MISSOURI PUBLIC SERVICE COMMISSION

STAFF REPORT

REVENUE REQUIREMENT

COST OF SERVICE

UNION ELECTRIC COMPANY
d/b/a Ameren Missouri

CASE NO. ER-2012-0166

Jefferson City, Missouri
July 6, 2012

**** Denotes Highly Confidential Information ****

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I. Executive Summary

The Staff has conducted a review in Case No. ER-2012-0166 of all revenue requirement cost of service components (capital structure and return on rate base, rate base, depreciation expense and other operating expenses) which comprise Union Electric Company's d/b/a Ameren Missouri ("Ameren Missouri" or "Company") revenue requirement. This audit was in response to Ameren Missouri's filing made on February 3, 2012, seeking to increase its retail rates to recover an additional approximately $375.6 million on an annual basis.

The Staff's recommended increase in revenue requirement is based upon an adjusted test year for the twelve months ending September 30, 2011, including true-up estimates through July 31, 2012. The Staff's recommended revenue requirement for Ameren Missouri is $152,480,937 to $210,300,136 based on a return on equity (ROE) range of 8.00% to 9.00%.

The impact of the Staff's recommended revenue requirement for each retail rate customer class will be addressed in the Staff's rate design direct testimony and report that is to be filed on July 19, 2012.

Staff Expert/Witness: John P. Cassidy

II. Background of Ameren Missouri

Ameren Missouri provides electric utility service to approximately 1.2 million retail customers primarily in the eastern half of Missouri, but also to a limited extent in northwestern Missouri. Ameren Missouri is wholly owned by Ameren Corporation (Ameren), which also provides utility service in Illinois through its Ameren Illinois operating subsidiary. Ameren Missouri also operates a natural gas distribution business in Missouri, which serves approximately 127,000 customers.

Ameren Missouri last sought a general change of its electric retail rates when it filed for a $263 million annual increase on September 3, 2010, in Case No. ER-2011-0028. As a result of the Missouri Public Service Commission's ("PSC" or "Commission") Report and Order in that proceeding, Ameren Missouri was granted a general annual rate increase of approximately $173.2 million, effective July 31, 2011.

Staff Expert/Witness: John P. Cassidy

III. Test Year/True-Up Period

Ameren Missouri filed its case based upon a twelve-month-ending September 30, 2011, test year and made adjustments to its case to reflect the impacts of anticipated changes through July 31, 2012, its requested true-up period end date. These dates were ordered by the Commission on March 28, 2012, in its Order Adopting Procedural Schedule, Establishing Test Year, And Delegating Authority.

The Staff's revenue requirement as presented in its Accounting Schedules includes expected changes for a true-up ending July 31, 2012, based on current information. For example, the plant and depreciation reserve balances have been adjusted to reflect the anticipated additions through the July 31, 2012, true-up period. Fuel expense has also been adjusted, based on the January 2012 coal contract prices. The Staff expects to consider changes to these items, as well as additional components of the cost of service, during the true-up audit. The Staff is not now adopting for the purpose of setting Ameren Missouri's rates the items listed and quantified in the Staff's true-up estimate. The Staff has included these items as placeholders, pending the Staff's completion of its true-up audit.

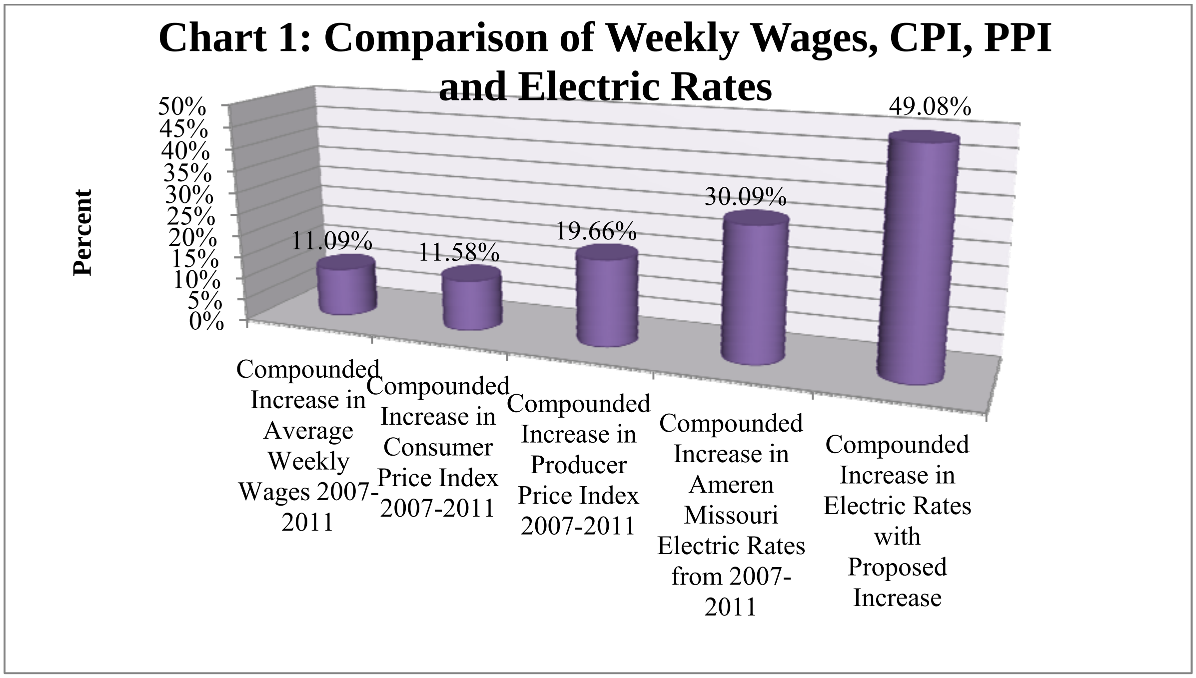
Staff Expert/Witness: John P. Cassidy

IV. Economic Considerations

As demonstrated below, Missouri, and specifically the counties[1] of the service area of the Ameren Missouri, have experienced challenging economic times since 2007 due to the recession and a slow recovery. Additionally, Ameren Missouri customers have experienced a 30.09% increase in electric rates, while experiencing an increase in income of less than one-half of that amount since 2007. Chart 1 provides a comparison of the increase in average weekly wages for

[1] According to Schedule 2 of the minimum filing requirements and the current tariffs, Ameren Missouri serves a total of 60 counties and the independent City of St. Louis. The Quarterly Census of Employment and Wages designates the independent City of St. Louis as a county, making the Ameren Missouri service area a total of 61 counties.

the counties in the Ameren Missouri service area, Consumer Price Index ("CPI"), Producer Price Index ("PPI")[2] and Ameren Missouri electric rates.



From 2007 to 2011,[3] the counties in the Ameren Missouri service area collectively experienced an 11.09% increase in average weekly wages. This was slightly lower than the overall Missouri compounded increase in average weekly wages of 11.63%. During that same time period, the CPI increased 11.58% and electric rates for customers served by Ameren Missouri increased 30.09% in Case Nos. ER-2007-0002, ER-2008-0318, ER-2010-0036, and ER-2011-0028, which accumulated to a total increase of approximately $607 million, shown in Table 1. However, Ameren Missouri has also experienced inflationary pressure illustrated by a 19.66% increase in the PPI for Industrial Commodities from 2007 to 2011.[4] Ameren Missouri is currently requesting an additional $376 million or a 14.6% increase in rates.

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[2] The PPI represents the Producer Price Index for Industrial Commodities which includes textile products and apparel, hides, skins, leather and related products, fuels and related products and power, chemicals and allied products, rubber and plastic products, lumber and wood products, pulp, paper and allied products, metals and metal products, machinery and equipment, furniture and household durables, nonmetallic mineral products and transportation equipment.

[3] Data for 2011 is still preliminary.

[4] Detailed information on Ameren Missouri's expenditures and revenues can be found later in the Staff Cost-of-Service Report.

Table 1: Ameren Missouri Rate Case History 2007 - 2011

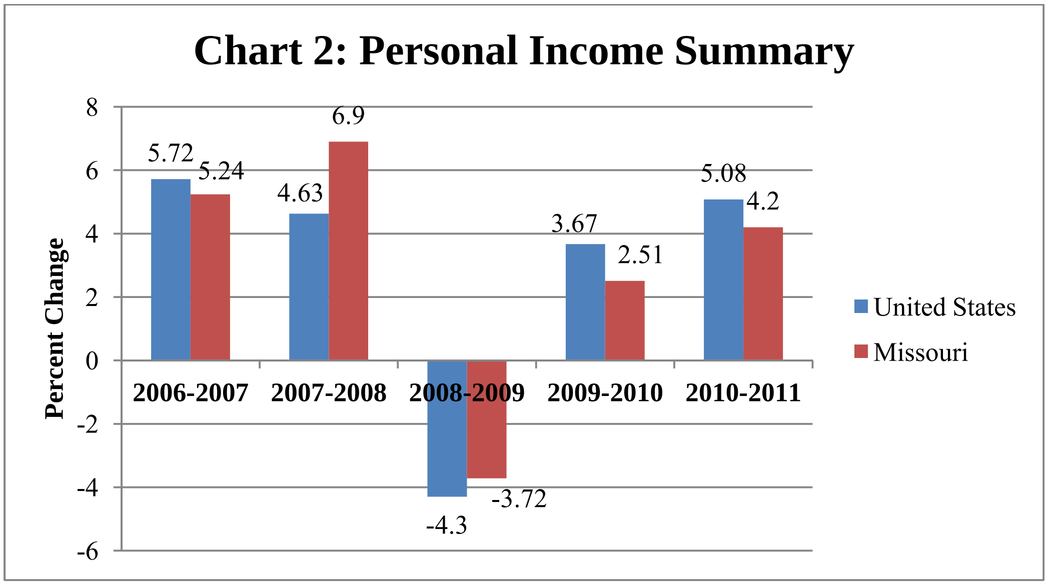
Case Number	Effective Date	Dollar Value	Percent Increase
ER-2007-0002	June 1, 2007	$41,777,474	2.07%
	July 23, 2007	$1,010,430	
ER-2008-0318	March 1, 2009	$161,709,205	7.75%
ER-2010-0036	June 21, 2010	$229,552,309	10.43%
ER-2011-0028	July 31, 2011	$173,225,030	7.11%
Total Dollars		$607,274,448	
Total Compounded Increase			30.09%

The increase in average weekly wages for counties in the Ameren Missouri service area is less than one-half of the increase in electric rates for Ameren Missouri customers from 2007 to 2011 and approximately one-quarter of the increase in rates if Ameren Missouri received its requested 14.6% increase. Furthermore, in the first quarter of 2012, the cost of living utility index[5] for Missouri was 103.1. This indicates that general utility expenses constitute a higher percentage of a Missouri resident's living expenses than the average U.S. resident. The U.S. average is an average of the participating urban areas in that quarter and is the "base" value which serves as the comparison at 100. Although average weekly wages are increasing, the cost of living as reflected by the CPI is also increasing, decreasing the positive impact of the increase in average weekly wages.

Based on the direct testimony of Company witness John J. Reed and information from the Federal Reserve Bank of St. Louis, Missouri's economic recovery has been weaker compared to the nation as a whole. Chart 2 illustrates this through a comparison of personal income between the United States as a whole and Missouri, based on data obtained from the Bureau of Economic Analysis. The data shows that Missouri had a percentage change of positive 4.2% in

[5] Source: Missouri Economic Research and Information Center (MERIC) and The Council for Community & Economic Research – 1st Quarter 2012. The cost of living composite index represents indices for grocery items, housing, utilities, transportation, health care and miscellaneous services. The utility index includes electric, natural gas and telephone services.

personal income, while the nation experienced a percentage change of positive 5.08% between 2010 and 2011.



In addition, Company witness Reed also reported on Missouri's coincident index, or economic performance.[6] According to the Current Economic Conditions in the Eighth Federal Reserve District report from the Federal Reserve Bank of St. Louis, as of March 2012, Missouri's coincident index is at 89.7% of its pre-recession level compared to the nation's coincident index at 97% of its pre-recession level. Missouri also fell behind the nation in Gross Domestic Product ("GDP")[7] growth in 2010 and 2011[8] as illustrated in Chart 3.

[6] Based on information from the Federal Reserve Bank of St. Louis using the Federal Reserve Bank of Philadelphia's coincident index, which is a combination of payroll employment wages, unemployment and hours of work to give a single measure of economic performance

[7] Staff Expert/Witness David Murray discusses Gross Domestic Product ("GDP") and the utility industry in detail later in the Staff Cost-of-Service Report.

[8] Advance 2011 real GDP by state statistics and revised 1997-2010 statistics were released on June 5th, 2012, by the Bureau of Economic Analysis. Real GDP by Metropolitan Statistical Area ("MSA") for 2011 have not yet been released.

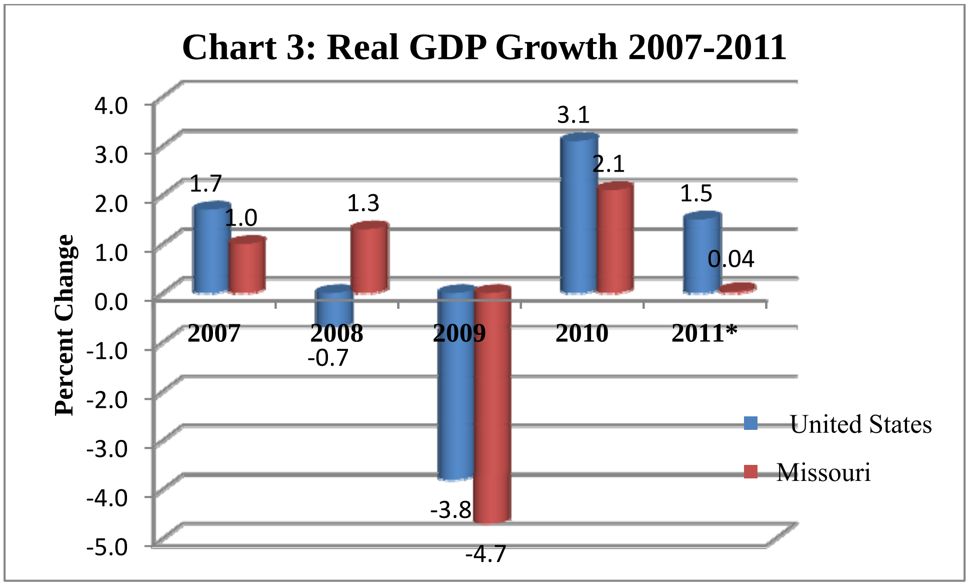


Chart 3 shows that Missouri's real GDP[9] only increased 0.04% in 2011, while the nation's real GDP grew 1.5% in 2011. In 2010, Missouri's real GDP grew less than the nation's real GDP at 2.1% and 3.1%, respectfully. Growth in real GDP occurred in 2010 after Missouri's real GDP declined by 4.7% in 2009, compared to the nation's real GDP decline of 3.8%. In "Facts About Ameren Missouri," posted on the Ameren Missouri website, it is reported that 53% of its electric customers are located in the St. Louis metropolitan area. The St. Louis MO-IL Metropolitan Statistical Area ("MSA"),[10] which includes 8 counties in Illinois and 8 counties[11] in Missouri, reported an increase in real GDP of 1.5% in 2010 which also fell behind the U.S. metropolitan portion's increase in real GDP of 2.5%. The St. Louis MO-IL MSA also experienced a decline in real GDP of 4.2% in 2009, which was greater than the U.S metropolitan portion's decline of 2.5%. The personal income data, the coincident index data and the real GDP data support Mr. Reed's conclusion that Missouri is experiencing a slower recovery than the nation.

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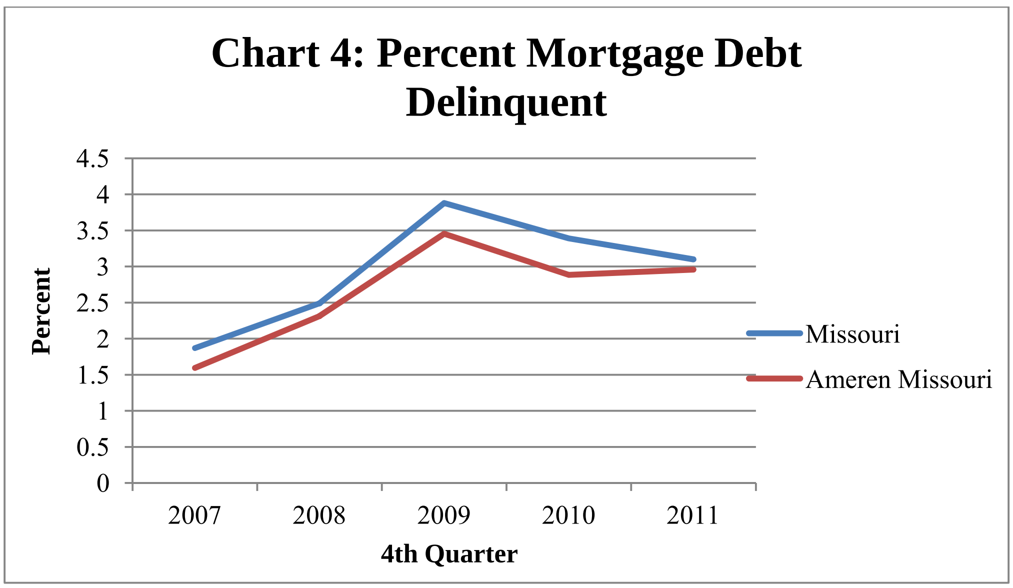
[9] Source: Bureau of Economic Analysis – Real GDP by State, All Industries.

[10] The Bureau of Economic Analysis reports that GDP by state is "the value added in production by the labor and capital located in a state" and GDP by metropolitan area is "the measure of the market value of all final goods and services produced within a metropolitan area in a particular period of time."

[11] All eight Missouri counties (Franklin, Jefferson, Warren, Washington, Lincoln, St. Charles, St. Louis, and St. Louis City) are located in the Ameren Missouri service area.

As explained below, the counties in the Ameren Missouri service area are collectively trying to recover from a recession where the unemployment rate peaked at 9.5%[12] in 2009, on lower than the national average weekly wages and lower than the national average per capita personal income. However, the counties in the Ameren Missouri service area do have, on average, a lower percentage of mortgage debt than the state average, as shown in Chart 4. Nevertheless, percent mortgage debt delinquency has increased greatly between the fourth quarter of 2007 and the fourth quarter of 2011 for both the Ameren Missouri service area and the state in general. The values in Chart 4, shown below, can be interpreted as the percent of mortgage debt balance that is 90+ days delinquent.[13]



Of the counties[14] in the Ameren Missouri service area, Madison County had the highest percent of mortgage debt balance 90+ days delinquent in 2011 at 8.69%, up from 1.22% in 2007; St. Louis City followed at 5.08% in 2011, up from 3.75% in 2007. Linn County reported the lowest mortgage debt delinquency rate at 0.21%. Of the three largest cities in Missouri

[12] The Ameren Missouri service area unemployment rate is calculated as a percentage of total labor force.

