a Wall Street legend, provides rigorous analysis that the long-term total return for the broader market will be around 7 percent going forward.[5] Another Wall Street legend, Professor Burton Malkiel, corroborates that 7 percent in the latest edition of his seminal work, *A Random Walk Down Wall Street*.[6]

2. Institutions like pension funds are validating #1 by piling on risky investments to try and get to a 7.5 percent total return, as reported by the *Wall Street Journal.*[7]

3. Utilities are being granted returns on equity around 10 percent.[8]

Let's reflect on what #3 means relative to #1 and 2.

It means that the less risky utilities are being awarded much higher returns, roughly 40 percent higher, than the broader market is expected to earn. The extra is about $17 billion per year.[9] Not too shabby.

So let's repeat the actionable intelligence. If you're a professional money manager it means you should buy the Vanguard utility index fund (or a comparable fund) and spend the next 10 years in Maui drinking Mai Tai's with those little umbrellas.

The rest of us should make the same investment. But we'll still have to work because we can't drink Mai Tai's in Maui for a living.

Now that we've gotten the practical stuff out of the way, let's think about why this might be so. The efficient market hypothesis says it isn't possible to have an anomaly like lower risk stocks consistently outperforming higher risk stocks. And yet they are.

Why? One thing we know off the bat is that utility stocks are the only stocks where Wall Street analysts actually set earnings, instead of just forecasting earnings. That is because utility regulators use Wall Street analysts' forecasts of earnings and dividend growth to set the "g" factor, and dividend yield plus g becomes the allowed return on equity.

You might observe that there is some circularity to this. If Wall Street analysts set g high, then the allowed return on equity will be high, and then g will be high, etc.

But it's not all circular. There may be some reasons for Wall Street to think g ought to be high. Wall Street forecasts tend to be led by guidance from the companies themselves. Utility companies have decades of experience in maximizing earnings under regulation, and partial deregulation, and they do very well at it.

How exactly? Well, we need to get in the weeds to explore some of the ways, but here goes. Utilities often can take advantage of double leveraging their capital structure. That's pretty esoteric so let's take an example.

Suppose you have an operating utility company with a 50 percent debt, 50 percent equity capital structure, with 5 percent debt cost and 10 percent equity cost. Now, let's suppose a

holding company is created that finances the 50 percent operating company equity with 40 percent debt and 60 percent equity. How much does the parent company equity earn on equity? It earns 13.3 percent, not 10 percent, because of the double leverage.[10]

And it also works in reverse. Wall Street forecasts a return of equity of 13.3 percent on the double leveraged parent equity, and that percent is applied to the capital structure of the operating company where the equity cost is only 10 percent. Pretty neat, eh?

Beyond capital structure, the nature of regulation has evolved favorably over time for the regulated. Utilities have been able to enlist regulators in risky endeavors so as to eliminate or mitigate financial losses from failures.

Nuclear and clean coal plants come to mind. New such plants are concentrated in areas of the country where traditional rate regulation for generation has continued. In contrast to areas where generation investment is subject to market conditions and competitive pressures.[11]

Utilities also have exhibited some facility for shifting regulatory paradigms as market conditions change. Ohio and Illinois illustrate this. As part of the deal to allow competition, utilities received stranded cost payments.

Then, rising wholesale prices became a bonus. And now with wholesale prices back down, some of those same utilities are seeking subsidies for their generation. This ability to shift among regulatory paradigms is unique to the utility industry.

Utility rates also tend to be downward sticky. It is easier for a utility to initiate and prosecute rate increases than for consumer advocates to initiate and prosecute rate decreases, with an imbalance in information being one obvious reason why.

And utilities have some ability to influence timing of expenses with, for example, workforce reductions coming a polite period after the resolution of a rate case. And utilities over time have been able to implement automatic pass-through of various types of costs so, for example, some costs can be passed through without comprehensive review of the utility's overall revenues and costs.

All of this is nice work if you can get it.

You may be thinking, is there a risk that regulators look at all this and reduce allowed returns to something closer to what the riskier broader market is expected to earn? So utilities would no longer be an anomalously great investment?

No worries. This is our little secret.

Endnotes:

1. According to EEI data, there is $356 billion in electric utility common equity. Assume a 10 percent return on equity plus an income tax allowance of 6.4 percent. The income tax allowance is based on a composite federal or state income tax rate of 39 percent. The 10 percent return is divided by 61 percent (1 minus 39 percent). This gives a pre-tax total return of 16.4 percent, which amounts to $58 billion on the $356 billion in common equity.

2. "... one would expect merchant firms to earn a much higher level of return than the firms that are more tightly regulated. However, the opposite seems to be true as the consistently positive alphas for regulated firms indicates these companies are earning returns higher than what they should be expected to earn given their much lower level of risk." Resource Investment in Competitive Markets, Technical Appendix, May 5, 2016.

3. "In an efficient market, investors earn higher returns only to the extent that they bear higher risk. Despite the intuitive appeal of a positive risk-return relationship, this pattern has been surprisingly hard to find in the data, dating at least to Black (1972). For example, sorting stocks by using measures of market beta or volatility shows just the opposite. Panel A of Figure 1 shows that from 1968 through 2012 in the U.S. equity market, portfolios of low-risk stocks delivered on the promise of lower risk as expected but had surprisingly higher average returns. A dollar invested in the lowest-risk portfolio grew to $81.66, whereas a dollar invested in the highest-risk portfolio grew to only $9.76." The Low Risk Anomaly: A Decomposition into Micro and Macro Effects, *Financial Analysts Journal,* March/April 2014.

4. These returns are from Google Finance, comparing Dow Jones Utility Average Total Return with Dow Jones Industrial Average Total Return from August 31, 2004, earliest common date, to June 28, 2016.

5. "Thus, the prospective nominal investment return on stocks seems likely to run in the range of 7 percent..." Occam's Razor Redux: Establishing Reasonable Expectations for Financial Market Returns, *Journal of Portfolio Management*. This conclusion is supported by unprecedented lows in the risk-free rate, even negative interest on some sovereign debt. For an excellent summary of the Bogle study see Jason Zweig's column, This Simple Way Is the Best Way to Predict the Market, *Wall Street Journal,* December 24, 2015.

6. "Adding the initial yield and growth rate together, we get a projected total return for the S&P 500 of just under seven percent per year ...." (*A Random Walk*, page 346).

7. "To even come close these days to what is considered a reasonably strong return of 7.5 percent, pension funds and other large endowments are reaching ever further into riskier investments..." *Wall Street Journal,* June 1, 2016.

8. FERC set the base allowed return for New England transmission owners at 10.57 percent in its Opinion Numbers 531, 531-A and 531-B. State commission allowed returns for electric utilities have averaged 9.78 percent according to an analysis of *Public Utilities Fortnightly* data in the PJM Study, earlier referenced.

9. Here's the math: 16.4 percent pretax return on $356 billion equity is $58 billion. If the equity return is 30 percent less, 7 percent versus 10 percent, then the reduction in return is $17 billion.

10. Here's an example of the math. Assume the operating company's equity is $100 million. At a 10 percent allowed return it earns $10 million. Now let's suppose the holding company finances that $100 million with 40 percent debt costing 5 percent and 60 percent equity. The holding company pays $2 million for the debt and thus earns $8 million on the $60 million equity for an actual return on equity of 13.3 percent. The key is the difference

between the holding company's consolidated capital structure and the utility operating company's capital structure. Indeed, the leveraging is even more lucrative because the phantom equity also gets a phantom income tax allowance.

11. For more on this see the PJM Study, earlier referenced.

PUBLIC UTILITIES FORTNIGHTLY ENERGY, MONEY, POWER

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What do utility shareholders want? Answer: to earn a total return, dividends plus capital gains, at least commensurate with the risk incurred.

That is, to earn a return equal to, or in excess of, the cost of capital.

Did shareholders earn this in the past? And what do they require now?

In a recent piece written for *Public Utilities Fortnightly*, Steve Huntoon didn't directly answer those questions. Rather he concluded, much more elegantly, that whatever shareholders want, they get too much of it.[1]

Steve is a lawyer. So what does he know?

The authors of this column spent years on Wall Street, complaining that regulators did not provide investors with adequate returns. So we decided to check out the numbers.

Understand first, the market determines cost of capital. Regulators don't.

Second, to determine expected return, investors and academics have lately begun to rely more on historical data.

They are taking into account the tendency of markets to revert to the mean. We will try to apply that technique to answer the questions.

Let's cut to the chase. In the past century or more, globally, common stocks earned real returns of about five and a half percent to six and a half percent. Per year. Adjusted for inflation.

In the U.S., return on stocks have exceeded return on risk-free Treasury bonds. The equity risk premium was roughly two-point-four to five percentage points.

Recent Federal Reserve Bank monetary policy makes Treasuries a dubious benchmark. So we will use seasoned Baa corporate bonds instead.

Those bonds offered yields of one to two percentage points more than Treasuries in the past. And two to three percentage points more recently.

We estimate that investors, over the long term, expect that corporate bonds will earn two percentage points over Treasuries. And equities will earn five percentage points over Treasuries.

For a rule of thumb, equities will earn about three percentage points over corporate bond yields. Why bother with a rate case? Just use that handy rule of thumb.

Two additional points. Bond yields track inflationary expectations. So our calculation in current dollars indirectly takes inflation into account.

Also, over the post war period, utility stocks have performed at least as well as industrial stocks. So conclusions derived from the general market probably apply to them as well.

The first question is, what did utility investors earn? And was that good enough?

In the postwar period, investors earned just less than ten percent per year. That's six and a half percent in real terms.

Dividends made up about sixty-three percent of this return. See Figure 1.

Our rough-and-ready formula calculated a required return of ten and a half percent per year. That's six-point-nine percent in real terms. See Figure 2.

Utility stocks then earned in-line with long-term market expectations.

But utility stock prices exceeded their book value in fifty-six of the past seventy years. With sub-par pricing during energy and nuclear crises.

This indicates that utilities earned more than the cost of capital in most years.

Thus, utility investors earned an average market return, while taking a lower than average risk. Return probably exceeded the cost of capital.

The numbers tell us about anticipated growth. We define this as expected total return, minus dividend yield.

Over the postwar period, we calculate that investors expected growth of about four and a half percent per year. See Figure 3.

At the end of June 2016, corporate bonds yielded four and a half percent. Utility stocks yielded three-point-four percent.

This indicates, based on historical precedent, that equity investors want a seven and a half percent annual return. Three-point-four percent from dividends. Four-point-one percent from capital gains.

Is seven and a half percent, the number implied by Steve Huntoon, the nominal cost of equity capital? Imagine using that level of return in a utility rate case.

Sooner or later, regulators may see the gap between allowed returns and cost of capital. They might reduce returns.

Or regulators could impose British-style incentive regulation. It would offer utilities the opportunity to take higher risks, in order to maintain returns.

Either option could endanger dividends. That is the downside.

Income-starved investors are looking for means to meet their long-term obligations. They may accept even lower returns than the cost of equity capital we calculated.

The trick is for utilities to find ways to utilize that pool of capital.

Investors just want a better return on a safe investment than the one and a half percent they can get on ten-year Treasuries. Both utilities and electricity consumers might benefit from this trying financial situation.

And yes, it looks as if Steve Huntoon was right after all. Even if he is a lawyer.

Endnotes:

1. Steve Huntoon, "Nice Work If You Can Get It," *Public Utilities Fortnightly,* August 2016.

Robert D. Arnott and Peter L. Bernstein, "What Risk Premium Is Normal?" *Financial Analysts Journal*, March/April 2002, is a pioneering paper on the topic. It is comprehensive and comprehensible. For more recent data and analysis, see Martin Leibowitz, Andrew W. Lo, Robert C. Merton, Stephen A. Ross, and Jeremy Siegel, "Q Group Panel Discussion: Looking to the Future," *Financial Analysts Journal*, July/August 2016.

Media:

FIG. 1 PERCENT TOTAL RETURN, DIVIDEND YIELD

Percent total return, dividend yield for five-year periods, 1946-2015. Data for 1946-1985 from Hyman, *America's Electric Utilities: Past, Present and Future*, 8th edition, based on Moody's Electric Utility Average. Data for 1986-2015 from Hyman, op. cit., and from Edison Electric Institute, EEI Index. Total return is a compound rate for the five-year period. Dividend yield is a simple average for the five-year period.

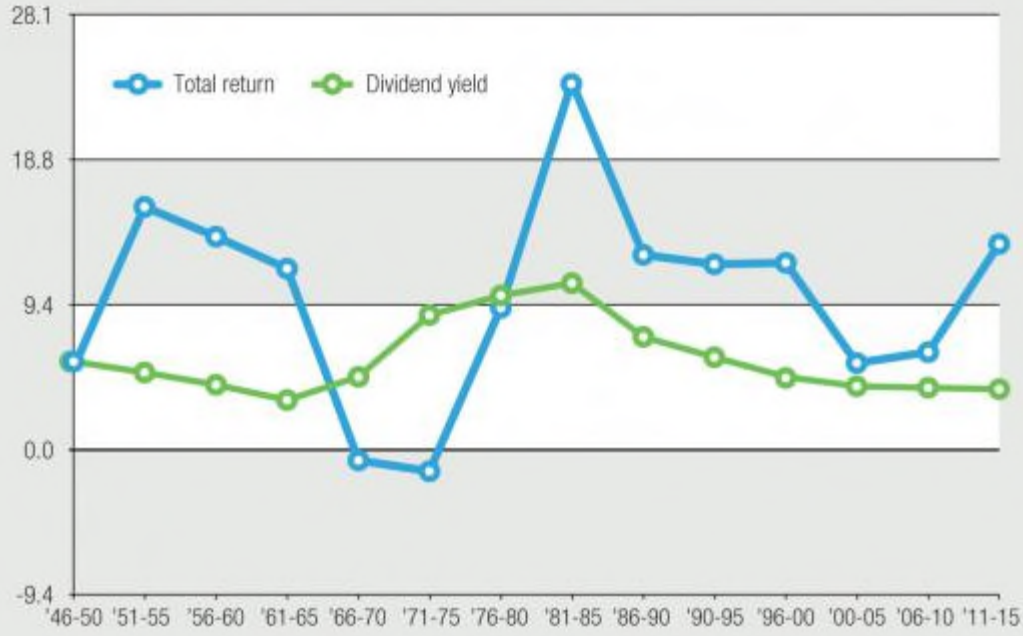


Figure 1 - Percent Total Return, Dividend Yield

FIG. 2 PERCENT EXPECTED, ACHIEVED TOTAL RETURN

Percent expected, achieved total return, five-year periods, 1946-2015. See Figure 1 for sources. Total returns compounded by five-year period. Expected return is Baa seasoned corporate bond yield plus three percentage points.

Figure 2 - Percent Expected, Achieved Total Return

FIG. 3 EXPECTED RATE OF GROWTH, FIVE-YEAR PERIODS, 1946-2015

See Figure 1 for sources. Expected growth rate is defined as the difference between the expected total return for the period minus the dividend yield in the period.

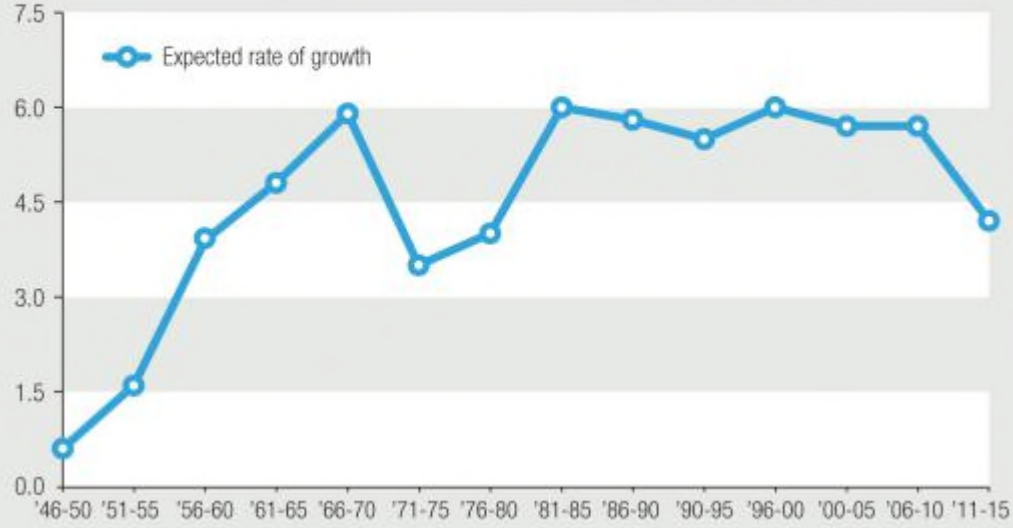


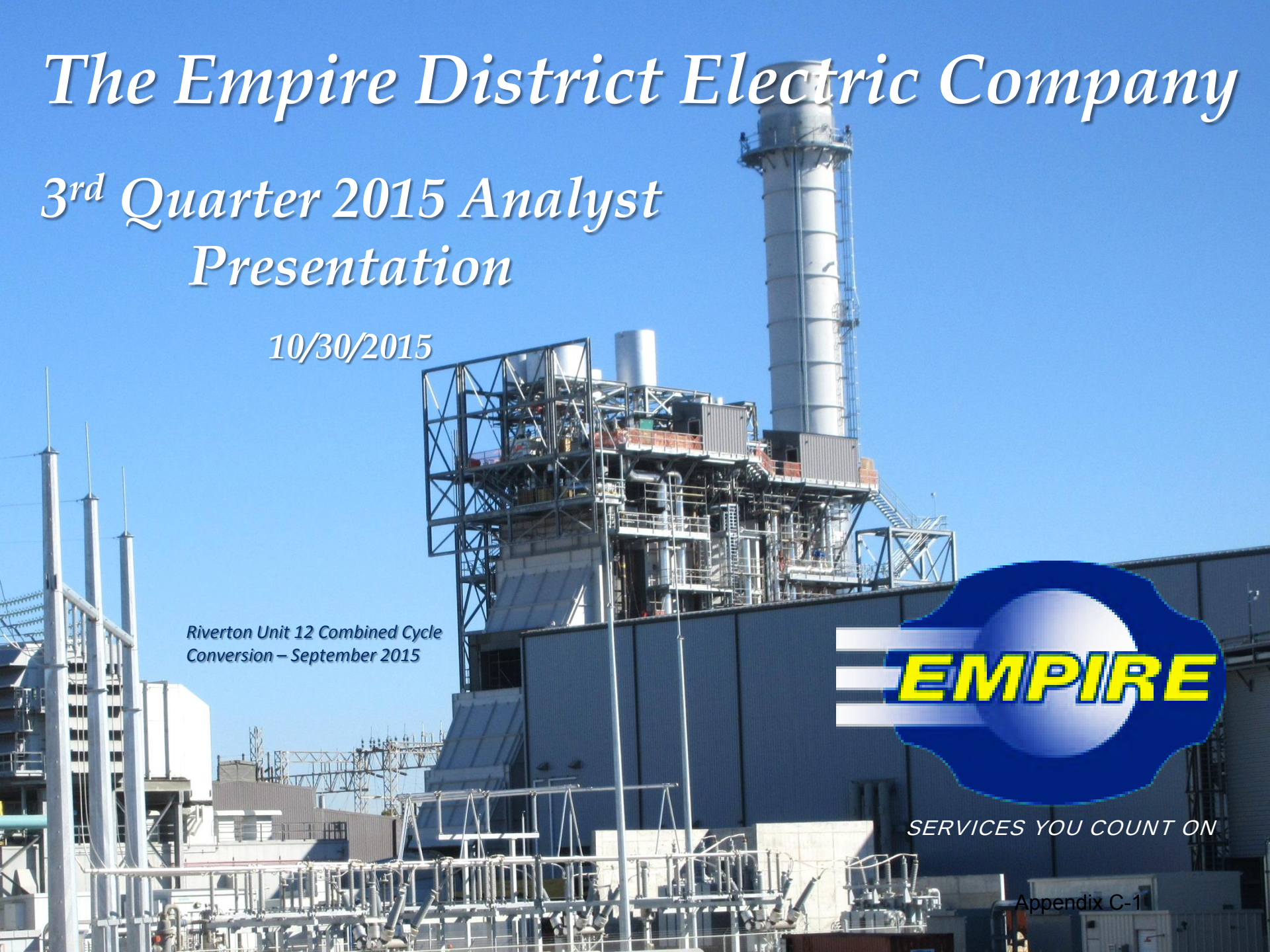
Figure 3 - Expected Rate of Growth, Five-Year Periods, 1946-2015

Source URL: https://www.fortnightly.com/fortnightly/2016/10/dont-cry-utility-shareholders-america

The Empire District Electric Company

3rd Quarter 2015 Analyst Presentation

10/30/2015



Riverton Unit 12 Combined Cycle Conversion – September 2015

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Forward Looking Statements

This presentation discusses various matters that are "forward-looking statements" intended to qualify for the safe harbor from liability established by the Private Securities Litigation Reform Act of 1995. Such statements address or may address future plans, objectives, expectations and events or conditions concerning various matters such as capital expenditures, earnings, pension and other costs, competition, litigation, our construction program, our generation plans, our financing plans, potential acquisitions, rate and other regulatory matters, liquidity and capital resources and accounting matters. Forward-looking statements may contain words like "anticipate," "believe," "expect," "project," "objective" or similar expressions to identify them as forward-looking statements. Factors that could cause actual results to differ materially from those currently anticipated in such statements include:

- weather, business and economic conditions and other factors which may impact sales volumes and customer growth;
- the impact of energy efficiency and alternative energy sources, including solar;
- the costs and other impacts resulting from natural disasters, such as tornados and ice storms;
- the amount, terms and timing of rate relief we seek and related matters;
- the results of prudency and similar reviews by regulators of costs we incur, including capital expenditures and fuel and purchased power costs, including any regulatory disallowances that could result from prudency reviews;
- unauthorized physical or virtual access to our facilities and systems and acts of terrorism, including, but not limited to, cyber-terrorism;
- legislation and regulation, including environmental regulation (such as NOx, SO_2, mercury, ash and CO_2) and health care regulation;
- the periodic revision of our construction and capital expenditure plans and cost and timing estimates
- costs and activities associated with markets and transmission, including the Southwest Power Pool (SPP) regional transmission organization (RTO) transmission development, and SPP Day-Ahead Market;
- electric utility restructuring, including deregulation;
- spending rates, terminal value calculations and other factors integral to the calculations utilized to test the impairment of goodwill, in addition to market and economic conditions which could adversely affect the analysis and ultimately negatively impact earnings;
- volatility in the credit, equity and other financial markets and the resulting impact on our short term debt costs and our ability to issue debt or equity securities, or otherwise secure funds to meet our capital expenditure, dividend and liquidity needs;
- the effect of changes in our credit ratings on the availability and cost of funds;
- the performance of our pension assets and other post employment benefit plan assets and the resulting impact on our related funding commitments;
- our exposure to the credit risk of our hedging counterparties;
- the cost and availability of purchased power and fuel, including costs and activities associated with the SPP Day-Ahead Market, and the results of our activities (such as hedging) to reduce the volatility of such costs;
- interruptions or changes in our coal delivery, gas transportation or storage agreements or arrangements;
- operation of our electric generation facilities and electric and gas transmission and distribution systems, including the performance of our joint owners;
- our potential inability to attract and retain an appropriately qualified workforce;
- changes in accounting requirements;
- costs and effects of legal and administrative proceedings, settlements, investigations and claims;
- performance of acquired businesses; and
- other circumstances affecting anticipated rates, revenues and costs.

All such factors are difficult to predict, contain uncertainties that may materially affect actual results, and may be beyond our control. New factors emerge from time to time and it is not possible for management to predict all factors or to assess the impact of each factor on us. Any forward-looking statement speaks only as of the date on which such statement is made, and we do not undertake any obligation to update any forward-looking statement to reflect events or circumstances after the date on which such statement is made.

We caution you that any forward-looking statements are not guarantees of future performance and involve known and unknown risk, uncertainties and other factors which may cause our actual results, performance or achievements to differ materially from the facts, results, performance or achievements we have anticipated in such forward-looking statements.

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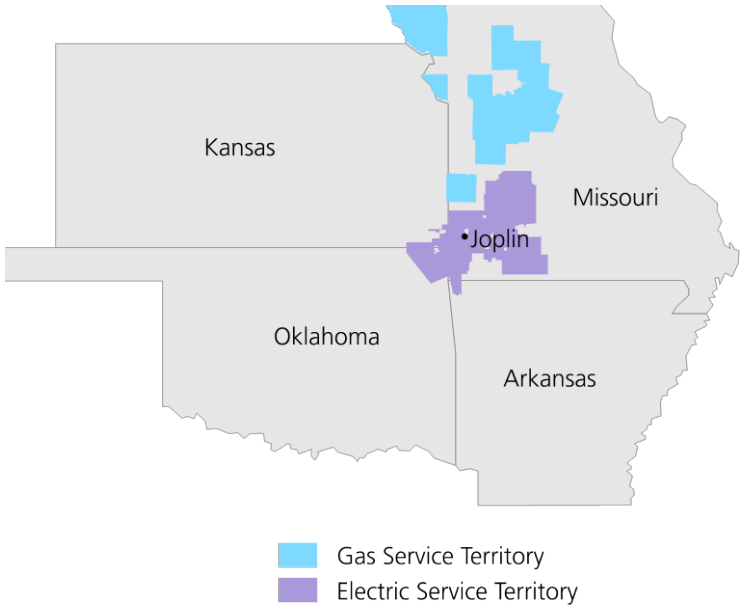
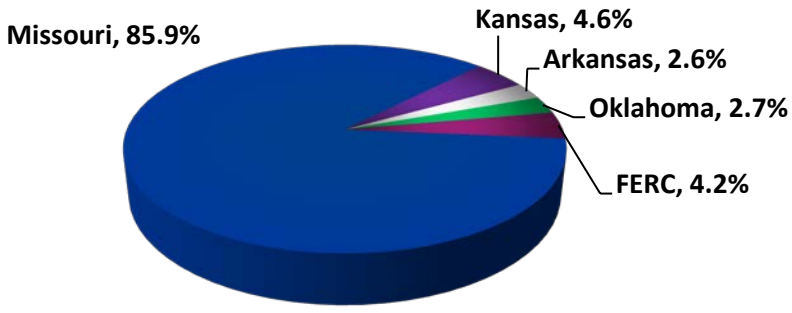
Who We Are

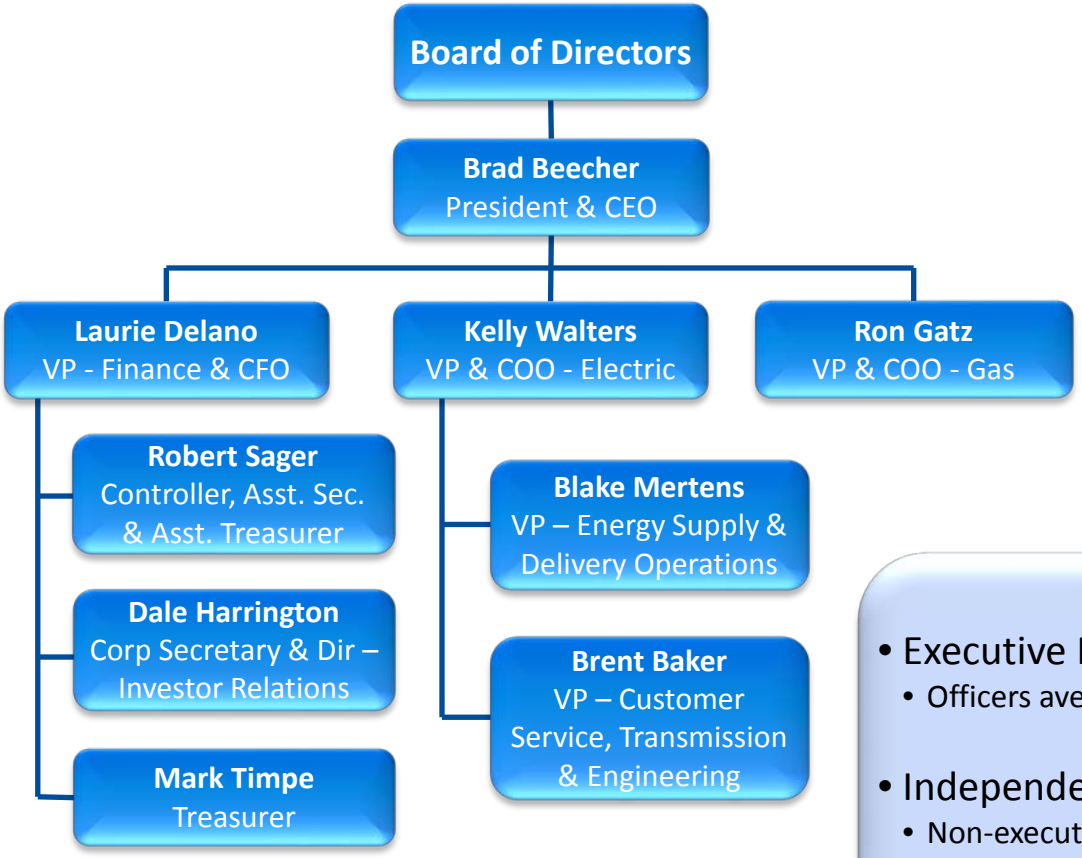
- NYSE ticker: EDE
- 100% regulated utility
- Operations in four states: MO, KS, OK, AR plus FERC
- 218,000 customers
- 10,000 square mile service territory
- Stock price on 10/30/2015: $22.55
- Market capitalization: $990 million on 10/30/2015
- 52 week range: $20.69 – $31.49
- Shares outstanding: 43.8 million
- Annual average daily trading volume (12 month): 217,400 shares
- Current dividend Yield 4.6% (as of 10/30/2015)





2014 On-System Electric Revenues by Jurisdiction

Experienced Management



- Executive Management
  - Officers average nearly 20 years utility experience with Empire
- Independent Board of Directors
  - Non-executive chairman
  - All directors other than CEO are independent

Strategy

High-quality, pure-play, regulated electric and gas utility	• Favorable energy supply portfolio: reliable, diverse, low cost, regulated generating assets • Constructive regulatory relationships
Low-risk growth plan	• Core business with rate base infrastructure investment • Commitment to renewable energy and reducing emissions
Strong financial metrics	• Earnings growth driven by low risk growth plan • Regulatory lag managed through ratemaking process and cost-conscious management • Investment grade credit ratings
Competitive total return prospects	• Attractive annualized dividend yield of 4.6% on October 30, 2015 • Opportunity for earnings and dividend growth

Riverton 12 Combined Cycle Conversion Project
Building rate base with clean, efficient, low cost generation.