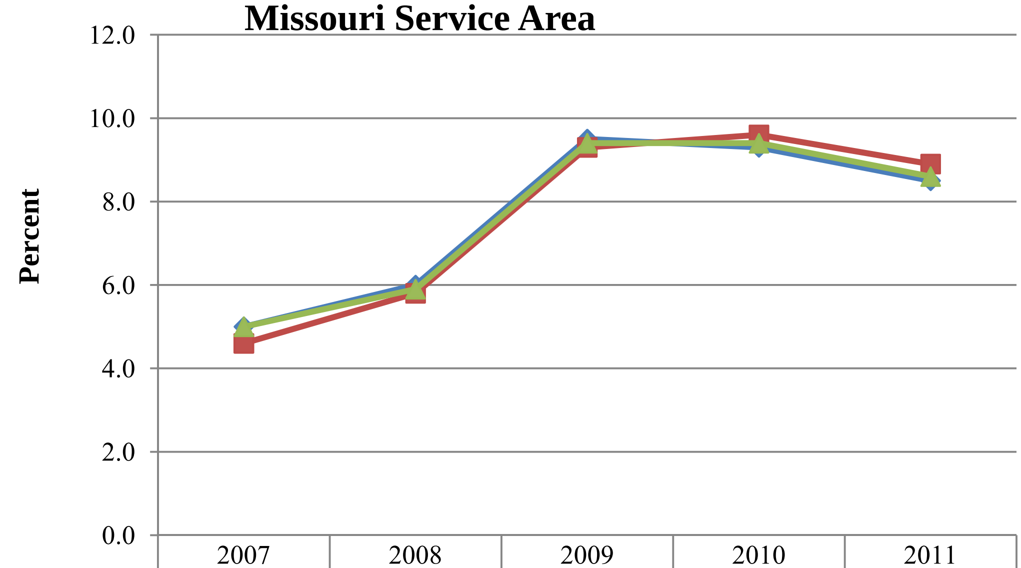
[13] Source: Federal Reserve Bank of New York, Consumer Credit Panel. 90+ days delinquent is considered seriously delinquent and in the foreclosure process.

[14] The Federal Reserve Bank of New York – Consumer Credit Panel, "only includes counties with an estimated population of at least 10,000 consumers with credit reports in the 4th quarter 2011." This includes 77 of the 115 counties in Missouri and 37 of the 61 counties in the Ameren Missouri service area.

(Kansas City, St. Louis and Springfield), St. Louis reported the highest percentage of mortgage delinquency at 5.08% in 2011.[15]

Counties in the Ameren Missouri service area had a slightly higher unemployment rate[16] than Missouri and the U.S. in 2008 and 2009, but fell slightly below Missouri and the U.S. unemployment rates in 2010 and 2011 as demonstrated in Chart 5, below. Although the unemployment rate seems to be decreasing in 2011, all of the counties in the Ameren Missouri service area have higher rates in 2011 than pre-recession or 2007 unemployment levels.

Chart 5: Unemployment Comparison for Ameren Missouri Service Area



	2007	2008	2009	2010	2011
Ameren Missouri	5.0	6.0	9.5	9.3	8.5
United States	4.6	5.8	9.3	9.6	8.9
Missouri	5.0	5.9	9.4	9.4	8.6

[15] Source: Consumer Credit Report – Missouri, Federal Reserve Bank of Kansas City – Tenth District, 4th Quarter 2011.

[16] Source: Bureau of Labor Statistics, Local Area Unemployment Statistics. The unemployment rate is calculated as a percentage of the labor force.

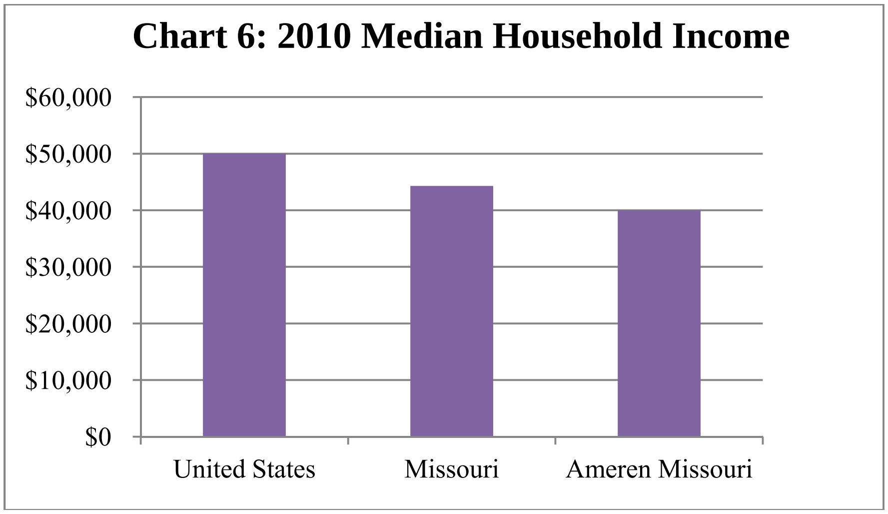
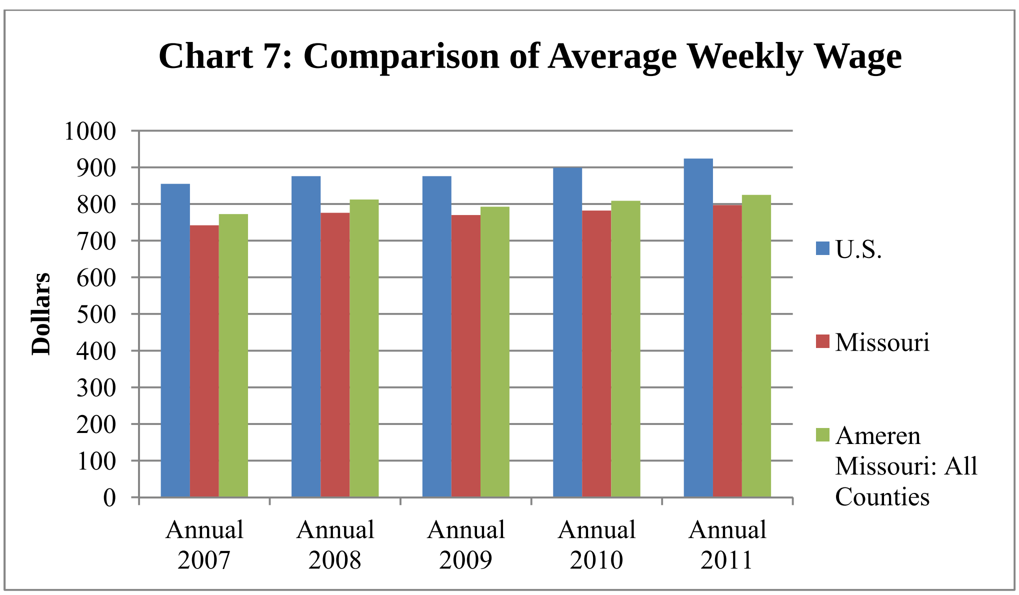


Chart 6 illustrates median household income based on data from the Missouri Economic Research and Information Center ("MERIC"). On average, counties in the Ameren Missouri service area fell below the national and state 2010 median household income levels. The average weekly wage[17] for the Ameren Missouri service area is also below the national average, but slightly higher than the state average shown in Chart 7.



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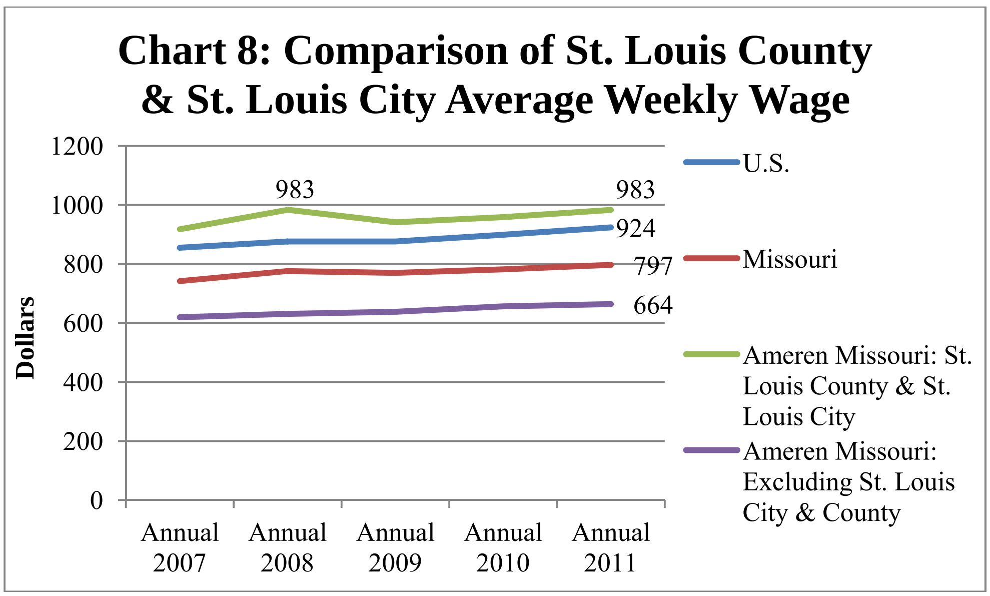
[17] Source: Bureau of Labor Statistics: Quarterly Census of Employment and Wages, Average Weekly Wage 2007-2011. Per Bureau of Labor Statistics, "annual average weekly wage values are calculated by dividing total annual wages by the average of the twelve monthly employment levels and dividing the result by fifty-two."

In 2011, the national average weekly wage was reported at $924. The only two counties served by Ameren Missouri that reported average weekly wages higher than the national average were St. Louis City at 10.3% higher at $1,019 and St. Louis County followed at 4.9% higher than the national average at $969. At $1,019, St. Louis City reported the highest average weekly wage amongst the counties; however, it has not reported an average weekly wage that high since 2008 at $1,010. Since St. Louis County and St. Louis City have a higher average weekly wage than the rest of the 59 counties, Chart 8 illustrates a comparison of the average weekly wage for only St. Louis City and St. Louis County, as compared to the average weekly wage for the other 59 counties served by Ameren Missouri.



In Chart 8, the average weekly wage for St. Louis City and St. Louis County, although higher than the average weekly wage for the rest of the 59 counties served by Ameren Missouri, is just recovering back up to the 2008 average weekly wage value in 2011.[18]

Again, 53% percent of Ameren Missouri's customers are in the St. Louis metropolitan area[19] and experience a higher than average weekly wage; however, 47% experience a lower weekly wage than the national and state average weekly wages. The median average weekly

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[18] The 2011 average weekly wage values are still preliminary.

[19] Based on customers per county reported in Ameren Missouri's outage report on the Ameren Missouri website the statement in the "Facts About Ameren Missouri" that "53% of its customers reside in the St. Louis metropolitan area" can only include its customers in St. Louis County and St. Louis City.

wage in 2011, including all 61 counties, is $553, meaning 50% of the counties are below this value and 50% are above. Another income variable is per capita personal income.[20] In 2010,[21] four counties (St. Louis County - $51,512, St. Charles - $39,441, Clay - $36,830 and Cole - $39,755) reported per capita personal income levels above the state level of $36,799.[22] However, just as with state per capita personal income, none of the four counties had per capita personal income levels in 2010 that were higher than per capita personal income levels in 2008. In 2009, the Ameren Missouri service area experienced a decrease of 4.82% in personal income, which was more than the decrease experienced by the state (3.72%) and the nation (4.3%).[23] In 2011, Missouri reported per capita personal income at $38,248, which fell below the national per capita personal income level of $41,663. However, this was the first time both the state and the nation experienced a per capita personal income level that surpassed 2008 levels by approximately 1.5%.

Even though Ameren Missouri's rates are lower than the national average, 47% of Ameren Missouri's customers receive a weekly wage below the national average weekly wage; over half of its customers enjoy less personal income than the national average per capita personal income and unemployment rates are above 2007 pre-recession unemployment rates for all 61 counties where Ameren Missouri provides service.

Staff Expert/Witness: Robin Kliethermes

V. Major Issues

The following are the major issues between the Staff and Ameren Missouri based on their respective prefiled direct revenue requirement cases. These issues are discussed here because of their estimated revenue requirement dollar value. A brief explanation for each issue follows, together with an estimate of the dollar value of the difference between the positions of the Staff and Ameren Missouri on the issue.

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[20] The Bureau of Economic Analysis calculates per capita personal income as total personal income divided by the Census Bureau's annual midyear population estimates.

[21] Source: Bureau of Economic Analysis. Local Area Personal Income data for 2011 will not be available until November 26th, 2012.

[22] Only St. Louis County had a level above the national level ($39,937).

[23] Shown in Chart 3.

Return on Equity (ROE) – Issue Value – ($101 million difference based on applying difference in ROEs to the rate base presented by Ameren Missouri). The Staff supports the high end of its ROE recommendation of 9.00%. Ameren Missouri is requesting a 10.75% ROE. This issue is addressed in detail in Section VI of this report by Staff witness David Murray.

Property Tax Expense – Issue Value – ($12.7 million difference). Ameren Missouri is seeking an increase in ongoing property taxes based on estimated growth in investment and also for investment associated with their new methane powered energy center. Staff annualized property taxes based on actual 2011 property tax bills.

Entergy Refund – Issue Value – ($10.2 million difference). This difference relates to the refund that Ameren Missouri received from Entergy during June 2012 based upon a recent Federal Energy Regulatory Commission (FERC) Order. Since this refund occurred subsequent to the Company's direct filing, this refund is not addressed by the Company's cost of service calculation. The Staff recommends that this refund be refunded to customers over a three year period beginning with the effective date of rates in this rate proceeding.

Revenues – Issue Value - ($9.0 million difference). The overall difference in revenue calculation that exists between Company and Staff is $9.0 million. The primary difference that exists with regard to revenues has to do with the difference in the weather history data that was used by the Company and Staff with regard to the ultimate determination of weather normalization of usage.

Severance – Issue Value – ($8.6 million difference). This difference relates to the recovery of severance costs associated with a Voluntary Separation Program offered to employees subsequent to the test year. Ameren Missouri is seeking a three year recovery for these costs. Staff contends that Ameren Missouri will achieve cost savings to offset these severance costs and that no adjustment to the cost of service is necessary to address these costs.

There are other significant differences between the Staff and the Company, based upon their respective direct filings. However, these other differences are less significant than the items discussed above.

Staff Expert/Witness: John P. Cassidy

VI. Rate of Return

A. Introduction

An essential ingredient of the cost-of-service ratemaking formula is the rate of return ("ROR"), which is designed to provide a utility with a return of the costs required to secure debt and equity financing. This ROR is equal to the utility's weighted average cost of capital ("WACC"), which is calculated by multiplying each component ratio of the appropriate capital structure by its cost and then summing the results. While the proportion and cost of most components of the capital structure are a matter of record, the cost of common equity must be determined through expert analysis. Staff's expert financial analyst, David Murray, has determined Ameren Missouri's cost of common equity by applying well-respected and widely-used methodologies to data derived from a carefully-assembled group of comparable companies. Staff then used that cost of common equity, net of any risk adjustments, together with other capital component information as of September 30, 2011, to calculate Ameren Missouri's fair rate of return, as follows:

			Weighted Cost of Capital Using Common Equity Return of:		
Capital Component	Percentage of Capital	Embedded Cost	**8.00%**	**8.50%**	**9.00%**
Common Stock Equity	53.02%	-----	4.24%	4.51%	4.77%
Preferred Stock	1.04%	4.18%	0.04%	0.04%	0.04%
Long-Term Debt	45.94%	5.885%	2.70%	2.70%	2.70%
Total	**100.00%**		**6.99%**	**7.25%**	**7.52%**

As contained in the above table, Staff estimates, based upon its expert analysis, a cost of common equity range of 8.00% to 9.00%, mid-point 8.50%, and an overall ROR of 6.99% to 7.52%, mid-point 7.25%. Staff recommends that the Commission authorize a return on common equity of 9.00% based on the high-end of its estimated cost of equity due to past concerns about Staff's estimates being too low. The details of Staff's analysis and recommendations are presented in attached Appendix 2, Schedules 1-23. Staff's workpapers will be provided to the parties at the time of filing Staff's Cost of Service Report. Staff will make any source documents of specific interest available upon the request of any party to this case or upon the Commission's request.

B. Analytical Parameters

The determination of a fair rate of return is guided by principles of economic and financial theory and by certain minimum Constitutional standards. Investor-owned public utilities such as Ameren Missouri are private property that the state may not confiscate without appropriate compensation. The Constitution requires, therefore, that utility rates set by the government must allow a reasonable opportunity for the shareholders to earn a fair return on their investment. The United States Supreme Court has described the minimum characteristics of a Constitutionally-acceptable rate of return in two frequently-cited cases.[24] In *Bluefield Water Works & Improvement Co. v. Public Service Commission of West Virginia*, the Court stated:[25]

> A public utility is entitled to such rates as will permit it to earn a return on the value of the property which it employs for the convenience of the public equal to that generally being made at the same time and in the same general part of the country on investments in other business undertakings which are attended by corresponding risks and uncertainties; but it has no constitutional right to profits such as are realized or anticipated in highly profitable enterprises or speculative ventures. The return should be reasonably sufficient to assure confidence in the financial soundness of the utility and should be adequate, under efficient and economical management, to maintain and support its credit and enable it to raise the money necessary for the proper discharge of its public duties. A rate of return may be reasonable at one time and become too high or too low by changes affecting opportunities for investment, the money market and business conditions generally.

Similarly, in the later of the two cases, *Federal Power Commission v. Hope Natural Gas Co.*, the Court stated:[26]

> '[R]egulation does not insure that the business shall produce net revenues.' But such considerations aside, the investor interest has a legitimate concern with the financial integrity of the company whose rates

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[24] *Federal Power Commission v. Hope Natural Gas Co.*, 320 U.S. 591, 64 S.Ct. 281, 88 L.Ed. 333 (1943); *Bluefield Water Works & Improvement Co. v. Public Service Commission of West Virginia*, 262 U.S. 679, 43 S.Ct. 675, 67 L.Ed. 1176 (1923).

[25] 262 U.S. 679, 692-693, 43 S.Ct. 675, 679, 67 L.Ed. 1176.

[26] 320 U.S. 591, 603, 64 S.Ct. 281, 288, 88 L.Ed. 333, 345.

> are being regulated. From the investor or company point of view it is important that there be enough revenue not only for operating expenses but also for the capital costs of the business. These include service on the debt and dividends on the stock. By that standard the return to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks. That return, moreover, should be sufficient to assure confidence in the financial integrity of the enterprise, so as to maintain its credit and to attract capital.

From these two decisions, Staff derives and applies the following principles to guide it in recommending a fair and reasonable ROR:

1. A return consistent with returns of investments of comparable risk;
2. A return sufficient to assure confidence in the utility's financial integrity; and
3. A return that allows the utility to attract capital.

Embodied in these three principles is the economic theory of the opportunity cost of investment. The opportunity cost of investment is the return that investors forego in order to invest in similar risk investment opportunities that vary depending on market and business conditions.