(artist rendition of finished project)

Most Recent Quarter

Third Quarter, YTD and Twelve Month Ended Highlights

	3rd Quarter 2015	3rd Quarter 2014		YTD 9/30/15	YTD 9/30/14		TME 9/30/15	TME 9/30/14
Net Income *(millions)*	$25.3	$23.9		$46.7	$56.0		$57.8	$71.2
Earnings Per Share	$0.58	$0.55		$1.07	$1.29		$1.33[1]	$1.65
Dividends Per Share	$0.26	$0.255		$0.78	$0.765		$1.04	$1.02

- ***Quarter Drivers:***
  - Increased Missouri customer rates
  - Favorable weather
  - Timing of fuel deferrals
  - Increased production maintenance but flat overall operating and maintenance expenses
  - Increased depreciation and amortization, property, interest and other non-operating expenses
- ***Year to Date and Twelve Month Ended Drivers:***
  - Increased Missouri customer rates
  - Customer growth
  - Fuel deferral timing
  - Milder weather and other volumetric changes
  - FERC wholesale refund
  - Lower gas segment margin
  - Increased production maintenance, depreciation and amortization, property, interest and other non-operating expenses
  - Reduced AFUDC levels
- ***Weather Normalized 2015 Earnings Guidance Unchanged:*** $1.30 to $1.45 per share
- ***Missouri Customer Rates:*** Effective July 26, 2015; $17.1M annual increase in base revenue; fuel re-based

[1] Fully Diluted = $1.32

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Missouri Rate Case Highlights (Docket No. ER-2016-0023)

- Seeks recovery of Riverton 12 Combined Cycle Conversion investment
- Requested increase of $33.4 million, or 7.3% above current rates
- Test year ending June 30, 2015; expense true up through March 31, 2016
- Assumes Riverton 12 Combined Cycle in-service date of June 1, 2016
- Requested Return on Equity – 9.9%
- Missouri jurisdictional Rate Base – $1.368 billion; overall Rate of Return – 7.58%
- Increased transmission, administrative and maintenance expenses
- Recovery of mandated solar program costs
- Revised depreciation rates; lower average interest costs
- Continuation of Fuel Adjustment Clause

Cost Driver	Revenue Requirement ($ in millions)
Riverton Unit 12 Combined Cycle Conversion	$27.4
Asbury True-Up	2.1
Effect of New Depreciation Rates	(1.0)
Other Normal Plant Additions	6.0
Administrative Costs	2.1
Capital Structure and Other	(3.2)
Total Base Rates	$33.4

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Recent Missouri Rate Case Settlement (Case No. ER-2014-0351)

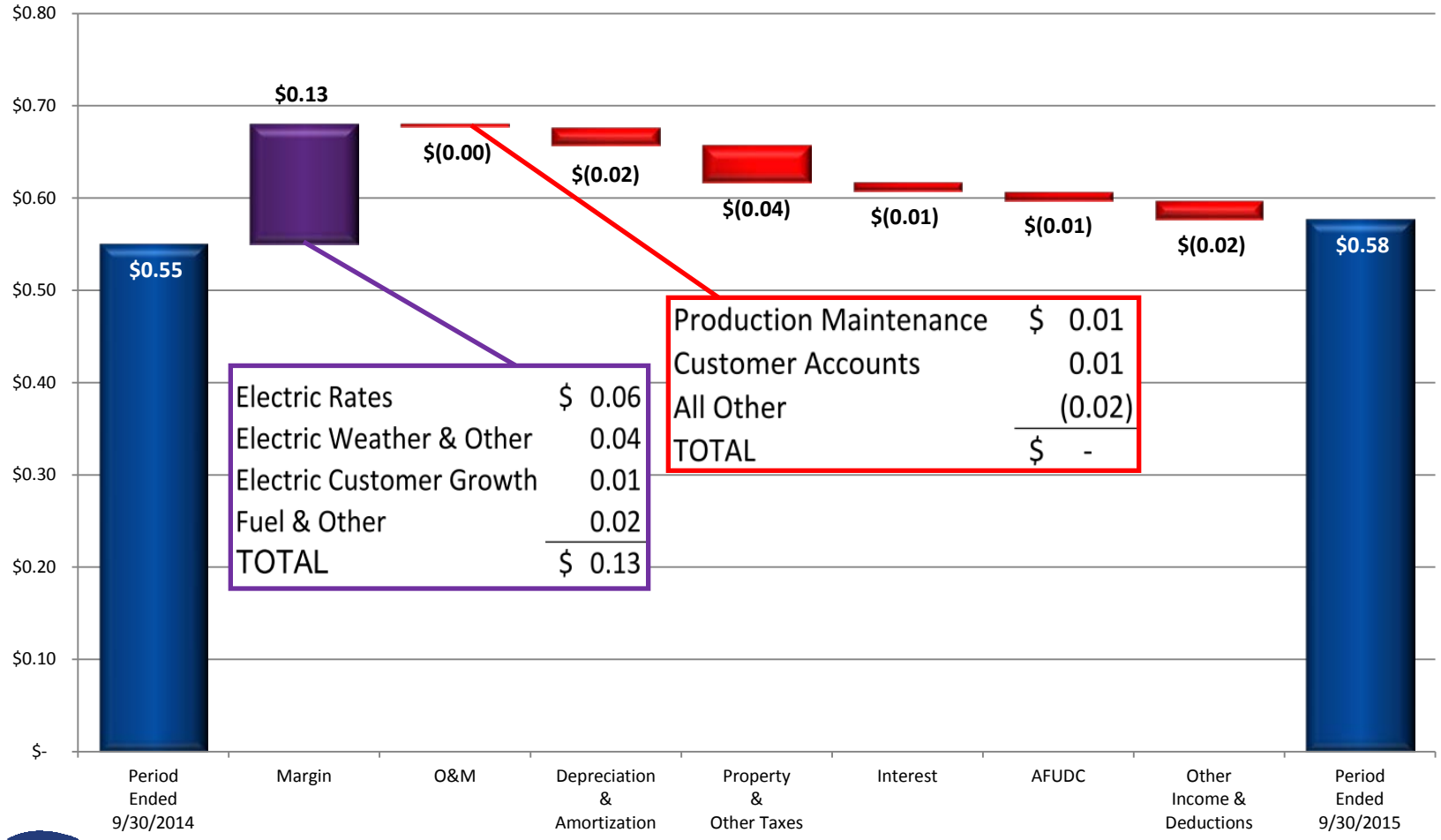
- **New customer rates effective July 26, 2015**
- **$17.1M (3.9%) increase, ordered June 24, 2015 (original request for $24.3M)**
  - Stipulated settlement, no stated Return on Equity
  - Base fuel reduction of $1.60 per MWh
  - Continuation of fuel recovery mechanism (FAC)
  - Recovery of approximately 34% of future changes in transmission expenses above base through FAC
  - Riverton 12 maintenance contract base amount reduced
  - Riverton 12 maintenance contract tracker added
  - Vegetation management, Iatan, and Plum Point maintenance trackers discontinued (costs managed in base rates)
  - Total company sales base of approximately 5 million MWhs
  - No stated Return on Equity
  - Other miscellaneous items as stipulated

Other Regulatory / Legislative Highlights

- **Missouri**
  - Notice updating Integrated Resource Plan (IRP)
    - Retirement of Riverton Units 8 and 9 – June 30, 2015
  - Missouri Energy Efficiency Investment Act (MEEIA) application withdrawn – July 24, 2015
    - Continue recovery of current Energy Efficiency programs through base rates
    - Consider future MEEIA filing with 2016 IRP
  - Solar Rebates
    - At September 30, 2015, approximately 250 applications received; rebate-related costs totaling $3.4M
- **Kansas**
  - Asbury Cost Recovery Tariff Rider approved April 15, 2015, increasing annual base revenues $0.78 million, effective June 1, 2015
  - Ad Valorem Tax Surcharge effective February 23, 2015, increasing annual base revenues $0.27 million
- **Arkansas**
  - Implemented rider February 23, 2015, to recover Asbury AQCS, effective upon filing, subject to refund
- **Oklahoma**
  - Administrative rule provides rate reciprocity to electric companies who serve less than 10% of total customers in state
  - Allows rates approved in Missouri to be applied in Oklahoma jurisdiction
    - Filed for reciprocal rate approval of Missouri rates in Docket No. ER-2016-0023 on October 26, 2015 (Oklahoma Cause No. PUD 201500379)

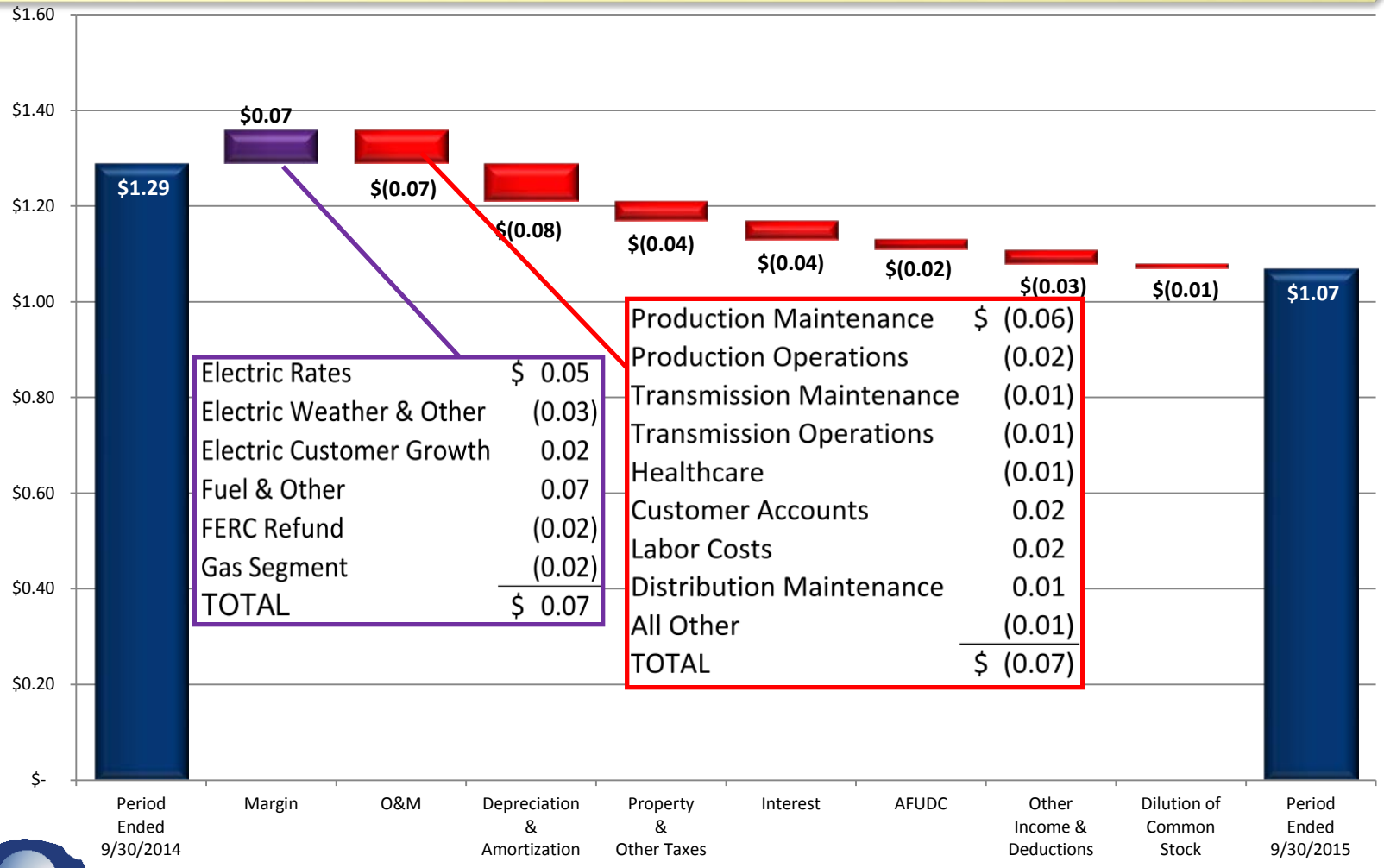
Third Quarter, YTD and Twelve Month Ended Highlights

Quarter ended September 30, 2015: Consolidated Basic EPS After Tax Increase (Decrease)



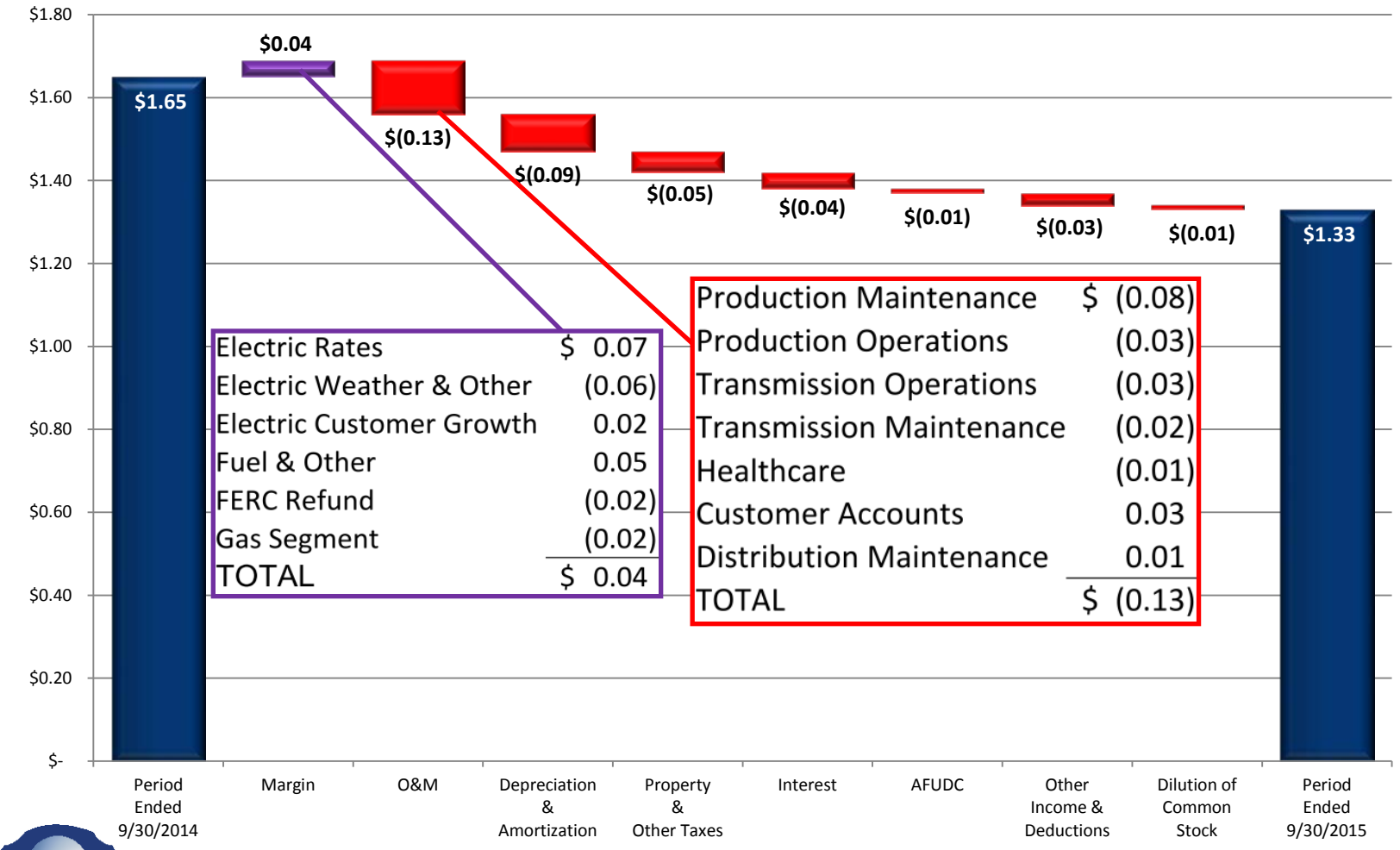
Third Quarter, YTD and Twelve Month Ended Highlights

Year to date ended September 30, 2015: Consolidated Basic EPS After Tax Increase (Decrease)

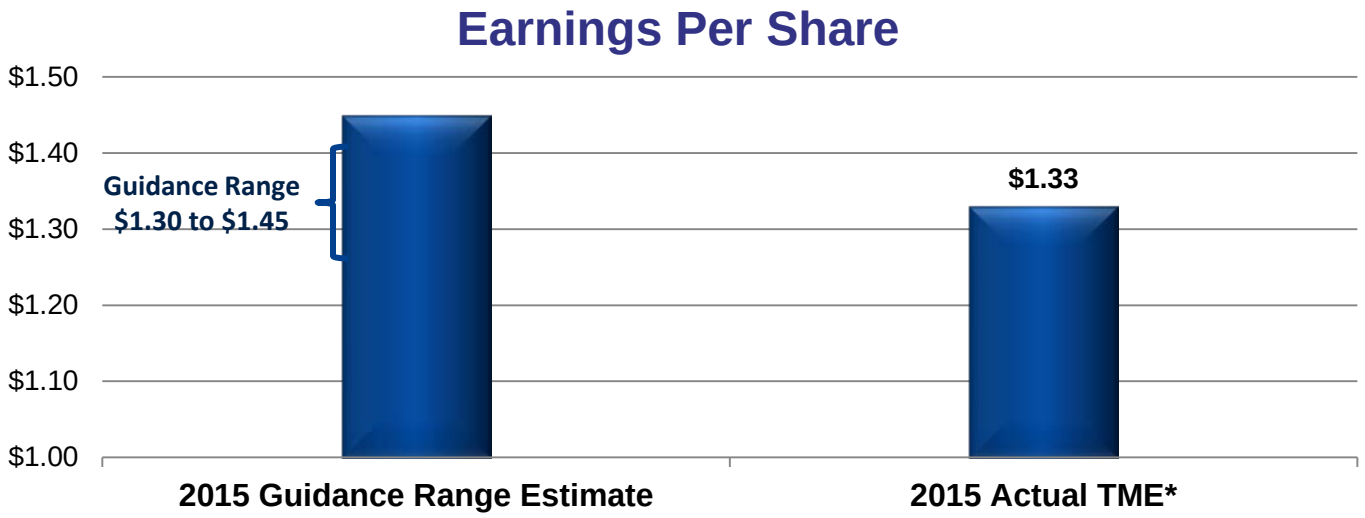


Third Quarter, YTD and Twelve Month Ended Highlights

Twelve Months ended September 30, 2015: Consolidated Basic EPS After Tax Increase (Decrease)



2015 / 2016 Drivers



2015:

- Asbury AQCS cost recovery in new customer rates effective July 26, 2015
- First half 2015 lag effects reduced after July 26 with new Missouri customer rates
- Expense tracking mechanism for Riverton maintenance contract
- Maintenance costs lower in second half of 2015 vs. first half of 2015, exception of Riverton Maintenance Contract (approx. $0.5M per quarter)

2016:

- Full year of Asbury AQCS cost recovery in customer rates
- Rates in effect September 2016 for Missouri case filed October 16, 2015 to recover Riverton Unit 12 Combined Cycle project costs
- Riverton lag effect until project costs recovered in customer rates in September 2016
  - Riverton 12 depreciation rate approximately 2%

*** $1.32 Diluted**

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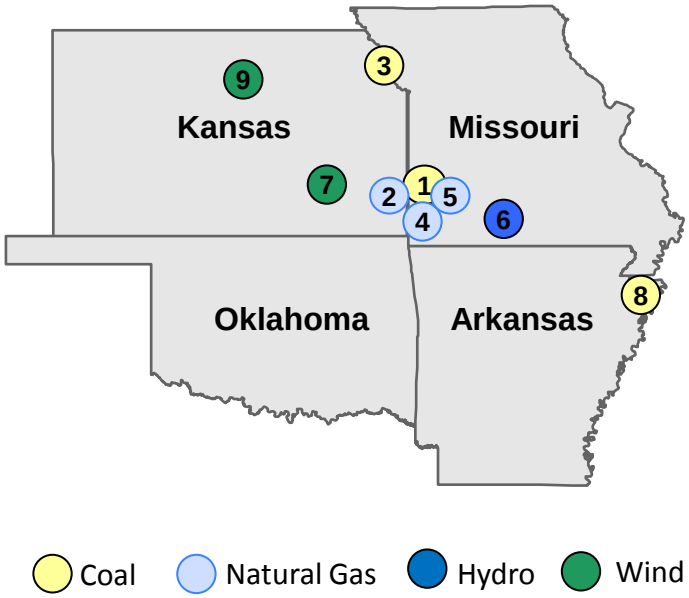
Leading by example – adopting electric plug-in technologies for vehicle fleet

Pure-Play Regulated Electric and Gas Utility

Favorable Energy Supply Portfolio



	Energy Supply	Primary Fuel	Net Capacity (MW)	Status
1	Asbury	Coal	194	Owned
2	Riverton	Natural Gas	226	Owned[1]
3	Iatan (12% owner, Units 1 &2)	Coal	190	Owned
4	State Line Combined Cycle	Natural Gas	297	Owned[2]
4	State Line Unit 1	Natural Gas	93	Owned
5	Empire Energy Center	Natural Gas	260	Owned
6	Ozark Beach	Hydro	16	Owned
8	Plum Point Energy Station (7.5% owner)	Coal	50	Owned
	Owned Capacity (MW)		**1,326**	
7	Elk River Windfarm PPA	Wind	17	Contracted[3]
8	Plum Point Energy Station PPA	Coal	50	Contracted[4]
9	Cloud County Windfarm PPA	Wind	19	Contracted[5]
	Purchased Power Capacity (MW)		**86**	
	Total Capacity (MW)		**1,412**	

Notes:

1 Capacity reduced to approximately 175 MW with retirement of Units 8 and 9 on June 30, 2015. Unit 12 combined cycle project expected to add an estimated 108 MW upon completion in early to mid-2016.
2 Does not include 40% owned by Westar
3 Elk River contracted through December 2025
4 Plum Point contracted through December 2036
5 Cloud County contracted through December 2028

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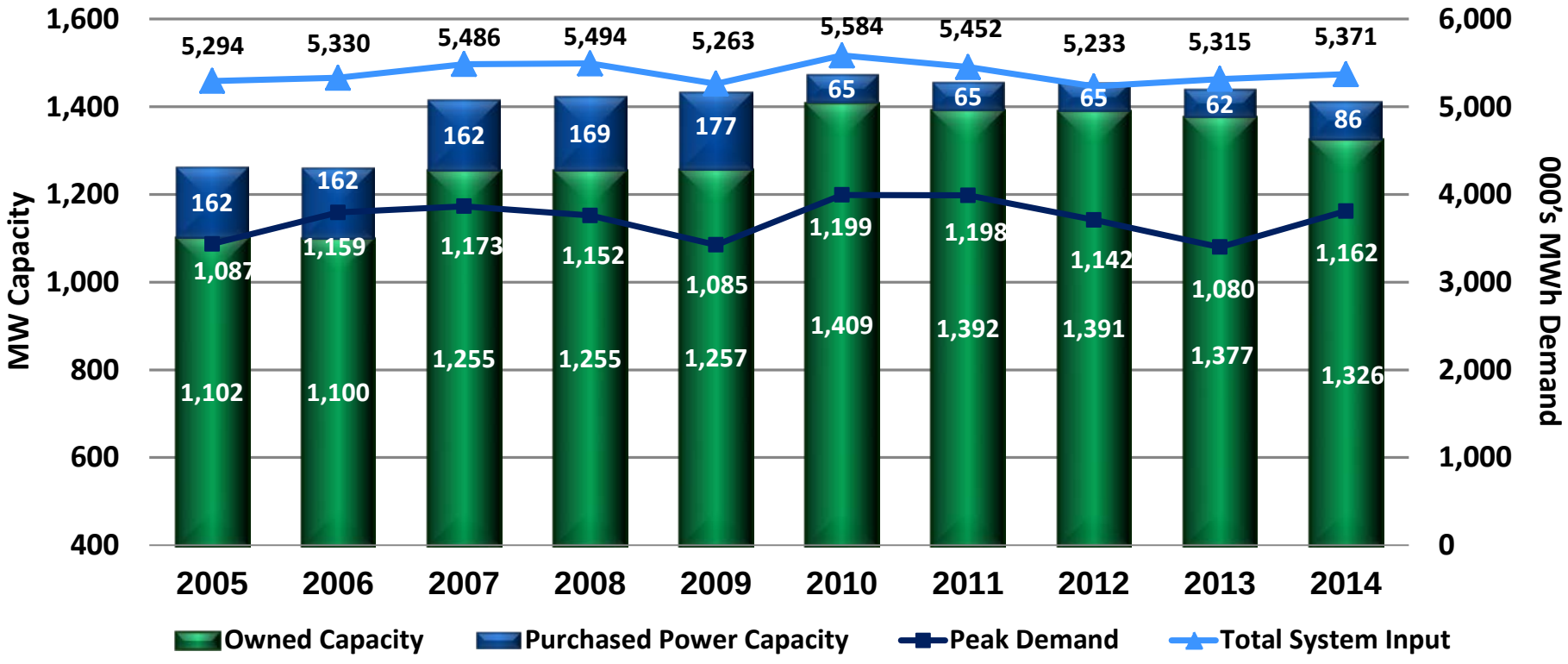
Environmental Compliance[1]

Iatan 1, Iatan 2 and Plum Point	• Environmentally compliant coal-fired generation
Asbury	• Environmentally compliant coal-fired generation • Construction of new ash landfill, permit expected in August 2016
Riverton	• Unit 7 retired June 30, 2014, Unit 8 and Unit 9 retired June 30, 2015 • Riverton Unit 12 conversion to Combined Cycle operation, expected completion early to mid 2016 • Estimated cost: $165 – $175 million ($150 million spent as of 9/30/2015) • October 16, 2015 Missouri rate filing to recover costs
Wind Farms	• Elk River and Meridian Way wind farms – environmentally compliant energy to meet MO and KS renewable energy standards[2]

[1] Does not include the impacts of final Clean Power Plan regulations issued August 3, 2015
[2] Solar requirement to be met with purchase of Renewable Energy Credits; KS standard is voluntary

Favorable Energy Supply Portfolio

Capacity, Peak Demand & Total System Input[1]

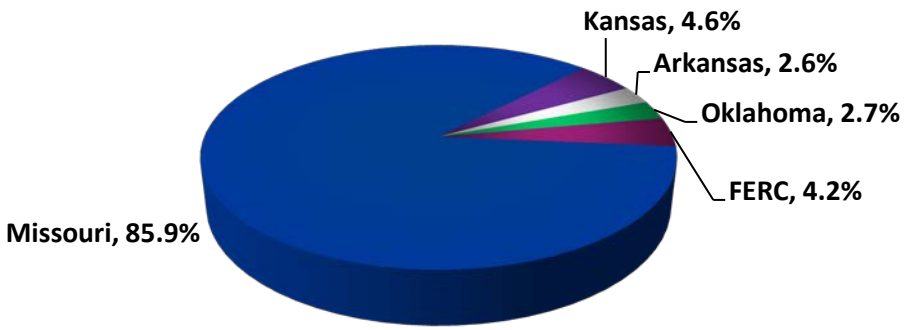


[1] Measure of customer usage, excluding losses

Constructive Regulatory Relationships

- Constructive relationships with state commissions in Missouri, Kansas, Oklahoma and Arkansas
- Rate cases managed to reduce regulatory lag
- Fuel recovery mechanisms in place in all four states
- Trackers for other costs in place
- Missouri Public Service Commission (MPSC)
  - Daniel Y. Hall (D) – Chairman
  - Stephen M. Stoll (D)
  - Scott T. Rupp (R)
  - Maida J. Coleman (D)
  - William P. Kenney (R)