The methodologies of financial analysis have advanced greatly since the *Bluefield* and *Hope* decisions.[27] Additionally, today's utilities compete for capital in a global market rather than a local market. Nonetheless, the parameters defined in those cases are readily met using current methods and theory. The principle of the commensurate return is based on the concept of risk. Financial theory holds that the return an investor may expect is reflective of the degree of risk inherent in the investment, risk being a measure of the likelihood that an investment will not perform as expected by that investor. Any line of business carries with it its own peculiar risks and it follows, therefore, that the return Ameren Missouri's shareholders may expect is equal to that required for comparable-risk utility companies.

Financial theory holds that the company-specific Discounted Cash Flow ("DCF") method satisfies the constitutional principles inherent in estimating a return consistent with those of

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[27] Neither the Discounted Cash Flow ("DCF") nor the Capital Asset Pricing Model ("CAPM") methods were in use when those decisions were issued.

companies of comparable risk;[28] however, Staff recognizes that there is also merit in analyzing a comparable group of companies as this approach allows for consideration of industry-wide data. Because Staff believes the cost of equity can be reliably estimated using a comparable group of companies and the Commission has expressed a preference for this approach, Staff relies primarily on its analysis of a comparable group of companies to estimate the cost of equity for Ameren Missouri.

In this case, Staff has applied this comparable company approach through the use of both the DCF method and the Capital Asset Pricing Model ("CAPM"). Properly used and applied in appropriate circumstances, both the DCF and the CAPM methodologies can provide accurate estimates of a utility's cost of equity. Because it is well-accepted economic theory that a company that earns its cost of capital will be able to attract capital and maintain its financial integrity, Staff believes that authorizing an *allowed* return on common equity based on the *cost* of common equity is consistent with the principles set forth in ***Hope*** and ***Bluefield***. However, as Staff will discuss extensively throughout this section of the report, Staff believes its recommended return on equity is higher than Ameren Missouri's cost of equity.

C. Current Economic and Capital Market Conditions

Determining whether a cost of capital estimate is fair and reasonable requires a good understanding of the current economic and capital market conditions, with the former having a significant impact on the latter. With this in mind, Staff emphasizes that an estimate of a utility's cost of equity should pass the "common sense" test when considering the broader current economic and capital market conditions.

1. Economic Conditions

The United States economy has been growing at a tepid pace since the most severe recession since the Great Depression. The pattern of this slow economic recovery has been much different than other past recoveries from severe recessions, in which the economy usually grew at a fairly rapid pace for a few years following the recession. This has investors,

[28] Because the DCF method uses stock prices to estimate the cost of equity, this theory not only compares the utility investment to other utilities, but it compares the utility investment to all available assets. Consequently, setting the allowed ROE based on a market-determined cost of equity is necessarily consistent with the principles of *Hope* and *Bluefield.*

policy makers and academics concerned about the long-term prospects for not only U.S. growth, but for that of global economic growth. Most economists project domestic economic growth to be lower in the long-term as compared to the growth rates achieved during the post World War II era before the recent recession. Economists generally expect the long-term nominal Gross Domestic Product ("GDP") growth rate to be in the range of 4% to 5%.[29] These projected long-term nominal GDP growth rates generally are predicated on 2% expected inflation, as measured by the GDP price deflator.

The Federal Reserve Bank ("the Fed") continues to maintain the Fed Funds Rate at historically low levels between 0.00% and 0.25% (*see* Schedules 2-1 and 2-2). Additionally, the Fed decided in meetings held on June 19 and 20, 2012, to extend its bond buy-back program, “Operation Twist,” through the end of the year. Through this program, the Fed hopes to continue to maintain, if not further reduce, already low long-term interest rates. Fed Chairman Ben Bernanke bluntly indicated, “if we don’t see continued improvement in the labor market we’ll be prepared to take additional steps.” The Fed’s announcement was accompanied by a revised outlook for lower economic growth in the near term as compared to previous estimates. The Fed now projects the economy will grow between 1.9% and 2.4% this year and less than 3% next year. The Fed also lowered its estimates for inflation to 1.2% to 1.7% for this year from its previous projection of 1.9% to 2.0% in April. The Fed continues to communicate to the markets that it will keep short-term interest rates low until late 2014.[30]

Consequently, while there is much debate regarding the effect current monetary policy may have on inflation, it appears that the Fed’s primary concern is still the lack of sustainable growth in the economy. Although there is also discussion of the possible impact monetary policy may have on inflation in the future, the market is not factoring in a high expected inflation rate in security prices. The 2012 monthly spread between 30-year Treasury

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[29] The Congressional Budget Office ("CBO"), *The Budget and Economic Outlook: Fiscal Years 2012-2022,* January 2012; Minutes from the Federal Open Market Committee’s (“FOMC”) meeting on April 24-25, 2010; First Quarter 2012 Survey of Professional Forecasters; Energy Information Administration’s 2012 Annual Energy Outlook and The Livingston Survey, June 7, 2012.

[30] Kristina Peterson and Jon Hilsenrath, “Fed Warns of Risk to Economy, Central Bank Extends Bid to Lower Long-Term Rates, Stands Poised to Do More,” *Wall Street Journal,* June 21, 2012, p. A1 and A14.

Inflation Protected Securities ("TIPS") and non-inflation protected Treasury bonds implies investors are requiring an additional 2.25% to 2.40% return for potential inflation.[31]

2. Capital Market Conditions

a. Utility Debt Markets

Debt markets have been very attractive for utility companies in recent months. It has started to become fairly common for utilities to issue 10-year to 15-year bonds at coupons in the 3% range. For example, The Empire District Electric Company issued $88 million of 15-year secured debt at a coupon of 3.58% in April 2012. If one were to assume that the risk premium[32] required to invest in utility stocks rather than utility bonds was constant, then these lower utility debt yields directly translate into a lower required return on equity. In other words, a lower cost of debt is indicative of a lower cost of capital, all else being equal.

Unlike the short-term capital costs directly influenced by the Fed, long-term capital costs are typically market-based. Although long-term interest rates, as measured by 30-year Treasury bonds ("T-bonds"), increased to the 4% range during the November 2010 to July 2011 period, they have since decreased to the high 2% to 3% range for the period August 2011 through May 2012. (*See* Schedules 4-2 and 4-3.)

Long-term utility bond yields have also continued to more closely track the changes in the 30-year T-bond yields in the aftermath of the financial crisis of late 2008 and early 2009. Although the current spread between utility bond yields and 30-year Treasury yields is slightly above the average of 1.55% since 1980 (1.91%), the absolute yield on utility bonds recently fell below 5% for the first time during this prolonged period of low interest rates and slow economic growth. (*See* Schedules 4-1 and 4-3.)

Not only has the cost of investment-grade debt capital declined considerably, but it appears that the cost of non-investment grade debt has declined, as well (*see* Schedule 4-6). However, the spread between investment-grade and non-investment grade debt is higher than it was during the loose credit years during the middle of the previous decade (*see* Schedule 4-7).

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[31] http://research.stlouisfed.org/fred2/categories/22

[32] Risk Premium in this context is defined as the excess required return to invest in a company's equity rather than its debt.

b. Utility Equity Markets

For the twelve months ending December 31, 2011, the total return on the Dow Jones Industrial Average was 8.38%, the total return on the Standard & Poor's 500 ("S&P 500") was 2.11%, and the total return on the Edison Electric Institute ("EEI") Index of electric utilities was 19.99%. More specifically, on a non-market capitalization weighted basis, the total return for the twelve months ending December 31, 2011, was 22.30% for EEI "Regulated" electric utilities, 19.52% for EEI "Mostly Regulated" electric utilities and 21.36% for "Diversified" electric utilities.

Typically, utility indices tend to lag behind broader market indices that are increasing or decreasing. Regulated utilities are not expected to be as cyclical as the broader markets because of low demand elasticity; however, utilities with significant non-regulated operations are likely to be more affected by general economic trends. Although the returns of EEI's "Diversified" electric utilities and "Mostly Regulated" electric utilities had lagged that of "Regulated" Utilities in 2010, in 2011 the returns of all the categories were quite strong as compared to the broader markets. "Regulated" utilities' total returns in 2010 were 15.75%. Adding the "Regulated" utilities' returns for 2011 with those achieved in 2010, totals 38.05% over the last two years, a truly spectacular couple of years for electric utility stock returns. It appears that these strong returns have been driven largely by the continued decline in bond yields over the past year. This is highly consistent with investors' views that utility stocks compete with bond investments because they are largely considered to be bond surrogates/substitutes. In order for equilibrium to return to bond prices as they relate to utility stock prices, either bond prices would decrease (bond yields increase) and/or utility stock prices would increase. So far, it has been the latter. The increase in utility stock price valuations does not appear to be driven by higher growth expectations for the regulated utility sector. Staff's proxy group in this case contains eight companies Staff used in the last Ameren Missouri rate case. The average forward price-to-earnings ("p/e") ratio for these eight companies increased from 13.19x to 14.67x in just a little over a year. There are two primary drivers for higher p/e ratios, higher expected growth in earnings and/or a lower cost of equity, i.e. investors willing to pay a higher price per unit of earnings. In this case, it appears to be the latter because the projected 5-year earnings-per-share ("EPS") forecasted growth rates have actually declined since the last rate case. This is a clear indication that the cost of equity has declined since the last Ameren Missouri rate case.

Another indication of the continued decrease in the cost of capital, especially for regulated electric utilities, is the fact that the electric utility industry is trading at a premium, i.e. higher p/e ratios, to that of the S&P 500. During a recent Society of Utility and Regulatory Analysts ("SURFA") conference Staff attended on April 26 and 27, 2012, Greg Gordon, CFA, Senior Managing Director and Partner with International Strategy and Investment, provided a presentation showing that regulated electric utilities' p/e ratios have been approximately 1.2x higher than that of the S&P 500. Higher p/e ratios are usually associated with higher growth companies. In the aggregate, the projected growth in EPS over the next 5-years for the S&P 500 is typically 10% or higher, whereas utilities' 5-year EPS growth forecasts are typically in the 5% to 6% range. Clearly, this means that investors are not paying a higher p/e for electric utility stocks for growth, but because of the low comparative returns offered by bonds. Utility stock returns are consistently highly correlated with bond returns. The current macroeconomic environment is clearly favorable to utilities in terms of a lower cost of capital for debt and equity instruments. Staff believes these lower capital costs should be shared with ratepayers through lower authorized returns on common equity ("ROEs").

In a recent Barron's 2012 Roundtable discussion, Bill Gross, founder and managing director of PIMCO, indicated the following about utility returns:

> They pay big dividends because they continually are granted a 10% return on equity by regulators in a world where returns are moving much lower. After earning 10% they can pay out 4% to 5% to investors.[33]

Consequently, it appears the capital market environment not only continues to support the ability to authorize ROEs below 10%, but it seems as if it expects them to be lowered considering the current capital and economic environment.

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[33] Lauren R. Rublin, "Listen Up, Class: Here's How to Profit," *Barron's Cover, January 16, 2012,* p. 11, http://online.barrons.com/article/SB50001424052748703535904577152932179268296.html#articleTabs_article%3D0

D. Ameren's and Ameren Missouri's Operations

1. Ameren

The following excerpt from Ameren's Form 10-Q filing with the United States Securities Exchange Commission ("SEC") for the quarter ended March 31, 2012, provides a good description of Ameren's current business operations and current organizational structure:

> Ameren, headquartered in St. Louis, Missouri, is a public utility holding company under PUHCA 2005, administered by FERC. Ameren's primary assets are the common stock of its subsidiaries. Ameren's subsidiaries are separate, independent legal entities with separate businesses, assets, and liabilities. These subsidiaries operate, as the case may be, rate-regulated electric generation, transmission and distribution businesses, rate-regulated natural gas transmission and distribution businesses, and merchant electric generation businesses in Missouri and Illinois. Dividends on Ameren's common stock and the payment of expenses by Ameren depend on distributions made to it by its subsidiaries. Ameren's principal subsidiaries are listed below. Also see the Glossary of Terms and Abbreviations at the front of this report and in the Form 10-K.
>
> • Union Electric Company, or Ameren Missouri, operates a rate-regulated electric generation, transmission and distribution business, and a rate-regulated natural gas transmission and distribution business, in Missouri.
>
> • Ameren Illinois Company, or Ameren Illinois, operates a rate-regulated electric and natural gas transmission and distribution business in Illinois.
>
> • AER consists of non-rate-regulated operations, including Genco, AERG, and Marketing Company. Genco operates a merchant electric generation business in Illinois and holds an 80% ownership interest in EEI, which it consolidates for financial reporting purposes.
>
> Ameren has various other subsidiaries responsible for activities such as the provision of shared services.

2. Ameren Missouri

In Note 1 to Ameren's Combined Notes to Financial Statements, December 31, 2011, Ameren provides the following description of Ameren Missouri's operations:

> Union Electric Company, or Ameren Missouri, operates a rate-regulated electric generation, transmission and distribution business, and a rate-regulated natural gas transmission and distribution business in Missouri. Ameren Missouri was incorporated in Missouri in 1922 and is successor to a number of companies, the oldest of which was organized in 1881. It is the largest electric utility in the state of Missouri. It supplies electric and

natural gas service to a 24,000-square-mile area in central and eastern Missouri. This area has an estimated population of 2.9 million and includes the Greater St. Louis area. Ameren Missouri supplies electric service to 1.2 million customers and natural gas service to 127,000 customers.

E. Ameren Missouri's and Ameren's Credit Ratings

Ameren and Ameren Missouri are currently rated by Moody's, Standard & Poor's ("S&P") and Fitch. It is important to understand the current credit standing of Ameren as well as Ameren Missouri, as Ameren's ratings influence investors' views of the risk associated with investing in Ameren Missouri. Although Staff is not estimating the cost of capital for Ameren in this case, the influence of the risks of Ameren's other operations, which includes non-regulated merchant generation operations, on Ameren Missouri's risk must be understood in order to estimate a fair rate of return for Ameren Missouri.

Ameren Missouri's Moody's, S&P and Fitch issuer/corporate credit rating are 'Baa2', 'BBB-', and 'BBB+', respectively. Ameren's Moody's, S&P and Fitch issuer/corporate credit rating are 'Baa3', 'BBB-', and 'BBB', respectively.[34] Moody's and Fitch rate Ameren one notch lower than Ameren Missouri because Moody's and Fitch tend to give more weight to the stand-alone financial risk and business risk of the subsidiary, i.e. they view Ameren Missouri's credit quality as being stronger than that of the parent. However, S&P's ratings methodology is based on its view that without significant ring-fencing mechanisms in place, they will rate the subsidiary based on the consolidated credit quality of the parent company. In fact, S&P does not even provide Ameren Missouri's stand-alone financial ratios in its published research reports. S&P only publishes Ameren's financial ratios.

The following is an excerpt from a March 16, 2012, S&P credit-rating report on Ameren Missouri:

> Standard & Poor's Ratings Services' ratings on St. Louis-based Ameren Missouri (AM) reflect the consolidated credit profile of its parent, Ameren Corp. (Ameren). The ratings also reflect AM's "excellent" business risk profile and Ameren's "significant" financial risk profile under our criteria.

[34] Ameren's SEC Form 10-Q Filing for the period ended March 31, 2012, p. 70.

> AM is a rate-regulated utility that serves 1.2 million electric and 126,000 gas customers in portions of central and eastern Missouri. The company also has 10,500 megawatts (MW) of generating capacity, of which 5,400 MW is base load coal and 1,200 MW is nuclear.
>
> AM's excellent business risk profile reflects its lower-risk, monopolistic rate-regulated utility businesses that provide an essential service. Additionally, the company's recent rate cases and regulatory mechanisms indicate an overall decreasing regulatory risk. In 2010 and 2011, the company received electric and gas rate case orders from the Missouri Public Service Commission (MPSC) that included more than $400 million of rate increases. In addition, the company also has credit-supportive trackers, including a fuel adjustment clause, pension and other postemployment benefit trackers, and a cost tracker for vegetation management and infrastructure inspections...
>
> Our corporate credit rating on AM marginally suffers from the company's affiliation with Ameren's nonrate-regulated competitive generation businesses…

Ameren's non-regulated businesses continue to hinder the ability of Ameren Missouri to achieve a higher credit rating from S&P. Although S&P indicates that Ameren's non-regulated operations only "marginally" hinder Ameren Missouri's credit rating, because Ameren Missouri's S&P credit rating is based on Ameren's consolidated risk profile, its credit rating is necessarily impacted by Ameren's non-regulated operations, which S&P currently rates 'BB-' with a Negative CreditWatch, which means it could be downgraded further. S&P stated the following about Ameren's business risk profile in its March 19, 2012, Research Report: "The consolidated strong business risk profile reflects the combination of the excellent business risk profiles of Ameren's regulated electric and gas utility businesses offset by the fair business risk of Ameren's competitive merchant energy business." Because S&P rates Ameren Missouri based on Ameren's consolidated credit profile, Ameren Missouri's S&P rating is clearly impacted by the risks associated with Ameren's non-regulated operations.

However, as explained previously, Moody's and Fitch tend to give more weight to Ameren Missouri's stand-alone risk profile. Although there is no consensus among the rating agencies on how much of an impact Ameren's non-regulated operations have on Ameren Missouri's credit quality, there is likely to be some trickle-down effect on Ameren Missouri's cost of capital due to its affiliation with these higher risk enterprises. Staff does not currently propose a downward adjustment to Ameren Missouri's cost of debt to reflect this trickle-down effect because the amount of the impact is debatable due to differing views on credit quality and the fact that there is currently only a one notch difference between Ameren's and Ameren Missouri's Moody's and Fitch credit rating. Although Staff did not make a downward adjustment to Ameren Missouri's cost of debt, Staff is not proposing to make an upward adjustment to the proxy group's cost of equity due to the credit rating differential between Ameren and Ameren Missouri as they compare to the average for the proxy group, due to Staff's concerns discussed above.

F. Cost of Capital

In order to arrive at Staff's recommended ROR, Staff specifically examined (1) an appropriate ratemaking capital structure, (2) the Company's embedded cost of debt and preferred stock, and (3) the Company's cost of common equity.

1. Capital Structure

Schedules 5-1 and 5-2 present Ameren Missouri's and Ameren's historical capital structures in dollar terms and percentage terms, respectively, for the past five years. As can be derived from these historical capital structures, the current capital structure of Ameren Missouri is fairly consistent with the way in which Ameren has been capitalized over this period, easing any concerns Staff may have regarding manipulation of Ameren Missouri's capital structure for ratemaking purposes.

Based on financial statements through March 31, 2012, Ameren Missouri has not issued any short-term debt since September 2009. This is the case in spite of the fact that Ameren Missouri has had construction work in progress ("CWIP") balances in the $600 million to $800 million range since January 1, 2011. Apparently, Ameren Missouri has been able to fund its liquidity needs through a March 2009 long-term debt issuance of $350 million and internal cash flows and balances. Staff will evaluate this situation further through the planned true-up proceeding in this case.

For the purposes of its direct case, Staff accepted Ameren Missouri's September 30, 2011, capital structure provided in the Direct Testimony of Company witness

Ryan J. Martin.[35] Schedule 6 presents Ameren Missouri's capital structure and associated capital ratios. The resulting capital structure consists of 53.02% common stock equity, 1.04% preferred stock and 45.94% long-term debt.

2. Embedded Cost of Debt and Preferred Stock

Staff also accepted the embedded cost of long-term debt and preferred stock provided by Ameren Missouri in response to Staff Data Request No. 0245.

3. Cost of Common Equity

Staff determined Ameren Missouri's cost of common equity through a comparable company cost-of-equity analysis of a proxy group of 10 companies using the DCF method. Additionally, Staff used a CAPM analysis and a survey of other indicators as a check of the reasonableness of its recommendations.

a. The Proxy Group

First, Staff formed a group of comparable companies for the commensurate return analysis. Starting with 55 market-traded electric utilities, Staff applied a number of criteria to develop a proxy group comparable in risk to Ameren Missouri's regulated electric utility operations (*see* Schedule 7). Staff decided to add one additional criterion in this case as compared to Ameren Missouri's last rate case. Staff added a criterion to screen out companies that do not have an equivalent S&P business risk profile as Ameren Missouri, which is currently 'Excellent.' Staff believes it was important to add this criterion to further screen utility companies that may have non-regulated operations that are impacting the parent company's business risk even though they were classified as "regulated" by EEI. For example, although EEI classifies Ameren as a "regulated" electric utility, many investment analysts, such as Goldman Sachs, consider Ameren to be a diversified company. Staff's criteria is as follows:

1. Classified as an electric utility by Value Line (55 companies);
2. Publicly-traded stock;

[35] Martin Direct Testimony, February 3, 2012, p. 5, lines 19-20.

3. Followed by EEI and classified by EEI as a regulated electric utility (19 companies eliminated, 36 remaining);

4. Followed by AUS and reporting at least 70% of revenues from electric operations (11 companies eliminated, 25 remaining);

5. Ten years of Value Line historical growth data available (3 companies eliminated, 22 remaining);

6. No reduced dividend since 2009 (2 companies eliminated, 20 remaining);

7. Projected growth available from Value Line and Reuters (1 company eliminated, 19 remaining);

8. At least investment grade credit rating (3 companies eliminated, 16 remaining);

9. Company-owned generating assets (0 companies eliminated, 16 remaining);

10. Rated an 'Excellent' Business Risk Profile by S&P (4 companies eliminated, 12)

11. No significant merger or acquisition announced in last 3 years (2 companies eliminated, 10 remaining).

This final group of 10 publicly-traded electric utility companies ("the comparables") was used as a proxy group to estimate the cost of common equity for Ameren Missouri's regulated electric utility operations. The comparables are listed on Schedule 8.

b. The Constant-growth DCF

Next, Staff calculated Ameren Missouri's cost of common equity applying values derived from the proxy group to the constant-growth DCF model. The constant-growth DCF model is widely used by investors to evaluate stable-growth investment opportunities, such as regulated utility companies. The constant-growth version of the model is usually considered appropriate for mature industries such as the regulated utility industry.[36] It may be expressed algebraically as follows:

$$k = D_1/P_0 + g$$

Where: k is the cost of equity;

D_1 is the expected next 12 months dividend;

P_0 is the current price of the stock; and

g is the dividend growth rate.

The term D_1/P_0, the expected next 12-months' dividend divided by current share price, is the dividend yield. Staff calculated the dividend yield for each of the comparable companies by dividing the a weighted average of the 2012 and 2013 Value Line projected dividend per share (*see* Schedule 11) by the monthly high/low average stock price for the three months ending May 31, 2012 (*see* Schedule 10).[37] Staff uses the above-described stock price because it reflects current market expectations. The projected average dividend yield for the ten comparable companies is 4.1%, unadjusted for quarterly compounding.

i. The Inputs

In the DCF method, the cost of equity is the sum of the dividend yield and a growth rate ("g") that represents the projected capital appreciation of the stock. In estimating a growth rate, Staff considered both the actual dividends per share ("DPS"), EPS and book value per share ("BVPS") for each of the comparable companies and also the projected DPS, EPS and BVPS. In reviewing actual growth rates, Staff found the historical growth rates to be quite

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[36] Aswath Damodaran, *Investment Valuation: Tools and techniques for determining the value of any asset,* University Edition, John Wiley & Sons, Inc., 1996, p. 195-196; John D. Stowe, Thomas R. Robinson, Jerald E. Pinto and Dennis W. McLeavey, *Analysis of Equity Investments: Valuation*, Association for Investment Management and Research, 2002, p.64.

[37] The monthly high/low averaging technique minimizes the effects of short-term stock market volatility on the calculation of dividend yield. P0 is calculated by averaging the highest and the lowest price for each month during the selected period.

volatile.[38] Staff then analyzed the projected DPS, EPS and BVPS estimated by Value Line for each of the comparable companies over the next five years (*see* Schedule 9-3). While more stable than the historical growth rates, Staff still found a relatively wide dispersion in projected EPS growth (3.00% to 8.00%). Equity analysts' earnings estimates on *Reuters.com* also showed a wide dispersion of 3.00% to 6.96%. The average projected 5-year EPS annual compound growth rate estimates yielded a growth rate of 5.40%, which Staff believes is not sustainable (*see* Schedule 9-4, Column 6).

Due to the current volatility and wide dispersions present in Staff's analysis of historical and projected DPS, EPS, and BVPS, Staff only gave this data limited weight in estimating a reasonable growth rate for its single-stage DCF analysis. For reasons Staff will discuss in more detail below, use of equity analysts' forecasts of 5-year EPS growth is not reasonable in the context of estimating the cost of equity using a single-stage DCF methodology. However, if Staff uses growth rates consistent with these estimates in its constant-growth DCF, the cost of equity indication is approximately 9.10% to 9.60%.

Although use of equity analysts' 5-year EPS growth forecasts as a constant growth rate is easy and popular in utility ratemaking, investors do not assume their utility investments can grow at this rate into perpetuity when estimating a fair price to pay for utility stocks. Not only does practical investment analysis prove this wrong, but empirical evidence proves that EPS growth for the electric utility industry has never achieved these lofty growth rates over a long period. This was true even during the growth stage of the electric utility industry.

According to data published in the *2003 Mergent Public Utility and Transportation Manual,* electric utility growth rates have been approximately half of achieved GDP growth for the period 1947 through 1999.[39] As noted previously, long-term GDP growth is expected to be in the 4.0% to 5.0% range, suggesting that the expected long-term growth rate for electric utilities should be much lower than the projected 5-year EPS growth rates.

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[38] Schedule 9-1 depicts the annual compound growth rates for DPS, EPS and BVPS for each comparable company for the past ten years. Schedule 9-2 lists the annual compound growth rates for DPS, EPS and BVPS for each of the comparable companies for the past five years.

[39] 2003 Mergent *Public Utility &* Transportation *Manual*, p. a15 – a18.

Staff also analyzed the growth of electric utilities identified by Value Line as *Central* region electric utilities over the period 1968 through 1999, a shorter, more recent period based on data from Value Line rather than Mergent (Staff will explain this analysis in more detail when explaining its multi-stage DCF analysis). Staff's analysis of this data revealed that the actual realized growth of these electric utilities was less than *half* of GDP growth over this time period. In addition, this analysis also showed that during a period of much higher nominal GDP growth, the *Central* region electric utilities' EPS, DPS and BVPS grew in the range of 3.18% to 3.99% (*see* Schedules 14-1 through 14-4). Because the constant-growth DCF will only provide reliable results if the growth rate is within 1.0% to 2.0% of a sustainable long-term industry growth rate,[40] Staff decided its analysis of historical growth in the electric utility industry could only marginally support a more aggressive growth rate range of 5.0% to 5.5%. Staff emphasizes that it believes this growth rate is higher than what investors expect for the electric utility industry considering that it is higher than the expected long-term GDP growth of approximately 4.5%. Although there have been periods in which electric utility aggregate nominal growth has been higher than that of nominal GDP growth, this has not occurred for the last 20 years (*see* Schedule 12). On a per share basis, which is the focus of investors, electric utility growth has been much lower. Because a multi-stage DCF analysis allows investors to address non-constant growth expectations, Staff places primary weight on its multi-stage DCF analysis in this case.

Using the constant-growth DCF model and the inputs described above -- a projected dividend yield of 4.1% and a growth rate range of 5.0% to 5.5% -- a cost of common equity of 9.1% to 9.6% is implied (*see* Schedule 11).

c. The Multi-stage DCF

i. Overview

The constant-growth DCF model may not yield reliable results if industry and/or economic circumstances cause expected near-term growth rates to be inconsistent with

[40] Aswath Damodaran, *Investment Valuation: Tools and techniques for determining the value of any asset,* University Edition, John Wiley & Sons, Inc., 1996, p. 193.

sustainable perpetual growth rates.[41] Staff believes this condition currently exists for the electric utility industry. Consequently, Staff has elected to use a multi-stage DCF method and will give this estimate primary weight in its estimated cost of equity for Ameren Missouri.

A multi-stage DCF may use either two or more growth stages, depending on the situation being modeled. In any case, the last stage must use a sustainable rate as it is considered to last into perpetuity. In fact, in Staff's experience, most DCF analyses do not assume a growth rate much higher than the expected rate of inflation, currently 2.0% to 2.5%. The ability of a multi-stage DCF analysis to reliably estimate the cost of common equity is primarily driven by the analyst using a reasonable growth rate for the final stage because this rate is assumed to last in perpetuity. Where three stages are used, the second stage is generally a transitional phase between the high growth first stage and the constant growth final stage.[42]

In the present case, Staff used a three-stage DCF approach, the stages being years 1-5, years 6-10, and years 11 to infinity.[43] For stage one, Staff gave full weight to the analysts' five-year EPS growth estimates. Staff adopts these EPS estimates for the first stage of its model, because Staff understands that these projections are designed to represent expectations over this same 5-year period. For stage two, Staff linearly reduced the growth rate from the stage one level to the constant-growth third stage level, in which Staff assumed a perpetual growth rate range of 3.00% to 4.00%; mid-point 3.50% (*see* Schedules 13-1 through 13-3). Based on this set of assumptions, Staff's estimated cost of equity for the proxy group is approximately 7.80% to 8.60%, mid-point of 8.20%.

ii. Stage one

The first stage of a multi-stage DCF is usually quite specific due to the ability to forecast cash flows in the near-term with more accuracy. In fact, it is often the case that the first stage of a multi-stage DCF will be based on discrete cash flows projected on an annual basis for the next

[41] Dr. Aswath Damadoran, Professor of Finance of the New York University Stern School of Business, advocates using a multi-stage methodology if the constant-growth rate is expected to be 1-2% different than the earlier stage growth rates. Aswath Damodaran, *Investment Valuation: Tools and techniques for determining the value of any asset,* University Edition, John Wiley & Sons, Inc., 1996, p. 193.

[42] John D. Stowe, Thomas R. Robinson, Jerald E. Pinto and Dennis W. McLeavey, *Analysis of Equity Investments: Valuation*, Association for Investment Management and Research, 2002, p. 71-72.

[43] In practice, Staff extended the third stage only to year 200.

several years. However, in the context of discounting expected future DPS, it is often the case that a compound growth rate is applied to the current DPS to estimate the expected DPS over the next several years. Although it is rare for a company to tie its targeted DPS growth rate directly to a 5-year EPS projected compound growth rate, because equity analysts' 5-year EPS forecasts are widely available and may provide some insight on expected DPS, Staff decided to use these growth rates for the first 5-years of its multi-stage DCF. However, Staff emphasizes that it has **never** seen an investment analysis of a utility company that used 5-year EPS forecasts for purposes of estimating the growth in DPS in a single-stage, constant-growth DCF or for the final stage in a multi-stage DCF. Considering the fact that the very equity analysts that provide 5-year EPS compound growth rates do not use them as a proxy for expected long-term DPS growth in their own analyses should be proof in and of itself that stock prices do not reflect this assumption. Consequently, Staff limited its use of these growth rates to the first five years of its analysis, the very period these growth rates are intended to cover.

iii. Stage two

Stage two, i.e. the transition stage, is simply a gradual movement from above normal growth to more normal/sustainable growth for the final stage. Although stage two can also consist of forecasted discrete cash flows, because it is a transitional period, it is logical to linearly reduce the high growth first-stage growth over a specific period in order to gradually reduce the growth rate to the expected sustainable growth rate. Staff chose to do this over a 5-year period, which is fairly conventional in multi-stage DCF analysis.

iv. Stage three

Stage three is the final/constant-growth stage. In fact, the final stage can be reduced to the single-stage, constant-growth form of the DCF. Although this is the "generic" stage, it is extremely important to select a reasonable growth rate for this stage to arrive at a reliable cost of equity estimate.

Cost of equity estimates using multi-stage DCF methodologies are **extremely sensitive** to the assumed perpetual growth rate. Although in the last Ameren Missouri rate case, the Commission considered Staff's estimated perpetual growth rates of 3.00% to 4.00% to be too low, Staff believes its further research supports the reasonableness, if not aggressiveness, of these growth rates. Staff will first explain the methodology it used to determine that a 3.00% to 4.00% growth rate is a reasonable proxy for perpetual growth for its electric utility comparable group. Staff will then discuss the additional research it performed to conclude that it is not reasonable to assume electric utilities can grow at the same rate as nominal GDP in perpetuity.

The Financial Analysis Department has access to Value Line data on *Central* region electric utility companies dating back to 1968.[44] Although Staff has access to current electric utility financial data for all regions of the United States (*Central, East* and *West*), Staff's access to older data from the *East* and *West* regions is limited. Staff believes it is important to analyze electric utility industry financial data to at least the early 1970s since this was approximately the beginning of the last large construction cycle for the electric utility industry.[45] Because 1968 is consistent with the starting point of the last construction cycle, Staff decided to capture data starting in that year. Ideally, Staff would have analyzed data through the beginning of the current construction cycle, which started approximately during the middle of the past decade, but because many electric utility companies diversified into non-regulated merchant and trading operations towards the end of the 1990s and there was much consolidation during this same period, this noise causes any study relying on this more recent data to be less reliable in evaluating *regulated* electric utility growth rates. It appears that much of the disruption in the electric industry occurred subsequent to the Enron, Inc., bankruptcy in December 2001. Considering that much of this disruption was caused by deregulation, Staff does not consider the information during this period to be informative for understanding investors' growth expectations for regulated electric utility operations.

Staff did not apply rigid selection criteria for purposes of selecting central region electric utility companies contained in Edition 5 of the Value Line Investment Survey. However, Staff did eliminate companies that generally did not have at least 70% of revenues from electric utility operations in the late 1990s. Staff also eliminated companies that appeared to be impacted significantly by restructuring in anticipation of the restructuring of the electric utility markets in

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[44] Value Line has consistently published information the electric utility industry based on three regions: East, West and Central. The Central Region electric utility industry data is published in Edition 5 of The Value Line Investment Survey data. Staff maintained consistent and comprehensive files for the Central Region for reports published back to 1985, which provides electric utility per share data dating back to 1968.

[45] Daniel Ford, Gregg Orrill, Theodore W. Brooks, Ross A. Fowler, M. Beth Straka and Noah Howser, "Utilities Capital Management," July 16, 2009, Barclays Capital, p. 13 (Attachment D).

the mid to late 1990s. Staff also eliminated companies that had data comparability problems due to major mergers, acquisitions and/or restructurings. Staff only included companies in which comparable data was available for each year of the period 1968 through 1999. The companies Staff selected are shown in Schedules 14-1 through 14-4.

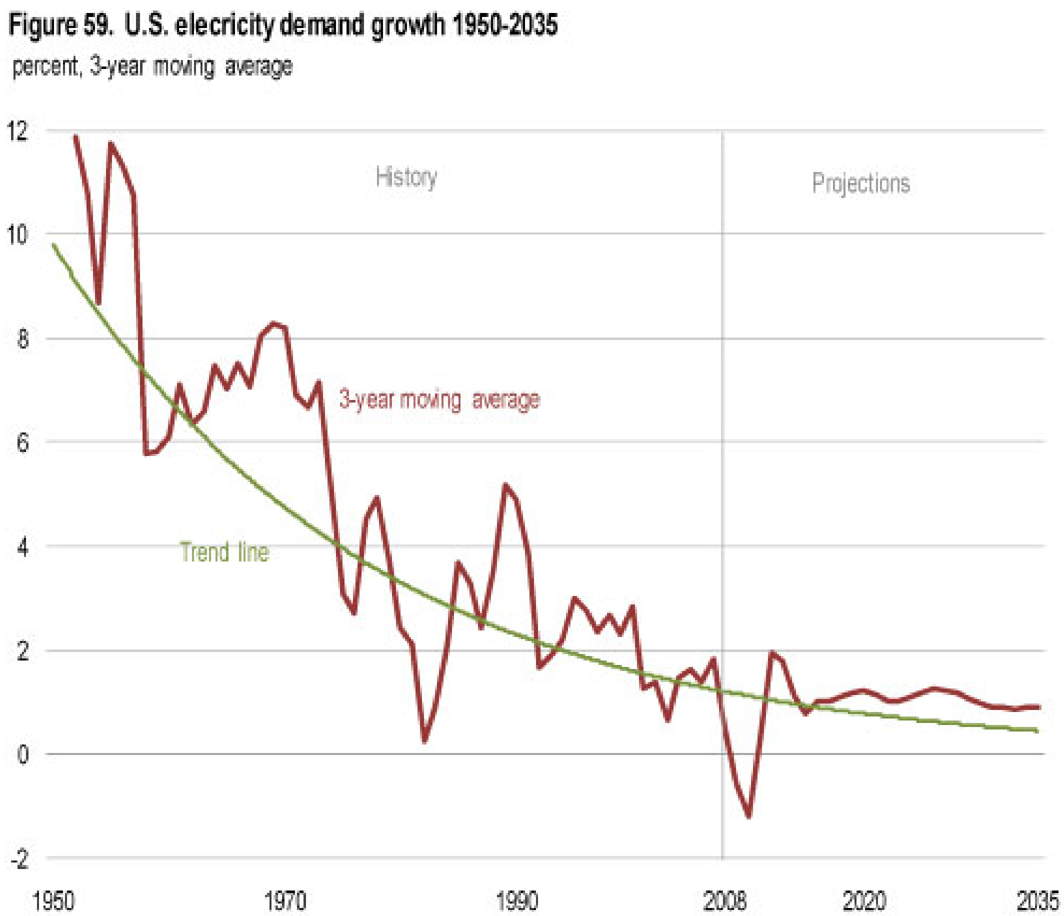
Staff's analysis of these electric utility companies' data over the last electric utility construction cycle indicates that average long-term growth slowly increased through the late 1980s and early 1990s and declined for the rest of the 1990s. The growth rates are based on Staff's calculation of a simple average of all of the companies' growth rates over this period. Because a simple average gives each company equal weight, Staff believes this approach is appropriate because it does not introduce size bias. As can be seen in the attached Schedules, the rolling average 10-year compound EPS growth rate for this period was 3.62%; the rolling 10-year compound DPS growth rate was 3.99%; the rolling 10-year compound BVPS growth rate was 3.18%; and the overall average for DPS, EPS and BVPS was 3.59%.

However, it is important to understand that these growth rates were achieved during a much more robust economic environment than the U.S. is expected to achieve in the foreseeable future. Also, it is interesting to note that the average growth rate for these electric utilities was less than 50% of GDP growth over the same period.