2014 On-System Electric Revenues by Jurisdiction



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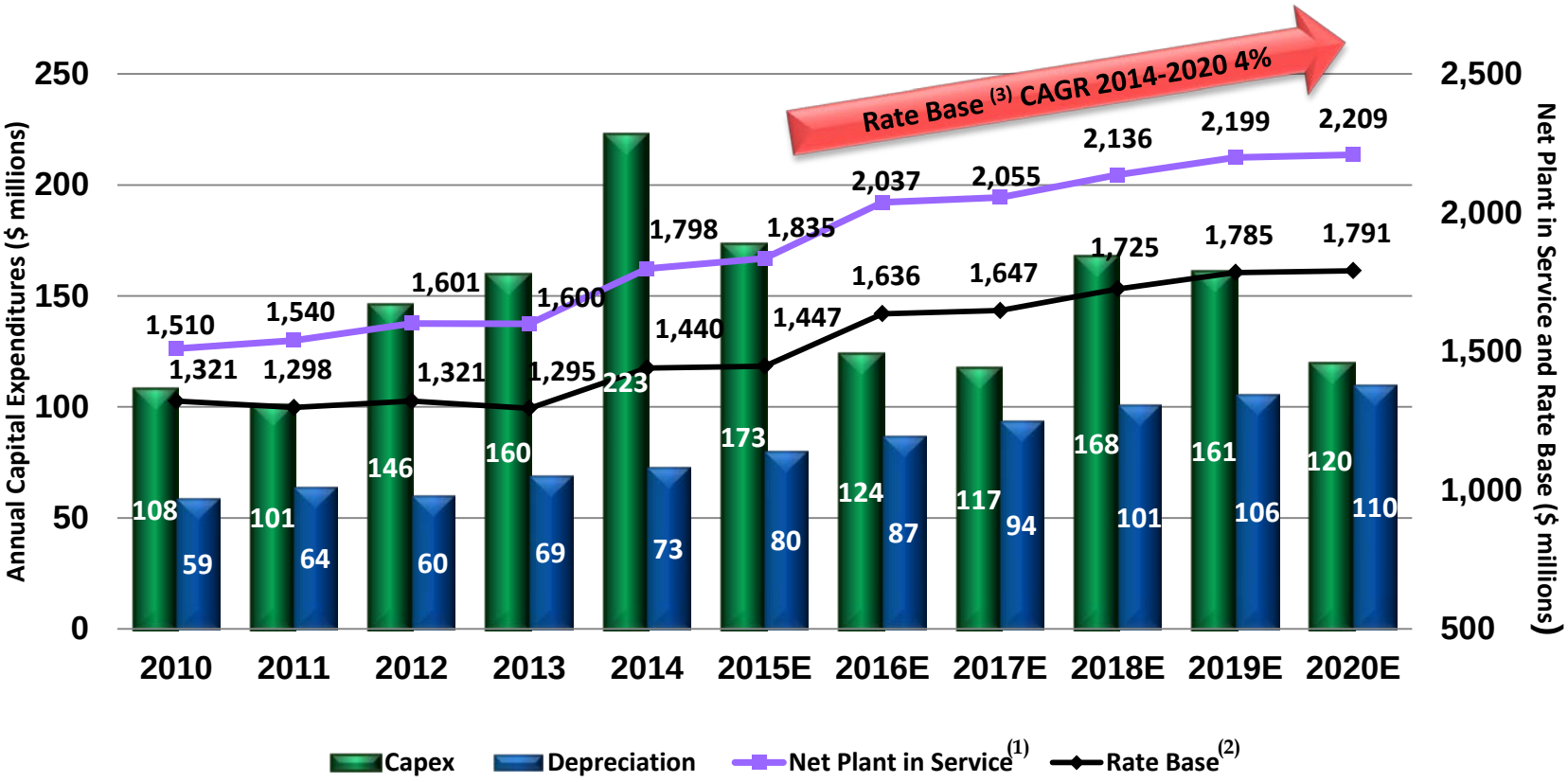
Riverton 12 Combined Cycle Conversion Project –as of September 30, 2015, construction approximately 93% complete, approximately $150M expenditures, tie-in underway, preparation for start-up and commissioning underway

Low-Risk Growth Plan

Building Core Business with Rate Base Infrastructure

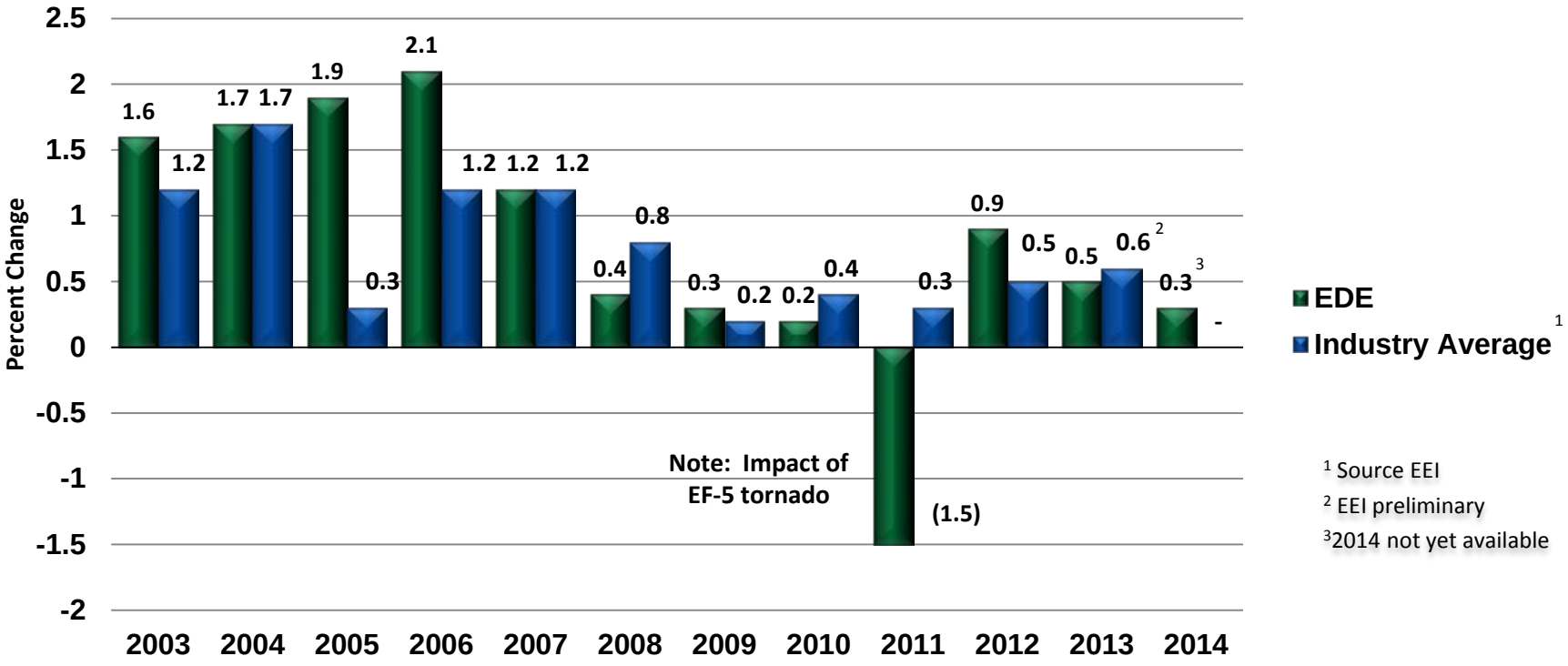
- Capital Expenditures (actuals include AFUDC, projections exclude AFUDC)



(1) Less Construction Work In Progress (CWIP), no bonus depreciation assumed after 2014
(2) Net Plant less CWIP and Deferred Taxes

Customer Growth

Electric Customer Growth



[1] Source EEI
[2] EEI preliminary
[3] 2014 not yet available

Beyond 2014:

- Customer and sales growth expected to be less than 1% annually over the next several years.

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Elk River Wind Farm –
Meeting renewable energy standards

Improving reliability and building rate base with infrastructure improvements

Strong Financial Metrics

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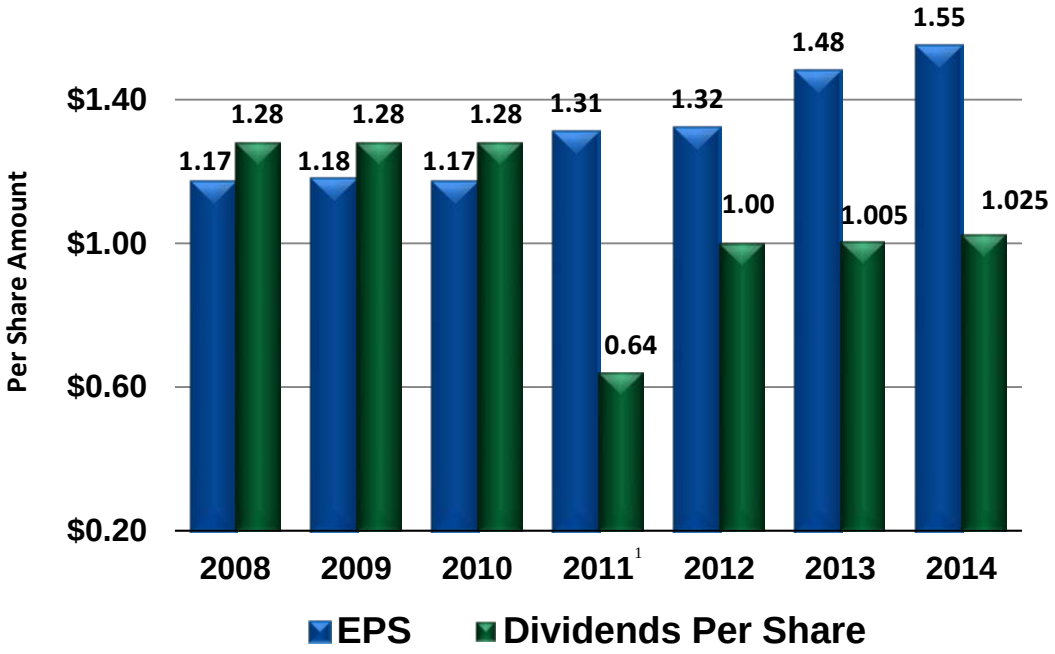
Earnings Profile

- 2015 earnings guidance - $1.30 to $1.45 per share
  - Missouri rates effective July 26th: no change in guidance range
- Dividend increased 2% in Q4 2014; implied annual rate of $1.04
  - Target long-term payout commensurate with utility peers

Earnings and Dividends Per Share



[1] Dividend suspended for Q3 and Q4 in 2011 following EF-5 tornado on May 22, 2011

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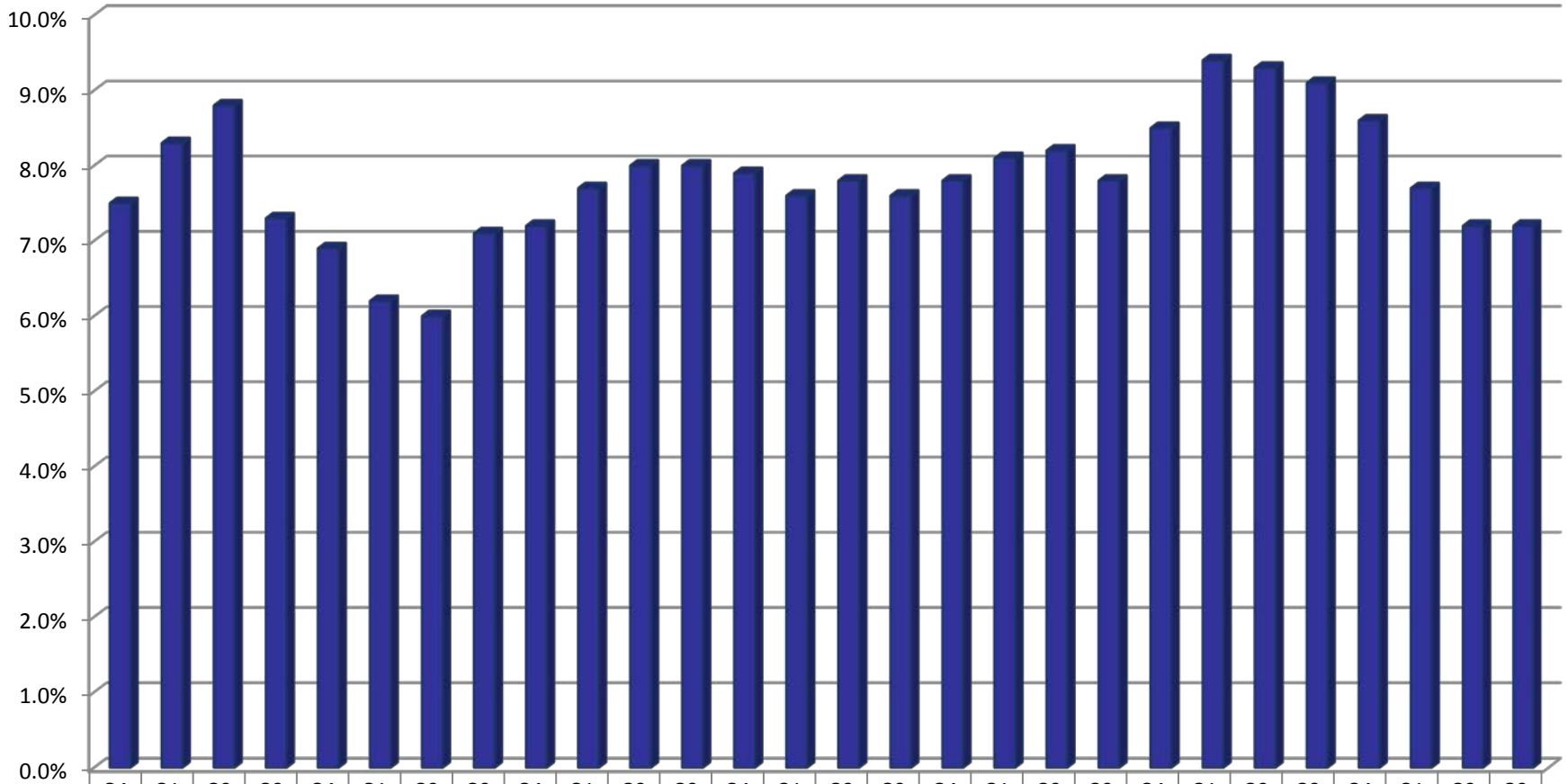
Return on Equity

Quarterly ROE* – Trailing 12-Month Basis



	Q4 2008	Q1 2009	Q2 2009	Q3 2009	Q4 2009	Q1 2010	Q2 2010	Q3 2010	Q4 2010	Q1 2011	Q2 2011	Q3 2011	Q4 2011	Q1 2012	Q2 2012	Q3 2012	Q4 2012	Q1 2013	Q2 2013	Q3 2013	Q4 2013	Q1 2014	Q2 2014	Q3 2014	Q4 2014	Q1 2015	Q2 2015	Q3 2015
ROE	7.5%	8.3%	8.8%	7.3%	6.9%	6.2%	6.0%	7.1%	7.2%	7.7%	8.0%	8.0%	7.9%	7.6%	7.8%	7.6%	7.8%	8.1%	8.2%	7.8%	8.5%	9.4%	9.3%	9.1%	8.6%	7.7%	7.2%	7.2%

* Not weather adjusted

Historical Financial Performance

($ in millions, except EPS and Book Value)	TME 9-30-15	2014	2013	2012	2011
Operating Revenues[1]	$620.2	$652.3	$594.3	$557.1	$576.9
Gross Margin[2]	$414.8	$410.2	$393.1	$359.6	$353.9
Operating Income	$95.8	$100.0	$99.7	$96.2	$96.9
Net Income	$57.8	$67.1	$63.4	$55.7	$55.0
Earnings Per Share	$1.33	$1.55	$1.48	$1.32	$1.31
Return on Average Common Equity	7.4%	8.6%	8.7%	7.9%	8.2%
EBITDA	$210.1	$212.6	$206.4	$190.8	$194.5
Cash from Operations	$174.5	$151.2	$157.5	$159.1	$134.6
Capital Structure					
Debt – Short Term	$16.6	$44.3	$4.3	$24.7	$12.9
Debt – Long Term	$863.0	$803.2	$743.4	$691.6	$692.3
Equity – Retained Earnings	$102.9	$90.3	$67.6	$47.1	$33.7
Equity – Other	$699.6	$693.0	$682.5	$670.7	$660.3
Total Equity	$802.5	$783.3	$750.1	$717.8	$694.0
Book Value	$18.34	$18.02	$17.43	$16.90	$16.53

[1] Operating Revenues include revenues for fuel recovery and, effective March 1, 2014, SPP Integrated Market activity ($19.7M in TME 9-30-15; $41.9M in 2014)

[2] Operating revenues less fuel and purchased power and cost of natural gas sold and transported

Strong Investment Grade Ratings

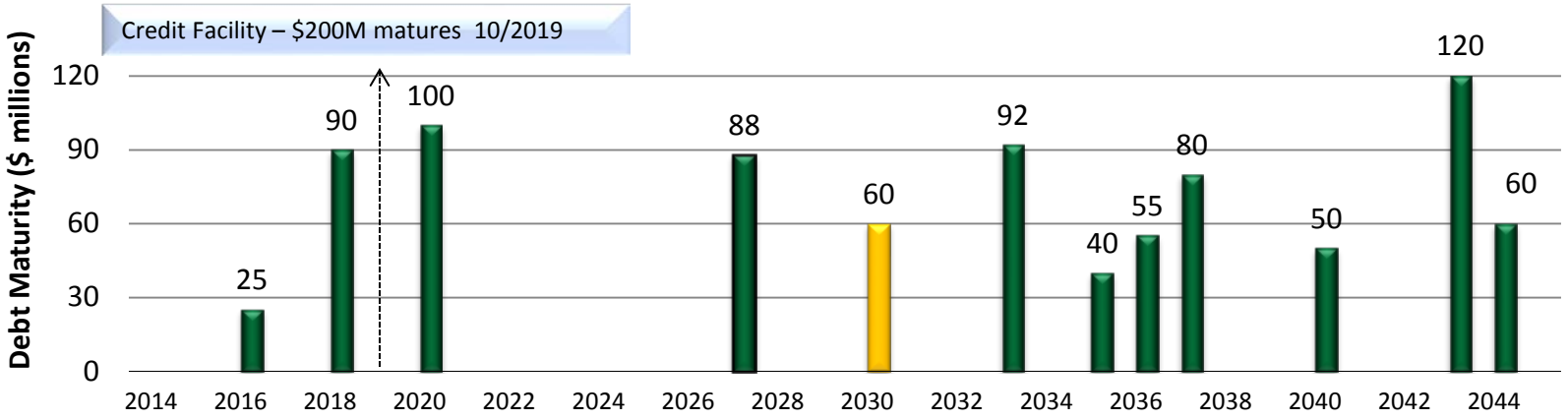
- Target 50/50 capital structure
- March 2015 Moody's reaffirmed credit ratings
- March 2015 Standard & Poor's reaffirmed credit ratings
- June 2015 Fitch reaffirmed credit ratings

	Moody's	Standard & Poor's	Fitch Ratings
Corporate Issuer	Baa1	BBB	N/R
First Mortgage Bonds	A2	A-	BBB+
Commercial Paper	P-2	A-2	F3
Outlook	Stable	Stable	Stable

Financing Outlook and Debt Maturities

- Lower-cost, flexible capital structure
- $60M 4.27% 30-year FMB private placement debt financing, settled December 1, 2014
- $60M 3.59% 15-year FMB private placement debt financing, settled August 20, 2015
  (below)
- Well-spaced debt maturities, upcoming maturity of $25M in late-2016 with expectation to pay off as matures
- Annual DRIP approximately $2M
- $200M five-year revolving credit facility maturing October 19, 2019; $75M accordion; two one-year extensions (subject to bank approval)

Debt Maturities



Average cost of debt 5.2% (including new 15 year $60M issuance

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State Line Generating Facility – Low-cost, efficient, gas-fired simple and combined-cycle operation

Competitive Total Return Profile

Competitive Total Return Equation

Key Earnings Drivers

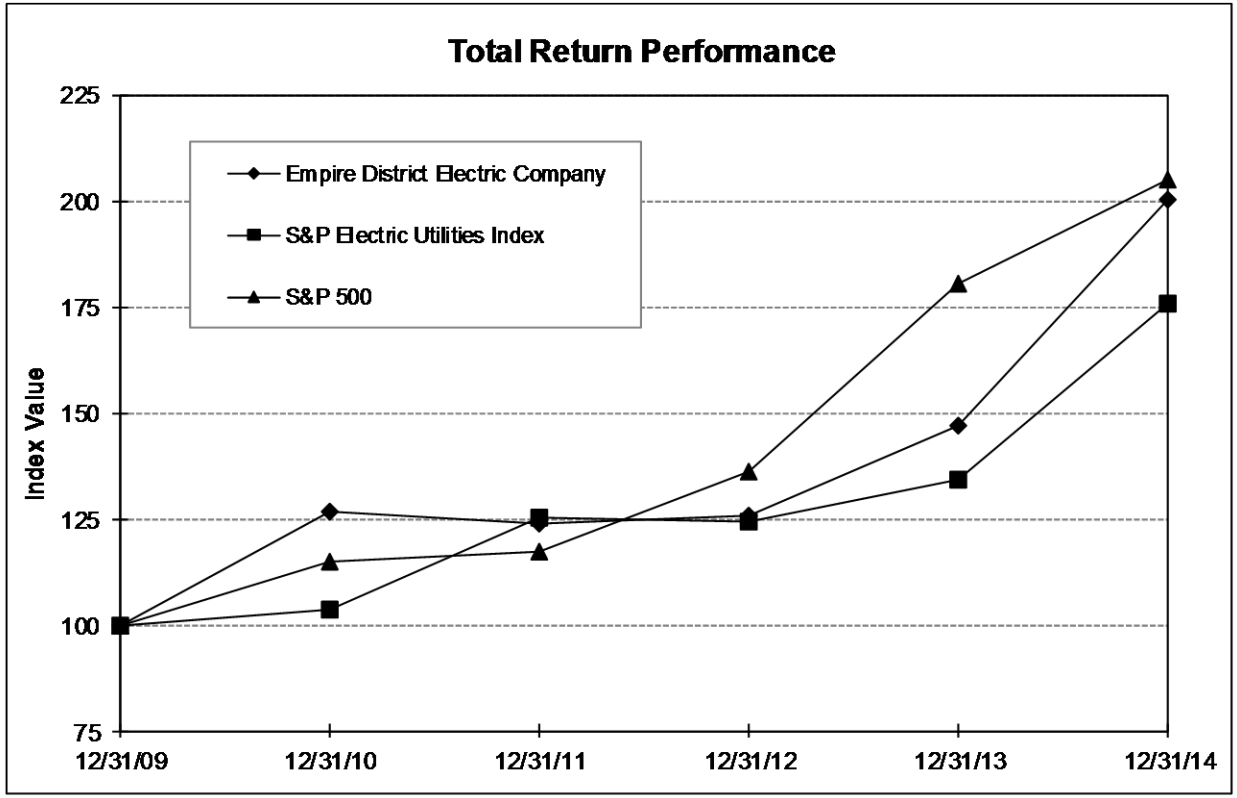
- Rate Base growth – 4% CAGR 2014 through 2020
- Attractive return on equity through constructive regulation
- Manageable financing requirements

Attractive Dividend

- Attractive yield of 4.6% relative to peers as of 10/30/2015
- Payout ratio commensurate with industry peer group

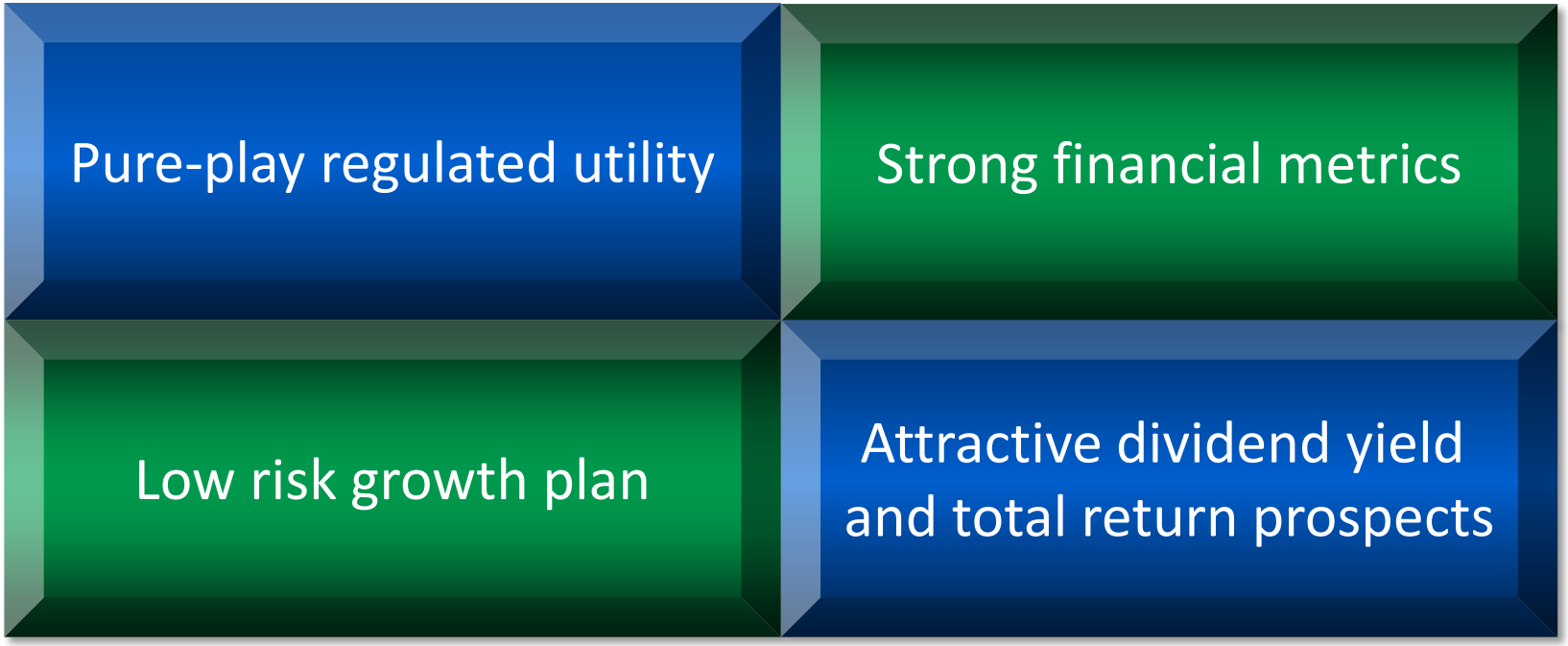
Competitive Total Return

Total Return Performance



	Period Ending					
Index	12/31/09	12/31/10	12/31/11	12/31/12	12/31/13	12/31/14
Empire District Electric Company	$100.00	$ 126.59	$ 124.13	$ 125.95	$ 146.80	$ 200.39
S&P Electric Utilities Index	$100.00	$ 103.43	$ 125.12	$ 124.43	$ 134.13	$ 176.00
S&P 500	$100.00	$ 115.06	$ 117.49	$ 136.30	$ 180.44	$ 205.14

Compelling Investment Platform



Asbury AQCS Project – environmentally compliant base-load generation, in service with recovery in rates effective July, 2015

Supplemental Materials

- Regulated Electric and Gas Utility Data
  - Revenue Mix
  - Generation Mix
- Residential Rates
- State Commission Profiles
- Management Biographies
- Contact Information

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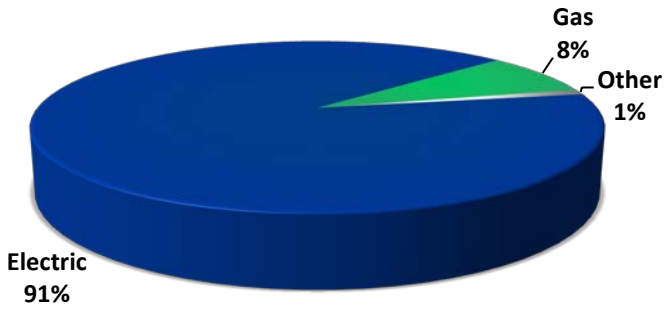
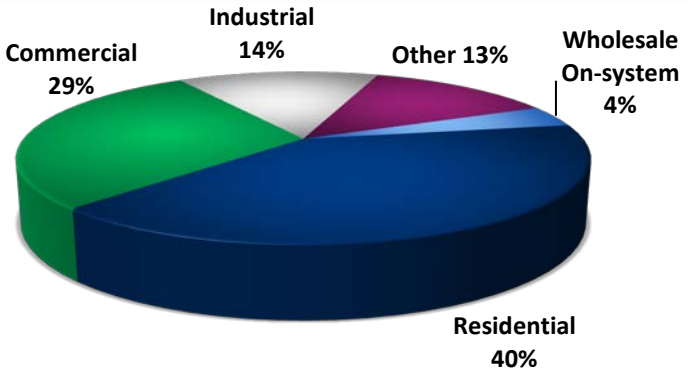
Regulated Electric and Gas Utility

Revenue Source (LTM 12/31/14)



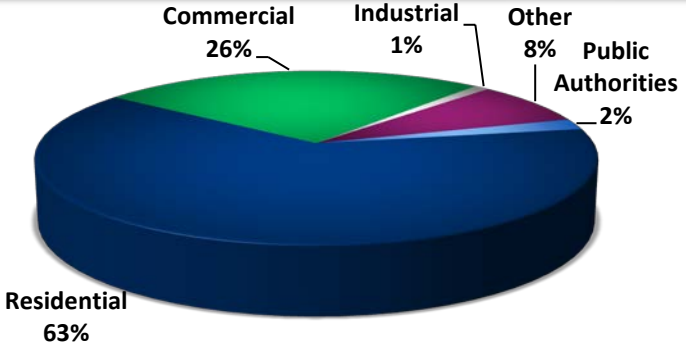
Total: $652 Million

Electric Revenues by Customer (LTM 12/31/14)



Total: $592 Million

Gas Revenues by Customer (LTM 12/31/14)

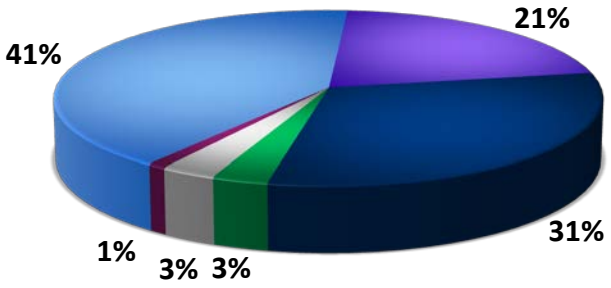


Total: $52 Million

Regulated Electric and Gas Utility (cont.)