Also attached is Staff Schedule 15, which shows Staff's study of actual realized long-term growth of electric utility companies for the period 1947 through 1999 as published in the 2003 Mergent *Public Utility and Transportation Manual.* Although Staff has had problems replicating this data, Staff believes this information is still useful in evaluating the trends in growth rates for the electric utility industry, which shows a downward trend in growth over the last 30 years. This data also demonstrates that electric utility companies' EPS and DPS do not grow at the same rate as GDP over the long-term.

v. Constraints on Long-term Growth Rates used in Stage Three

In the Commission's Report and Order in Ameren Missouri's last rate case, Case No. ER-2011-0028, the Commission dismissed Staff's estimated perpetual growth rates because they were lower than those used by the other ROR witnesses. As explained in the previous section of this report, Staff is using the same perpetual growth rates used in the last rate case based on data analyzed for the period 1968 through 1999. The Commission indicated that it appeared that Staff only relied on this period because this was the only data that was readily available to Staff. While Staff acknowledges it has certain resource constraints, Staff still considers this period to be logical considering it captured the last building cycle in the electric utility industry, which started in the 1970s, peaked in the 1980s and fell through the 1990s. In fact, growth rates for this period would likely be considered higher than those expected in the future due to the fact that this period encapsulated a period of higher demand for electricity as illustrated in the following Energy Information Administration ("EIA") chart provided in its 2011 Annual Energy Outlook:



Source: Energy Information Administration's 2011 Annual Energy Outlook

To meet this load growth, electric utilities made significant investments in generating capacity in the late 70's and early 80's.

In hopes of addressing the Commission's concerns about the period and comparable group Staff used to analyze electric utility per share growth data, Staff researched a variety of freely-available, web-based sources to determine if information is available that would allow for a broader and more extensive evaluation of actual realized growth in at least the broader utilities sector (i.e. electric, natural gas and water), if not specifically the electric utility industry. However, this information is not freely-available. Access to this information would require subscriptions to sources, such as Compustat, Factset, KnowledgeReuters and Ned Davis Research, which are often utilized by institutional investors. If the Commission would like Staff to perform a more comprehensive analysis, then Staff would need to further research the best sources to which to subscribe in order to obtain access to the relevant information at a reasonable cost.

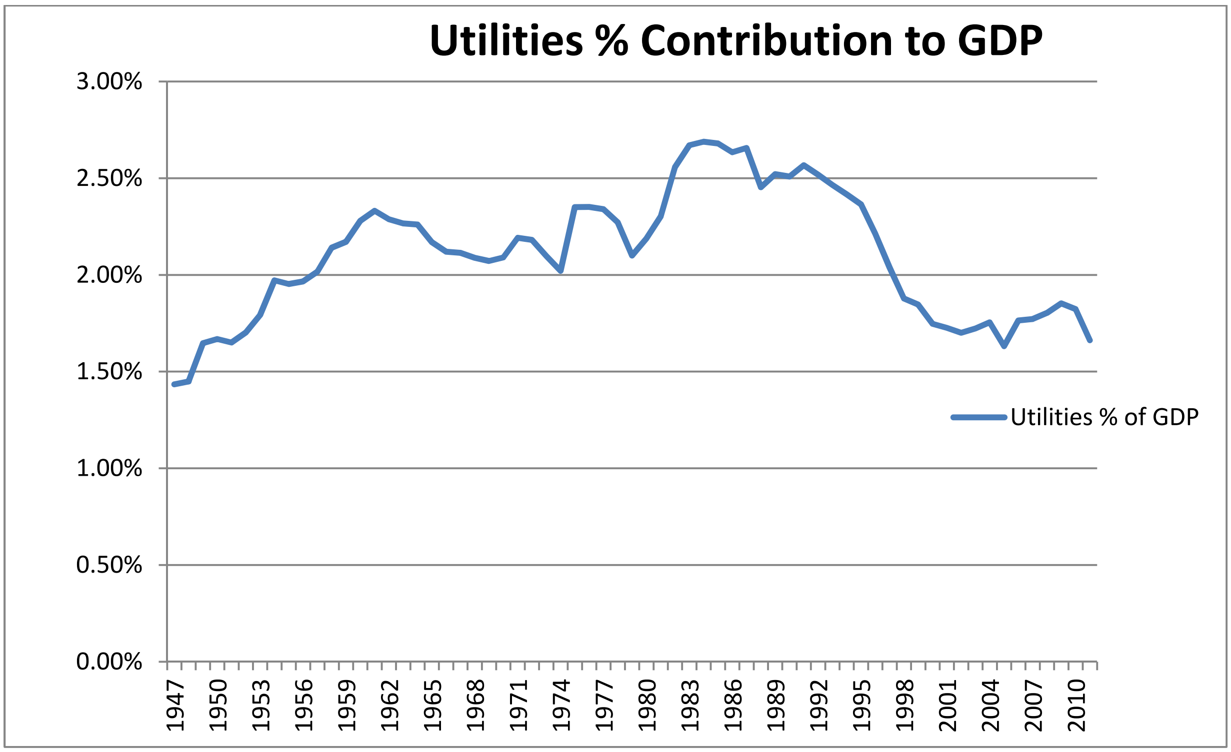
The other ROR witnesses in the last rate case estimated perpetual growth rates based on various estimates of long-term nominal GDP growth.[46] Specifically, the Company witness provided his own projected nominal GDP growth rate by analyzing historical data, whereas the Missouri Industrial Energy Consumers witness relied on the *Blue Chip Economic Forecasts.* While there may be some logic for this approach for early to middle-stage companies, there is little logic for this approach for industries that are in the mature to declining stages of growth. Also, the use of nominal GDP growth does not take into consideration the fact that existing shareholders do not realize the aggregate growth of an industry due to the dilution caused by issuance of new equity.

Staff researched data provided by the Bureau of Economic Analysis ("BEA") on GDP growth by industry and by components. Although the use of projected aggregate GDP data is expedient and convenient, this comes at the expense of a reliable cost of equity estimate. Staff does not believe investors would sacrifice reliability for expediency when making investment decisions. Several industries contribute to the aggregate GDP of the U.S. economy. Currently, the BEA compiles data based on the North American Industry Classification System of the United States ("NAICS"). Although the NAICS definitions include more refined utility classifications, the BEA only reports data for the aggregate Utilities definition, which is assigned NAICS Code 22. Although this is an aggregate codification, Staff believes investors would rely on data specific to the utilities sector rather than that of the aggregate economy when estimating the potential growth of their utility investments. Better yet, Staff believes investors would drill

[46] Nominal GDP includes economic growth caused by real factors, such as productivity improvements, technological advances and other factors that improve a country's overall standard of living, but it also includes expansion of the economy due solely to increases in the prices of goods and services, which is simply inflation.

down into the detail of the contribution of utilities' profits to GDP rather than that of *total value added* to GDP.

According to Staff's analysis of the utilities industry data available since 1947, as illustrated below and in Schedule 16, the utilities industry made up less than 2% of GDP until the middle 1950s and then gradually increased to just shy of 3% of GDP in the 1980s and 1990s. However, since the late 1990s, utilities contribution to GDP has declined to below 2% and has since leveled off.



Although it appears that utilities may contribute less to GDP going forward, if utilities continue to contribute the same percentage to GDP as they have for the last few years, then it is possible that the aggregate growth of *total value added* may be similar to that of aggregate GDP growth. It is extremely important to understand that this data represents *total value added* to GDP, not just aggregate earnings to shareholders or, more importantly, EPS and/or DPS, which is the primary focus of investors. Regardless, this data corroborates the data Staff provided in the last Ameren Missouri rate case, which showed increases in EPS and DPS growth rates through the late 1980s and declining EPS and DPS growth rates from that point through at least 1999. Staff did not provide data for the period after 1999 because company-specific data lacked continuity due to restructurings, mergers and acquisitions and the Enron debacle. The GDP data for the period after 1999 shows the growth rate of at least *total value added* to GDP by utilities is not declining to the extent it had been for the previous decade. If utilities are to be able to continue to stop this decline, they will need to determine how to add value to an economy that is not nearly as energy-intensive as it once was and is in fact looking at ways to cut back on energy use.

Although the GDP data does show some relationship between aggregate GDP growth and utilities' contribution to aggregate GDP growth, it is interesting to note that the *total value added* from the utilities' sector grew faster than aggregate GDP for a period, but during its decline it grew at a rate slower than GDP on an aggregate basis. While Staff has not quantified the gross capital invested in the utility industry during the period of growth, it is generally recognized that the electric utility industry required significant capital investment in the late 1970s and early 1980s due to the construction of large generation facilities. Although the electric utility industry is currently in another construction cycle, it is not driven by demand growth, but by environmental requirements, transmission investments, and replacement of aging and/or polluting generating facilities. Because this construction cycle is not driven by growing demand, it would not appear that this growth could be sustainable, otherwise this investment would cause rates to spiral out of control, if allowed by commissions.

The *total value added* measurement of GDP includes increases to GDP caused by inflation. Because the period analyzed by Staff includes a high inflationary period during the late 1970s and early 1980s, it is misleading to assume utilities may be able to contribute as much to real GDP as it may to nominal GDP. Consequently, Staff also analyzed real GDP growth as compared to the utility industry's real growth for the period 1947 through 2011 (*see* Schedule 17). Staff's growth rate calculations are based on the same methodology Staff used to evaluate the long-term growth of the *Central* region electric utilities. For 10-year periods up to 1979, the utility industry's real growth rates were higher than that of GDP. However, the utility industry's 10-year real growth rates were much lower than real GDP 10-year growth rates during the 1980s. This is most likely due to the tremendous amount of capital invested in the electric utility industry during the building cycle that occurred during this period. Real utility growth grew at a higher rate than that of real GDP for a brief period through the early-to-mid 90s, but since this time the real growth rate of utilities has been lower than that of real GDP growth. This would seem to imply that the utility industry is possibly in a state of decline or at least in another building cycle. If the latter, then this may cause investors to project higher aggregate growth over the near-term, but because this construction cycle is not being driven by demand growth, it seems illogical that investors would expect a growth rate higher than that achieved during the last construction cycle.

The utility industry's contribution to GDP discussed above is based on the *value added,* both real and nominal, of the industry, which is the sum of compensation to employees, taxes on production and imports less subsidies, and gross operating surplus. Gross operating surplus includes consumption of fixed capital ("CFC"), proprietors' income, corporate profits, and business current transfer payments (net).[47] Although gross operating surplus could be used as a proxy for utilities' capital contribution to GDP, it seems the more relevant data would be that of corporate profits considering we are attempting to estimate the growth of shareholder value. Again, however, it should be noted that the corporate profit figure is an aggregate figure, which does not consider the dilution caused by the issuance of new equity. Although utility corporate profits would seem to be the most relevant data for the purposes of evaluating utility growth, unfortunately, the BEA website does not provide this data for the aggregate utility industry for years prior to 1998. However, the BEA website does provide this data for SIC code 49 for electric, gas and sanitary services. Although this code includes industries other than utilities, it is still more refined than that of aggregate corporate profits for all industries that contribute to GDP growth. As with utility industry's *total value added* contribution to GDP, corporate profits peaked in the 1980s and have since declined (*see* Schedule 18). Staff was surprised to find that growth in corporate profits for SIC code 49 was as high as 20% in the early 1980s. This seemed to contradict the much lower electric utility industry per share growth rates published in the 2003 Moody's Public Utility Manual. Additionally, the growth rates in utility value added to GDP were also higher than electric utility industry per share growth rates, although not as much as the corporate profit growth rates. Because Staff analyzed a proxy group of Value Line *Central* region electric utilities over this same period, Staff decided to compare these per share growth rates to corporate profit growth and utility value added growth (*see* Schedule 19). Although these per share growth rates were not as low those of the Moody's index, they were

[47] http://www.bea.gov/glossary/glossary.cfm.

still much lower than the growth of corporate profits and utility value added. The fact that electric utilities had to issue equity to fund capital expenditures during this period probably explains the difference in these growth rates.

The issuance of additional equity creates a dilution of earnings to existing shareholders. Because the utility industry has historically had a high dividend payout ratio (DPS/EPS), anytime it needs to make large investments, it needs to issue new capital in the form of debt and equity. This can cause a vicious cycle for utility companies as described in *The Analysis and Use of Financial Statements,* 1998, by Gerald I. White, Ashwinpaul C. Sondhi and Dov Fried:

> Although this example may appear unrealistic, it is a reasonable description of the plight of public utility companies (gas, electric, water) in the United States. To attract investors, these firms historically paid out most of their earnings as dividends. To finance growth, they periodically sold additional common shares. As a result, EPS growth rates were low. These firms were trapped in a vicious cycle. If they reduced their dividend rates, their EPS growth rates would rise, and they might be considered growth companies rather than bond substitutes.

Staff tested this theory by analyzing the aggregate growth rates of its Value Line *Central* region electric utility proxy group for the same period in which per share growth rates were analyzed (1969 – 1998). Staff found that the aggregate growth of earnings, dividends and book value of this proxy group was extremely tightly correlated (99%) to that of the utility industry's contribution to GDP growth. In fact, this proved to be a much tighter correlation than that of utility corporate profits, which had a correlation of 72%. Although aggregate utility growth has been lower than GDP growth since the early 1990s, the aggregate proxy group financial growth for the period 1968 through 1999 was 97% correlated to overall GDP growth.

While Staff believes the above correlations are more than coincidence, if Staff had access to more historical data for not only the *Central* region electric utilities, but also the *East* and *West* region electric utilities, these correlations could be tested further to ensure consistent relationships over time and over regions. Because we are testing the hypothesis that electric utilities' growth would converge toward the United States' estimated GDP growth, it seems logical to test this across regions. Additionally, a key weakness in the data Staff analyzed is that it does not extend past 1998. Staff deemed this necessary due to changes in the industry due to restructuring. However, Staff did extend the termination year for the aggregate financial growth figures for the companies in its *Central* region proxy group that continued to exist through 2010.

The correlations for the aggregate growth rates for the 5 remaining companies to that of the utility industry's contribution to GDP growth and to overall GDP growth were approximately 97% and 91%, respectively.

Although there have been some strong correlations between aggregate electric utility financial growth and utility and aggregate GDP growth rates, this has not translated into equivalent per share financial growth for the electric utility industry. This is extremely important to understand when estimating the cost of equity because this is what matters to investors and the analysts that advise them. Historical experience has shown the per share growth was approximately half of aggregate electric utility financial growth over the period analyzed (*see* Schedule 20). Consequently, even if the Commission accepts the hypotheses that electric utilities' growth may be dependent on aggregate GDP growth, historical financial evidence proves this does not translate into the same growth on a per share basis. Historical evidence indicates that these aggregate growth rates should be divided by two in order to consider the dilution experienced by electric utility shareholders. The resulting perpetual growth rate would be approximately 2% to 2.5%, which is lower than that which Staff used in its cost of equity estimate, but consistent with the perpetual growth rates used by equity analysts when valuing electric utility stocks.

Staff's research regarding the relation of GDP growth to that of utility industry growth caused it to discover several journal articles that addressed GDP growth as it relates to EPS and DPS growth of the S&P 500. In past rate cases, Staff has provided academic and logical support that suggests that long-term nominal GDP growth may make sense as a proxy for perpetual growth for a broader index, such as the S&P 500. However, this assumption may even be too aggressive for purposes of estimating returns for the S&P 500.

William J. Bernstein and Robert D. Arnott published an article, "Earnings Growth: The Two Percent Dilution," in the September/October 2003 edition of the *Financial Analysts Journal.* This article reviewed some of the key drivers behind the bull market in the 1990s. One such driver was an apparent belief that earnings could grow faster than the macroeconomy. The authors contend that earnings must actually grow slower than that of the economy because growth of existing enterprises contribute only partly to GDP growth; the role of entrepreneurial capitalism, the creation of new enterprises, is a key driver of GDP growth, yet it does not contribute to earnings and dividend growth of existing enterprises. The other main factor the authors attributed to actual realized growth being less than that of aggregate GDP growth is that new equity issuances almost always exceed stock buybacks by an average of 2% or more a year.

A key observation made by the authors that lends support for the notion that at least aggregate corporate earnings may be able to grow at the same rate as GDP growth is that for the period 1929 through 2000, trend growth for corporate profits and nominal GDP was nearly identical. However, as the authors state, the ability of earnings and dividends to grow at this same rate is only possible if no new enterprises are created and no new shares in existing enterprises are issued. The authors illustrate that these two factors caused the growth in DPS over the period 1900-2000 to be 2.7% lower than real GDP growth in the United States and 2.3% lower than real GDP for relatively stable countries throughout the world. Consequently, empirical evidence shows that per share growth will be less than GDP growth even for the broader markets. The findings from the Bernstein and Arnott article were largely confirmed in another subsequent article, "Economic Growth and Equity Investing," by Bradford Cornell, published in the January/February 2010 edition of the *Financial Analysts Journal.* Cornell studied United States stock market data for the period 1926-2008. This information showed an average rate of dilution from aggregate growth of approximately 2%. The author specifically states: "Therefore, to estimate the growth rate of earnings to which current investors have a claim, approximately 2% must be deducted from the growth rate of aggregate earnings."

Although not addressed in these articles, another reason why broader markets may not grow at the same rate as U.S. GDP growth is because of the globalization of many companies that are domiciled in the United States. According to Ned Davis Research, 52.6% of pretax profits for companies in the S&P 500 came from outside the U.S.[48] Consequently, the profits of these global companies should also be dependent on the economic growth of the other countries in which they operate.

The above-mentioned articles address the relation of GDP growth to that of broader stock market growth expectations, not specifically to expected growth for utilities. In the August 2011 edition of *Public Utilities Fortnightly* ("PUF"), Steven Kihm addressed this issue more fully in

[48] "A Smarter Way to Invest Globally? Maybe it's time for world-stock funds, rather than ones that focus separately on the U.S. and Overseas," Javier Espinoza, *The Wall Street Journal,* C5 and C8*,* June 4, 2012

an article, "Rethinking ROE: Rational estimates lead to reasonable valuations."[49] Kihm specifically addresses the recent common practice in utility rate cases of estimating the cost of equity using the DCF and assuming that utility share prices can grow in perpetuity at the same rate of nominal GDP. Kihm specifically stated the following in regard to the interaction of GDP growth, DPS growth of the S&P 500, and DPS growth for the Moody's Electric Utility stock index:

> In the last half of the 20th century, nominal GDP grew about 8 percent per year. Dividends per share for the S&P 500 Index grew at only 6 percent per year. Dividends per share for Moody's Electric Utility stock index grew even more slowly at less than 4 percent per year. This suggests that utilities can be expected to grow not at the GDP growth rate, but at about half that rate on an annual basis.

Although Staff has drawn similar conclusions when analyzing long-term utility per share growth as compared to GDP growth, Staff notes that Kihm identified the same 2% dilution in S&P 500 DPS growth as discussed in the aforementioned financial literature. Staff verified this observation by analyzing data provided in the *Economic Report of the President (2012),* which provides earning and dividend information for the S&P 500 from 1947 through 2011. Schedule 21 clearly shows that actual realized EPS and DPS growth is less than that of nominal GDP. Again, considering the fact that, on average, companies in the S&P 500 retain far more earnings to pursue growth than utilities, no rational investor would expect utilities to grow in the long-term at a rate close to that of nominal GDP.