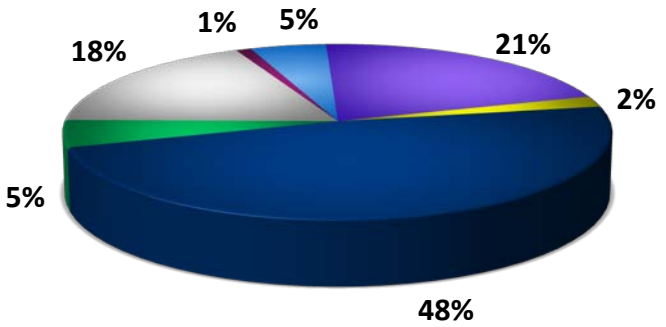
- Diverse Generation/Balanced Mix of Resources

2014 Capacity Mix



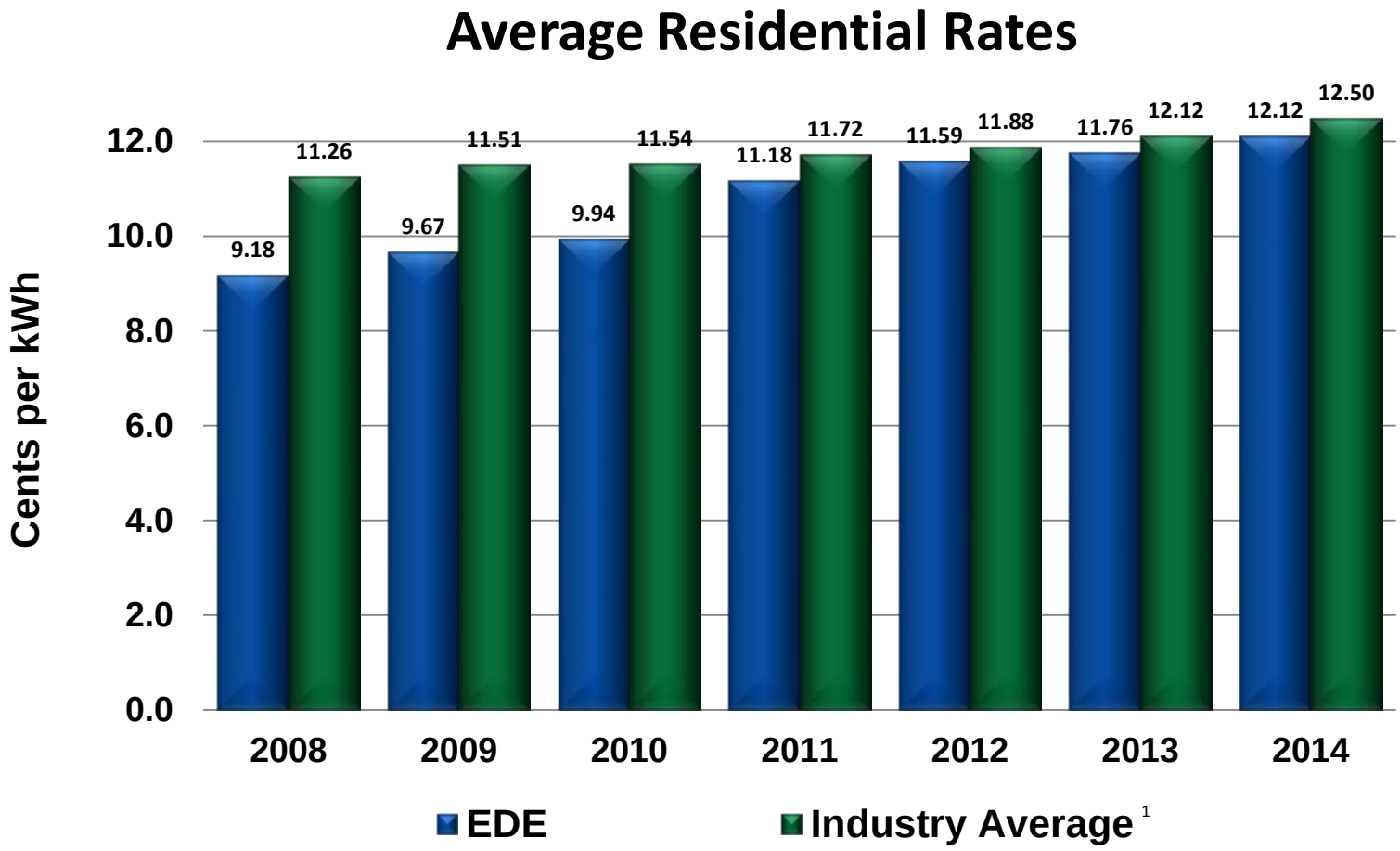
1,326 Net MW Owned Capacity
86 MW Purchased Power Capacity

2014 Energy Mix



Total: 5,085 GWh

Residential Rates



[1] Source: EIA

State Commission Profiles

	Missouri	Kansas	Oklahoma	Arkansas	FERC
% Operations	85.9	4.6	2.7	2.6	4.2
Commissioners (current; allowed)	5 of 5	3 of 3	3 of 3	3 of 3	5 of 5
Elected/Appointed	Appointed	Appointed	Elected	Appointed	Appointed
Test Year	Historical	Historical	Historical	Historical	Historical
Recovery mechanisms	Yes	Yes	Yes	Yes	Yes
RRA ranking [1]	Average/2	Average/2	Average/2	Average/3	N/A

[1] Regulatory Research Associates – RRA maintains three principal rating categories; Above Average, Average, and Below Average. Above Average indicates a relatively more-constructive, lower-risk regulatory environment from an investor viewpoint, and Below Average indicates a less-constructive, higher-risk regulatory environment from an investor viewpoint. Within the three principal rating categories, the numbers 1, 2 and 3 indicate relative position: designation 1 indicates a more constructive rating; 2, a mid-range rating; and 3, a less constructive rating. RRA endeavors to maintain a normal statistical distribution around the average.

Biographies

Bradley P. Beecher, President and Chief Executive Officer, became President and CEO on June 1, 2011. He joined The Empire District Electric Company in 1988 as a Staff Engineer at the Riverton Power Plant. He was elected Vice President – Energy Supply in 2001 and Vice President and COO – Electric in 2006. He was elected Executive Vice President in February 2010.

Mr. Beecher graduated from Kansas State University with a Bachelor of Science degree in Chemical Engineering. He is a registered professional engineer in the State of Kansas.

Mr. Beecher serves on the boards of the Edison Electric Institute, Missouri Energy Development Association, Joplin Chamber of Commerce, Boys and Girls Club of Southwest Missouri, Kiwanis Club of Joplin and Joplin Regional Partnership. He is a graduate of Leadership Missouri.

Laurie A. Delano, Vice President - Finance and Chief Financial Officer, was elected to her current position in July 2011. She first joined the Company in 1979 and served as Director of Internal Auditing from 1983 to 1991. After an eleven-year separation from Empire District, Ms. Delano re-joined the Company in 2002 as Director of Financial Services and Assistant Controller. She was named to the position of Controller, Assistant Secretary, and Assistant Treasurer in July 2005.

During the separation in employment, she was an accounting lecturer at Pittsburg State University and held accounting management positions with TAMKO Building Products, Inc. and Lozier Corporation.

A native of southwest Missouri, Ms. Delano received an Associate of Arts from Crowder College and a Bachelor of Science in Business Administration from Missouri Southern State University. She also holds a Master of Business Administration from Missouri State University. Ms. Delano is a Certified Public Accountant and Certified Management Accountant. She is a member of the American Institute of Certified Public Accountants and the Institute of Management Accountants.

Ms. Delano serves on the board of the Joplin Redevelopment Corporation (JRC) and the Missouri Southern State University School of Business Advisory Council. She has also been active with United Way organizations and agencies, and is a past President of the board of directors of the United Way of Southwest Missouri and the Lafayette House. She currently serves on the Endowment Committee for the Lafayette House. She is a member of the Joplin Daybreak Rotary.

Biographies

Dale W. Harrington, Corporate Secretary and Director of Investor Relations, was elected Secretary on February 5, 2015, effective May 1, 2015. He was named Director of Investor Relations in August 2014 and elected Assistant Secretary in October 2014. He joined The Empire District Electric Company in 1989 as an internal auditor. Mr. Harrington has held positions in financial and regulatory accounting and human resources. He was named to the position of Director of Financial Services in July 2011.

A native of southwest Missouri, Mr. Harrington graduated from Missouri Southern State University with a Bachelor of Science in Business Administration with a major in Accounting.

Mr. Harrington is a past President of the board of directors of the Lafayette House, and continues to actively serve on the Lafayette House board. He also serves on the board of College Heights Christian School.

Contact Us

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Asbury Generating Station – 2015 AQCS construction
Photo by Randy Richardson, AQCS Construction Manager

S&P CAPITAL IQ
McGRAW HILL FINANCIAL

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The Empire District Electric Company NYSE:EDE

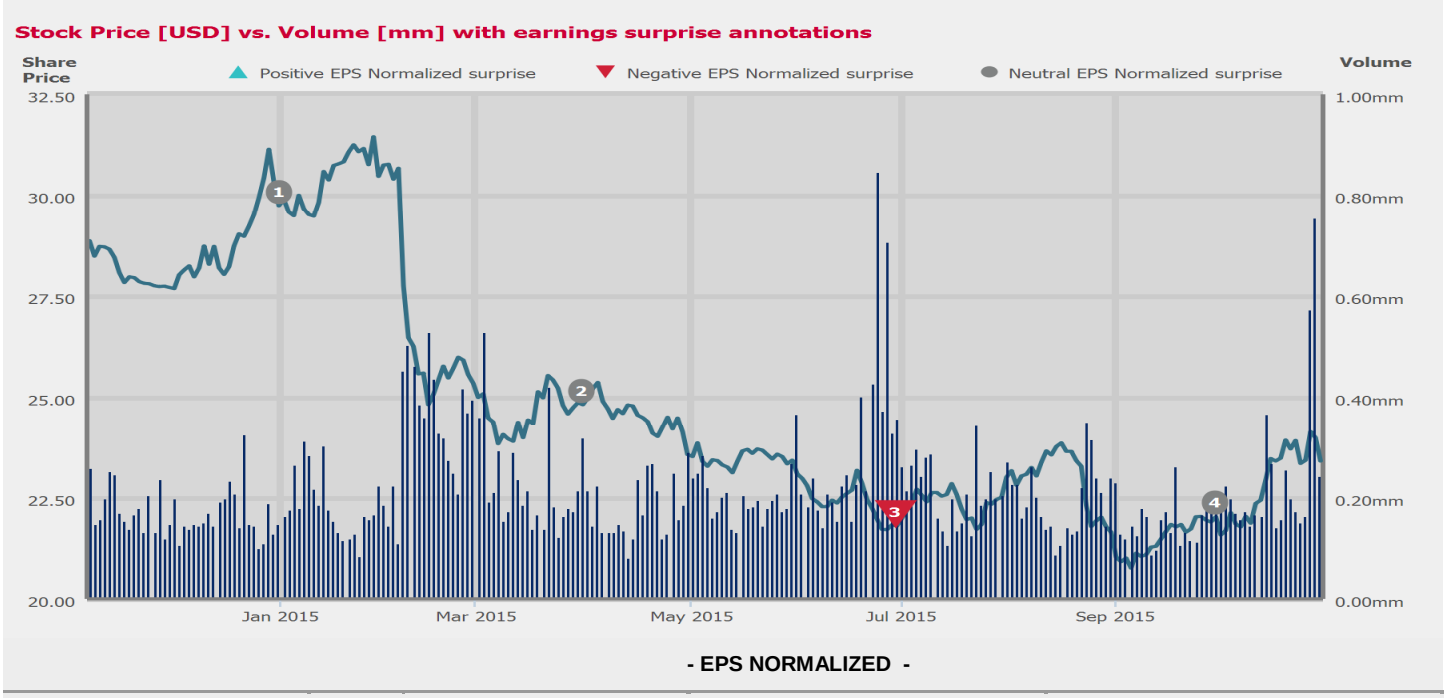
FQ4 2015 Earnings Call Transcripts

Friday, February 05, 2016 6:00 PM GMT

S&P Capital IQ Estimates

	-FQ4 2015-			-FY 2015-			-FY 2016-
	CONSENSUS	ACTUAL	SURPRISE	CONSENSUS	ACTUAL	SURPRISE	CONSENSUS
EPS Normalized	0.28	0.23	▼ (17.86 %)	1.37	1.29	▼ (5.84 %)	1.49
Revenue (mm)	170.94	96.10	▼ (43.78 %)	654.11	416.20	▼ (36.37 %)	681.62

Currency: USD
Consensus as of Feb-05-2016 3:51 PM GMT



- EPS NORMALIZED -

	CONSENSUS	ACTUAL	SURPRISE
FQ4 2014	0.26	0.26	1 0.00 %
FQ1 2015	0.34	0.34	2 0.00 %
FQ2 2015	0.22	0.15	▼ 3 (31.82 %)
FQ3 2015	0.58	0.58	4 0.00 %

Call Participants

EXECUTIVES

Bradley P. Beecher
Chief Executive Officer, President, Director and Chairman of Executive Committee

Dale W. Harrington
Director of Investor Relations and Corporate Secretary

Laurie A. Delano
Chief Financial Officer and Vice President of Finance

ANALYSTS

Brian J. Russo
Ladenburg Thalmann & Co. Inc., Research Division

David Frank
Corso Capital Management LP

Glen Franklin Pruitt
Wells Fargo Securities, LLC, Research Division

Paul Zimbardo
UBS Investment Bank, Research Division

Paul Patterson
Glenrock Associates LLC

Paul Thomas Ridzon
KeyBanc Capital Markets Inc., Research Division

Presentation

Operator

Good afternoon, and welcome to The Empire District Electric Company Year-end Fourth Quarter and 2015 Results Conference Call. [Operator Instructions] Please note that this event is being recorded.

I would now like to turn the conference over to Dale Harrington, Secretary and Director of Investor Relations. Please go ahead, sir.

Dale W. Harrington
Director of Investor Relations and Corporate Secretary

Thank you, Dan, and good afternoon, everyone. Welcome to The Empire District Electric Company's Year-end 2015 Earnings Conference Call. Our press release announcing fourth quarter and year-end 2015 results was issued yesterday afternoon. The press release and a live webcast of this call, including our accompanying slide presentation, are available on our website at www.empiredistrict.com. And a replay of the call will be available on our website through May 5, 2016.

Joining me today are Brad Beecher, our President and Chief Executive Officer; and Laurie Delano, our Vice President, Finance and Chief Financial Officer. In a few moments, Brad and Laurie will be providing an overview of the fourth quarter and year-end 2015 results and 2016 expectations as well as highlights on some other key matters.

But before we begin, let me remind you that our discussion today includes forward-looking statements and the use of non-GAAP financial measures. Slide 2 of our accompanying slide deck and the disclosure in our SEC filings present a list of some of the risks and other factors that could cause further results to differ materially from our expectations.

I'll caution that these lists are not exhaustive, and the statements made in our discussion today are subject to risks and uncertainties that are difficult to predict. Our SEC filings are available upon request or may be obtained from our website or from the SEC.

I would also direct you to our earnings press release for further information on why we believe the presentation of estimated earnings per share, impact of individual items and the presentation of gross margin, each of which are non-GAAP presentations, is beneficial for investors in understanding our financial results.

And with that, I will now turn the call over to our CEO, Brad Beecher.

Bradley P. Beecher
Chief Executive Officer, President, Director and Chairman of Executive Committee

Thank you, Dale. Good afternoon, everyone, and thank you for joining us. Today, we will discuss our financial results for the fourth quarter and 12 months ended December 31, 2015, period as well as recent activities impacting the company. As communicated in yesterday's earnings release, with regard to the strategic alternatives process confirmed in our December 13, 2015, news release, we have no update.

Moving on to our year-end results, we expect 2015 earnings to be -- we expected 2015 earnings to be impacted by regulatory lag associated with the Asbury Air Quality Control System project, and they were. Unfortunately, mild weather, particularly in the fourth quarter, also negatively affected earnings. In terms of Heating Degree Days, December and the fourth quarter of 2015 were the mildest in over 30 years.

Despite the mild weather, we achieved success in many areas. Our retained earnings reached $100 million for the first time. We have a healthy balance sheet and a sustainable dividend. We continue to improve service reliability for our customers, and it was another good year for employee safety performance.

As shown on Slide 3, yesterday we reported consolidated earnings for the fourth quarter of 2015 of $9.9 million or $0.23 per share compared to the same quarter in 2014 when earnings were $11.1 million or $0.26 per share. Earnings for the year ended December 31, 2015, were $56.6 million or $1.30 per share, $1.29 on a diluted basis, compared to 12 months ended 2014 earnings of $67.1 million or $1.55 per share.

During their meeting yesterday, the Board of Directors declared a quarterly dividend of $0.26 per share, payable March 15, 2016, for shareholders of record as of March 1. This represents a 3.5% annual yield at yesterday's closing price of $29.45.

I am pleased to report that our largest single construction project for the year, the Riverton 12 combined cycle unit, is progressing on schedule. During the fourth quarter, we completed construction work and the equipment integration outage. This past weekend, the project team successfully ran the steam turbine at full operational speed for the first time. And I'm happy to report, as of this morning, the unit was synchronized to the grid, or in other words, produced electricity for the first time. Additional operational performance and in-service tests will occur over the next several weeks. We remain on target to complete the project late in the first quarter or early in the second quarter of 2016. Our current projections indicate the combined cycle unit will come in at the lower end of the $165 million to $175 million budget range. However, this is dependent upon the amount of test fuel burned, test energy sales margin and any other unforeseen issues.

As we reach the final stages of the Riverton project, the completion of our multi-year compliance plan to reduce fossil fuel emissions is nearing conclusion. We have adequate production capacity and continue to be fully compliant with all current environmental standards. We remain engaged at the local, state and federal levels relating to the development of implementation plans for the Environmental Protection Agency's Clean Power Plan. We believe this regulation will drive significant change in the way electricity is generated in the future, even though there is still uncertainty surrounding the details of implementation plans.

You will recall we filed a Missouri rate case last October, primarily to recover costs associated with the Riverton investment. The filing seeks an increase in base rate revenues of approximately $33.4 million or about a 7.3% increase. The procedural schedule provides for a true-up of expenditures incurred through March 31, 2016. This includes rate base items associated with the Riverton project, provided it meets in-service criteria by June 1, 2016. The Missouri commission has scheduled local public hearings for the case in April and evidentiary hearings in Jefferson City beginning May 31. We expect new rates to become effective late in the third quarter.

We have also made a corresponding filing in Oklahoma. An administrative rate reciprocity rule now in effect provides for our approved Missouri rates to be applied in our Oklahoma jurisdiction, of course, subject to approval by the Oklahoma commission. As a reminder, we are currently recovering our Asbury Air Quality Control System investment through riders in both Kansas and Arkansas. We have a separate rider in place in Kansas to recover increased property taxes.

In January, we filed a request to increase the rider by $0.2 million to reflect increased property taxes for the Riverton project. We expect to file a full year -- full rate case in Kansas by the end of the third quarter, and in Arkansas no later than the end of the year.

For 2016, we expect earnings to be within a weather-normalized range of $1.38 to $1.54 per share. This reflects a full year of recovery for expenses related to the Asbury Air Quality Control System and the expectation of a partial year of new rates for the Riverton project.

I will now turn the call over to Laurie to provide additional details of our financials and our 2016 earnings guidance.

Laurie A. Delano
Chief Financial Officer and Vice President of Finance

Thank you, Brad, and good afternoon, everyone. As always, the information I'm about to discuss today will supplement the press release we issued late yesterday. And as always, the earnings per share numbers referenced throughout the call are provided on an after-tax estimated basis. I'll briefly touch on our 2015 fourth quarter results before I discuss our annual results.

Our fourth quarter earnings of $0.23 per share is reflective of much milder winter weather when compared to the previous year's fourth quarter. In particular, mild December 2015 weather resulted in the lowest number of Heating Degree Days in 30 years. So the mild quarter weather was the primary driver of a 6.3% decrease in quarter-over-quarter electric sales.

Slide 5 shows the quarter-over-quarter changes that impacted earnings per share. Electric segment gross margin, or revenues less fuel and purchased power expense, increased $2.3 million, increasing earnings by $0.02 per share. Increased customer rates of about $6.2 million, net of an estimated $1.8 million decrease in Missouri-based fuel recovery, increased revenue $4.4 million quarter-over-quarter. This added an estimated $0.09 per share to margin. This increase was almost entirely offset by the impact of the mild weather and other volumetric factors, which decreased revenue by about $8 million, negatively impacting margin by about $0.08 per share when compared to last year.

Positive customer growth contributed about $0.01 to earnings per share. Other items including Southwest Power Pool integrated market activity and the timing of our fuel deferrals along with our nonregulated revenues combined to add another estimated $0.02 per share to margin when compared to the fourth quarter of 2014. Mild weather also impacted our gas segment retail sales quarter-over-quarter, driving a decline of just over 27% in total sales volume. This resulted in a decrease in gas segment margin of about $0.02 per share.

Consolidated operating and maintenance expenses were relatively flat compared to the 2014 quarter, but added another $0.01 to earnings per share. Higher depreciation and amortization expense, reflective of higher levels of plant in-service, primarily due to our Asbury project, reduced earnings per share around $0.03. Changes in interest cost, AFUDC and other income and deductions reduced earnings per share another $0.03 compared to the prior year quarter.

Turning to our annual results, our net income decreased approximately $10.5 million or around $0.25 per share compared to the 2014 full year results. Slide 6 provides a breakdown of the various components that resulted in this year-over-year earnings per share decrease. Consolidated gross margin increased $6 million over 2014, adding an estimated $0.09 per share.

As shown in the callout box on Slide 6, we estimate that increased customer rates from our July 2015 Missouri rate case added about $0.15 per share to margin. This is reflective of increased customer rates of about $10.4 million netted with a $3.3 million lowering of our base fuel recovery, ultimately adding an estimated $7.1 million to revenue.

We estimate the impacts of weather and other volumetric factors on the electric side of the business reduced revenues an estimated $10.3 million year-over-year. This negatively impacted margin by about $0.10 per share, partially offsetting the increase in earnings driven by the customer rate changes. Increased customer growth added about $0.02 per share to margin.

And as in the quarter, Southwest Power Pool integrated market activity and timing differences of our fuel deferrals and other fuel recovery components drove a $0.07 per share margin increase when compared to the 2014 period. A January 2015 FERC refund to 4 of our wholesale customers reduced margin about $0.02 per share. And other miscellaneous and non-regulated revenues combined to increase margin about $0.01 per share.

Again, the mild weather impacted our gas segment, driving a margin decrease of about $2.6 million for the year or about

$0.04 per share. Increases in our consolidated operating and maintenance expenses decreased earnings about $0.07 per share. The callout box on Slide 6 provides a breakdown of this impact. Increased production maintenance expense was a significant driver of the increase in overall O&M expenses. As I mentioned on our previous call, this increase is reflective of our Riverton 12 maintenance contract, which was effective January 1, 2015.

In addition, it reflects the planned major maintenance outage for our steam turbine at our State Line Combined Cycle facility. These added expenses reduced earnings about $0.05 per share. Higher production operations expenses, primarily from the increased use of consumables, reduced earnings another $0.03 per share. And as you can see on the slide, increased transmission operations and employee health care expenses were offset by decreases in customer and distribution maintenance expenses.

Continuing on Slide 6, depreciation and amortization expenses decreased earnings per share about $0.11, driven by higher levels of plant in-service, again primarily as a result of our Asbury project. These higher levels of plant in-service also drove an increase in property taxes, bringing earnings down another $0.04 per share.

Increased interest expense reduced earnings per share about $0.05 year-over-year. This reflects our 2 $60 million debt issuances completed in December 2014 and in August 2015. Reduced AFUDC levels, changes in other income and deductions and the dilutive effect of common stock issuances under our various stock plans combined to round out the remaining $0.07 decrease in earnings per share.

As illustrated on Slide 7, our actual 2015 results of $1.30 basic earnings per share were, of course, at the bottom end of our guidance range, due primarily to the mild weather during the fourth quarter of 2015. We estimate the impact of the mild fourth quarter weather reduced earnings about $0.07 to $0.09 per share compared to normal. Absent this weather impact, we would have been very close to the midpoint of our 2015 guidance range. As Brad mentioned earlier, we expect our full year 2016 weather-normalized earnings to be within the range of $1.38 to $1.54 per share.

On Slide 8, we highlight the drivers of our increase in earnings expectations in 2016. As in the past, our estimates are based on normal weather and modest positive sales growth, which as we have previously disclosed, we still expect to be at a level of less than 1% per year over the next several years. We are also assuming our Missouri rate case filed last October to recover Riverton 12 combined cycle cost will be effective as filed with rates effective in mid-September of this year. Depreciation expense will increase, reflecting our previously disclosed expectation of the Riverton 12 project in-service date in the early to mid-2016 time period at an estimated 30-year life rate.

In addition, depreciation will increase for assets placed in service since our last rate case. The impact on depreciation of the Riverton 12 project alone is estimated at approximately $0.05 to $0.06 per share on an annualized earnings per share basis. We will also see increases in property tax and interest expense. The higher interest expense, of course, reflects our previously discussed August 2015 debt insurance. It also reflects the redemption of $25 million of our First Mortgage Bonds, which are due in late 2016. And as indicated previously, we are not planning on refinancing this debt when it matures.

And last but not least, our AFUDC impact will be lower in 2016 as the Riverton project comes online. Other factors we considered in our range are variations in customer growth and usage as well as variations in operating and maintenance expense.

On Slide 9, we have updated our trailing 12-month return on equity chart. And as you can see, at the end of 2015, our return on equity was approximately 7.1%. I'll also mention that we have not made any changes to the capital expenditure plan we discussed on our last call.

Turning to our recent regulatory activities, Slide 10 once again summarizes the key aspects of our Missouri rate case filed October 16, 2015. As filed, we are seeking a $33.4 million increase in base revenues, which is about a 7.3% increase. Our requested return on equity is 9.9%, and we are using a capital structure of approximately 51% debt and 49% equity. The filed Missouri rate base is approximately $1.4 billion. The procedural schedule has been set by the

commission. The test year ends June 30, 2015, with true-up expenses through March 31, 2016. Rate base items for Riverton 12 through March 31, 2016, may be included if the in-service criteria for the Riverton 12 project has been met by June 1.

As Brad noted, we are making good progress on meeting the in-service criteria. Slide 12 gives you our projected time line for the case proceedings. Our solar program compliance costs are also included in this Missouri rate filing, and Brad will provide an update on this program in his wrap-up of our presentation.

Similar to our previous rate case to recover our Asbury environmental expenditures, and as you can see on the projected time line, we will experience a period of lag between the in-service date of the Riverton 12 conversion and the time when new customer rates are put in place. Assuming the Missouri Public Service Commission's 11-month procedural schedule, new rates would become effective in mid-September 2016.

I'll now turn the discussion back over to Brad.

Bradley P. Beecher
Chief Executive Officer, President, Director and Chairman of Executive Committee

Thank you, Laurie. This past year, we implemented a mandated solar rebate program resulting in 767 customer applications as of December 31. The applications represent a total of 11.5 megawatts of customer-owned solar installation, which aid in meeting the solar requirements of the Missouri Renewable Energy Standard. Through the end of the year, we have booked $3.5 million in rebates. And as Laurie mentioned, the recovery of the rebates paid through the end of the year is included in our pending Missouri rate case. Any additional costs or rebates incurred through the true-up period will be reflected in the results of our rate case.

We're also very pleased to report that our customers experienced improved service in 2015 as we continued focus on system reliability. We reduced the average number of outage occurrences and the duration of outages affecting customers by 7% and 13%, respectively. Continuous improvement in the efficiency of our operations is the goal of another major project undertaken this past year. After months of preparation, a project team is preparing to launch what we term the power delivery construction bundle of our new work management software platform. The new system will aid in the standardization of the design and construction of transmission, distribution and substation equipment. We expect to realize significant cost savings from these efficiency improvements.

It has also been a good year on the economic development front. As we reported earlier, Owens Corning is establishing a new manufacturing operation just west of Joplin. They are investing $90 million in a mineral wool insulation production facility that will employ over 100 workers. We have a substation upgrade underway to accommodate a June startup for the facility, and we're developing plans to construct a new substation to serve the 5 to 6 megawatts of load expected when the facility is fully operational.

Excitement continues to remain high for the new medical school being established in Joplin, which we reported on earlier this year. The new medical school is being developed by Kansas City University of Medicine and Biosciences and will have over 600 students when it reaches full enrollment in 2020. The project is expected to have an annual economic impact for our region of over $100 million.

On the legislative front, Senate Bill 1028 was filed in Missouri -- in the Missouri Senate this week, which states an intent to modernize the regulatory process for electrical corporations in Missouri. It proposes 4 general provisions: first, consumer protections, such as earnings caps, rate caps and performance standards; second, more timely recovery of the -- a utility's prudently incurred operating costs; third, policies that encourage investment in Missouri electrical infrastructure; and finally, globally competitive rates for energy-intensive customers. Details are not included in the bill, but we anticipate that additional language will be added as it moves through the legislative process.
I will now turn the call back over to the operator for your questions.

Question and Answer

Operator

[Operator Instructions] And our first question comes from Brian Russo of Ladenburg Thalmann.

Brian J. Russo
Ladenburg Thalmann & Co. Inc., Research Division

Just to follow up on the Senate Bill 1028, maybe you can kind of add your view as to what's different with this bill proposed versus prior bills that didn't make it out of committee?

Bradley P. Beecher
Chief Executive Officer, President, Director and Chairman of Executive Committee

So there's the -- so I would tell you this time there's a lot more work on consensus on the front end of the process. And as you can see, if you've looked at Senate Bill 1028, it's 1 page and really doesn't have any details. And that's because all parties are still working very hard on trying to reach consensus before we try to push this forward in a utility committee.

Brian J. Russo
Ladenburg Thalmann & Co. Inc., Research Division

And who are the parties? I would imagine there are some large industrial customers.

Bradley P. Beecher
Chief Executive Officer, President, Director and Chairman of Executive Committee

It's the same general set of parties that are always participatory in Missouri proceedings. This time, it's a little different because Noranda is helping -- try to find a good solution for them as well. But it's really the Missouri Industrial Energy Consumers group, it's probably the biggest opponent as we sit here today.

Brian J. Russo
Ladenburg Thalmann & Co. Inc., Research Division

Okay, got it. And this is just the electric utilities, right? Not all utilities?

Bradley P. Beecher
Chief Executive Officer, President, Director and Chairman of Executive Committee

So Senate Bill 1028 is just an electric bill. There are 2 other bills. There's a -- and I don't know the numbers off the top of my head, but there's a gas interest bill and there's also a water decoupling bill that are making their own pathways through the Missouri legislature. But all 3 bills, to my knowledge, are being supported by all the MEDA entities within Missouri. And MEDA being the Missouri Energy Development Association.

Brian J. Russo
Ladenburg Thalmann & Co. Inc., Research Division

Got it. Okay. And when does the legislature end?

Bradley P. Beecher

Chief Executive Officer, President, Director and Chairman of Executive Committee

Sometime around the 1st of May. I can't -- that's not exactly right, but sometime in May.

Brian J. Russo
Ladenburg Thalmann & Co. Inc., Research Division

Okay, got it. And then you mentioned the -- your CapEx is the same. So does that imply that your prior rate base line is also the same?

Laurie A. Delano
Chief Financial Officer and Vice President of Finance

Yes, it would, Brian.

Brian J. Russo
Ladenburg Thalmann & Co. Inc., Research Division

Okay. So there's no impact from bonus depreciation?

Laurie A. Delano
Chief Financial Officer and Vice President of Finance

Yes. We've -- in the near term, we don't think there's much impact from bonus depreciation. What it impacts more is the outer years. And so we will have that updated in our analyst presentation when we file it.

Brian J. Russo
Ladenburg Thalmann & Co. Inc., Research Division

Okay. Great. And then the $33.4 million revenue request in the Missouri rate case, how much of that is Riverton?

Laurie A. Delano
Chief Financial Officer and Vice President of Finance

We estimate that the total effect of Riverton is about $27.4 million of that. And that includes return on and of and expenses associated with Riverton.

Brian J. Russo
Ladenburg Thalmann & Co. Inc., Research Division

And will there be a net offset from lower fuel?

Bradley P. Beecher
Chief Executive Officer, President, Director and Chairman of Executive Committee

Not in base rate...

Laurie A. Delano
Chief Financial Officer and Vice President of Finance

We're not expecting one in base rates, no.

Brian J. Russo

Ladenburg Thalmann & Co. Inc., Research Division

All right. Great. And then just referring to the prior rate base disclosures, rate base seems to be leveling off in '18 versus '17. And I'm just curious, how do you achieve earnings growth as rate base levels off? Is it just less regulatory lag or an ROE improvement? Or is there incremental CapEx that's being considered?

Bradley P. Beecher
Chief Executive Officer, President, Director and Chairman of Executive Committee

So that's the question of the day. How do you grow if you don't have a lot of plant growth? And so we continue to analyze alternatives to grow rate base in those outer years.

Brian J. Russo
Ladenburg Thalmann & Co. Inc., Research Division

Okay. And then just elaborate on what gets you to the high end of the 2016 guidance range? Is it just -- is it a constructive outcome in the rate case? Or what would drive that, weather?

Laurie A. Delano
Chief Financial Officer and Vice President of Finance

A couple of things would drive that. Managing our O&M expenses to under budget is one of our considerations. If the growth in our area would be a bit higher than what we have laid into our budget, those are the, really, the 2 things that we have -- that would have the most impact.

Bradley P. Beecher
Chief Executive Officer, President, Director and Chairman of Executive Committee

And Brian, you mentioned that -- asked if it was weather, and we give weather-normalized guidance. And so our entire guidance range covers just normal weather.

Operator

And the next question comes from Paul Ridzon of KeyBanc.

Paul Thomas Ridzon
KeyBanc Capital Markets Inc., Research Division

Brad, you mentioned you filed in Oklahoma. How do you envision that process unfolding to kind of sync the rates up?

Bradley P. Beecher
Chief Executive Officer, President, Director and Chairman of Executive Committee

So last year, Oklahoma initiated a process whereby if you had a very small number of customers in Oklahoma and you were next to a state with larger jurisdiction, you could simply file, in this case, Missouri's rates in Oklahoma. And so we're the first company to go through that. And so Oklahoma is watching what's going on in our Missouri case. But we would anticipate, at the conclusion of the Missouri case, working with the Oklahoma staff and Oklahoma commission to implement those same rates in Oklahoma. But it's the first time and so we're not exactly sure how that's going to work. But so far, discussions with Oklahoma staff have been going very well.

Paul Thomas Ridzon
KeyBanc Capital Markets Inc., Research Division

When do you expect those new rates to take effect?

Bradley P. Beecher
Chief Executive Officer, President, Director and Chairman of Executive Committee

Shortly after the Missouri rates take effect.

Paul Thomas Ridzon
KeyBanc Capital Markets Inc., Research Division

We were just not sure what the process looks like, so whether they get phased in or whether they can come all in at once?

Bradley P. Beecher
Chief Executive Officer, President, Director and Chairman of Executive Committee

So we have to work with the Oklahoma staff to determine how that works.

Paul Thomas Ridzon
KeyBanc Capital Markets Inc., Research Division

Okay. Okay. And then you said that you thought Riverton was going to come in at the low end of the budget?

Bradley P. Beecher
Chief Executive Officer, President, Director and Chairman of Executive Committee

That's correct.

Paul Thomas Ridzon
KeyBanc Capital Markets Inc., Research Division

And there's a nice pickup in industrial load in the fourth quarter. What was driving that?

Laurie A. Delano
Chief Financial Officer and Vice President of Finance

Well, we have -- if you'll recall in the past discussions, we've talked about our new dog food plant that came to Joplin as a result of the tornado and then we've just seen some other general increases in some of our other customers. But that would be the main driver of that.

Paul Thomas Ridzon
KeyBanc Capital Markets Inc., Research Division

Can you quantify what you expect the lag impact to be on earnings per share basis with Riverton?

Laurie A. Delano
Chief Financial Officer and Vice President of Finance

Well, we said that the depreciation alone would be about a $0.05 to $0.06 earnings per share per year on an annualized basis. Obviously, for '16, you're not going to have that much impact for that piece of it. Property taxes, we didn't really quantify specifically what that was. The depreciation is the biggest direct expense lag that we would have.

Paul Thomas Ridzon
KeyBanc Capital Markets Inc., Research Division

The depreciation is the return of capital, and then we're also lagging on return on capital, and then operating expenses...

Laurie A. Delano
Chief Financial Officer and Vice President of Finance

You'd also have the return on capital. Those would be -- those would be the 2 major items.

Paul Thomas Ridzon
KeyBanc Capital Markets Inc., Research Division

And Brad, I appreciate you're limited on what you can say, can we expect that the next commentary you make around strategic review will be a kind of an up or down, kind of give us a final answer, there's a transaction, there is no transaction?

Bradley P. Beecher
Chief Executive Officer, President, Director and Chairman of Executive Committee

I appreciate the fact that you have to ask, but I have no update on that topic today.

Operator

And our next question comes from Glen Pruitt of Wells Fargo.

Glen Franklin Pruitt
Wells Fargo Securities, LLC, Research Division

I have 2 questions. One, relating to January weather. Can you give me some indication of January weather, where it is relative to normal? And if there's any impact to 2016 relative to your guidance range?

Bradley P. Beecher
Chief Executive Officer, President, Director and Chairman of Executive Committee

You live just on the other side of the state from us, so you know this January was kind of normal. We had some cold days, we had some hot days. But in the end, it wasn't too far off of normal.

Glen Franklin Pruitt
Wells Fargo Securities, LLC, Research Division

Okay. Great. And so I know you're hesitant to make any additional comments on strategic alternative discussion, but I was wondering if you could just give some facts-based information on what precipitated this discussion? Was it someone approaching you externally? Or was it initiated internally?

Bradley P. Beecher
Chief Executive Officer, President, Director and Chairman of Executive Committee

You get the same answer as Paul did. I have no update.

Operator

And our next question comes from Julien Dumoulin-Smith of UBS.

Paul Zimbardo

UBS Investment Bank, Research Division

It's actually Paul Zimbardo in for Julien. Just a quick question, if you could answer, whether you believe you'd be subject to regulatory approval in all of the jurisdictions in the event of a change of control?

Bradley P. Beecher
Chief Executive Officer, President, Director and Chairman of Executive Committee

Yes. We do -- we would believe that.

Operator

And our next question comes from David Frank of Corso Capital Management.

David Frank
Corso Capital Management LP

My question was just asked. Thank you very much.

Operator

And then our next question comes from Paul Patterson of Glenrock Associates.

Paul Patterson
Glenrock Associates LLC

Just on the sales growth, what was it, weather normalized, I apologize if I missed it, for 2015?

Laurie A. Delano
Chief Financial Officer and Vice President of Finance

We generally estimate our total normal sales volume to be about 5 million kilowatt hours...

Bradley P. Beecher
Chief Executive Officer, President, Director and Chairman of Executive Committee

Megawatt hours.

Laurie A. Delano
Chief Financial Officer and Vice President of Finance

I'm sorry, megawatt hours. So we were just under that.

Bradley P. Beecher
Chief Executive Officer, President, Director and Chairman of Executive Committee

But we continue to believe our weather-normalized sales is right at 5 million megawatt hours. So not a lot of growth in 2015.

Paul Patterson
Glenrock Associates LLC

Okay. And then, I guess the rest of my questions have been asked.

Operator

And this concludes our question-and-answer session. I would like to turn the conference back over to management for any closing remarks.

Bradley P. Beecher
Chief Executive Officer, President, Director and Chairman of Executive Committee

Thank you. Before we close, I remind you that we are focused on our vision of making lives better every day with reliable energy and service. We are committed to meeting today's energy challenges with least cost resources, while ensuring reliable and responsible energy for our customers, an attractive return for our shareholders and a rewarding environment for our employees.

Thank you for joining us today, and have a great weekend.

OperatorThe conference has now concluded. Thank you for attending today's presentation. You may now disconnect.

OUR
FUTURE
FOCUS

FIRST QUARTER 2016
BUSINESS UPDATE AND EARNINGS REVIEW

MAY 6, 2016

Presented by:

Terry Bassham
Chairman, President and CEO

Kevin Bryant
SVP Finance & Strategy and CFO

GREAT PLAINS ENERGY

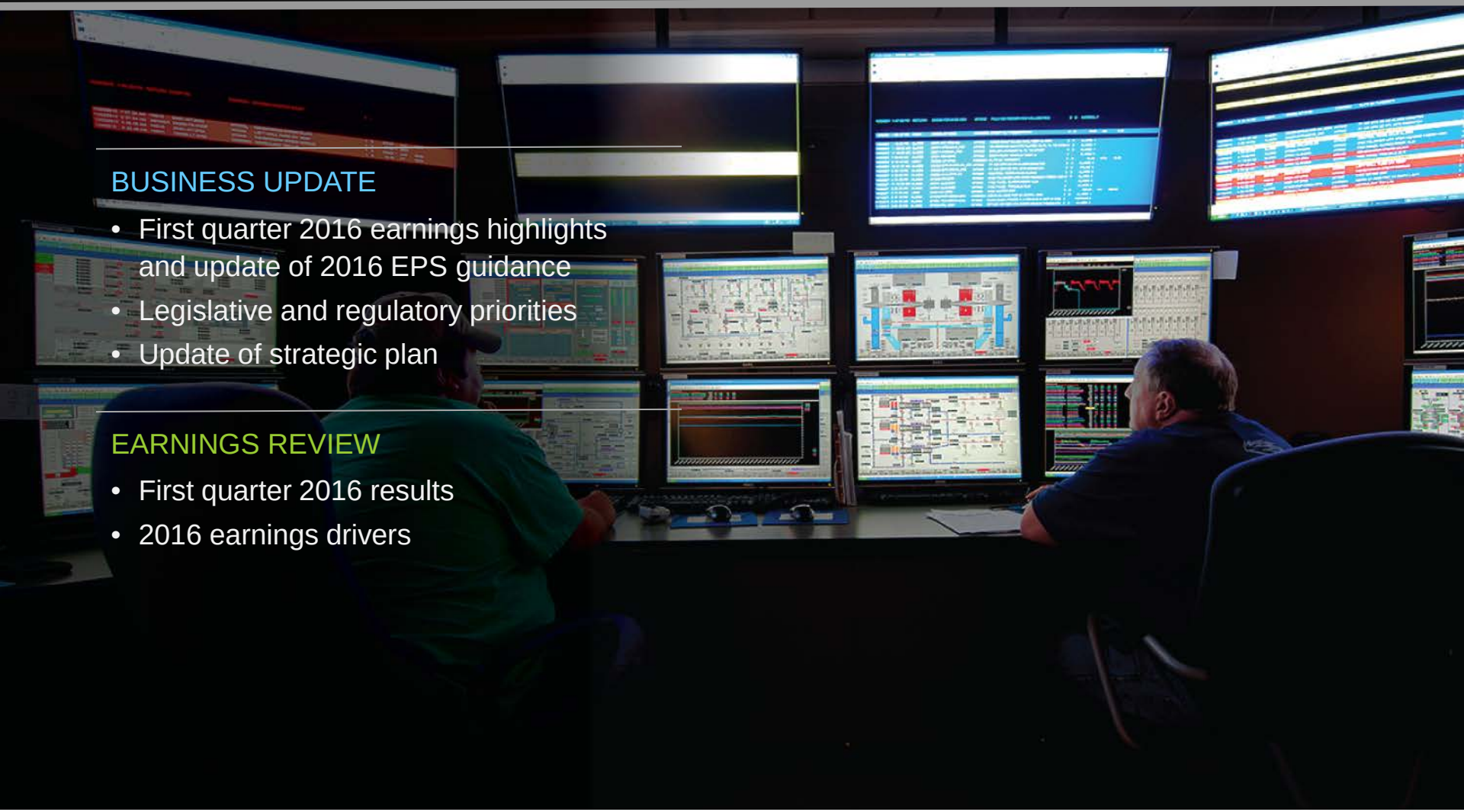
FORWARD-LOOKING STATEMENTS

Statements made in this presentation that are not based on historical facts are forward-looking, may involve risks and uncertainties, and are intended to be as of the date when made. Forward-looking statements include, but are not limited to, the outcome of regulatory proceedings, cost estimates of capital projects and other matters affecting future operations. In connection with the safe harbor provisions of the Private Securities Litigation Reform Act of 1995, Great Plains Energy and KCP&L are providing a number of important factors that could cause actual results to differ materially from the provided forward-looking information. These important factors include: future economic conditions in regional, national and international markets and their effects on sales, prices and costs; prices and availability of electricity in regional and national wholesale markets; market perception of the energy industry, Great Plains Energy and KCP&L; changes in business strategy, operations or development plans; the outcome of contract negotiations for goods and services; effects of current or proposed state and federal legislative and regulatory actions or developments, including, but not limited to, deregulation, re-regulation and restructuring of the electric utility industry; decisions of regulators regarding rates the companies can charge for electricity; adverse changes in applicable laws, regulations, rules, principles or practices governing tax, accounting and environmental matters including, but not limited to, air and water quality; financial market conditions and performance including, but not limited to, changes in interest rates and credit spreads and in availability and cost of capital and the effects on nuclear decommissioning trust and pension plan assets and costs; impairments of long-lived assets or goodwill; credit ratings; inflation rates; effectiveness of risk management policies and procedures and the ability of counterparties to satisfy their contractual commitments; impact of terrorist acts, including but not limited to cyber terrorism; ability to carry out marketing and sales plans; weather conditions including, but not limited to, weather-related damage and their effects on sales, prices and costs; cost, availability, quality and deliverability of fuel; the inherent uncertainties in estimating the effects of weather, economic conditions and other factors on customer consumption and financial results; ability to achieve generation goals and the occurrence and duration of planned and unplanned generation outages; delays in the anticipated in-service dates and cost increases of generation, transmission, distribution or other projects; Great Plains Energy's ability to successfully manage transmission joint venture; the inherent risks associated with the ownership and operation of a nuclear facility including, but not limited to, environmental, health, safety, regulatory and financial risks; workforce risks, including, but not limited to, increased costs of retirement, health care and other benefits; and other risks and uncertainties.

This list of factors is not all-inclusive because it is not possible to predict all factors. Other risk factors are detailed from time to time in Great Plains Energy's and KCP&L's quarterly reports on Form 10-Q and annual report on Form 10-K filed with the Securities and Exchange Commission. Each forward-looking statement speaks only as of the date of the particular statement. Great Plains Energy and KCP&L undertake no obligation to publicly update or revise any forward-looking statement, whether as a result of new information, future events or otherwise.

AGENDA

TOPICS FOR TODAY'S DISCUSSION



BUSINESS UPDATE

- First quarter 2016 earnings highlights and update of 2016 EPS guidance
- Legislative and regulatory priorities
- Update of strategic plan

EARNINGS REVIEW

- First quarter 2016 results
- 2016 earnings drivers

BUSINESS UPDATE

Terry Bassham
Chairman, President and CEO

OUR FUTURE FOCUS

As a leading provider of electricity in the Midwest, we focus on closely managing our existing business, promoting economic growth and improving our customer experience

RESULTS

- First quarter 2016 EPS of $0.17 compared to $0.12 in prior year
- Affirming 2016 EPS guidance range of $1.65 to $1.80

COMMITMENT

- Proactively addressing regulatory lag through regulatory and legislative priorities
- Environmental sustainability practices
  - Ceased burning coal at two units
  - Announced the expansion of our renewable energy portfolio to about 20% of total capacity

INNOVATION

- KCP&L is the first utility in Kansas to request energy-savings programs for customers through Kansas Energy Efficiency Investment Act

OUR REGULATORY PRIORITIES

MANAGING LEGISLATIVE AND REGULATORY ISSUES

We are firmly committed to reducing regulatory lag and are partnering with policy makers and other utilities on comprehensive reforms

- Legislation pending in Missouri for comprehensive, performance-based statewide regulatory reform for investor-owned electric utilities
- Pending conclusion of Missouri legislative process, expect to file KCP&L Missouri general rate case in the second half of 2016 for recovery of investments and to address regulatory lag
- Expedited GMO rate case schedule calls for new retail rates effective December 2016
- File abbreviated rate case for KCP&L Kansas by November 2016

OUR STRATEGIC PRIORITIES

EXECUTING OUR PLAN FOR CONTINUED GROWTH

Continue to promote the economic strength of the region, improve the customer experience and grow earnings

BEST-IN-CLASS OPERATIONS

- Disciplined execution to deliver reliable and low cost power
- Focused on earning our allowed return by actively managing regulatory lag
- Proactive economic development

CUSTOMER ENGAGEMENT

- Responsive to changing customer expectations
  - Technology investments that facilitate more informed customer interaction
  - Expand comprehensive suite of energy-related products and services

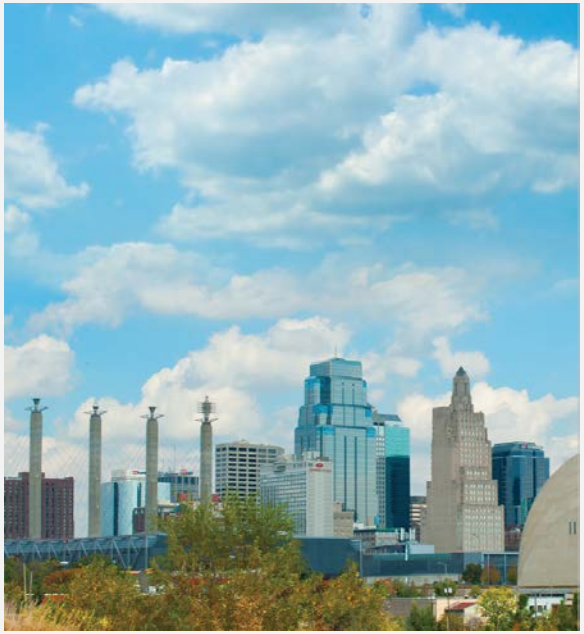
TARGETED INVESTMENTS

- Balanced strategic growth initiatives through national transmission opportunities and flexibility for opportunistic growth

OUR VALUE PROPOSITION
STRONG GROWTH AND BALANCED RETURNS

Solid execution of our strategic plan and financial results combined with long-term targets equal an attractive platform for investors

EPS GROWTH TARGET	• Annualized EPS growth of 4% to 5% through 2020[1] • Rate base growth of 2% to 3% through 2020 • Focus on minimizing regulatory lag
DIVIDEND GROWTH TARGET	• Dividend growth of 5% to 7% through 2020 • Dividend payout ratio of 60% to 70% through 2020
TOTAL RETURN	• Balanced total shareholder return profile



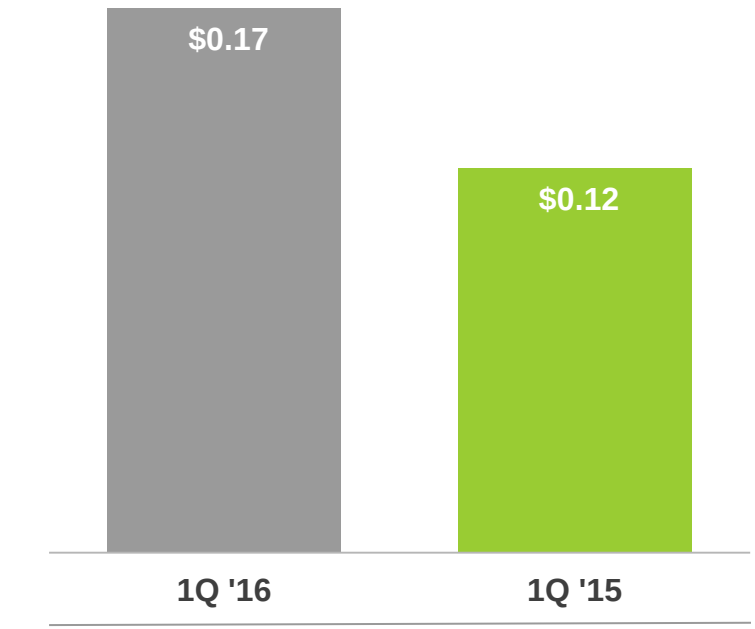
1. *Based on our 2016 EPS guidance range of $1.65 - $1.80*

EARNINGS REVIEW

Kevin Bryant
SVP Finance & Strategy and CFO

FIRST QUARTER RESULTS
EARNINGS – 2016 vs 2015

EARNINGS PER SHARE



Affirming 2016 earnings per share guidance range of $1.65 - $1.80

EPS 2016 COMPARED TO 2015

	1Q
New retail rates	$0.12
Weather	($0.07)
New cost recovery mechanisms	$0.06
MEEIA throughput disincentive	$0.02
Other margin	$0.01
O&M	($0.02)
AFUDC	($0.03)
Depreciation & Amortization	($0.02)
Other	($0.02)
Total	**$0.05**

EARNINGS CONSIDERATIONS
FULL YEAR 2016

EARNINGS GUIDANCE	• Affirming 2016 EPS guidance range of $1.65 - $1.80
REVENUE ASSUMPTIONS	• Normal weather the remainder of 2016 • Weather-normalized demand growth - 12-months ended March 31, 2016, weather-normalized demand up 0.4%, net of energy efficiency—in line with full year projection of flat to 0.5% • New retail rates and cost recovery mechanisms in KCP&L's Missouri and Kansas jurisdictions effective September 29, 2015 and October 1, 2015, respectively
OTHER DRIVERS	• Disciplined cost and capital management • Effective tax rate of approximately 37% in 2016

LONG-TERM GROWTH OUTLOOK
FOR THE YEARS 2016-2020

We are excited about our long-term opportunity to grow our business while meeting the increasing needs of our customers

EARNINGS GROWTH

- Earnings growth driven by investments in regulated utility infrastructure, disciplined cost management and national transmission opportunities
- Targeting 4% to 5% CAGR[1]

DIVIDEND GROWTH

- Increasing cash flexibility expected to drive dividend growth and potential share repurchases
- Targeting 5% to 7% CAGR

RATE BASE GROWTH

- Targeted investments to empower customers and optimize our grid.
- Targeting 2% to 3% CAGR

1. *Based on our 2016 EPS guidance range of $1.65 - $1.80*

FIRST QUARTER 2016 EARNINGS PRESENTATION

APPENDIX

RECONCILIATION OF GROSS MARGIN TO OPERATING REVENUES

GREAT PLAINS ENERGY (UNAUDITED)

($ in millions)	THREE MONTHS ENDED MARCH 31	
	2016	**2015**
Operating revenues	$572.1	$549.1
Fuel	(90.6)	(107.6)
Purchased power	(45.0)	(45.4)
Transmission	(23.5)	(20.9)
Gross margin	**$413.0**	**$375.2**

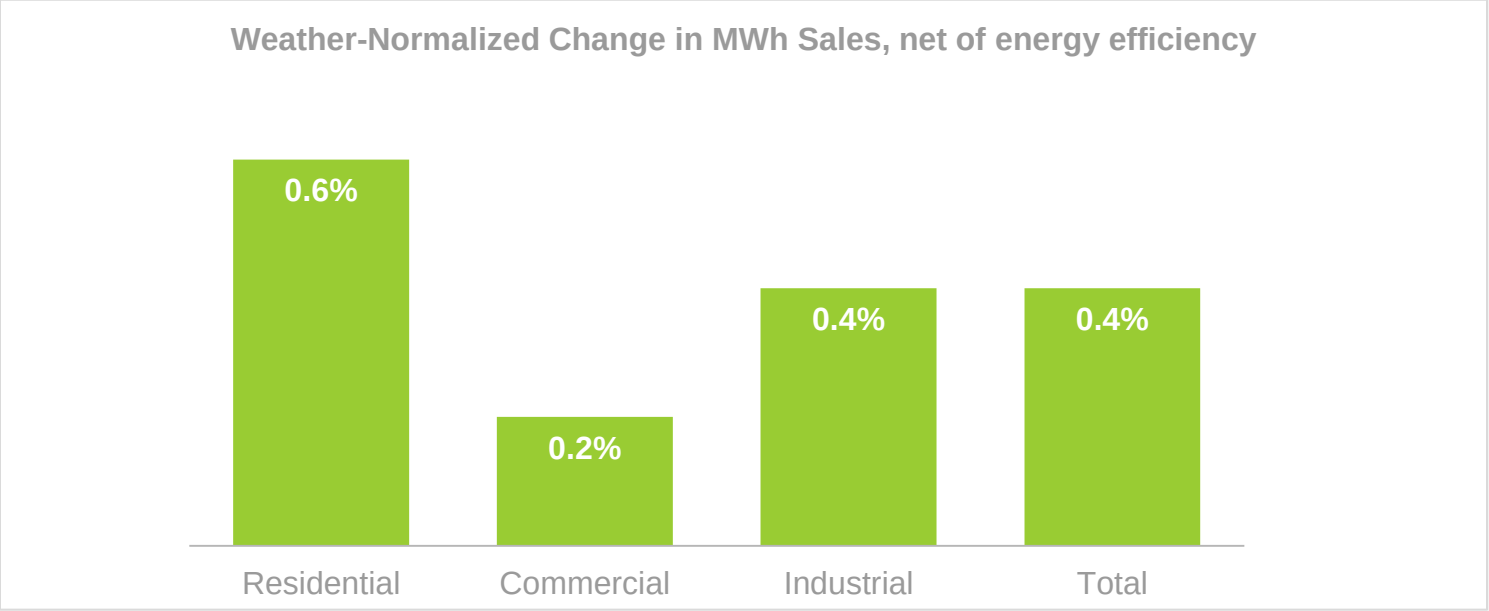
Gross margin is a financial measure that is not calculated in accordance with generally accepted accounting principles (GAAP). Gross margin, as used by Great Plains Energy, is defined as operating revenues less fuel, purchased power and transmission. The Company's expense for fuel, purchased power and transmission, offset by wholesale sales margin, is subject to recovery through cost adjustment mechanisms, except for KCP&L's Missouri retail operations prior to September 29, 2015. As a result, operating revenues increase or decrease in relation to a significant portion of these expenses. Management believes that gross margin provides a meaningful basis for evaluating the Electric Utility segment's operations across periods than operating revenues because gross margin excludes the revenue effect of fluctuations in these expenses. Gross margin is used internally to measure performance against budget and in reports for management and the Board of Directors. The Company's definition of gross margin may differ from similar terms used by other companies. A reconciliation to GAAP operating revenues is provided in the table above

WEATHER-NORMALIZED DEMAND TRENDS

12-MONTHS ENDED MARCH 31, 2016

- For the 12-months ended March 31, 2016:
  - Estimate the impact of our MEEIA programs is approximately 0.5%
  - Customer growth increase of 1%

WEATHER-NORMALIZED RETAIL SALES GROWTH



Full-year 2016 projection of flat to 0.5%, net of approximately 0.5% due to our energy efficiency programs