Kihm discusses one of the often-used explanations as to why GDP should be used as a proxy for long-term utility growth -- namely, that if utilities don't keep pace with economic growth, they will become a shrinking segment of the economy. Staff's analysis of the BEA data actually proves that this is in fact what has happened over the last 60 years. Over approximately the last 20 years, utilities' *total value added* as a percentage of GDP growth has been declining. Although it is hard to fathom that utilities will become obsolete, assuming utilities do not need to expand to meet additional load growth, it is logical to assume that utilities should not grow much faster than the rate of inflation in the long-term.

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[49] "Rethinking ROE: Rational estimates lead to reasonable valuations," Steven Kihm, *Public Utilities Fortnightly,* August 2011, pp. 16-21.

Kihm worked for more than 20 years as a member of the staff of the Public Service Commission of Wisconsin ("Wisconsin Commission"). He developed the staff's two-stage DCF model, which is still used by Wisconsin Commission staff. The Wisconsin Commission staff's DCF model uses the inflation rate for the perpetual growth rate for utilities.

In the PUF article, Kihm also discusses the impact of dilution on expected growth rates for utilities by comparing Southern Company's aggregate dividend growth rate and Southern Company per share dividend growth rate to that of GDP growth for the period 1995 to 2010. Southern Company's annual compound growth rate for *aggregate* dividends was 4.2%, while the annual compound growth rate for nominal GDP was 4.6% for this same period. However, after taking into consideration the additional common equity Southern Company issued over this period, the annual dividend compound growth rate was only 2.6% on a per share basis. Clearly this empirical evidence disproves the assumption that utilities could grow anywhere near the rate of GDP growth over the long-term.

A simple example using the earnings retention method of estimating sustainable growth rates illustrates the fallacy of assuming that utility per share growth rates can approach the level of aggregate GDP growth. The S&P 500 has historically earned ROEs in the 10% to 15% range with an average close to 12.50%.[50] For purposes of this example, we will assume that the S&P 500 will earn a 12.50% ROE in the long-run. Assuming the S&P 500 dividend payout ratio remains near the average of approximately 40% for the past decade, then this translates into 60% of earnings retained for reinvestment. At an expected 12.5% ROE (mid-point of the 10% to 15% range), this translates into a potential growth rate of 7.5% for the S&P 500. Now, assuming electric utilities should be allowed to earn an ROE similar to that of the S&P 500, which would be too high in Staff's opinion, since electric utilities typically maintain a dividend payout ratio of approximately 65%, this allows for a potential growth rate of 4.375%. Consequently, simple mathematics dictates that because electric utilities have higher payout ratios than the S&P 500, even if they earn a similar ROE, their per share growth would have to be lower than the S&P 500. Considering that the allowed ROEs have been in the 10% to 10.25% range, assuming

[50] Timothy Vick, "Picking Stocks The Buffett Way: Understanding Return on Equity," American Association of Individual Investors, April 2001; Frank K. Reilly, "The Impact of Inflation on ROE, Growth and Stock Prices," Financial Services Review, 1997.

electric utilities continue to pay out 65% of their earnings in dividends, this would translate into a growth rate of approximately 3.5%.

It is worth emphasizing that the articles Staff has reviewed explore the relationship of GDP growth to EPS and DPS for the broader markets, such as the S&P 500. This is consistent with most mainstream financial literature that suggests expected nominal GDP growth can be used as a proxy for perpetual growth for a broad index. However, Staff is not aware of any such literature that suggests this is appropriate for a mature, low-growth sector such as that of utilities. In fact, Staff has provided evidence in past cases that investment analysts do not make this assumption when estimating a fair price to pay for utility stocks.

Kihm also provides an example of why current utility stock prices seem logical when using a more reasonable cost of equity estimate. In Kihm's example, he uses an 8% cost of equity to arrive at a price estimate of $50.62 for Consolidated Edison, which was within 4% of the stock price at the time (June 2011). Kihm's example can be taken one step further by performing a DCF valuation estimate using the same cost of equity and the assumption that utility dividends per share can grow at the same rate as GDP in the long-term. Consolidated Edison's annual dividend in 2011 was $2.40. If one assumes that this dividend can grow in perpetuity at a compound annual rate of 5% and the cost of equity is the same 8% used by Kihm, then this would translate into an intrinsic value of $84, 66% higher than its current trading price. However, if one assumes a much more reasonable dividend growth rate of approximately 3% with the same cost of equity, then the intrinsic value of the stock would be $49.44, which is close to Kihm's estimate.

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_____ ** It is this clear-cut evidence that should be considered by the Commission when determining the reasonableness of certain projected growth rates for dividends in the long-run. In fact, because Ameren's non-regulated operations are expected to be a cash drain on Ameren's overall cash flow, it is likely that Ameren's regulated operations cannot provide investors with the full growth potential of the regulated utility operation. This causes investors to discount

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Ameren's stock price, which causes a higher cost of equity than Ameren Missouri would otherwise be able to realize.

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vii. Preference for GDP Growth

Although Staff is confident that investors do not expect utilities' per share growth rates can grow at the same rate of nominal GDP in the long-run, Staff recognizes that even customer ROR witnesses have been willing to accept this assumption for purposes of estimating the cost of equity. Consequently, Staff will provide a cost of equity indication using this simplified approach.

Projected GDP growth is available from a variety of sources, such as the Congressional Budget Office ("CBO"), the Federal Reserve, the EIA, and Blue Chip Economic Forecasts. Staff will use the CBO, EIA, The Survey of Professional Forecasters published by the Philadelphia Federal Reserve, The Federal Open Market Committee ("FOMC"), and The Livingston Survey for purposes of long-term projected GDP growth. The CBO projects an annual compound growth rate in nominal GDP of approximately 4.90% through 2022; EIA projects an annual compound growth rate of 4.4% for the period 2010 through 2035; The Survey of Professional Forecasters projects a 10-year annual compound growth rate in real GDP of 2.64%; The Livingston Survey projects an average annual compound growth rate of 2.7% over the next ten years and the FOMC projects a central tendency long-term real GDP growth of 2.3% to 2.6%. In each case in which the sources do not project a nominal GDP growth rate, Staff recommends adding a GDP price deflator of 2.0%, which is the CBO's prediction of long-term inflation and also the inflation rate which is targeted by the Federal Reserve. Based on these projections, the long-term nominal GDP growth rate is expected to be in the range of 4.3% to 4.9%. If the Commission chooses to use a GDP growth rate to estimate the cost of equity, Staff recommends the Commission use the lower end of the range (4.3%) because of the amount of evidence that shows that rational investors would not expect utility per share figures to grow at the same rate as GDP. When using a 4.3% GDP growth rate in Staff's multi-stage DCF results in a cost of equity estimate of approximately 8.85%.

G. Tests of Reasonableness

Staff has tested the reasonableness of its DCF results, both by use of a CAPM analysis and consideration of other evidence.

1. The CAPM

The CAPM is built on the premise that the variance in returns is the appropriate measure of risk, but only the non-diversifiable variance (systematic risk) is rewarded. Systematic risks, also called market risks, are unanticipated events that affect almost all assets to some degree because the effects are economy wide. Systematic risk in an asset, relative to the average, is measured by the Beta of that asset. Unsystematic risks, also called asset-specific risks, are unanticipated events that affect single assets or small groups of assets. Because unsystematic risks can be freely eliminated by diversification, the reward for bearing risk depends on the level of systematic risk. The CAPM shows that the expected return for a particular asset depends on the pure time value of money (measured by the risk free rate), the reward for bearing systematic risk (measured by the market risk premium), and the amount of systematic risk (measured by Beta). The general form of the CAPM is as follows:

$$k = Rf + \beta\,(Rm - Rf)$$

Where: k is the expected return on equity for a security;
Rf is the risk-free rate;
β is Beta; and
Rm - Rf is the market risk premium.

For inputs, Staff relied on historical capital market return information through the end of 2010. For the risk-free rate (Rf), Staff used the average yield on 30-year U.S. Treasury bonds for the three-month period ending May 30, 2012; that figure was 3.13%. For Beta, Staff used Value Line's betas for the comparable companies (*see* Schedule 22). The average beta (β) for the proxy group was 0.69. For the market risk premium (Rm – Rf), Staff relied on risk premium estimates based on historical differences between earned returns on stocks and earned returns on bonds.[51] The first risk premium was based on the long-term, arithmetic average of historical return differences from 1926 to 2011, which was 5.70%. The second risk premium was based on the long-term, geometric average of historical return differences from 1926 to 2011, which was 4.10%.

Staff's CAPM is presented on Schedule 22. The results using the long-term arithmetic average risk premium and the long-term geometric risk premium are 7.06% and 5.96%, respectively. While the cost of equity indication using the geometric average risk premium is more than likely below equity discount rates used to value utility stocks, Staff believes the 7.06% cost of equity is quite probable considering the current low bond yield environment. It is generally recognized that the risk premium over Treasury yields is higher than historical averages due to the Fed's efforts to keep Treasury yields quite low. However, this increases the opportunity costs of not investing in utility bonds and stocks, which puts pressure on the prices of these alternative, low-risk investments.

2. Other Tests

a. The "Rule of Thumb"

A "rule of thumb" method allows an objective test of individual analysts' cost of equity estimates. Because this method is suggested in a textbook[52] used for the curriculum for Chartered Financial Analyst ("CFA") Program, Staff believes this method is free of any bias from those involved in utility ratemaking. It is also a great test because it is very straightforward and limits the risk premium to a 100 basis point range. The cost of equity is estimated by simply adding a risk premium to the yield-to-maturity ("YTM") of the subject company's long-term debt. Based on experience in the U.S. markets, the typical risk premium is in the 3% to 4%

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[51] From Ibbotson Associates, Inc.'s *Stocks, Bonds, Bills, and Inflation: 2010 Yearbook.*

[52] John D. Stowe, Thomas R. Robinson, Jerald E. Pinto and Dennis W. McLeavey, *Analysis of Equity Investments: Valuation*, Association for Investment Management and Research, 2002, p. 54.

range. Considering that this is based on general U.S. capital-market experience and that regulated utilities are on the low end of the risk spectrum of the general U.S. market, a risk premium closer to 3% seems logical. This is especially true considering that regulated utility stocks behave like bonds. For the months of March, April and May 2012, "A" rated 30-year utility bonds and "Baa" rated 30-year utility bonds had average yields of 4.92% and 5.52% respectively.[53] Adding a 3% risk premium, the "rule of thumb" indicates a cost of common equity between 7.92% and 8.92%. Adding a 4% risk premium, the "rule of thumb" indicates a cost of common equity between 8.52% and 9.52%.

b. Average Authorized Returns

In the past, the Commission has applied a test of reasonableness using the average authorized returns published by Regulatory Research Associates ("RRA") as a benchmark. According to RRA, the average authorized cost of common equity for electric utility companies for the first quarter of 2012 was 10.84% based on 12 decisions. This number is high because it includes Virginia surcharge/rider generation cases that incorporate ROE premiums. Virginia statutes authorize the State Corporation Commission to approve ROE premiums of up to 200 basis points for certain generation projects. Excluding these Virginia surcharge/rider generation cases from the data, the average authorized electric utility ROE approximated 10.3% for the first quarter of 2012. The average authorized cost of common equity for electric utility companies for 2011 was 10.22% based on 41 decisions (first quarter – 10.32% based on thirteen decisions; second quarter – 10.12% based on ten decisions; third quarter – 10.00% based on seven decisions; fourth quarter – 10.34% based on eleven decisions).

The average authorized ROR for electric utilities for the first quarter of 2012 was 8.00% based on 11 decisions. The average authorized ROR for electric utilities in 2011 was 7.95% based on 41 decisions (first quarter – 8.12% based on 13 decisions; second quarter – 8.01% based on 10 decisions; third quarter – 8.09% based on 7 decisions; fourth quarter – 7.61% based on 11 decisions).

While Staff understands the Commission's desire to review other commissions' authorized ROE's due to concerns about Missouri-jurisdictional utilities having to compete with

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[53] BondsOnline.com, pursuant to a subscription agreement Staff has with BondsOnline.

other utilities for capital, Staff would like to briefly explain why an allowed ROE is not indicative of a required ROE and the ability to attract capital. The primary consideration for attraction of capital is whether the current price of a given stock will result in the investor earning above, below or equivalent to their required return. For example, the allowed ROEs for many of Southern Companies' utility subsidiaries are typically much higher than the rest of the utilities in the country. However, this does not translate into higher realized returns for investors in Southern Company because the price of Southern Company's stock already reflects these high allowed ROEs. If this Commission were to award an ROE similar to those allowed for Southern Company's subsidiaries and hold all other ratemaking treatments constant, then current investors in the Missouri utility would achieve a return that was higher than their required return. However, after the increase in the Missouri utility's stock price, the investor and subsequent prospective investors would revert back to earning their required return. The opposite holds true if the Commission were to authorize an ROE below what is expected from the Commission. Consequently, setting allowed ROEs based on those allowed or earned for other companies may temporarily cause upward or downward pressure on the stock, but once this price correction occurs, the stock should experience "normal" capital attraction.

c. Equity Analysts

Past Commission decisions have expressed the view that the cost of equity used by equity analysts is not relevant to determining a reasonable cost of equity estimate in utility ratemaking proceedings. Although Staff respects the Commission's decisions based on the evidence the Commission reviewed in past rate cases, Staff believes it can provide further analysis and explanation that supports the relevance of these cost of equity estimates to the cost of capital determined in a utility rate proceeding.

First, it is important to consider the inherent contradiction caused by using equity analysts' 5-year EPS growth rate forecasts as the constant growth rate of dividends in the single-stage DCF, but ignoring the rest of the analysis performed by the equity analysts. It is naïve to assume that investors would simply take values from the internet without researching the supporting analysis when making investment decisions. While this assumption may allow for expediency in estimating the cost of equity, investors do not make investment decisions with expediency as a priority. Staff has reviewed numerous equity research reports and it has NEVER seen an analyst estimate a fair price for a utility stock by making this naïve assumption. If the equity analysts that provide professional investment advice based on in-depth analysis do not utilize their own growth rates in this manner, then it is completely illogical to make this assumption for purposes of estimating the cost of equity. If the cost of equity is not considered a fair return in terms of the *Hope* and *Bluefield* cases, then the time and effort devoted to rate-of-return testimony would be better spent on determining an appropriate margin over the cost of equity that would be fair in setting the allowed ROE.

Rate-of-return witnesses often cite various academic studies to support their position that investors naïvely assume that dividends can grow in perpetuity at the same rate as equity analysts' estimates of the 5-year annually compounded EPS growth rate. Although Staff believes the fact that the very equity analysts that provide these forecasts do not make this same assumption when valuing utility stocks disproves this conclusion, it is important to understand the true conclusion of some of these studies. One of the studies often cited to support the use of equity analysts' 5-year EPS growth rate forecasts in the DCF is that of Burton G. Malkiel and John G. Cragg, "Expectations and the Structure of Share Prices." The conclusion of this academic study was that equity analysts' expectations had a greater influence on stock prices compared to simple extrapolations of historical financial data. Staff believes this conclusion is logical considering the vast amounts of resources dedicated to the discipline of securities analysis. However, Staff is not sure how subsequent studies concluded that the results of this study somehow translated into a proof that investors use 5-year EPS forecasts as a constant growth rate in the single-stage DCF methodology. In fact, the Cragg and Malkiel did not even use the DCF valuation model when testing their hypothesis regarding the influence of analysts' projections on stock prices. It is more plausible to conclude that, because investors rely on equity analysts' expectations, they rely on their investment recommendations (e.g. buy, sell or hold). Equity analysts' investment recommendations are based on their assessment of the intrinsic value of a given stock. Analysts' methodologies for estimating a fair price varies, but most at least assess the current price-to-forward earnings ratios both on a consensus basis and on the analysts' own estimates. If the analyst believes the company can grow its earnings faster than the consensus and/or the company deserves a higher price-to-earnings ("p/e") ratio than the consensus, then the analyst will expect a higher return than the consensus. In Staff's experience, this is the primary purpose for providing both absolute EPS forecasts and EPS growth rate forecasts. It allows investors to estimate a potential justified p/e multiple.

Cragg and Malkiel specifically indicated the following in their study:

> We would not argue that these estimates necessarily give an accurate picture of general market expectations. It would, however, seem reasonable to suggest that they are representative of opinions of some of the largest professional investment institutions and that they may not be wholly unrepresentative of more general expectations. **Since investors consult professional investment institutions in forming their own expectations, individuals' expectations may be strongly influenced—and so reflect—those of their advisers**. That several of our participating firms find it worthwhile to publish these projections and provide them to their customers provides prima facie evidence that a certain segment of the market places some reliance on such information in forming its own expectations. Also, insofar as other security analysts and investors follow the same sorts of procedures as those used by our sample analysts in forming expectations, general investors' expectations would resemble those of the analysts. Consequently, these predictions may well serve as acceptable proxies for general expectations and surely seem worthy of detailed analysis. (emphasis added)

In past rate cases, including Case No. ER-2010-0036, the Commission has dismissed evidence Staff presented regarding assumptions investment analysts use to estimate a fair price to pay for utility stocks. Considering the above information, in which the foundation for the study concludes that investors rely and depend on their investment advisors, and therefore, stock prices reflect these expectations, it would seem that the cost of equity assumptions used by these investment analysts are indeed reflected in share prices. To assume that investors utilize the information provided by equity analysts in a way that is wholly inconsistent with how the very analysts that provide them use them, is not supported by any evidence.

Equity analysts often use the dividend discount model ("DDM") to estimate a fair price to pay for the stock. The DDM is synonymous with the DCF in utility ratemaking settings. The DCF in utility ratemaking is simply solving for the required return/cost of equity variable. In valuation, the goal is to solve for the fair price of the stock. Consequently, if equity analysts are of value to their clients, then the stock prices will reflect their estimates of future dividends and the required return on these dividends. Consequently, if one accepts the studies that security analysts' expectations influence investors, which is the conclusion made by Malkiel and Cragg, then this means that stock prices reflect the cost of equity used by these very same analysts. Staff's experience has been that these equity discount rates are usually much lower than cost of equity estimates provided by ROR witnesses in utility rate cases. Staff has provided many examples in the last several rate cases that indicate equity analysts use equity discount rates in the 7% to 9% range when valuing utility stocks. However, this does not mean that these equity analysts expect commissions to allow an ROE equivalent to the market-implied cost of equity. If allowed ROEs were set equal to the cost of equity, this would cause downward pressure on the stock price of a company whose earnings rely primarily on the regulated utility operations. This is the case because utility stock prices currently reflect investors' expectations of regulators continuing to allow returns of close to 10%.