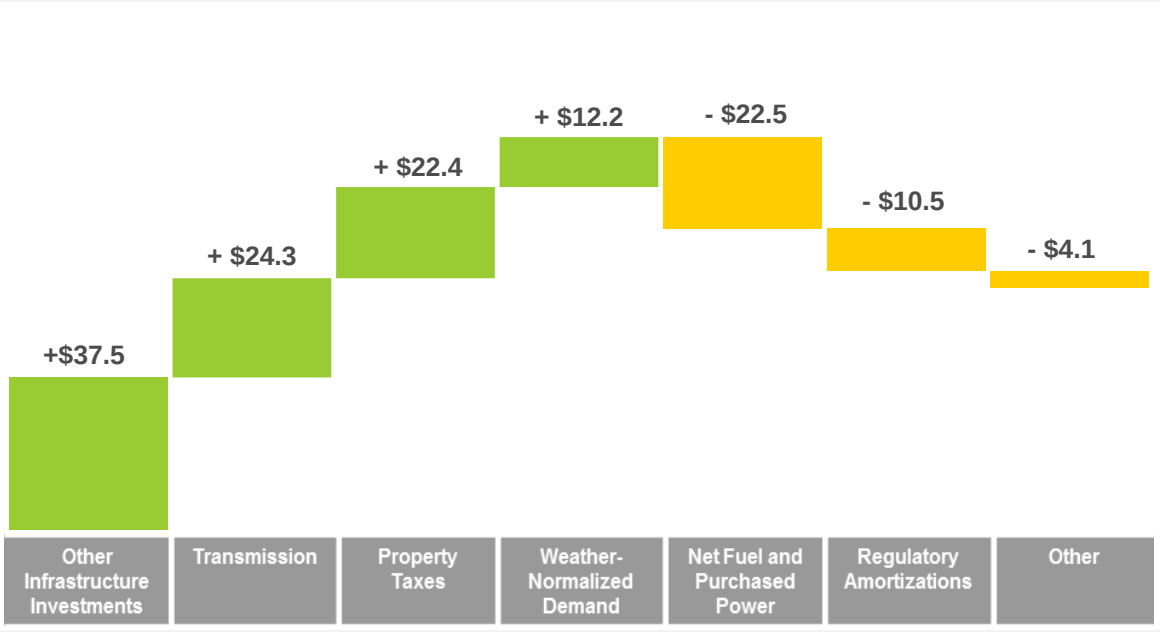
GMO CONSOLIDATED RATE CASE SUMMARY

CASE NUMBER	DATE FILED	REQUESTED INCREASE (IN MILLIONS)	REQUESTED INCREASE (PERCENT)	RATE BASE (IN MILLIONS)	ROE	COST OF DEBT	RATE – MAKING EQUITY RATIO	CAPITAL STRUCTURE ROR	ANTICIPATED EFFECTIVE DATE OF NEW RATES
ER-2016-0156	2/23/16	$59.3	8.17%	$1,906[1]	9.9%	5.09%	54.83%	7.73%	12/22/16

RATE CASE ATTRIBUTES

- Test year ended June 30, 2015 with a requested July 31, 2016 true-up date
- Primary drivers:
  - New infrastructure investments to ensure reliability, security and dependable service to customers
  - GMO standalone capital structure
  - Average of projected 2017-2018 expenses for both transmission costs and Critical Infrastructure Projection Standards (CIPS) / Cybersecurity

$59.3 MILLION RATE INCREASE REQUEST



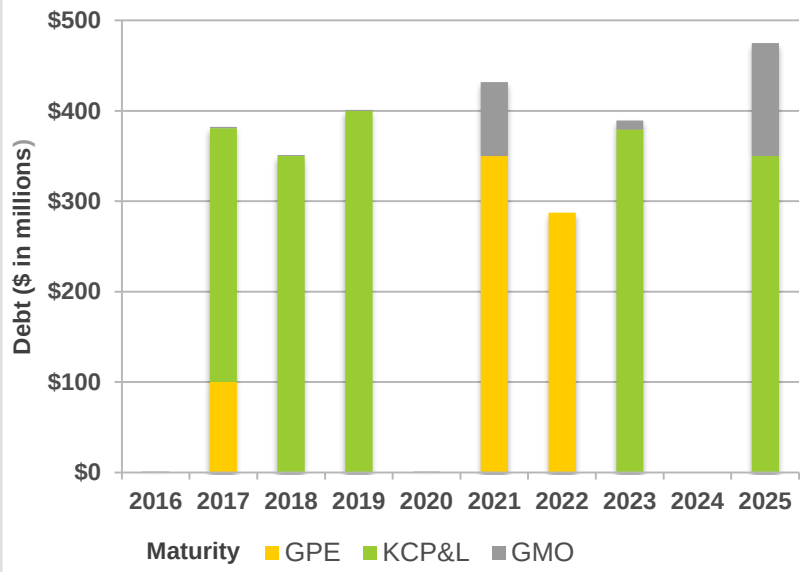
1. *Projected rate base is approximately $76 million or 4% higher than at the conclusion of the last GMO rate cases for the MPS and L&P jurisdictions*

MARCH 31, 2016 DEBT PROFILE AND CREDIT RATINGS

GREAT PLAINS ENERGY DEBT

Debt ($ in millions)	KCP&L		GMO[1]		GPE		Consolidated	
	Amount	Rate[2]	Amount	Rate[2]	Amount	Rate[2]	Amount	Rate[2]
Short-term debt	$195.8	0.96%	$267.5	0.82%	$15.0	1.97%	$478.3	0.91%
Long-term debt[3]	2,563.4	4.94%	446.6	5.03%	735.5	5.30%	3,745.5	5.02%
Total	**$2,759.2**	**4.66%**	**$714.1**	**3.45%**	**$750.5**	**5.23%**	**$4,223.8**	**4.56%[4]**

LONG-TERM DEBT MATURITIES[5]



CURRENT CREDIT RATINGS

	Moody's	Standard & Poors
Great Plains Energy		
Outlook	Stable	Stable
Corporate Credit Rating	–	BBB+
Preferred Stock	Ba1	BBB-
Senior Unsecured Debt	Baa2	BBB
Stable		
KCP&L		
Outlook	Stable	Stable
Senior Secured Debt	A2	A
Senior Unsecured Debt	Baa1	BBB+
Commercial Paper	P–2	A–2
GMO		
Outlook	Stable	Stable
Senior Unsecured Debt	Baa2	BBB+
Commercial Paper	P–2	A–2

[1]Great Plains Energy guarantees approximately 42% of GMO's debt; [2]Weighted Average Rates–excludes premium/discounts and other amortizations;
[3]Includes current maturities of long-term debt; [4]Secured debt=$691M (16%), Unsecured debt=$3,533M (84%); [5]Includes long-term debt maturities through December 31, 2025

S&P CAPITAL IQ
McGRAW HILL FINANCIAL

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Ameren Corporation NYSE:AEE

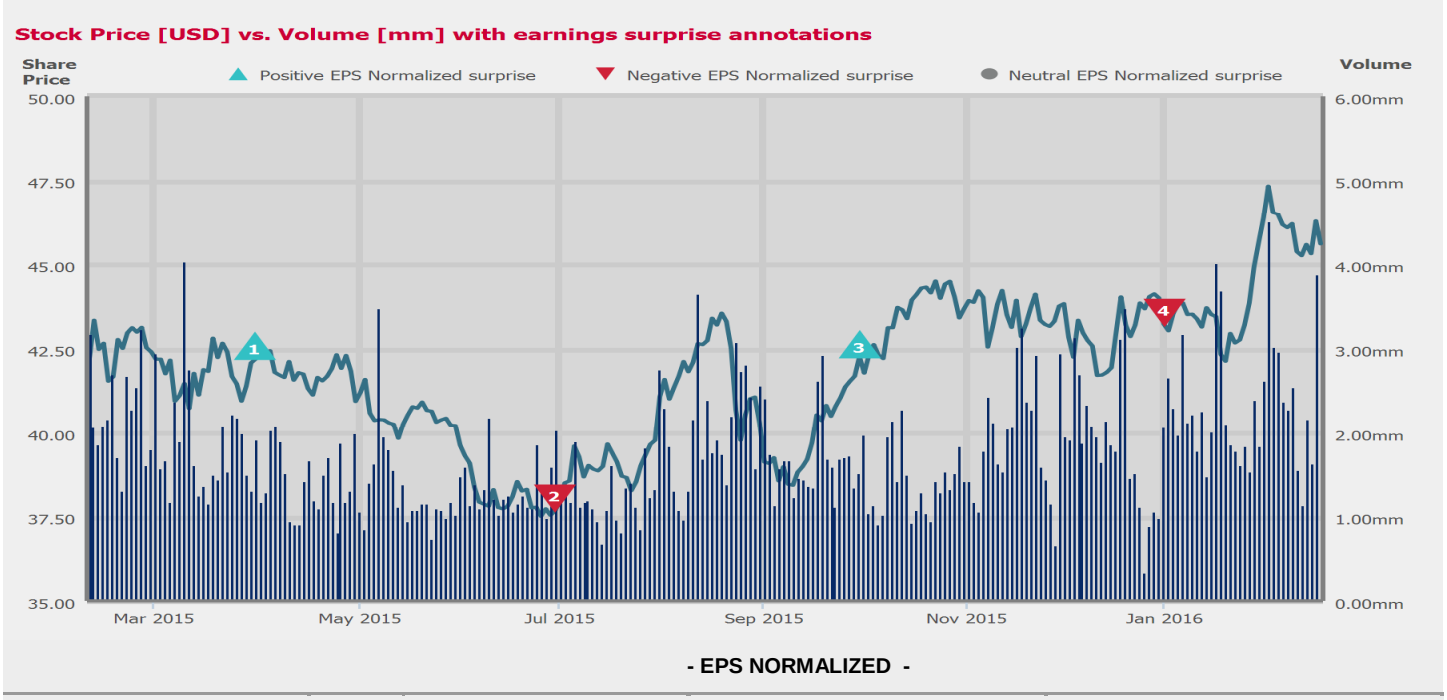
FQ1 2016 Earnings Call Transcripts

Wednesday, May 11, 2016 2:00 PM GMT

S&P Capital IQ Estimates

	-FQ1 2016-			-FQ2 2016-	-FY 2016-	-FY 2017-
	CONSENSUS	ACTUAL	SURPRISE	CONSENSUS	CONSENSUS	CONSENSUS
EPS Normalized	0.37	0.43	▲16.22	0.53	2.52	2.81
Revenue (mm)	1510.22	1434.00	▼(5.05 %)	1456.96	6259.93	6524.73

Currency: USD
Consensus as of May-09-2016 10:56 AM GMT



- EPS NORMALIZED -

	CONSENSUS	ACTUAL	SURPRISE
FQ1 2015	0.38	0.45	▲1 18.42 %
FQ2 2015	0.61	0.58	▼2 (4.92 %)
FQ3 2015	1.30	1.41	▲3 8.46 %
FQ4 2015	0.15	0.12	▼4 (20.00 %)

Call Participants

EXECUTIVES

Douglas Fischer
Senior Director of Investor Relations

Martin J. Lyons
Chief Financial Officer, Executive Vice President, Chairman of Ameren Services and President of Ameren Services

Maureen A. Borkowski
Chairman of Atxi, Chief Executive Officer of Atxi and President of Atxi

Michael L. Moehn
Chairman of Ameren Missouri and President of Ameren Missouri

Warner L. Baxter
Executive Chairman, Chief Executive Officer and President

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Presentation

Operator

Greetings, and welcome to the Ameren Corporation's First Quarter 2016 Earnings Call. [Operator Instructions] As a reminder, this conference is being recorded.

It is now my pleasure to introduce your host, Doug Fischer, Senior Director of Investor Relations for Ameren Corporation. Mr. Fischer, you may begin.

Douglas Fischer
Senior Director of Investor Relations

Thank you, and good morning. I'm Doug Fischer, Senior Director of Investor Relations for Ameren Corporation.

On the call with me today are Warner Baxter, our Chairman, President and Chief Executive Officer; and Marty Lyons, our Executive Vice President and Chief Financial Officer; as well as other members of the Ameren management team.

Before we begin, let me cover a few administrative detail. This call is being broadcast live on the Internet, and the webcast will be available for 1 year on our website at ameren.com. Further, this call contains time-sensitive data that is accurate only as of the date of today's live broadcast, and redistribution of this broadcast is prohibited.

To assist with our call this morning, we have posted on our website a presentation that will be referenced by our speakers. To access this, please look in the Investors section of our website under Webcasts and Presentations and follow the appropriate link.

Turning to Page 2 of the presentation. I need to inform you that comments made during this conference call may contain statements that are commonly referred to as forward-looking statements. Such statements include those about future expectations, beliefs, plans, strategies, objectives, events, conditions and financial performance. We caution you that various factors could cause actual results to differ materially from those anticipated. For additional information concerning these factors, please read the Forward-looking Statements section in the news release we issued yesterday and the Forward-looking Statements and Risk Factors sections in our filing with the SEC.

Warner will begin this call with comments on first quarter financial results, full year 2016 earnings guidance and a business update. Marty will follow with a more detailed discussion of first quarter results and an update on financial and regulatory matters. We will then open the call for questions.

Before Warner begins, I would like to mention that all per share earnings amounts discussed during today's presentation, including earnings guidance, are presented on a diluted basis unless otherwise noted. Now here's Warner, who will start on Page 4 of the presentation.

Warner L. Baxter
Executive Chairman, Chief Executive Officer and President

Thanks, Doug. Good morning, everyone, and thank you for joining us. Yesterday afternoon, we announced first quarter 2016 earnings of $0.43 per share compared to $0.45 per share in last year's first quarter. The earnings decline reflected lower electric and natural gas sales volumes, which were primarily due to milder winter temperatures. These milder temperatures lowered earnings by an estimated $0.10 per share compared to 2015.

The year-over-year earnings comparison was also reduced as a result of lower electric sales to Noranda Aluminum,

historically, Ameren Missouri's largest customer. In early January 2016, Noranda announced that production had been idle at 2 of its 3 smelter pipelines as a result of an operational failure. And in mid-March, Noranda idled its remaining smelter pot line.

The impact of these unfavorable items was partially offset by a decrease in the effective income tax rate, which was primarily due to tax benefits associated with share-based compensation. The earnings comparison also benefited from increased earnings from FERC-regulated transmission and Illinois electric and natural gas delivery service, resulting from infrastructure investments made under modern constructive regulatory frameworks in order to better serve our customers.

Overall, our first quarter results were solid, and we remain on track to deliver within our 2016 earnings guidance range of $2.40 to $2.60 per share.

Turning now to Page 5. Here, we reiterate our strategic plan. We remain focused on executing this strategy and continue to strongly believe it will deliver superior long-term value to both our customers and shareholders.

I would like to highlight some of our year-to-date efforts and accomplishments towards this end.

These include our continued strategic allocation of significant amounts of capital to those businesses whose investments are supported by regulatory frameworks that provide fair, predictable and timely cost recovery and also deliver long-term benefits to our customers. This capital allocation is illustrated in the graphic on the right side of the slide. As you can see, we invested more than $300 million of our first quarter capital expenditures in jurisdictions with the support of regulatory frameworks. This represented almost 2/3 of our first quarter 2016 investments and included approximately $170 million of capital spent on FERC-regulated projects.

The largest of these is ATXI's $1.4 billion Illinois Rivers transmission project. Construction of the first of this project's 9-line segments is now complete, with construction of 3 other segments in 2 of 3 river crossings expected to be completed later this year. Further, 2 of the project's 10 substations are already in service, with construction well underway on the remaining ones. For ATXI's Spoon River project in Northwestern Illinois, we are currently acquiring right of way and plan to begin line construction later this year. In addition, the project's new substation is under construction and should be completed by the end of the year.

Finally, I am pleased to note that the Missouri Public Service Commission approved the certificate of convenience and necessity for the Mark Twain project late last month. Moving forward, we plan to obtain assents from the 5 counties that Mark Twain will cross and to begin right-of-way acquisition soon.

All 3 of these transmission projects, Illinois Rivers, Spoon River and Mark Twain are MISO-approved multi-value projects. When completed, these projects will deliver significant customer benefits, including improved reliability and access to cleaner generation, including wind power from the western and northern parts of the MISO region.

Turning to Page 6 of our presentation. Let me update you on the execution of our strategic plan at Ameren Illinois. We invested approximately $145 million in Illinois electric and natural gas delivery infrastructure projects in the first quarter of this year. These investments are made under the company's Modernization Action Plan, which was enabled by Illinois' Energy Infrastructure Modernization Act. This work remains on track to meet or exceed its investment, reliability and advanced metering goals.

Ameren Illinois customers are experiencing fewer and shorter power outages as a result of electric grid upgrades. Since the program began in 2012, installation of storm-resilient utility poles, advanced meters, outage detection technology and stronger power lines has resulted in 17% improvement in reliability. And when customers do experience an outage, Ameren Illinois is restoring power 18% faster on average than in previous years. Further, installations of advanced electric meters are ahead of schedule. In 2016, Ameren Illinois plans to deploy at least 148,000 electric and 103,000 gas

meters at customer locations in central and southern Illinois.

Also, from the beginning of 2012 through 2015, Ameren Illinois added more than 400 employees and more than 1,100 contractor personnel in support of electric system projects under this Modernization Action Plan. These benefits are being driven by the forward-thinking and constructive regulatory frameworks that support investment in Illinois.

Turning now to Missouri, where modernizing the regulatory framework has been a key area of focus. As we speak today, House Bill 2689, 21st Century Grid Modernization and Security Act, remains on the Missouri senate calendar and is available for further debate. Informed by extensive outreach, collaboration and input from key stakeholders, this legislation has received unprecedented statewide support, including that from major chambers of commerce, individual businesses, labor, suppliers, the Missouri farm bureau and many other key stakeholders. In addition, this process has resulted in significant and constructive dialogue with policymakers regarding the extent which regulatory lag discourages investment in grid monetization.

Unfortunately, the bill is subject to a filibuster by a small group of state senators during debate last week and was not advanced at that time. Time is short for passers of this legislation as this year's general assembly session ends Friday. As a result, I do not believe a comprehensive performance-based ratemaking legislation will be enacted this session.

However, despite the short window, we continue to work with key stakeholders to find other constructive paths forward this session. In addition, we will remain focused on enhancing energy policies to address regulatory lag and support investment in aging infrastructure through both the regulatory and legislative processes. As a result, and at this time, I do expect that we would support another legislative initiative next year.

I am convinced that those efforts are in the best long-term interest of our customers and the entire State of Missouri as we seek to modernize the grid to meet our customers' future energy needs and expectations as well as create jobs. As long as Missouri stands still, it is being left behind by other states who have adopted forward-thinking energy policies. In light of the fact that we do not expect comprehensive regulatory reform this session, coupled with the ongoing financial impacts of Noranda's outage, as well as increased investments and operating costs, we are moving forward with plans to file for an electric rate increase in early July.

Moving from regulatory and legislative matters to a quick comment on Missouri operational matters. Our scheduled 2016 nuclear refueling and maintenance outage at the Callaway Energy Center was successfully executed, and the plant is now back online. We also continue our efforts to relentlessly improve operating performance, including our focus on safety, disciplined cost management and strategic capital allocation.

Moving on to Page 7 and our long-term total return outlook. In February, we outlined our plan to grow rate base at an approximate 6.5% compound annual rate over the 2015 to 2020 period, driven by a strong pipeline of investments to benefit customers and shareholders. Our peer-leading rate base growth reflects strategic allocation of capital to those jurisdictions that operate under constructive and modern regulatory frameworks. In addition, we stated in February that we expected earnings per share to grow at a 5% to 8% compound annual rate from 2016 to 2020, excluding the estimated temporary negative effect on 2016 earnings of lower sales to Noranda. Our rate base growth is foundational to our strong earnings per share growth expectations.

We also remain focused on our dividend because we recognize its importance to our shareholders. Today, our dividend yield remains above the average of our regulated utility peers. Of course, future dividend increases will be based on consideration of, among other things, earnings growth, cash flows and economic and other business conditions. To summarize, we are relentlessly executing our strategy, and I remain firmly convinced that continuing to do so will deliver superior value to our customers, shareholders and the communities we serve.

Again, thank you all for joining us today. I'll now turn the call over to Marty. Marty?

Martin J. Lyons
Chief Financial Officer, Executive Vice President, Chairman of Ameren Services and President of Ameren Services

Thanks, Warner. Good morning, everyone.

Turning now to Page 9 of our presentation. As Warner already noted, we reported earnings of $0.43 per share for the first quarter of 2016 compared to earnings of $0.45 per share for the year-ago period. Key drivers of the earnings variance are listed on this page.

Lower electric and natural gas sales volumes reduced earnings, with milder winter temperatures accounting for an estimated $0.10 per share decline. This temperature-related earnings decline was almost entirely driven by lower electric sales volumes since Illinois gas sales are subject to a volume-balancing adjustment effective at the beginning of this year. This volume-balancing adjustment ensures that changes in natural gas sales, including those from weather, do not result in an over- or under-collection of revenues from residential and small nonresidential customers.

First quarter 2016 temperatures were not only milder than those experienced in the year-ago period, they were also milder than normal, with heating degree days about 20% less than the year-ago period and about 10% less than normal.

The remainder of the sales volume-related earnings decline was almost entirely due to the idling of Noranda's smelter pot lines. Further, the carryover effect from Ameren Missouri's 2013 through 2015 energy efficiency plan reduced earnings by $0.03 per share.

Moving to the next key driver of the first quarter earnings variance. Last year's Ameren Illinois results benefited from recovery of certain cumulative power usage costs. The absence of this benefit had a $0.04 per share unfavorable effect on the earnings comparison.

Shifting now to factors that had a favorable effect on the first quarter earnings comparison. A decrease in the effective income tax rate lifted earnings by $0.08 per share. This reduced tax rate was primarily due to recognition of 2016 tax benefits associated with share-based compensation. These benefits were recognized in earnings pursuant to accounting guidance issued in March of 2016.

I would note that the level of such tax benefit to be recognized in future years will be a function of the fair value of share-based incentive awards when they vest and could cause our effective income tax rate to fluctuate above or below the approximately 38% effective tax rate normally expected. For 2016, we now project the full year effective tax rate to be approximately 35%.

In addition, increased investments in electric transmission and delivery infrastructure in our ATXI and Ameren Illinois businesses lifted earnings by $0.05 per share compared to the year-ago period. I want to note that our ATXI and Ameren Illinois transmission earnings continue to be reduced by reserve, reflecting the potential for a lower MISO-based allowed ROE, given pending complaint cases at the FERC. In addition, the earnings of our Illinois electric delivery business incorporated an 8.7% allowed ROE under formulaic ratemaking compared to 8.6% for the year-ago period. The Illinois electric delivery ROE reflected in first quarter 2016 results assumes an annual average 30-year treasury yield of 2.9% for the full year.

Moving to the last item on the page. Earnings for the first quarter also benefited from higher Illinois natural gas delivery service rates effective at the beginning of this year, adding $0.04 per share.

Before moving on, let me briefly cover electric sales trends for the first quarter. Weather-normalized kilowatt hour sales to Illinois and Missouri residential and commercial customers were essentially flat as the 2016 leap day sales benefit was offset by energy efficiency impacts. Kilowatt hour sales to Illinois' industrial customers decreased approximately 8%, primarily reflecting lower sales to several large low-margin Illinois customers, including those in mining, agriculture, auto

and steelmaking. Excluding lower sales to Noranda, kilowatt hour sales to Missouri's industrial customers were flat.

Turning to Page 10 of our presentation. Now I would like to discuss our guidance for this year. As Warner stated, we continue to expect 2016 diluted earnings to be in the range of $2.40 to $2.60 per share despite several notable items that were not incorporated into our initial guidance provided back in February. These include 1 favorable item that was offset by 3 unfavorable items, resulting in no change to our guidance range.

The favorable item was the decrease in the first quarter effective income tax rate, primarily due to tax benefits associated with share-based compensation, which boosted earnings by $0.08 per share. The 3 unfavorable items were: milder first quarter temperatures, which reduced earnings by an estimated $0.05 per share compared to normal temperatures; an increase on the 2016 estimated earnings impact from lower sales to Noranda of $0.02 per share; as well as a 30 basis point lower assumed ROE for Illinois electric delivery service, which reduced expected 2016 EPS by almost $0.02 per share. The last item reflected the lower estimated average 30-year treasury rate for 2016 of 2.9%, which I mentioned a moment ago, compared to our beginning-of-the-year estimate of 3.2%.

Regarding Noranda, our 2016 guidance includes an updated estimate of approximately $0.15 per share for the impact of lower electric sales to this customer compared to the prior estimate of $0.13 per share. As we discussed in February, this estimate is net of expected revenues from off-system sales that Ameren Missouri is making as a result of reduced sales to Noranda and that are retained under the provision of our fuel adjustment clause. This estimate has been updated for the regulatorily agreed-upon method for calculating such off-system sales revenues and changes in forward power prices. We continue to assume Noranda's production lines will remain idle for the rest of this year. I will not go through the balance of the year earnings considerations listed on this page since they are largely self-explanatory and we discussed each item on our February earnings call.

Overall, our goal remains to earn at or close to our allowed ROEs in all of our jurisdictions. Of course, this goal will continue to be more challenging to achieve in Missouri, pending improvement in the regulatory framework. However, as Warner mentioned, we expect to file a Missouri electric rate case in early July to recover costs related to additional infrastructure investments and rising expenses, including those related to net fuel, depreciation, transmission service and property taxes. In addition, rates need to be adjusted to reflect the loss of sales to Noranda. As discussed in February, we expect the earnings impact of lower sales to Noranda to be temporary.

Moving now to Page 11. I would like to update you on select regulatory matters pending at the Illinois Commerce Commission and the Federal Energy Regulatory Commission. Turning first to Illinois. Last month, Ameren Illinois made its required annual electric delivery rate update filing. Under Illinois' formula ratemaking, our utility is required to file annual rate updates to systematically adjust cash flows over time for changes in cost of service and to true up any prior period over- or under-recovery of such costs.

Our filing seeks a $14 million decrease in annual electric rates. This net amount includes a $96 million increase reflecting 2015 actual costs, related carrying charges and expected 2016 infrastructure investments, which is more than offset by a $110 million decrease due to recovery by year-end 2016 of previously under-recovered 2014 costs and related carrying charges. The ICC will review the matter in the months ahead, with a decision expected in December of this year and new rates effective early next year. I'll remind you that each year's Illinois electric delivery earnings are a function of that year's ending rate base, the formula-determined allowed ROE, which is the annual average of 30-year U.S. treasury bond yields for that year plus 580 basis points and the ICC-authorized equity ratio and are not directly determined by that year's rate update filing.

Finally, previously mentioned complaint cases seeking to reduce base allowed ROE for MISO transmission owners, including Ameren Illinois and ATXI, are pending at the FERC. In the first case, the schedule calls for a final order from the FERC in the forced -- excuse me, in the fourth quarter of this year. And in the second case, the schedule calls for an initial order from an administrative law judge by the end of June this year with a final order from the FERC expected next year.

Finally, turning to Page 12. I will summarize. We have affirmed our earnings guidance for 2016, and we continue to execute our strategy. Further, on our February call, we stated that we expected earnings per share to grow at a strong 5% to 8% compound annual rate from 2016 through 2020, excluding the estimated temporary net effect of lower sales to Noranda this year. We said this earnings growth was driven by approximately 6.5% compound annual rate base growth over the 2015 through 2020 period based on a mix of needed transmission, distribution and generation investments across multiple regulatory jurisdictions being made for the benefit of customers. When you compile -- combine our strong earnings growth with Ameren's dividend, which now provides investors with an above-peer-group average yield of approximately 3.5%, we believe our common stock provides very attractive total return potential for investors.
That concludes our prepared remarks. We now invite your questions.

Question and Answer

Operator

[Operator Instructions] Our first question comes from the line of Paul Patterson with Glenrock Associates.

Paul Patterson
Glenrock Associates LLC

Just with respect to the long-term earnings growth rate and your comments regarding the legislation and Noranda, I guess. It seems like you're suggesting that Noranda might be a temporary situation and that you expect that it might change. I was just wondering, is Noranda in the long-term guidance, Noranda coming back that is? Or how should we think about that?

Martin J. Lyons
Chief Financial Officer, Executive Vice President, Chairman of Ameren Services and President of Ameren Services

Sure. Paul, this is Marty. You may recall when we gave the long-term guidance outlook back in February, we -- number one, said we expected 5% to 8% compound annual EPS growth from 2016 through 2020. And the foundational element of that, of course, is the 6.5% rate base growth that we have, which we showed, from 2015 to 2020. But importantly, when we talked about that 5% to 8% compounded annual EPS growth, we were basing that off of an adjusted 2016 EPS guidance of $2.63. Obviously, if you took our guidance for this year, the midpoint is $2.50, but we added to that the impact we estimated at that time of the Noranda outage, which was $0.13 at that time, to get to an adjusted midpoint of $2.63 and then based the earnings guidance off of that. And the reason we did that is that we do believe the impact of Noranda's outage on our earnings to be temporary, and as we mentioned on the call, we do expect to file a Missouri rate case in early July of this year. We expect that, that rate case will reflect the reduced usage by Noranda, and as our rates are adjusted next year, then the temporary impact of this earnings decline from the outage would be erased. So that's how we expect it to go. And so long term, in terms of our earnings growth guidance, Noranda may be there, Noranda may not be there. We're not speculating on that, but we do believe that, through the rate case process, the impact of the outage will be mitigated.

Paul Patterson
Glenrock Associates LLC

Okay. That makes sense. And just in terms of the legislation, as I recall, so you guys -- your earnings growth rate is not dependent upon Missouri legislation getting enacted. Is that still the case?

Martin J. Lyons
Chief Financial Officer, Executive Vice President, Chairman of Ameren Services and President of Ameren Services

Yes, that's absolutely right. We said that in February, and we stand by that. As you know, that the overall 6.5% rate base growth is the foundation. We've got about 2% growth forecasted for Missouri over that period of time. And we do believe both that rate base growth as well as our earnings growth expectation of 5% to 8% can be achieved without the need for legislation in Missouri.

Paul Patterson
Glenrock Associates LLC

How should we think about this tax benefit? I mean, how do you sort of model it? It sounds like there was obviously a benefit this year. But I mean, just in general, how do we factor in this new guidance associated with the taxes?

Martin J. Lyons

Chief Financial Officer, Executive Vice President, Chairman of Ameren Services and President of Ameren Services

Paul, it's a good question. And I think going forward, continuing to think about that 38% effective tax rate is probably the right way to think about it, but to be aware that there could be some variation up or down from year-to-year based upon this new accounting guidance. And as mentioned on the call, what it would really be a function of is what the fair value is of long-term share-based compensation as of the time of vest versus what's been reflected in book expense over the 3 years -- as it relates to our plans, over the 3-year vesting period. And that can create a little bit of volatility in the effective rate. In this particular period, as you see, the value of what vested was greater than what had been recognized in expense over the past 3 years, and therefore, the tax benefit was greater than the effective tax rate reflected over the past few years. So we ended up with a benefit this year. But as noted on the talking points, it could be a benefit or it could be a detriment. But I think in the absence of any further information, I think I'd expect that 38% effective tax rate. As it relates to this year, that item had a discrete impact on the first quarter, so it lowered the first quarter effective tax rate. At the end of the year, as we mentioned on the -- in the prepared remarks, we expect the tax rate -- effective tax rate to be around 35%, which would imply, over the remainder of this year -- in the remaining 3 quarters, that effective tax rate is somewhere between 37% and 38%.

Paul Patterson
Glenrock Associates LLC

Okay. And then just finally on the Mark Twain transmission ruling. There was this idea that you have to go back to the counties to get approval there, the county consent. There was some discussion at the PSC that, that was going to probably lead to more litigation in the court system. I just wonder if you could sort of elaborate a little bit on how you see that.

Maureen A. Borkowski
Chairman of Atxi, Chief Executive Officer of Atxi and President of Atxi

It's Maureen Borkowski. Yes, at this point in time, we're fully expecting just to go to each county and present the evidence of, really, their statutory obligation in each county is to ensure that the transmission line doesn't have any impact on the user safety of public roadways. So we will put that packet of information together for each county and pursue getting their assent when we make that demonstration. So at this point in time, we're not anticipating any additional litigation in that regard.

Operator

Our next question comes from the line of Julien Dumoulin-Smith with UBS.

Julien Dumoulin-Smith
UBS Investment Bank, Research Division

So perhaps following a little bit up on the last round of questions here. Can you elaborate a little bit on the specific differences in the statistics between Missouri and Illinois? You kind of -- you started off your remarks elaborating on Illinois. But just how does the 2 compare? And then what are the kind of tangible projects that would be on the table if you were to succeed, either this year or next year, under a new legislative framework?

Martin J. Lyons
Chief Financial Officer, Executive Vice President, Chairman of Ameren Services and President of Ameren Services

Julien, this is Marty. Could you restate your first question? We're not clear what statistics you were referring to.

Julien Dumoulin-Smith
UBS Investment Bank, Research Division

Well, you -- I suppose, what are the reliability statistics, the differentials between Illinois and Missouri? Just to get a sense as to what the -- what are you aspiring to in Missouri versus Illinois? And then -- or perhaps to boot with that, what

are the discrete and tangible projects that you're evaluating should you be able to get legislation this year or next year?

Warner L. Baxter
Executive Chairman, Chief Executive Officer and President

Yes. Paul (sic) [Julien], this is Warner. I think a couple of things. Number one, by and large, Illinois has clearly made progress in improving reliability as well as responding to outage duration as a result of the grid modernization project. By and large, what you're seeing between the 2 jurisdictions is that they're moving closer in terms of what their overall reliability and ultimate responsiveness to outages are. And so Illinois will continue to have specific metrics that they have to hit as part of the grid modernization act, and they'll continue to pursue that. As part of the legislative effort in Missouri, there are specific performance metrics that are put out there as well for reliability, and that was in the legislation. I think, importantly, what really we were focused on and continue to be focused on in Missouri is to address the aging infrastructure. So what are the kind of things that we would think about doing? Well, we would certainly be doing many of the things that you're seeing over in Illinois, investing in smart meters. Missouri needs to do that, and it's an opportunity not just for our customers ultimately to avail -- to use the more advanced meters. It's investing on a smarter grid. Whether it be on the power lines, whether it be in automating much of the grid compared to where it is today, substations, all these things are very important and things that we're doing in Illinois that we would be focused on doing in Missouri. We would also -- as part of the legislative effort, we'd be looking at the generation portfolio. Clearly, we have aging infrastructure there, and we could do improvements in a more timely fashion, we think, in our generating power plants as well as invest in renewable energy, which was a significant aspect of this bill. So when you put all those things together, these are things that we would be focused on in Missouri should we get legislation passed that would support that investment, and those are the kind of things we're going to continue to talk about with policymakers, both the remaining part of this session as well as, frankly, moving into next year, both during the rate case as well as preparing for the next legislative session.

Julien Dumoulin-Smith
UBS Investment Bank, Research Division

Excellent. And then turning my attention to Illinois. Specifically here, we've seen a lot of retirements in the last few weeks here. Can you comment at all where you are in the process of evaluating trends and the requisite transmission upgrades for MISO?

Warner L. Baxter
Executive Chairman, Chief Executive Officer and President

Yes. We have Maureen Borkowski. She can jump in. As we've seen some of these retirements, we think there are some transmission opportunities. And so Maureen, why don't you jump in and talk a little bit about some of those?

Maureen A. Borkowski
Chairman of Atxi, Chief Executive Officer of Atxi and President of Atxi

Yes. It's a little too early to be specific about what projects. But process-wise, when a generator applies to MISO to shut down even on an interim basis, there's a study that's done by our transmission planners of the generator on our system to determine what the transmission needs would be to make sure the system can still operate reliably. So there's certainly the potential, as these reported shutdowns are studied, for additional transmission investment. And the one thing I would point out is that, because any needed investment here would be for reliability purposes, that would be outside of the competitive process, and it would be Ameren's own companies that would make -- be making any investment that was identified.

Warner L. Baxter
Executive Chairman, Chief Executive Officer and President

So Julien, I apologize, I think I was saying Paul a moment ago. It's Julien, so I apologize for that. I'm sure Paul is not offended, hoping you're not as well.

Julien Dumoulin-Smith
UBS Investment Bank, Research Division

I'm sure he has ignored that. Last quick question on Missouri and the rate case. Any changes in the regulatory framework that you'd be seeking in this? And also, do you have any initial estimate on what the rate impact would be?

Warner L. Baxter
Executive Chairman, Chief Executive Officer and President

Julien, this is Warner. I think a couple of things. It would be premature for us to say if we're going to do something special from a regulatory framework perspective. Every time we move into a rate case, we step back and say "Okay, what, from a policy perspective, things that we want to pursue?" So we'll step back and think about that. And in terms of the overall rate increase, yes, it, too, is premature. You'll see a lot of that here coming up very soon in early July. We'll give you all the specifics, and as we move forward in the rest of the year, we'll explain the case in more detail to you and the rest of our shareholders.

Operator

Our next question comes from the line of Paul Ridzon with KeyBanc.

Paul Thomas Ridzon
KeyBanc Capital Markets Inc., Research Division

You've mentioned growth in Missouri of 2%. Is that EPS or rate base or both?

Martin J. Lyons
Chief Financial Officer, Executive Vice President, Chairman of Ameren Services and President of Ameren Services

Yes. Paul, this is Marty. That 2% I was referencing was rate base. So overall, we're expecting 6.5% compound annual rate base growth. In Missouri, we expect it to be 2% compound annual rate base growth. So really not commenting specifically there on earnings. But overall, I would say that 6.5% rate base growth is sort of the midpoint of our long-term earnings per share growth guidance of 5% to 8%. So consistent with what we've talked about in prior quarters, I mean, the bulk of that growth is coming in our FERC-regulated transmission and our Illinois electric and Illinois gas distribution businesses, where we're allocating a significant amount of capital because of the constructive regulation we have in those jurisdictions.

Paul Thomas Ridzon
KeyBanc Capital Markets Inc., Research Division

What's the statutory deadline to adjudicate a Missouri rate case?

Martin J. Lyons
Chief Financial Officer, Executive Vice President, Chairman of Ameren Services and President of Ameren Services

We've typically experienced 11-month resolution of the rate cases in Missouri.

Paul Thomas Ridzon
KeyBanc Capital Markets Inc., Research Division

And in February, I think you indicated that you might pursue an accounting order of some sort for Noranda or other means to rectify the situation. Where does that stand? Or is that just going to be through rate case?

Martin J. Lyons

Chief Financial Officer, Executive Vice President, Chairman of Ameren Services and President of Ameren Services

Sure, yes. No, good memory, good recollection. We laid that out there as one of the options that we would have in terms of ensuring this impact to be temporary. However, that's really not needed if the plan is to file a rate case. We'll make the appropriate requests in the context of the rate case we file in early July, and therefore, that accounting authority order would not be needed. So as we said on the call, that is our plan as we sit here today, is to file that rate case in early July.

Paul Thomas Ridzon
KeyBanc Capital Markets Inc., Research Division

Should we model in a $0.075 drag for Noranda in '17?

Martin J. Lyons
Chief Financial Officer, Executive Vice President, Chairman of Ameren Services and President of Ameren Services

We hadn't given that, but to your point, we said on our call today that we expect the impact to be about $0.15 this year. And just to give you an idea of how that breaks down this year, we expect -- obviously, we experienced in the first quarter about a $0.03 drag on earnings. We expect another $0.03 drag in the second quarter, $0.06 in the third quarter and then $0.03 again on the final quarter of the year in the fourth quarter. So through the first half of this year, about $0.06. To your point, Noranda was up and running, to some extent, in the first quarter. So I would say an impact in the order of $0.07 -- $0.06 to $0.07 in the early half of next year until we can get rates updated is probably a fair assumption.

Paul Thomas Ridzon
KeyBanc Capital Markets Inc., Research Division

And why is 3Q so heavily weighted? Do you have summer rates? Or...

Martin J. Lyons
Chief Financial Officer, Executive Vice President, Chairman of Ameren Services and President of Ameren Services

Yes. Noranda -- and we talked about this at some length in our February call. Noranda has differential in rate. So between October and May of each year, their rate has been $31 and during -- per megawatt hour and June to September, about $46. So it had differential, I'll call them, winter and summer rates. And so there is differentiated impact in those various quarters.

Operator

Our next question comes from the line of Feliks Kerman with Visium Asset Management.

Ashar Khan

This is Ashar. Marty, one thing which I read in the Q which I was little bit surprised was that the change in the FAC. Of course, I knew there was some transmission earnings, I guess, that we don't get recovery on a timely basis, but you mentioned that in '16, that could be a gap of like $20 million. So as we file the case next year, is there some way that this gap can be minimized to kind of 0 or something to be changed? I'm trying to kind of like put that into my model. Is there some way that, in this next case filing, that this regulatory lag can be eliminated?

Martin J. Lyons
Chief Financial Officer, Executive Vice President, Chairman of Ameren Services and President of Ameren Services

Sure, Ashar. What you're referring to in the Q, I believe, is that we actually lay out what the amount was that was actually included in rates when rates were set and then contrast that with the transmission costs that we're actually

experiencing in 2016. And so there's a differential there. The transmission costs have grown during our last rate case. Transmission costs were renewed from recovery in the FAC, and it's an element of lag that we're experiencing. So you would expect, as we go to file this next rate case, that we would update our cost of service for the transmission costs that we're incurring. And through the rate case process, you would expect then that, that increased cost would be incorporated into the revenue requirement.

Ashar Khan

But my question, is there some way -- because I'm assuming transmission costs are going to keep on going up. So is this going to be a repeat issue, like a year after the next rate case, we will again have under-recovery? Or is this just something which has happened this year? That's what I'm trying to kind of like gather.

Martin J. Lyons
Chief Financial Officer, Executive Vice President, Chairman of Ameren Services and President of Ameren Services

Ashar, in the absence of a change in the regulatory framework or some mechanism to avoid that, there would be a continuing drag on earnings or regulatory lag associated with that item. So that's something that certainly we'll consider as we go into this next rate case, is how to deal with that. But absolutely, at this point in time, it is not incorporated into the FAC. I'd remind you, Ashar, that overall, we continue to work very hard to earn as close to our allowed return as we can. We have had that lag from transmissions since the last rate case, and we've been working hard to do what we can to find cost reductions in other areas. I mentioned in the guidance earlier this year that year-over-year, as we move from '15 to '16, that we expect overall our operations and maintenance expenses to be down in Missouri and when you normalize for the Callaway refueling and remove the effect of Noranda, expect to earn within 50 basis points of the allowed this year. So in isolation, absolutely yes, the transmission -- the increases in transmission costs are creating lag for us.

Operator

[Operator Instructions] Our next question comes from the line of Brian Russo with Ladenburg Thalmann.

Brian J. Russo
Ladenburg Thalmann & Co. Inc., Research Division

Could you remind us of the test year in the most recently concluded Missouri rate case?

Martin J. Lyons
Chief Financial Officer, Executive Vice President, Chairman of Ameren Services and President of Ameren Services

Yes. I think it was -- we might look. I think it was in 2015, but I can't remember what the exact cutoff date was. I think I'll let Doug maybe address it.

Douglas Fischer
Senior Director of Investor Relations

Yes. The test year was the 12 months ended March 31 of '15, but then a number of things were updated. I'm not there -- yes, '15 and a number of things were updated through the end of the year. Am I giving the year wrong there? '14, I'm sorry, March -- end of March '14 was the test year, and then we updated for rate base and a number of items through the end of '14, and the rates went into effect in May of '15, late May.

Brian J. Russo
Ladenburg Thalmann & Co. Inc., Research Division

Okay. So I guess, if we wanted to kind of calculate the incremental net plan that you'll be seeking recovery of in this -- in the July rate case, could we just, back of the envelope, take your year-end '14 and grow it by the 2% CAGR?

Martin J. Lyons
Chief Financial Officer, Executive Vice President, Chairman of Ameren Services and President of Ameren Services

Yes. I think we'd have to give that one some thought, whether that simplified works or not.

Brian J. Russo
Ladenburg Thalmann & Co. Inc., Research Division

Got it, okay. And I'm just curious, hypothetically speaking, what happens if you go through the Missouri rate case, you get new rates in effect to reflect the loss in Noranda sales and then Noranda resumes the plant? Is that just incremental excess sales and margin until your next rate case?

Martin J. Lyons
Chief Financial Officer, Executive Vice President, Chairman of Ameren Services and President of Ameren Services

I don't know if I would assume that to be the case. As we work through the rate case, maybe there'll be clarity brought to that issue. But wouldn't want to speculate that there'd be some windfall that would be achieved as a result of that.

Operator

Our next question comes from the line of Andy Levi with Avon Capital.

Andrew Levi

Just 2 questions. Just can you guys talk about just M&A and -- in the context of Ameren as a buyer?

Warner L. Baxter
Executive Chairman, Chief Executive Officer and President

So Andy, this is Warner. And so a couple of things. Just in general, as you know, from a buyer perspective obviously, if you look in the past, we have been a buyer of M&A. But as I've said before and continue to say, our policy has been we don't really kind of get into the specifics or comment on speculative transactions or M&A activities. And just in general, that's not very constructive, but as you know, we've grown in the past 2 acquisitions. But to be clear, our current plan is focused on the plan that I laid out before, and that's on the organic growth in our regulated business. It is -- we plan to deliver strong earnings growth that I outlined, and it's driven by the rate base growth, of course. And then with our strong dividend, we believe, we'll deliver the superior value to our shareholders and, ultimately, to our customers, too. And so M&As happen in our space, so it doesn't surprise us that there continues to be some level of consolidation. And then in particular, we continue to be attentive to the things going on in our space, that kind of companies. But whether we're a buyer or anything, that probably takes it one step too further than just what we've been in the past.

Andrew Levi

Got it, okay. And then the second question I have is just regarding Missouri commission. What's the thinking now, since legislation is not getting done, that the commission may do some type of workshops this summer to maybe address some of the things in the legislation?

Warner L. Baxter
Executive Chairman, Chief Executive Officer and President

So Andy, this is Warner, and I'll ask Michael Moehn to speak up as well. I think that there's -- whether there's going to be a specific workshop, I don't think there's anything have been decided in particular on that. That's always a possibility. But I don't think the commission's come out with a specific statement or ruling that they plan on doing that. Michael, I don't know, would you...

Michael L. Moehn
Chairman of Ameren Missouri and President of Ameren Missouri

I think that's right, Warner. I think the commission remains focused on trying to help deal with this regulatory lag issue, and I think that could potentially be an outcome, do a work-through this summer to help gain some additional support with respect to what we're trying to do here in Missouri.

Operator

Our next question comes from the line of Paul Patterson with Glenrock Associates.

Paul Patterson
Glenrock Associates LLC

Just really quickly, I think you guys mentioned the potential for non-comprehensive legislation. In other words, you guys mentioned that you thought comprehensive legislation was unlikely this session. But are there -- I was wondering if that meant that there was maybe some other sort of legislative opportunities that you do see potentially and if you could elaborate on that.

Warner L. Baxter
Executive Chairman, Chief Executive Officer and President

Sure, Paul. This is Warner. I guess, a couple of things. Number one, the session, as I said, ends this Friday. So the reality is time is very short. And while comprehensive performance-based regulation legislation will not pass, at least from our perspective, that doesn't mean that we still don't have conversations with key stakeholders to see if we can make some level of progress. It's probably not appropriate for me to speculate, frankly, to say what that may or may not look like. We'll know, frankly, in a shoe -- a few short days whether anything happens. But time is short, and so while it may be difficult, it doesn't mean that we're still not on the table talking to key stakeholders.

Paul Patterson
Glenrock Associates LLC

Okay. So sort of stay tuned?

Warner L. Baxter
Executive Chairman, Chief Executive Officer and President

Stay tuned is a good way to put it.

Operator

Our next question comes from the line of Steve Fleishman with Wolfe Research.

Steven I. Fleishman
Wolfe Research, LLC

Going back a while ago, the company used to talk about keeping the parent balance sheet pretty consistent with the utilities. And particularly in Missouri, that used to be kind of a focus in terms of just making sure there's not a big difference there. Is that still something that you need to kind of monitor and keep in balance or no?

Martin J. Lyons
Chief Financial Officer, Executive Vice President, Chairman of Ameren Services and President of Ameren Services

Yes. Steve, this is Marty. Look, I think still, if you look at our slides that we got up there today, we look to keep a parent company cap structure of around 50% equity. Today, I think in our Missouri rates, we've got a little north of 51%; in Illinois, about 50%; the transmission business, depending on where it's at, anywhere from 51% to 56% with our hypothetical cap structure for ATXI. So we do -- we have, over time, there tried to keep those all in the ballpark, in the general vicinity of one another and generally keep strong balance sheets and solid credit ratings.

Steven I. Fleishman
Wolfe Research, LLC

Okay. But is that just a choice? Or is there, in Missouri, kind of a risk of some kind of imputation if you were to have a lot more parent or holdco leverage?

Martin J. Lyons
Chief Financial Officer, Executive Vice President, Chairman of Ameren Services and President of Ameren Services

Well, I guess, Steve, I'd say in Missouri, we really haven't experienced any sort of look-through kind of issue, if that's what you're getting at. I think over time, in Missouri, we've been able to demonstrate that the equity in the utility balance sheet hasn't been funded by any debt at the parent. So largely, I'd say it's by choice. We think it's good to keep all of those in general alignment and, like I said, keep a strong balance sheet. I do think, as you look around the state, there's different historical practices in terms of use of the parent company balance sheet or utility-specific balance sheet, but it seems more situational versus some bright-line test or standard practice.

Operator

This concludes today's question-and-answer session. I would like to turn the floor back to Doug Fischer, Senior Director of IR, for closing remarks.

Douglas Fischer
Senior Director of Investor Relations

Thank you for participating in this call. Let me remind you again that a replay of the call will be available for 1 year on our website.

If you have questions, you may call the contacts listed on our earnings release. Financial analyst inquiries should be directed to me, Doug Fischer, and my associate, Andrew Kirk. Media should call Joe Muehlenkamp. Our contact numbers are on the release.

Again, thank you for your interest in Ameren, and have a great day.

OperatorThis concludes today's teleconference. You may disconnect your lines at this time, and thank you for your participation.

S&P Capital IQ

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Ameren Corporation NYSE:AEE

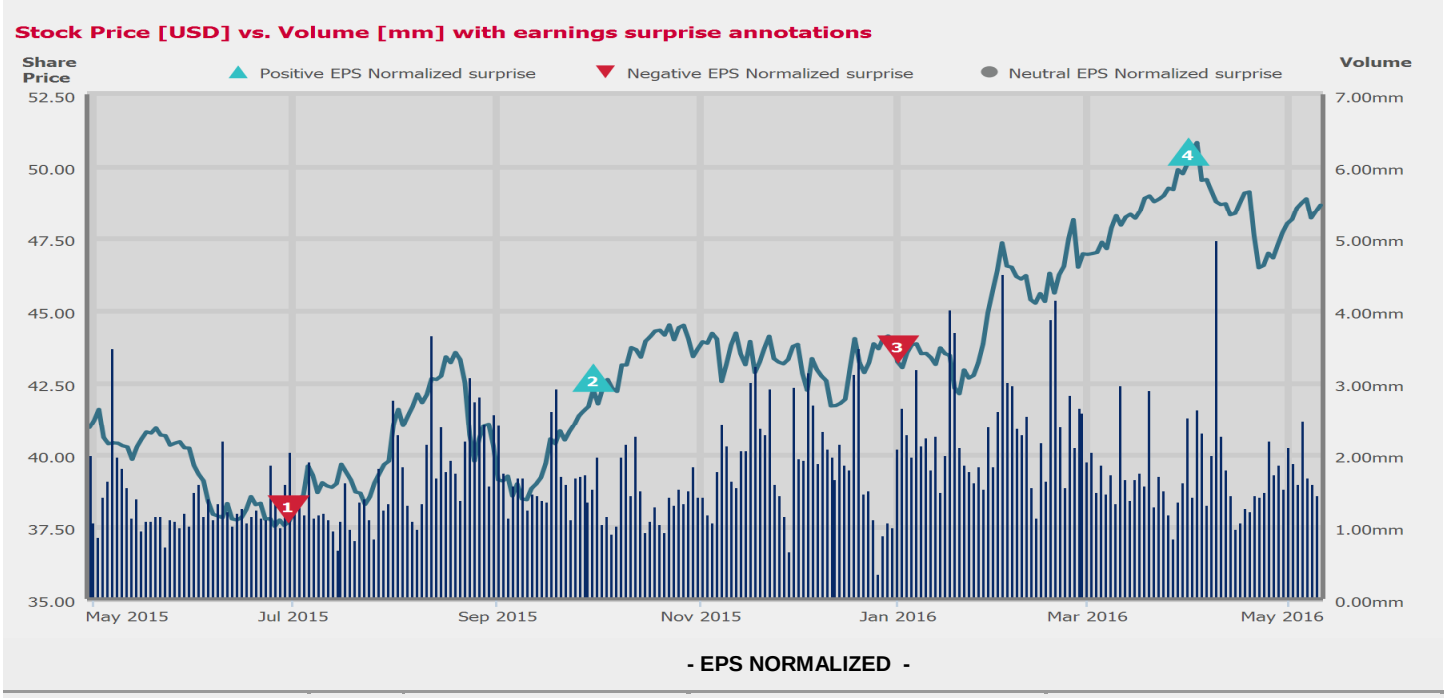
FQ2 2016 Earnings Call Transcripts

Friday, August 05, 2016 2:00 PM GMT

S&P Capital IQ Estimates

	-FQ2 2016-			-FQ3 2016-	-FY 2016-	-FY 2017-
	CONSENSUS	ACTUAL	SURPRISE	CONSENSUS	CONSENSUS	CONSENSUS
EPS Normalized	0.52	0.61	▲17.31	1.37	2.50	2.77
Revenue (mm)	1452.82	1427.00	▼(1.78 %)	1878.19	6225.60	6472.09

Currency: USD
Consensus as of Jul-26-2016 7:30 AM GMT



- EPS NORMALIZED -

	CONSENSUS	ACTUAL	SURPRISE
FQ2 2015	0.61	0.58	▼1 (4.92 %)
FQ3 2015	1.30	1.41	▲2 8.46 %
FQ4 2015	0.15	0.12	▼3 (20.00 %)
FQ1 2016	0.37	0.43	▲4 16.22 %

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Senior Director of Investor Relations

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Presentation

Operator

Greetings, and welcome to Ameren Corporation's Second Quarter 2016 Earnings Call. [Operator Instructions] As a reminder, this conference is being recorded. It is now my pleasure to introduce your host, Doug Fischer, Senior Director of Investor Relations for Ameren Corporation.

Thank you. Mr. Fischer, you may begin.

Douglas Fischer
Senior Director of Investor Relations

Thank you, and good morning. I'm Doug Fischer, Senior Director of Investor Relations for Ameren Corporation.

On the call with me today are Warner Baxter, our Chairman, President and Chief Executive Officer; and Marty Lyons, our Executive Vice President and Chief Financial Officer; as well as other members of the Ameren management team.

Before we begin, let me cover a few administrative details. This call is being broadcast live on the Internet, and the webcast will be available for 1 year on our website at ameren.com.

Further, this call contains time-sensitive data that is accurate only as of the date of today's live broadcast, and redistribution of this broadcast is prohibited. To assist with our call this morning, we have posted on our website a presentation that will be referenced by our speakers. Acronyms used in the presentation are defined in the glossary on the last page.

To access the presentation, please look in the Investors section of our website under webcasts and presentations and follow the appropriate link.

Turning to Page 2 of the presentation. I need to inform you that comments made this -- during this conference call may contain statements that are commonly referred to as forward-looking statements. Such statements include those about future expectations, beliefs, plans, strategies, objectives, events, conditions and financial performance. We caution you that various factors could cause actual results to differ materially from those anticipated. For additional information concerning these factors, please read the Forward-looking Statements section in the news release we issued today and the Forward-looking Statements and Risk Factors sections in our filing with the SEC.

Warner will begin this call with comments on second quarter financial results, full year 2016 earnings guidance and a business update. Marty will follow with a more detailed discussion of second quarter results and an update on financial and regulatory matters. We'll then open the call for questions.

Before Warner begins, I would like to mention that all per share earnings amounts discussed during today's call, including earnings guidance, are presented on a diluted basis, unless otherwise noted.

Now here's Warner, who will start on Page 4 of the presentation.

Warner L. Baxter
Executive Chairman, Chief Executive Officer and President

Thanks, Doug. Good morning, everyone, and thank you for joining us.

Today, we announced second quarter 2016 core earnings of $0.61 per share compared to core earnings of $0.58 per share in last year's second quarter. This earnings increase reflected higher retail electric sales volumes, excluding sales of Noranda Aluminum, driven by warmer early summer temperatures.

The earnings comparison also benefited from increased FERC-regulated transmission and Illinois electric distribution infrastructure investments made under modern constructive regulatory frameworks to better serve our customers.

These favorable items were partially offset by expenses for the 2016 scheduled Callaway nuclear refueling and maintenance outage as well as lower electric sales to Noranda Aluminum, historically Ameren Missouri's largest customer.

Earlier this year, Noranda idled production at a smelter, and the plant remains shut down. Overall, our second quarter results were solid as our team continued to successfully execute our strategy, and I am pleased to report that we have raised our 2016 guidance to a range of $2.45 to $2.65 per share, up from our prior range of $2.40 to $2.60, reflecting year-to-date results.

Turning to Page 5, here we reiterate our strategic plan. We remain focused on executing this strategy and continue to strongly believe that we'll deliver superior long-term value to both our customers and shareholders.

I would like to take a moment and highlight some of our year-to-date efforts and accomplishments towards this end. To begin, our accomplishments include continued strategic allocation of significant amounts of capital to those businesses whose investments are supported by regulatory frameworks to provide fair, predictable and timely cost recovery and also deliver long-term benefits to our customers. This capital allocation is illustrated in the graphic on the right side of the slide.

As you can see, year-to-date, we invested almost $650 million of capital in jurisdictions with these supportive regulatory frameworks. This represented almost 2/3 of our year-to-date 2016 investments and included approximately $330 million of capital spent on FERC-regulated transmission projects. The largest of these is ATXI's $1.4 billion Illinois Rivers transmission project. Construction of the first of this project's 9 line segments is complete, with construction of 3 other segments and 2 of 3 river crossings well under way. Further, 2 of the project's 10 substations are already in service with remaining 8 under construction.

For ATXI's Spoon River project in Northwestern Illinois, we are acquiring the balance of the needed right-of-way, and we plan to begin line construction later this year.

As for the Mark Twain project, we are in the process of obtaining assents from the 5 counties this transmission line will cross and have begun right-of-way acquisition. All 3 of these transmission projects, Illinois Rivers, Spoon River and Mark Twain, are MISO-approved multi-value projects. When completed, they will deliver significant customer benefits such as improved reliability and access to cleaner energy, including wind power from the western and northern parts of the MISO region.

We also continue to make significant investments in Ameren Illinois transmission that will result in a smarter and more reliable energy grid.

Turning to Page 6 of our presentation, let me update you on the execution of our strategic plan at Ameren Illinois. We invested approximately $320 million in Illinois electric and natural gas distribution infrastructure projects during the first 6 months. These include investments made under the company's Modernization Action Plan, which was enabled by Illinois' Energy Infrastructure Modernization Act. This work remains on track to meet or exceed its investment, reliability and smart meter goals. Ameren Illinois customers are experiencing fewer and shorter power outages due to our smart grid investments.

In addition, natural gas distribution infrastructure projects are improving the safety and reliability of our gas distribution system.

Turning now to Missouri. First, on May 10, we safely completed the 21st nuclear refueling and maintenance outage for our Callaway Energy Center ahead of schedule.

In addition, Ameren Missouri continues to aggressively manage those costs that are under its control. Our success in this area has helped maintain electric rates that are the lowest of any investor-owned utility in Missouri and are well below the Midwest and national averages.

While we are taking actions to keep our electric rates among the lowest in the country, we also need to take action to begin recovery of energy infrastructure investments that are not included in rates. As a result, in early July, Ameren Missouri filed a request with the Missouri Public Service Commission, or PSC, for a $206 million increase in annual electric service revenue. This request includes recovery of, and return on, the new infrastructure investments I just mentioned, including those from nuclear safety, environmental controls, transmission line improvements and reliability.