Considering the fact that the Cragg and Malkiel study is the foundation for other studies that are cited to support the use of 5-year EPS forecasts in the constant growth DCF, it is important to understand how at least one of the authors has estimated required returns on stocks in his past studies and how he estimates required returns currently. In his May 1979 study, "The Capital Formation Problem in the United States," Malkiel estimated the required returns on the Dow Jones Industrial Average by using Value Line growth rates for the first five years. This growth rate was then reduced over time to that of the expected real growth rate of the economy, which was 3.6% at the time.[54]

In a recent January 5, 2012, editorial in the *Wall Street Journal,* "Where to Put Your Money in 2012," Burton G. Malkiel provided his opinion on the long-run return expectations for U.S. equities. Malkiel simplified his approach by simply indicating that earnings and dividends in the market have grown at an approximate 5% rate over the long run. He simply added this long-run growth rate to the current approximate 2% dividend yield on the U.S. stock market to arrive at a long-run return estimate of 7% for the U.S. stock market, which is very close to the 6.80% projected return on the S&P 500 estimated by professional forecasters in the First Quarter 2012 *Survey of Professional Forecasters*. If Malkiel believed investors projected returns based on 5-year EPS forecasts on the U.S. stock market, then he would have projected a long-run return of approximately 12.3% (2% dividend yield plus 10.3% 5-year EPS growth forecasts for the S&P 500). He did not. While Malkiel and Cragg's studies certainly concluded that security analysts' estimates have an impact on share prices, they did *not* conclude that

[54] The use of a real GDP growth rate for perpetual growth is consistent with Goldman Sachs' valuation approach discussed in the last rate case, Case No. ER-2011-0028. While the Commission interpreted this to mean that inflation needed to be added to the real GDP growth rate to make the analysis correct, Malkiel made it clear that he purposely chose real GDP as a perpetual growth rate, but also indicated an argument could be made to use nominal GDP.

investors would assume security analysts' 5-year EPS growth rate forecasts are a proxy for perpetual growth.

The focus on earnings growth rates is understandable considering that most security analysts' stock predictions are based on a multiple of p/e ratios, but security analysts provide this information to evaluate potential p/e ratios as they compare to consensus p/e ratios. The ability of the analyst to accurately project future earnings and justified p/e ratios will determine whether that analyst is successful. Consequently, the focus on analysts' EPS projections is understandable in this context.

H. Cost of Equity Compared to Returns on Equity

It would likely be of interest to the Commission that the aforementioned Kihm article is not necessarily advocating that the allowed ROE be set based on a utility company's cost of equity. While it is quite clear that Kihm believes the cost of equity for utilities is in the 7 to 8% range, he does not advocate that commissions set the allowed ROE at this lower level. Kihm is just pointing out that commissions "might be doing the right thing, but for the wrong reason." Kihm is simply trying to emphasize that allowed ROEs should not be assumed to be the cost of equity for purposes of making investment decisions or for purposes of valuing utility assets or securities. Staff has performed extensive discovery in past rate cases that provide assurance that utility companies are not confusing the allowed ROE with the cost of equity. In fact, in the most recent Ameren Missouri rate case, Case No. ER-2011-0028, Staff discovered internal analysis performed by Ameren and Lazard, formerly known as "Lazard Freres," that clearly showed that Ameren is not making strategic corporate decisions based on this assumption.

It is also quite clear from Staff's analysis of equity analysts' reports that analysts do not expect commission to set the authorized ROE equal to the cost of common equity. Most equity analysts use a cost of equity in the 7% to 8% range, yet when projecting cash flows generated by the utilities through ratemaking, they assume companies will be authorized an ROE of close to 10%. While the Staff does not believe the Commission should allow investors' expectations of the authorized ROE determine what is authorized in a rate case, Staff does recognize that investors have become accustomed to some margin over the cost of equity being allowed in rates. In fact, some would argue that because book ROEs of the S&P 500 (10% to 15% on average) tend to be higher than the market cost of equity, this may justify the decision to allow an ROE higher than the cost of equity. If the Commission accepts this premise, then the issue before it would be what margin is fair and reasonable for purposes of complying with *Hope* and *Bluefield*. This is a matter that could be explored further if the Commission accepts the notion that the cost of equity is lower than that which it chooses to authorize.

I. Demand-Side Investment Mechanism

As of the date Staff was preparing the ROR Section of this Staff Cost-of-Service Report, a stipulation and agreement had just been finalized in Ameren Missouri's Missouri Energy Efficiency and Investment Act ("MEEIA") Application, File No. EO-2012-0142. Therefore, it would be improper and premature to discuss this in detail in context of the Staff's Cost-of-Service Report. However, as Staff indicated in its Rebuttal Testimony in that case, Staff believes the Demand Side Investment Mechanism ("DSIM"), regardless of the final details, reduces Ameren Missouri's business risk. Unfortunately, it is very difficult to quantify in terms of basis points just how much the cost of equity may be reduced by the final mechanism. Most of the companies in Staff's proxy group already have demand side programs along with special recovery and incentive mechanisms to encourage these programs. Consequently, some of the impacts on the cost of equity of more favorable rate-making treatment for demand-side investments are already reflected in the stock prices of these companies. However, Staff believes the granting of the DSIM, coupled with the current high valuations on electric utility stock prices, i.e. low costs of equity, should more than support a Commission decision to allow an ROE for Ameren Missouri somewhere below 10%.

J. Conclusion

A just and reasonable rate is one that is fair to the investors and fair to the ratepayers. Fairness to the ratepayers means rates that are not one penny more than is necessary to be fair to the shareholders. Fairness to the shareholders means rates that will produce revenues, on an annual basis, sufficient to cover Ameren Missouri's prudent cost of service, which includes its cost of capital. Using widely-accepted methods of financial analysis, Staff has developed a weighted average cost of capital for Ameren Missouri in the range of 6.99% to 7.52% (*see* Schedule 23). This rate was calculated by applying an embedded cost of long-term debt of 5.885% and a cost of common equity range of 8.00% to 9.00% to a capital structure consisting of 53.02% common equity, 45.94% long-term debt, and 1.04% preferred stock. Because there appears to be some concern in setting an allowed return on equity based on the cost of equity, Staff recommends the Commission set the allowed ROE at 9.00% in this case. Although this is well-above what Staff believes the true cost of equity to be in the current capital market environment, this allowed ROE would balance the concern about the impact a lower allowed ROE would have on investors' view of Missouri's regulatory environment, while still passing along the benefit of lower capital costs to ratepayers.

Staff Expert/Witness: David Murray

VII. Rate Base

A. Plant in Service and Depreciation Reserve

1. Accounting Schedule 3

This schedule has been adjusted, by account, to reflect the rate base value of Ameren Missouri's plant-in-service estimates through July 31, 2012. These estimates will be replaced with actual amounts following the true-up audit. The Staff adjusted Ameren Missouri's plant balances to allocate a portion of the Company's general plant to Ameren Missouri's retail natural gas business. These adjustments to the test year balances are reflected in Adjustments to Plant-In-Service Accounting Schedule 4.

Staff Expert/Witness: Erin M. Carle

2. Owensville Acquisition

The City of Owensville approved the sale of its electric distribution system in November 2011. During March 2012, Ameren Missouri purchased these electric distribution system assets. All plant in service and depreciation reserve amounts related to this acquisition have been included in Staff's Accounting Schedules 3 (Plant-in-Service) and 5 (Accumulated Reserve) in this case. Staff will continue to evaluate these values through the end of the July 31, 2012, true-up.

Staff Expert/Witness: Erin M. Carle

3. Plant-In-Service Accounting (Construction Accounting)

The Company requested that the Commission allow Ameren Missouri to implement a new regulatory mechanism called "Plant-In-Service Accounting" also called "construction accounting." Specifically, the Company seeks accounting authority to accrue for return and deferral of depreciation expense for all non-revenue producing plant additions in a regulatory asset during the period between the date when those assets begin serving customers until they can be reflected in rate base in a later rate case. In each future rate case, the Company would include these deferred amounts in its revenue requirement to be amortized over the lives of the underlying assets. Staff does not recommend wholesale application of construction accounting, and will discuss its specific opposition to this proposed regulatory mechanism in its rebuttal testimony.

Staff Expert/Witness: John P. Cassidy

4. Depreciation Reserve - Accounting Schedule 5

Accounting Schedule 5, Depreciation Reserve, has been adjusted by account to reflect the rate base value of Ameren Missouri's depreciation reserve estimates through July 31, 2012. These estimates will be replaced with actual amounts following the true-up audit. As it did with Plant in Service, the Staff adjusted Ameren Missouri's depreciation reserve balances to allocate a portion of the Company's general plant depreciation reserve to Ameren Missouri's retail natural gas business. These adjustments to the test year balances are reflected in Adjustments to Depreciation Reserve – Accounting Schedule 6.

Staff Expert/Witness: Erin M. Carle

5. Allowance for Funds Used During Construction (AFUDC) on Sioux Scrubbers

Ameren Missouri began construction of the Sioux Wet Flue Gas Desulfurization Project ("Sioux WFGD" or "scrubbers") during April 2005. The First Nonunanimous Stipulation and Agreement approved by the Commission in Ameren Missouri's rate case, Case No. ER-2010-0036, stated that Ameren Missouri could receive construction accounting for this project until costs were reflected in rates at the effective date of rates as part of its next rate proceeding or January 1, 2012, whichever occurred earlier. On September 3, 2010, Ameren

Missouri filed a subsequent application before the Commission seeking a rate increase as part of Case No. ER-2011-0028. As part of that rate case, the Commission established a July 31, 2011, effective date of rates. The scrubbers were installed at the Sioux station in a major construction project that was declared in service during November 2010. Most of these Sioux scrubber related construction costs were included in rate base in Ameren Missouri's Case No. ER-2011-0028. In this proceeding, the Commission must now determine whether construction accounting should be permitted to continue past the effective date of rates established in Case No. ER-2011-0028, July 31, 2011, for any costs related to the Sioux WFGD not already included in rates. Staff will also address certain other issues and adjustments regarding the Sioux WFGD Project construction accounting.

In Case No. ER-2010-0036, for purposes of computing depreciation rates, the Commision used a retirement date of September 2033 for the Sioux scrubbers. A corresponding depreciation rate was also established in that case. The Sioux scrubbers were not deemed in-service until November 2010. As such, Ameren Missouri did not begin its amortization period for the deferred depreciation expense and allowance for funds used during construction ("AFUDC") accrued during construction until the effective date of new rates approved in Case No. ER-2011-0028. The effective date of new rates approved in Case No. ER-2011-0028 by the Commission was July 31, 2011. The Company's response to MIEC Data Request No. 5.5 indicates the depreciation expense and AFUDC to be amortized over 266 months equals $45,069,631 as established by Commission Report and Order in Case No. ER-2011-0028. The Company's response specifically states, "Sioux Plant retirement date of September 2033 was used for depreciation rates implemented in PSC Case No. ER-2010-0036. The amortization period started in August 2011, therefore the amortizable life established was 266 months."

Based upon the information provided in response to MIEC Data Request No. 5.5, the monthly amortization related to the deferred depreciation expense and AFUDC calculated for the Sioux scrubber is $169,435. Ameren Missouri booked monthly amortizations for the months of August and September 2011 during the test year. Therefore, Staff proposes an adjustment of $1,694,429 to annualize the amortization related to the Sioux scrubbers as authorized by the Commission Report and Order in Case No. ER-2010-0036.

Staff also proposes an adjustment of $150,636 to add back the equity portion of AFUDC allowed for regulatory purposes, but removed from AFUDC for GAAP accounting purposes. In its response to MIEC Data Request No. 5.5, the Company states: "The Sioux scrubber construction accounting contra test year amount is being booked for GAAP accounting purposes only. Under GAAP accounting rules, only debt portion of interest expense can be capitalized for capital projects. FERC rules permit both the debt and equity portion of interest expense to be capitalized. The Sioux scrubber construction accounting contra regulated asset is the reversal of the equity portion for GAAP accounting. This is eliminated as it does not apply per FERC regulations." Ameren Missouri proposed this same adjustment in the same amount in its case.

In the First Non-Unanimous Stipulation and Agreement in Case No. ER-2010-0036, it states on Page 3, Item 5:

> 5. AmerenUE shall be allowed to continue to accrue Allowance for Funds Used During Construction ("AFUDC") on the wet flue gas desulfurization units ("scrubbers") AmerenUE is presently installing on the No. 1 and No. 2 generating units at AmerenUE's Sioux generating station, with the rate of return on equity ("ROE") adopted by the Commission in this case to apply to the equity component of that AFUDC. AmerenUE shall also be allowed to defer the depreciation expense (but no other Sioux scrubber related expense) of the Sioux scrubbers during the period commencing when the costs of the Sioux scrubbers are booked to plant-in-service and ending the earlier of: (1) the effective date of new rates in AmerenUE's next general rate proceeding or (b) January 1, 2012.

Staff's legal counsel advised that the intent of the language included in the First Non-Unanimous Stipulation and Agreement in Case No. ER-2010-0036 is to halt all accruals of deferred depreciation expense and AFUDC calculated on costs included in rate base in Case No. ER-2011-0028 related to the plant-in-service for the Sioux scrubbers at the earlier of the effective date of new rates in Case No. ER-2011-0028 or January 1, 2012. Based on this legal interpretation, Staff contends that all accruals of deferred depreciation expense and AFUDC related to the Sioux scrubber costs placed in rate base in Case No. ER-2011-0028 should cease at July 31, 2011. It is also Staff's position that any plant additions related to the Sioux scrubbers that were placed in-service after December 31, 2010 (the cut-off date for all plant in service related to the Sioux scrubbers in Case No. ER-2011-0028) but before July 31, 2011, are intended to accrue deferred depreciation expense and AFUDC as well although not explicitly stated in the *First Non Unanimous Stipulation and Agreement* in Case No. ER-2010-0036. As such, Staff is recommending an adjustment in the amount of $19,404, which represents the annualized deferred depreciation expense and AFUDC calculated for the period January 1, 2011 through

July 31, 2011, on all plant additions related to the Sioux scrubbers that occurred after December 31, 2010, but prior to August 1, 2011. The total deferred depreciation expense and AFUDC calculated for this time period is $402,629, to be amortized over a period of 249 months.

Staff Expert/Witness: Roberta A. Grissum

B. Cash Working Capital ("CWC")

<u>1. Calculation of Revenue and Expense Lags</u>

In certain instances, after examining the appropriateness of Ameren Missouri's revenue and expense lag cash working capital ("CWC") calculations, Staff has used the same revenue and expense lag factors as those recommended by the Company in this proceeding. In the situations where Staff determined that the lag the Company calculated was not appropriate, Staff developed a new lag based on available data provided in this rate case proceeding. Staff also adopted certain revenue and expense lags it calculated in Ameren Missouri's most recent rate case, Case No. ER-2011-0028, in which the test year was the twelve months ending March 31, 2010, with the true-up cut-off on February 28, 2011. For example, in this proceeding the Company developed its revenue collection lag using accounts receivable aging reports. However, Staff has instead adopted the revenue collection lag it developed in Case No. ER-2011-0028 (21.11 days), which was calculated based on an Ameren Missouri report specifically maintained for rate cases that calculated the actual period of time that the customers take to pay their bills. This report ("CURST 246 report") has been used by both Staff and the Company to determine the revenue collection lag in previous rate cases, and Staff believes that the data from that report provides a more accurate estimation of Ameren Missouri's collection lag than do accounts receivable aging reports. Almost half of the test year collection data in this rate case proceeding was also utilized to calculate the collection lag in Ameren Missouri's last rate case, Case No. ER-2011-0028. In addition, Ameren Missouri's response to Staff Data Request No. 0262 affirms that since the Company's last rate case, it has not made any changes to its billing and collections policies and procedures that would materially impact customer collections. For these reasons, the collection lag Staff recommended in Ameren Missouri's last rate case is still appropriate for use in this proceeding as well.

To further verify the accuracy of the Company's collection lag day recommendation based on accounts receivable aging analysis in this proceeding, Staff is also conducting a collection lag study of actual timing of customer collections, based upon a random customer sample. On May 7, 2012, Staff submitted Staff Data Request No. 0339 for access to customer billing and collections information for the test year, and received the Company's response on June 7, 2012, after an initial objection to Staff's request on May 17, 2012. Staff is currently reviewing the customer billing and collection data provided by the Company, and, given the large volume of data, has been unable to complete its review at this time. Staff will continue to examine this data as part of its true-up audit in order to determine if adjustments to its recommended revenue collection lag value are appropriate.

Staff and Ameren Missouri also differed on the calculation of Gross Receipts Tax ("GRT") expense lag. The Company calculated a 29.74 day expense lag for this item without factoring into its calculation the actual payment schedules for each of the taxing authorities. For gross receipts tax payments, the frequency of the payments varies (monthly, quarterly, semi-annually, or annually) and depends on the municipality to which the payments are being made. For some cities, payments are made on the last day of the following month, and for others, on the 20th day of the following month. Using the payment schedules of the municipalities that collect GRT from Ameren Missouri, Staff calculated a 48.04 day expense lag for GRT.

Staff will continue to examine CWC through the true-up period ending July 31, 2012, to determine if further adjustments to the cost of service are necessary to address revenue and expense lags.

Staff Expert/Witness: Kofi Agyenim Boateng

C. Prepayments and Materials and Supplies

The Company has utilized shareholder funds for prepaid items such as insurance premiums and materials and supplies. By including these items in rate base, this up-front investment made by the Company is recognized in customer's rates.

During the test year, in May 2011, the lease for the freight on coal cars expired. Staff has eliminated this item from its calculations as this lease will not be renewed in the future. The lease for imaging software also expired during the test year in November 2010. However, the Company has indicated to Staff that a new lease for imaging software was signed in May 2012.

Staff has requested a copy of the new lease for imaging software and will review this item during its true-up analysis in this case. Staff has included prepayments in Accounting Schedule 2, Rate Base, at the 13-month average level ending April 30, 2012.

The Company also maintains a variety of materials and supplies in inventory to meet its day-to-day needs in performing its utility operations. Staff has included Ameren Missouri's average balance of materials and supplies inventory that was maintained during the 13 months ending April 30, 2012, in Accounting Schedule 2, Rate Base. The level of both materials and supplies and prepayments will also be re-examined as part of Staff's true-up audit.

Staff Expert/Witness: Erin M. Carle

D. Customer Deposits

Customer deposits represent funds received from Ameren Missouri's customers as a security against potential loss arising from failure to pay for utility service received. Until refunded, customer deposits represent a source of funds available to the Company and are included as an offset to the rate base investment. Generally, interest is calculated on customer deposits and paid to the customers for the use of their money. The amount of customer deposits in Accounting Schedule 2, Rate Base, represents a 13-month average (April 2011-April 2012) of Ameren Missouri's customer deposits. In Accounting Schedule 10, Staff adjusted expenses to include interest calculated on Staff's level of customer deposits reflected in rate base.

Staff Expert/Witness: Erin M. Carle

E. Customer Advances

Customer advances are funds provided by individual customers of the Company to assist in the costs of the provision of electric service to them. These funds represent interest-free money to the Company. Therefore, it is appropriate to include these funds as an offset to rate base. No interest is paid to customers for the use of their money, unlike customer deposits. The amount of customer advances reflected on Accounting Schedule 2, Rate Base, represents a 13-month average (April 2011 - April 2012).