In addition, the filing includes recovery of fixed costs related to the loss of sales to Noranda as well as increased MISO transmission charges. We expect the Missouri PSC to issue a decision in this proceeding in late April of next year. Marty will discuss this rate filing further in a moment.

Shifting now to efforts to enhance Missouri's regulatory framework. As you know, comprehensive, performance-based ratemaking legislation was not enacted by the Missouri General Assembly before its session ended in mid-May as a result of a filibuster by a small group of state senators. Since then, 2 separate efforts have been initiated by the state to address the need for regulatory reform to support investment in Missouri energy infrastructure.

One of these efforts is an undertaking under Missouri PSC and the other is the work of a Senate Interim Committee.

The stated purpose of the Missouri PSC's effort is to consider policies to improve the way in which the commission regulates Missouri's investor-owned electric utilities; and the stated objective of the Senate Interim Committee is to evaluate ways utility regulatory process in Missouri might be modernized in order to ensure sustained investment in utility infrastructure while, at the same time, promoting interest of fairness among all constituencies, including customers and shareholders. We are pleased, and we are -- certainly appreciate that the Missouri PSC and the Senate Interim Committee are taking the time and effort to study this important issue. I am convinced that improvements to Missouri's regulatory framework are in the best long-term interest of our customers and the entire state of Missouri as we seek to implement a smarter grid, transition to a cleaner and more diverse energy portfolio as well as create jobs.

We have filed comments with the Missouri PSC, and we will be actively engaged in both proceedings this summer and fall.

In addition, we continue to engage with other key stakeholders involved in the process to explore constructive paths forward to support investment in Missouri's aging infrastructure.

As I wrap up my business update, I want to take a moment to express my appreciation to all of our coworkers who have maintained their relentless focus on executing our strategy, which is enabling us to deliver safe, reliable and affordable service to our customers and the communities we serve. Their actions have included working under challenging and hot operating conditions in the field and in our energy centers, responding to our customers' needs in a timely manner when faced with periodic summer storms, using innovation to meet our customers' rising expectations as well as making our operations even more efficient, and most importantly, doing all of these things with safety being at the top of their mind.

Of course, we are not done. Looking ahead, we will be relentless in our efforts to improve our operating and financial

performance, including maintaining our strong focus on safety as well as exercising disciplined cost management and strategic capital allocation. And we will continue to focus on meeting and exceeding our customers' energy needs and expectations and ultimately delivering superior long-term value to you, our shareholders.

Speaking of delivering superior value to our shareholders, I will now move to Page 7 and our long-term total return outlook. In February, we outlined our plan to grow rate base at an approximate 6.5% compound annual rate over the 2015 to 2020 period, driven by a strong pipeline of investments to benefit customers and shareholders. Our above-peer-average rate based growth plan reflects strategic allocation of capital to those jurisdictions that operate under constructive and modern regulatory frameworks, and our rate base growth is foundational to our strong earnings per share growth expectations.

We stated in February that we expected earnings per share to grow at a 5% to 8% compound annual rate from 2016 to 2020, excluding the estimated temporary negative effect on 2016 earnings of lower sales to Noranda.

We also remain focused on delivering a solid dividend because we recognize its importance to our shareholders. Today, our dividend yield remains above the average of our regulated-utility peers.

Of course, future dividend increases will be based on consideration of, among other things, earnings growth, cash flows and economic and other business conditions. Our strong earnings growth profile, combined with our solid dividend, results in superior total return opportunity for our shareholders.

To summarize, we continue to successfully execute our strategy, and I remain firmly convinced that doing so will deliver superior value to our shareholders, customers and the communities we serve.

Again, thank you all for joining us today, and I'll now turn the call over to Marty. Marty?

Martin J. Lyons
Chief Financial Officer, Executive Vice President, Chairman of Ameren Services and President of Ameren Services

Thank you, Warner, and good morning, everyone.

Turning now to Page 9 of our presentation. Today, we reported second quarter 2016 GAAP earnings of $0.61 per share, which matched last year's second quarter GAAP earnings. As you can see on this page, there was no difference between GAAP and core results for this year's second quarter.

Moving then to Page 10. Here, we highlight factors that drove the $0.03 per share increase in second quarter 2016 results compared to prior year quarter results. In 2016, we experienced higher retail electric sales volumes, excluding sales to Noranda, driven by warmer early summer temperatures. These temperatures increased earnings by an estimated $0.07 per share versus 2015 and $0.06 per share versus normal conditions.

Moving to the next key driver of the second quarter earnings variance. Increased investments in electric transmission and distribution infrastructure in our ATXI and Ameren Illinois businesses lifted earnings by $0.06 per share compared to the year-ago period and net of changes in returns on equity. Our Illinois electric distribution business results incorporated an 8.45% allowed ROE under formulaic ratemaking compared to 8.75% for the year-ago period based on an assumed average 30-year treasury rate of 2.65% for the full year.

Moving to the next 2 items on the page. Earnings for the second quarter also benefited from higher Illinois natural gas distribution service rates effective this year as well as the decline in other operations and maintenance expenses not subject to writers, regulatory trackers or formula rates, each adding $0.02 per share compared to the prior year period.

Shifting now to factors that had an unfavorable effect on the second quarter earnings comparison. The scheduled 2016 Callaway nuclear refueling and maintenance outage reduced second quarter 2016 earnings by $0.07 per share compared to 2015 when there was no refueling outage. The next Callaway refueling is scheduled for the fall of next year.

The previously mentioned idling of Noranda smelter pipelines reduced earnings by $0.05 per share. And finally, the quarter-over-quarter impacts of Ameren Missouri's 2015 energy efficiency plan negatively affected the earnings comparison by $0.04 per share.

Before moving on, let me briefly cover electric sales trends year-to-date. Overall, we experienced sales trends similar to those discussed on our first quarter call. Weather-normalized kilowatt hour sales to Illinois and Missouri residential and commercial customers on a combined basis were essentially flat as the 2016 leap day sales benefit was offset by energy efficiency impacts.

Kilowatt hour sales to Illinois industrial customers decreased approximately 5%, primarily reflecting lower sales to several large low-margin Illinois customers, including those in steelmaking, heavy equipment manufacturing, mining and energy. Excluding lower sales to Noranda, kilowatt hour sales to Missouri industrial customers were down 0.5%.

Turning to Page 11 of our presentation. Now I would like to move from this discussion of sales to our guidance for the full year. As Warner stated, we now expect 2016 diluted earnings to be in a range of $2.45 to $2.65 per share, an increase from our prior range of $2.40 to $2.60 per share. This increased guidance reflects solid year-to-date results, including a first quarter tax gain associated with the new accounting rule and an estimated $0.01 per share first half weather benefit compared to normal, as warmer-than-normal second quarter temperatures more than offset milder-than-normal first quarter temperatures.

Regarding Noranda, we continue to expect the unfavorable impact of lower electric sales to be approximately $0.15 per share in 2016. This estimate is net of expected revenues from all system sales that Ameren Missouri is making as a result of reduced sales to Noranda and that are retained under our provision of our fuel adjustment clause. We continue to expect Noranda's smelter to remain idle for the rest of this year and that this will reduce earnings by approximately $0.05 per share in the third quarter and approximately $0.02 per share in the fourth quarter compared to the prior year periods.

I will not go through the other earnings considerations listed on this page because they are largely self-explanatory, and we discussed them on our February earnings call.

Overall, our goal remains to earn at or close to our allowed ROEs in all of our jurisdictions. Of course, we are falling short of this goal in Missouri in 2016, due in large part to the Noranda sales losses.

Moving to Page 12. Here, we begin to outline in more detail our recently filed Missouri electric rate case, which Warner mentioned earlier.

Earlier this week, parties to this proceeding jointly proposed a schedule to the Missouri Public Service Commission, and key dates of the proposed schedule are listed on this page. We expect the Public Service Commission to decide the case by late April of next year, with new rates expected to be effective in late May.

Further, on Page 13, you can see that 3/4 of our $206 million request is driven by our need to recover and earn a return on important new infrastructure investments made for the benefit of our customers; adjust rates to reflect reduced customer sales, largely driven by the idling of Noranda smelter; and recovery of increased MISO transmission charges. To address the regulatory lag associated with these increasing transmission expenses, we have requested the implementation of a new MISO transmission tracker.

In addition, the rate filing includes $8 million for amortized recovery of an estimated $81 million of fixed costs not recovered as a result of lower sales to Noranda.

I would also like to update you on select regulatory matters pending at the Illinois Commerce Commission and the Federal Energy Regulatory Commission.

Turning to Page 14. In April, Ameren Illinois made its required annual electric distribution rate filing with the ICC. Under formula ratemaking, Ameren Illinois makes such filings to systematically adjust cash flows over time for changes in cost to service and to true-up any prior-period over- or under-recovery of such costs. Our filing calls for a $14 million decrease in the net annual electric revenue requirement consisting of an increase reflecting 2015 actual cost and expected 2016 infrastructure investments that is more than offset by a decrease reflecting completion of the recovery of 2014 actual cost by the end of this year.

Late last month, Ameren Illinois and the ICC staff entered into a stipulation agreement that resolved all issues currently existing between them and supported an annual revenue requirement that is consistent with Ameren Illinois' filing. The positions for other interveners in the case are noted on this page, and an ICC decision is expected in December of this year, with new rates effective early next year.

I'll remind you that each year's Illinois electric distribution earnings are a function of that year's ending rate base; the formula-determined allowed ROE, which is the annual average of 30-year U.S. Treasury bond yields for that year plus 580 basis points; and the ICC-authorized equity ratio, and are not directly determined by that year's rate update filing.

Turning to Page 15. Here, we outline the previously mentioned complaint cases pending at the FERC that seek to reduce the base allowed ROE for MISO transmission owners, including Ameren Illinois and ATXI.

In the first case, last December, a FERC administrative law judge issued a proposed order recommending a 10.32% base allowed ROE and the FERC is expected to issue a final order in the fourth quarter of this year. In the second case, in late June, the FERC administrative law judge issued a proposed order recommending a 9.7% base allowed ROE, with a final FERC decision expected in the second quarter of next year.

As a result of these pending cases and consistent with the ALJ ruling in each case, we have accrued [ph] a reserve for potential refunds of $58 million as of June 30, 2016.

Finally, turning to Page 16, I will summarize. Year-to-date in 2016, we continue to successfully execute our strategy, and we have delivered solid second quarter and year-to-date results. Our solid year-to-date results allowed us to increase our full year earnings guidance range for 2016.

Further, on our February call, we stated that we expected earnings per share to grow at a strong 5% to 8% compound annual rate from 2016 through 2020, excluding the estimated temporary net effect of lower sales to Noranda this year. We said this earnings growth was driven by approximately 6.5% compound annual rate base growth over the 2015 through 2020 period based on a mix of needed transmission, distribution and generation investments across multiple regulatory jurisdictions being made for the benefit of customers.

When you combine our strong earnings growth with Ameren's dividend, which provides investors with a yield of approximately 3.3% and which is above average compared to fully regulated utility peers, we believe our common stock provides very attractive total return potential for investors.
That concludes our prepared remarks. We now invite your questions.

Question and Answer

Operator

[Operator Instructions] Our first question comes from Julien Dumoulin-Smith with UBS.

Julien Dumoulin-Smith
UBS Investment Bank, Research Division

So just, first, detailed question and bigger-picture question. On energy efficiency, obviously, you're talking about lower load growth here in general, but what is the annualized impact here in '16 after incentives? It seems that it's about $0.17. In tandem with that, what are the weather-normalized sales trend excluding Noranda? And then, most importantly, what are your '17 expectations as you think about that energy efficiency drag?

Martin J. Lyons
Chief Financial Officer, Executive Vice President, Chairman of Ameren Services and President of Ameren Services

Yes, sure, Julien. This is Marty. And obviously, a number of questions there. I think, as it relates to energy efficiency, you got to keep in mind that some of what we've quantified is year-over-year comparative impacts from last year to this year. So when we think about that, you got to remember that the construct of the energy efficiency plan in Missouri from 2013 through 2015 was different than the one we've got now. And last year, we were being compensated for some of the efforts associated with energy efficiency and being compensated not only for the current year effects in 2015 but some of the carryover effects to 2016. And so that's creating a bit of a year-over-year comparison, and that's why we've noted some of those effects this year. In terms of the sales trends, what we're seeing, we mentioned this on the call, year-to-date, on a consolidated basis, residential and commercial sales were roughly flat. Frankly, they're up a little bit in Missouri and down a little bit in Illinois. Then industrial sales overall are down about 4%, with Missouri down about 0.5% and Illinois down more significantly. When you actually exclude the impacts of energy efficiency in Missouri, we would actually see overall sales -- instead of being flat, overall sales we'd see up about 1.5%. On the residential, we think they'd be up about 1.3%; commercial, may be up 2%; and industrial, while they're down on a reported basis, may be up 0.5% excluding energy efficiency. So we do see those programs as having an effect, both the programs we've put in place last year having a carryover effect to this year, but also the current year programs that we've now put into place. So they are having an impact, but overall, sales are about where we thought. We said they -- we thought they'd be about flattish because of the effects of energy efficiency, and that's about where they are. I think, economically, unemployment's running pretty good in Missouri, frankly. I think you probably saw, nationally, the unemployment was at about 4.9% now for the past couple of months. What we're seeing in Missouri is it's actually run a little bit below that, closer to 4%, while unfortunately, on the Illinois side, where we're seeing some of the industrial sales declines seeing unemployment a little bit higher over there at about 6%. But overall, I think the economies are remaining stable. We're seeing a little bit of growth, I'd say, in Missouri, especially when you strip out energy efficiency. And in Illinois, while the industrial sales are down, we're still seeing some growth in terms of residential and commercial demand, which we see as a positive.

Julien Dumoulin-Smith
UBS Investment Bank, Research Division

And then just a follow-up here on the broader 5% to 8% CAGR. Can you comment quickly what the impact is from the U.S. Treasury being down within that range? Perhaps it's linear, but I'd just be -- just want to reaffirm it. And then, separately related, what about the impact from pension discount rates? Just want to make sure we understand. It's probably fairly modest, given Illinois and then also Missouri, but just want to make sure we have that right.

Martin J. Lyons
Chief Financial Officer, Executive Vice President, Chairman of Ameren Services and President of Ameren Services

Yes, sure. No, I understand the question. I think that as you to think about the 5% to 8% growth over time as we've said

repeatedly, that's really anchored by the 6.5% compound annual rate base growth. And so that really is the foundation. And then when you think about whether we would be above that or below that from an earnings per share growth perspective, certainly, changes in treasury rates or earned ROEs, sales growth levels, spending levels, regulatory decisions, all of those things can push you up or down within that range. And look, it's a 5-year outlook going out to 2020, so a number of things can happen over that time, and that's why we have sort of a $0.40 range when you look out to 2020. As it relates to the current impact of the 30-year treasuries as we mentioned on the call, we have booked to a lower treasury yield than we expected at the beginning of the year. At the beginning of the year, we had expected treasury yields to be around 3.2%. What we've booked to as of the end of June is an average rate for the year of about 2.65%. And of course, the current 30-day treasuries are sitting at 2.25% So that has caused us to change our outlook for this year. We've baked that into our guidance range for this year. I'd remind you that a 50 basis point move in ROEs in the Ameren Illinois delivery business is about $0.025. So that gives you a sensitivity, but we've baked that into our current year guidance. We feel very good about the guidance. We were able to raise it $0.05, as you know, this year, which is a positive. It's net of the impacts of those changes in 30-year treasuries. And as it relates to our long-term guidance, we obviously update our overall thoughts about how we're going to manage the business going forward on an annual basis. But right now, we feel very good about that 6.5% rate base growth and that 5% to 8% compound annual EPS growth that we've projected.

Warner L. Baxter
Executive Chairman, Chief Executive Officer and President

Marty, maybe Julien had one other issue on pensions and OPEBs?

Martin J. Lyons
Chief Financial Officer, Executive Vice President, Chairman of Ameren Services and President of Ameren Services

Yes, thanks, Warner. On the pension and OPEB, which was a good question, Julien, I know that's impacting some folks with the lower discount rates that are expected, but we have trackers in Missouri for both pension and OPEB, and then, in Illinois, for our energy delivery business as well as in our FERC transmission business, you have formulaic rates, so we're largely protected from those declines that are happening in terms of the discount rate. The Illinois gas business, obviously, we have forecasted test years and, depending on the timing of those filings, there can be some impact there, but largely insulated from the impacts of the changes in discount rate and any kind of asset performance changes.

Operator

Our next question comes from Brian Russo with Ladenburg Thalmann.

Brian J. Russo
Ladenburg Thalmann & Co. Inc., Research Division

Yes, the $0.05 increase in the guidance, is there any way to break down some of the more noticeable positives and negatives? It looks like interest rates would be maybe a $0.025 negative versus previous guidance, and I'm not sure, I think weather is $0.01 positive. Just maybe if you could elaborate on that. What's operational and what's kind of weather-related?

Martin J. Lyons
Chief Financial Officer, Executive Vice President, Chairman of Ameren Services and President of Ameren Services

Yes, sure, Brian. Good question. And I think if you look back at our "beginning of the year" guidance and then walk through our first quarter or now our second quarter disclosures, you can piece some of these things together, and you've got some of those. I think as it relates to -- starting with our guidance at the beginning of the year and thinking about how it moved, we had an $0.08-or-so pickup from the adoption of a new accounting standard in the first quarter, which was a positive. At that same time, we also had a couple of additional cents of decline due to this Noranda outage. We started the year thinking it was going to be about a $0.13 impact and now we're at about $0.15 impact. We also had -- as you mentioned, we've now had a little bit of a lowered expectation in terms of the treasury rates and again, that -- like you said, that has impacted us by $0.02 or $0.03 there as well. So those are some of the impacts that we had. Now in the

first quarter, we also had negative weather. It was about $0.05 negative in the first quarter. As mentioned on the call, we had positive weather here in the second quarter, which more than offset more about $0.01 positive now for weather year-to-date. So when you look at that -- if you look at that, where we are at the end of 6 months, you get that tax gain that we experienced in the first quarter. You got about $0.01 of positive weather, and we've had some offsets due to the decline in the treasuries and then this temporary impact of the Noranda outage that we're experiencing this year. So those are some of the things that were pluses and minuses versus our original expectations and why we were positioned then with a backdrop of very solid operations and very solid execution of our strategy and our plan for this year that we're able to raise the guidance by $0.05.

Brian J. Russo
Ladenburg Thalmann & Co. Inc., Research Division

Okay, great. And it's my understanding that you're using the ATXI and FERC transmission is being financed at the parent. Just want to be -- I'd just like you to clarify the financing strategy with ATXI. And when might we see it break out into a separate sub and that parent leverage be a little bit more transparent?

Martin J. Lyons
Chief Financial Officer, Executive Vice President, Chairman of Ameren Services and President of Ameren Services

Yes, that's -- you correctly described it, I mean, what we're doing today, because it is the most -- it has been the most efficient way to do it as we've been financing the transmission growth at our ATXI business through financing at the parent, which we've got both some short-term and long-term financing in place there at the parent that supports the investments we've been making at ATXI. Obviously, as that short-term debt grows at the parent, we'll consider when it might be appropriate to term some of that out. I don't expect that to be this year, but in prospective periods, we very well might consider that. And to the extent that we believe it's more efficient at that point to do it at an entity other than Ameren Corporation, at either ATXI or a holding company level, we'll evaluate that going forward. But as we approach that decision, whether that be next year or in some period beyond, we'll certainly be happy to discuss our thinking at that time about why we're proceeding.

Brian J. Russo
Ladenburg Thalmann & Co. Inc., Research Division

Got it. And then the Missouri electric case filing, did you file the -- a utility cap structure or the parent cap structure?

Martin J. Lyons
Chief Financial Officer, Executive Vice President, Chairman of Ameren Services and President of Ameren Services

Yes, the Missouri filing that we filed, as we mentioned on the call, had an equity content in the cap structure of 51.8%, and that is the cap structure of the utility subsidiary Ameren Missouri.

Operator

Our next question comes from Michael Lapides from Goldman Sachs.

Michael J. Lapides
Goldman Sachs Group Inc., Research Division

Can you talk about, in your multiyear forecast, what your planning is for leverage at the holding company level? Meaning, do you plan on delevering the holding company? Do you plan on issuing debt solely to fund ATXI or using debt at the holding company level and sending it down to the utilities to help fund utility growth?

Martin J. Lyons
Chief Financial Officer, Executive Vice President, Chairman of Ameren Services and President of Ameren Services

Michael, this is Marty. As you've seen in our slides, we have about an $11 billion expenditure plan over the next 5 years. It's something that we believe given the strength of our balance sheet today. We can finance solely with debt and maintain a very strong balance sheet and maintain very strong credit metrics relative to the ratings that we have today. And then as we think about the expenditures, obviously, we've got those at each of the subsidiaries. We do financing independently at each one of the subsidiaries, so we have -- obviously, we issue long-term debt at Ameren Illinois, Ameren Missouri. And then as we just spoke about on the prior Q&A, as it relates to the ATXI transmission business, then we are using parent company leverage to be able to redebt [ph] to be able to find those investments at ATXI and, at some point, may very well be able to do financing either at ATXI or some sort of intermediate holding company. But that's, overall, our plan, and our goal is with each one of our utility subsidiaries to maintain very strong overall balance sheet there as well. So that's how we're balancing things out, and again, we do believe we'll be able to finance this capital expenditure plan with that over the coming 5-year period.

Michael J. Lapides
Goldman Sachs Group Inc., Research Division

Got it. So no real plans for equity or significant debt at the holding company to infuse as equity into the operating companies?

Martin J. Lyons
Chief Financial Officer, Executive Vice President, Chairman of Ameren Services and President of Ameren Services

That is correct. That's absolutely correct. And I think one thing, too, to keep in mind longer term. Over time, we'll be able to monetize some of the tax assets that we have up at the parent. We've got quite a bit of tax assets built up overall, about $760 million, but about $460 million or so of that is really at the parent company, and it's something that, over time, we'll be able to monetize as well.

Michael J. Lapides
Goldman Sachs Group Inc., Research Division

Got it. One last one, and this is really -- I don't know if this is Warner or for Michael, but when you're thinking about the proceeding in Missouri to help improve ratemaking processes, I know some of the testimony filing dates have already passed, and honestly, it didn't look like there was -- it didn't look like there was lots -- there were lots of suggestions of very specific things that other intervenors besides you guys really, were recommending more. The testimony seemed like it was more, please don't do this or don't do that, but not as much please do this or do that. How do you think the commission kind of takes it from there? Like if you think about it as this is a giant kind of a cauldron or boiling pot or lots of things can come out of this, how do you think about what the options the commission actually looks at/or based on what's been filed in the public testimonies?

Warner L. Baxter
Executive Chairman, Chief Executive Officer and President

Michael, this is Warner. I'll take a shot at it, and then I'll let Michael add some more of the details on that. Number one, I think I would start with this. There's a positive development that we're talking about the need to address Missouri's aging infrastructure and seeking solutions, especially outside of the legislative session. So I see that these proceedings that are being conducted, both by the Missouri Public Service Commission and the Senate Interim Committee, an opportunity for stakeholders really to come together to not only share ideas, to share differences and to try to find a constructive path forward. And so. While maybe some of the filings included things that the intervenors or others did not want to see that's informative. But secondly, I know that Ameren, Ameren Missouri, and then certainly the utility group, they filed specific suggestions, and there was a host of suggestions to try and address this issue. So I fully expect the commission to carefully look at these things, to engage with stakeholders as well as to send an interim committee to try and advance Missouri forward. Because as -- we've been consistent. We strongly believe that this is not only an opportunity but one of these things that is really imperative to Missouri to move forward without constructive policies. And so we're encouraged by these developments, where we look forward to engage with the key stakeholders. Michael, you've been working with some of the more specific key stakeholders. Anything you'd like to add in terms of the overall process and where things go from here?

Michael L. Moehn
Chairman of Ameren Missouri and President of Ameren Missouri

Yes. Perfect, Warner, and thanks for the question, Michael. I think that, I mean, where we are today is a positive, as Warner said. I mean, there's a great deal of dialogue that's occurring. And I think that given where the various stakeholders are, it's not terribly surprising. I think that the commission is being very constructive in its process. We'll have a couple more rounds of testimony as we move through it. As Warner said, the interim senate committee is going to hold some hearings in the very near future. They're really looking to get some outside perspectives. And I think, to me, the one thing that's really positive in all of this is there's a recognition of the issue. Now there's not tremendous consensus on what the solution is yet, but there's a recognition of the issue, and that's where this whole thing starts. Once we have the problem identified, we can figure out how to go about and come through, through debate and dialogue, come up with the right solution. So I think it's a positive first step, hard to predict where it's going to go, but both, I think, the commission-ordered process as well as the interim senate committee are driving towards an early December date with ample time to work something through the legislative process.

Operator

Our next question comes from Paul Patterson with Glenrock Associates.

Paul Patterson
Glenrock Associates LLC

Just a few quick follow-ups. So the -- most of my questions have been answered. But the tax asset monetization that you were referring to, is that just over the course of business? Or is there any potential transaction that might be contemplated? [indiscernible] I was just wondering if you could elaborate a little further on that.

Martin J. Lyons
Chief Financial Officer, Executive Vice President, Chairman of Ameren Services and President of Ameren Services

Yes, really, expect it to be monetized just over the course of business. As we go through time, what'll happen is that as the -- as we have taxable earnings and we have taxes due, what will happen over time is that the utilities will burn off their tax assets. The utilities will then pay taxes up to the parent, the parent will be able to monetize this sort of tax -- have this tax shield of the $460 million that I spoke about. And then, ultimately, once that's burned through, Ameren Corporation becomes a taxpayer, which is out in the 2021 time frame is when we project today.

Paul Patterson
Glenrock Associates LLC

Okay. And then on Illinois, there's a lot of legislative discussion there regarding the nuke [ph] stuff that Exelon's asking for, but also, others are asking for sort of renewable stuff, et cetera. And there's been some discussion of the homeless bill [ph], there's discussion of single ISO kind of things. And I was just wondering, is there any opportunity there for you guys, given your formula rate plan, everything else for additional investments or additional opportunity? Or any thoughts to risks or any thoughts that you guys have that -- in terms of seeing what's going on in Illinois.

Warner L. Baxter
Executive Chairman, Chief Executive Officer and President

Paul, this is Warner again. The simple answer is, yes, we're at the table with key stakeholders, and as Exelon and others have promoted plans or potential pieces of legislation, we have provided input, and we provided input that we believe that will encourage some additional investments that we believe will benefit customers, but also to make sure that it's balanced for, certainly, the southern part of Illinois as well as the northern part of Illinois. That's all part of the framework. And so we think there are opportunities. Whether that will be a legislative effort, that will be the priority for this legislature here in the short term remains to be seen. They obviously, are very focused on addressing some budget issues, and so once those matters are addressed, perhaps an energy legislation will come to the forefront. But the

bottom line is we're engaged. We're simply engaged with them. And Richard Mark is -- oversees our operations there. Richard, would you have anything else to add to that?

Richard J. Mark
Chairman, Chief Executive Officer, President and Member of Executive Committee

No, I think you put it well, Warner. I think we're at the table with stakeholders. We're watching the legislation very closely. But in Illinois, right now, I think the primary focus of legislators is trying to get some of the state budget issues resolved.

Paul Patterson
Glenrock Associates LLC

Right, sure. And then, just finally on the Mark Twain, you guys mentioned the assent process of the counties. Is that going well? Is that working out? Or is it just a -- sort of a follow-up from -- just was wondering what, if there's anything, going on there.

Warner L. Baxter
Executive Chairman, Chief Executive Officer and President

We'll have Maureen Borkowski, who oversees our transmission operation. She'll be able to give you some input on that.

Maureen A. Borkowski
Chairman of Atxi, Chief Executive Officer of Atxi and President of Atxi

This is Maureen. Yes, everything with Mark Twain is going as per schedule. We are basically preparing the packets of information to demonstrate to each county that we meet the statutory requirement of safely crossing public roadways. And we'd continue to have dialogue with each of the commissioners in each of the 5 counties to move that forward. So everything's on schedule at this point.

Operator

Our last question comes from Steven Fleishman with Wolfe Research.

Steven I. Fleishman
Wolfe Research, LLC

Yes, I wanted to give you a rare compliment for basically staying disciplined in this Westar M&A process. Usually, people congratulate on doing deals, but sometimes it's best not to. So just on that front, though, could you maybe just give a sense of how important M&A is to the plan? Or is it pretty much focused on the core rate base growth and is kind of more opportunistic?

Warner L. Baxter
Executive Chairman, Chief Executive Officer and President

Steve, this is Warner. So let me comment squarely on this. Our focus is on the strategic plan we laid out right at the outset. And that focus, as you can see, is on the organic growth in our business, which is driven by robust rate base growth, which we believe is going to deliver solid earnings per share growth. And we have obviously talked about the dividend that goes along with that's going to deliver what we think is a superior total shareholder return. As you said, we do believe the industry will continue to consolidate, and certainly, in the past, we have obviously participated in some level of consolidation. And so the bottom line is we're focused on our organic growth plan, we're attentive to what's going on in the industry, and we'll simply just continue to execute, execute, execute. Period.

Operator

I'm showing no further questions at this time, so I will turn it back to Mr. Fischer for closing remarks.

Douglas Fischer
Senior Director of Investor Relations

Thank you for participating in this call. Let me remind you again that a replay of the call will be available for 1 year on our website. If you have questions, you may call the contacts listed on our earnings release. Financial analyst inquiries should be directed to me, Doug Fischer, or my associate, Andrew Kirk. Media should call Joe Muehlenkamp. Our contact numbers are on the release. Again, thank you for interest in Ameren, and have a great Friday.

OperatorThis concludes today's conference. Thank you for your participation. You may disconnect your lines at this time.