Staff Expert/Witness: Erin M. Carle

F. Fuel Inventories

Staff included a 13-month average of coal inventory through April 30, 2012, adjusted to reflect coal prices that will be in effect as of July 31, 2012. Staff also utilized a 13-month average through April 30, 2012, to determine the inventory amount for oil. For nuclear fuel inventory, Staff used an 18-month average of the value of the nuclear fuel that was contained in the fuel core of the Callaway Nuclear Generating unit through April 2012. For stored natural gas, Staff utilized a 13-month average through April 30, 2012, to determine the quantity stored and determined its value utilizing the latest known and measurable pricing information which reflects the current trend in gas prices. Staff will continue to examine the actual inventory quantities for all of these items through the end of the true-up period on July 31, 2012. Staff will also re-examine natural gas prices on July 31, 2012, the end of the true-up cut-off established by the Commission in this case.

Staff Expert/Witness: Lisa K. Hanneken

G. Demand-Side Management Cost Recovery Regulatory Asset

1. Ameren Missouri's "Cycle 1" Demand-Side Management Programs

Ameren Missouri began implementing demand-side management ("DSM") programs in February 2009 for energy efficiency programs contained in the Company's then-adopted preferred resource plan which was filed on February 5, 2008, in Case No. EO-2007-0409. Ameren Missouri's "Cycle 1" DSM programs (four business energy efficiency programs and five residential energy efficiency programs) were each first offered to customers in 2009 and were each terminated on September 30, 2011. Ameren Missouri also had one voluntary demand response program (Rider L Peak Power Rebate) which was effective from July 9, 2009, to December 31, 2011. Rider L was utilized during the summer of 2009 but was not utilized during the summer of 2010 or during the summer of 2011. Attached to this Staff COS Report as Appendix 3, Schedule JAR-1 are pages from Staff's recent Status Report[55] which highlight the

[55] See File No. AO-2011-0035, item number 6, filed on January 4, 2012.

Ameren Missouri DSM Quarterly Stakeholder Group[56] process, Ameren Missouri's implemented and planned DSM programs and the challenges and successes of Ameren Missouri's DSM programs.

The energy and demand impacts and the overall delivery processes of Ameren Missouri's DSM programs are evaluated, measured and verified by third-party contractors chosen and paid for by Ameren Missouri. Ameren Missouri's "Cycle 1" evaluation, measurement and verification ("EM&V") reports for all of its DSM programs were provided to the Company's DSM Stakeholder Group members in May 2012.

2. Ameren Missouri's "Bridge" DSM Programs

Ameren Missouri currently offers five "bridge" DSM programs (two business energy efficiency programs and three residential energy efficiency programs), [57] which the Company plans to offer until it can transition to Commission-approved MEEIA of 2009 DSM programs.[58] The business "bridge" programs became effective on November 24, 2011, and the residential "bridge" programs became effective on December 18, 2011. All "bridge" DSM programs terminate on September 30, 2012, and are limited by the Company's goal of reducing a total of 30,000 MWh of energy usage through the "bridge" programs. Should the Commission approve the *Unanimous Stipulation and Agreement Resolving Ameren Missouri's MEEIA Filing* filed on July 5, 2012 in Case No. EO-2012-0142, it is expected that Ameren Missouri will extend the term of its "bridge" DSM programs until early 2013 when it transitions to its Commission-approved MEEIA DSM programs.

Ameren Missouri's "bridge" programs' EM&V reports will be provided to the Company's DSM Stakeholder Group members within four months of the termination date of the "bridge" DSM programs.

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[56] The Ameren Missouri DSM Quarterly Stakeholder Group includes Staff, Office of the Public Counsel, Missouri Department of Natural Resources and other interested parties and serves as an advisory group to Ameren Missouri in the development, implementation, monitoring and evaluation of Ameren Missouri's demand response, energy efficiency and affordability programs.

[57] Business Standard Incentive Program, Business Custom Incentive Program, Residential Lighting Program, Residential Multifamily Income Qualified Program, and Refrigerator Recycling Program in MO.P.S.C. Schedule No. 5, Sheet Numbers 225 through 258.

[58] Case No. EO-2012-0142 contains Ameren Missouri's January 20, 2012, requests for approval of eleven DSM programs and for approval of a demand-side programs investment mechanism ("DSIM") under MEEIA and the Commission's MEEIA Rules: 4 CSR 240-3.163, 4 CSR 240-3.164, 4 CSR 240-20.093 and 4 CSR 240-20.094.

3. Staff Recommendation

Staff recommends that the Commission order the continuation of the current Ameren Missouri DSM regulatory asset cost recovery mechanism[59] for the "Cycle 1" DSM programs and for the "bridge" DSM programs.

Staff Expert/Witness: John A. Rogers

4. DSM Costs Included In Rate Base

In prior rate proceedings, Ameren Missouri was allowed to treat DSM program expenditures as a depreciable asset through booking the amounts to a regulatory asset account and accruing a carrying charge equal to Ameren Missouri's AFUDC rate on the balance.[60] A new DSM regulatory asset was created in each rate case. In Case No. ER-2008-0318, one-tenth of the program cost amount Ameren Missouri spent through September 30, 2008, was included in the cost of service through a ten-year amortization. In Case No. ER-2010-0036, $11,430,501, the balance in the regulatory asset as of December 31, 2009, less the Residential Lighting and Appliance program costs, was included in rate base and an annual amortization based on six years was included in expense. In Case No. ER-2011-0028, DSM program costs expenses incurred through February 28, 2011, in the amount of $28,547,631, was included in Ameren Missouri's rate base and an annual amortization of that amount (again, less Residential Lighting and Appliance program costs) based on six years was included in expense.

In this proceeding, consistent with past Staff practice, $33,905,016 of DSM program costs incurred since February 28, 2011, the true-up cut-off date in Ameren Missouri's last rate proceeding, Case No. ER-2011-0028, has been included in Staff's rate base. One-sixth of that amount has been included in expense through a six-year amortization.

For ease of presentation, Staff has combined the unamortized portion of all previous Ameren Missouri DSM regulatory assets included in rate base into one rate base item in this case labeled "Energy Efficiency Regulatory Asset." Staff's adjustment to amortization expense was

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[59] In Case No. ER-2010-0036, as a result of the First Nonunanimous Stipulation and Agreement, the balance of the regulatory asset for prudently incurred programs' costs was included in rate base and an annual amortization based on six years was included in expense. In Case No. ER-2011-0028, the Commission approved the continued use of the regulatory asset cost recovery mechanism it had approved in Case No. ER-2010-0036.

[60] "AFUDC" is Allowance for Funds Used During Construction.

determined by combining a full year's amortization expense for each previously authorized DSM regulatory asset, and comparing the result to Ameren Missouri's test year DSM regulatory asset amortization expense.

Staff Expert/Witness: Mark L. Oligschlaeger

H. FAS 87 – Pensions and FAS 106 OPEBs Trackers

See the discussion in Section IX.D. - Payroll and Benefits, subsections 6.a. and 7.a.

Staff Expert/Witness: Roberta A. Grissum

I. Accumulated Deferred Income Taxes

Ameren Missouri's deferred tax reserve represents, in effect, a prepayment of income taxes by Ameren Missouri's customers to the Company prior to payment being made by the Company to taxing authorities. As an example, because Ameren Missouri is allowed to deduct depreciation expense on an accelerated basis for income tax purposes, the depreciation expense deduction used for income taxes paid by the Company is considerably higher than depreciation expense used for ratemaking purposes. This results in what is referred to as a "book-tax timing difference," and creates a deferral of income taxes to the future. The net credit balance in the deferred tax reserve represents a source of cost-free funds to the Company. Therefore, Ameren Missouri's rate base is reduced by the deferred tax reserve balance to avoid having customers pay a return on funds that are provided cost-free to the Company. As part of its true-up audit, the Staff will re-examine Accumulated Deferred Income Tax ("ADIT") balances to make sure all items included in those balances are consistent with the other components of the cost of service and that they reflect the current balances at the true-up cutoff date, July 31, 2012. Based on this true-up examination, Staff may make additional adjustments to the cost of service as necessary.

Staff Expert/Witness: John P. Cassidy

VIII. Allocations

A. Review of need for Missouri Jurisdictional Allocations Factors

The traditional method for determining the costs allocated to the retail jurisdiction to determine the retail cost of service is accomplished by applying a retail jurisdictional allocation factor to the utility's total amount of investments and expenses. The retail cost of service is then compared to the retail revenues generated by the current effective retail rates to determine the additional revenue and incremental rate increase for retail customers. Thus, the retail jurisdiction and the wholesale jurisdiction are allocated both rate base and expense costs. Any wholesale revenue the utility receives from municipalities is excluded in the determination of the utility's retail revenues.

In the current case when Ameren Missouri determined its retail revenues, it did not recognize either the existence of the municipal customers' contracts or the municipal customers' generation requirements on Ameren Missouri's system. Instead, Ameren Missouri has included revenue from wholesale municipal customers as off-system sales based upon actual wholesale contractual rates. Ameren Missouri has also included the generation costs to serve those wholesale customers as additional fuel and purchased power expense.

The Staff performed an analysis that determined that reflecting wholesale revenues received from the four municipalities as off-systems sales and flowing those off-system sale revenues and costs through to the fuel adjustment clause appears to be reasonable for this case. In general, the Staff is not opposed to departing from the traditional jurisdictional allocation method of determining the retail cost of service. However, the Staff will continue to analyze this treatment on a case by case basis going forward in all future Ameren Missouri rate proceedings.

Staff Expert/Witness: John P. Cassidy

B. Corporate Allocations

A subsidiary of Ameren Corporation, Ameren Services Company ("AMS"), provides various management and administrative services for Ameren Missouri. In its audit, Staff reviewed the methods used by AMS to assign and allocate its costs to Ameren Missouri's electric operations. Under AMS's corporate cost allocation system, costs are categorized into four types: Direct, Direct Allocated, Indirect Corporate, and Indirect Function. The allocations of costs and the methods used to allocate costs from AMS are provided in Ameren Missouri's cost allocation manual ("CAM").

AMS evaluates and updates the allocation factors at the beginning of each calendar year, unless a significant change in circumstances occurs which would require an intermediate factor update. In addition, the Company's internal auditing department performs an audit each year of the Service Request System and Service Request policies, operating procedures, and controls as ordered by the Illinois Commerce Commission (ICC) in Order #06-0070 on May 16, 2007.

The Company provided Staff with data regarding its allocations through May 2012 for review, as well as copies of the internal audit reports required by the ICC. While Staff is not recommending an adjustment at this time, Staff will need to examine the allocation of AMS costs to Ameren Missouri's electric operations through the true-up period ending July 31, 2012, to determine if any significant changes have or will take place subsequent to the May 2012 data provided.

Staff Expert/Witness: Kofi Agyenim Boateng

IX. Income Statement

A. Rate Revenues

1. Introduction

Since the largest component of operating revenues results from rates charged to Ameren Missouri's retail customers, a comparison of operating revenues with cost of service is fundamentally a test of the adequacy of the currently effective Missouri retail electricity rates. If the overall cost of providing service to Missouri retail customers exceeds operating revenues, an increase in the current rates Ameren Missouri charges its Missouri retail customers for electricity is required.

One of the major tasks in a rate case is not only to determine whether a deficiency (or excess) between cost of service and operating revenues exists, but also to determine the magnitude of any such deficiency (or excess). Any deficiency (or excess) identified can only be made up (or otherwise addressed) by adjusting Missouri retail rates (i.e., rate revenues) prospectively, on a going-forward basis.

Staff Expert/Witness: Roberta A. Grissum

2. Definitions

Operating Revenues are composed of Rate Revenue, Revenue from Off-System Sales and Other Operating Revenues. Each is defined respectively as follows:

Rate Revenues: Test year rate revenues consist solely of the revenues derived from the current rates Ameren Missouri charges for providing electric service to its Missouri retail customers (i.e., native load and customer charges). Ameren Missouri charges are determined by multiplying each customer's usage by the per unit rates established in its tariff. Missouri retail customers are charged summer rates (June – September) and winter rates (October – May) during the year. These charges are broken down for Missouri retail customers into two categories: (1) a demand charge; and (2) an energy charge. Missouri retail customers' rates are also broken down by rate class based upon type and amount of usage. These rate classes include: (1) Residential Services ("Res"); (2) Small General Services;("SGS") (3) Large General Services ("LGS"); (4) Small Primary Service ("SPS"); (5) Large Primary Services ("LPS"); (6) Large Transmission Service ("LTS") and (7) Public and Private Lighting. In addition to these rate classes, there is a separate category for Metropolitan Sewer District ("MSD"). Revenues from the fuel adjustment clause ("FAC") represent collections or refunds of prior period fuel costs and are excluded in determining the annualized level of ongoing rate revenues.

Revenue from Off-System Sales: Revenue from off-system sales is realized as a result of Ameren Missouri's sales of electricity to other utilities at non-regulated prices. The gross revenues from these sales, less the generation or purchased power expense incurred by Ameren Missouri to make these sales, is known as the profit margin on off-system sales. The rationale for assigning this profit to ratepayers and including it in operating revenues is that the electricity sold by Ameren Missouri is generated by power plants being paid for by the ratepayers through electric rates charged by Ameren Missouri.

Other Operating Revenues: This category includes the revenue from such items as the rental of pole space, leased land and other miscellaneous charges.

Staff Expert/Witness: Roberta A. Grissum

3. The Development of Rate Revenue in this Case

The objective of this section is to determine annualized, normalized test year usage and revenues by rate class.

The intent of Staff's adjustments to test year Missouri usage and rate revenues is to determine the level of revenue that the Company would have collected on an annual, normal-weather basis, based on information "known and measurable" at the end of the test year (in this case, updated through January 31, 2012, as explained below).

The two major categories of revenue adjustments are known as "normalizations" and "annualizations." Normalizations deal with test year events that are unusual and unlikely to be repeated in the years when the new rates from this case are in effect. Test year weather is an example. Annualizations are adjustments that re-state test year results as if conditions known at the end of the test year had existed throughout the entire test year. Adjustments for customer growth are an example of an annualization.

Staff Expert/Witness: Curt Wells

4. Regulatory Adjustments to Test Year Sales and Rate Revenue

a. Adjustment to Remove Unbilled Revenues

Staff has eliminated unbilled revenue from its determination of revenue requirement to ensure only 365 days of revenue is included and to reflect revenues stated on an "as billed" basis. The recording of unbilled revenue on the books of the Company recognizes sales of electricity that have occurred, but have not yet been billed to the customer. Therefore, it is necessary for Staff to remove unbilled revenue in order to reach an accurate revenue requirement based upon electricity sales billed to and revenues collected from Missouri ratepayers.

Staff Expert/Witness: Roberta A. Grissum

b. Adjustment to Remove Gross Receipts Tax

The Company acts as a collector for taxes imposed on utility service revenues by municipalities and other taxing authorities. The GRT included on a customer's bill is collected by the Company and remitted to the appropriate taxing authority. The GRT included on a customers' bill is recorded as revenue on the books of the Company, with a corresponding charge booked to GRT expense. Theoretically, the revenue and expense offset one another and, therefore, have no effect on net income. However, the expense accrual for GRT does not always match perfectly with the GRT included in revenue due to timing differences in the collection and payment of GRT. Eliminating the GRT recorded in revenue and expense through companion adjustments assures that GRT will have no impact on the calculation of net income for revenue requirement purposes.

Staff Expert/Witness: Roberta A. Grissum

c. Preliminary Adjustments to Test Year

Starting with revenue based on Revenue Month (the month in which usage and revenue were reported in the Company billing system), Staff adjusted Ameren Missouri's revenue in all rate classes to reflect Ameren's revenues as Primary/Rate Month (the month reflecting the rates and revenue in the month when the majority of service actually occurred). This adjustment was necessary to move re-billed amounts (negative and positive) to the month where the energy was actually used.

Staff Experts/Witnesses: Curt Wells and Seoung Joun Won

d. Update Period Adjustment

To provide a more current basis for normalization, annualization, and growth calculations, Staff determined that usage data used to determine revenue in this case should be updated to reflect the 12-month period ending January 31, 2012, and should include minor billing adjustments.

Staff Experts/Witnesses: Curt Wells and Seoung Joun Won

e. Large Customers Annualization

LPS Rate Class – Staff made adjustments to billing units and revenues based upon an "update period" of February 1, 2011, through January 31, 2012, to be adjusted for known and measurable changes through the true-up period July 31, 2012. There were 72 customers in the LPS rate class during the update period. Staff performed a data check for billing corrections prior to doing other adjustments. Staff annualized LPS customers on an individual customer (account) basis. Staff examined each LPS customer's individual monthly demand and energy use, measured over multiple years prior to the update period and the twelve (12) months of the update period, graphically to determine if an adjustment was needed to reflect an annualized/normalized level of demand and energy use for the 12-month update period, as well as to identify the type of adjustment required to reflect the appropriate annualized/normalized level.

There were no adjustments to revenues for the Economic Development Rider ("EDR"). This rider provides for discounts to be "paid" to customers (in the form of credits on their electricity bill) who locate or expand operations in certain areas of Ameren Missouri's service territory. EDR credits are provided to the customer over a five-year period. The value of the credits is a declining percentage of the customer's electric bill calculated on the appropriate general application rate schedule. Usually, these discounts are included in the determination of Ameren Missouri's revenues because fostering economic development is assumed to be a benefit to all ratepayers. As of the end of the update period, there are no EDR customers. Therefore, Staff included no EDR discount to revenues in this rate case.

The other LPS adjustments are as follows:

(a) Interclass Rate Switching Adjustment

No customers moved into or out of the LPS rate class from other classes during the update period. Therefore, Staff made no adjustments to billing units and revenues for interclass rate switching.

(b) Annualization

The general intent of an annualization is to restate update period billing units results as if conditions known at the end of the update period had existed throughout the entire time period considered. Staff reviews each of the very largest customers to determine if adjustments need to be made to reflect any major growth or decline in kWh usage and rate revenues due to the entrance of new customers, the exit of existing customers, and load growth or decline of specific existing customers. During the update period in this rate case, one existing customer started to receive service under Rider B,[61] and one new customer was added to the LPS class. Staff annualized these customers' billing units and revenues for all twelve (12) months.

(c) 365-Days Adjustment

Staff measured rate revenues and billing units by billing month (the period of time over which the staggered bill cycles result in each customer being billed precisely once) rather than by calendar month. The number of days in the twelve (12) billing months comprising the update period for each customer was compared to a 365-day calendar year. For those LPS customers with greater or less than 365 days, Staff made a per-day kWh adjustment, with the appropriate rates applied to determine the revenue adjustment. Days adjustments are also known as "unbilled" sales and "unbilled" revenues on financial statements.

Staff Expert/Witness: Seoung Joun Won

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[61] The existing customer will be taking service at a different voltage and Rider B discount for service at 34.5 kV or higher. Rider B is a discount applicable for service to substations owned by customer in lieu of company ownership.

LTS Rate Class - There was only one customer on the LTS rate class. The only adjustment made to the LTS customer was an annualization for the rate increase that occurred during the update period.

Staff Expert/Witness: Seoung Joun Won

f. Annualization for Rate Change

The rates approved in Case No. ER-2011-0028 were effective July 31, 2011. Therefore rate revenues prior to July 31, 2011, are based on the rates that were in effect prior to Case No. ER-2011-0028. Thus, update period revenues are understated by the difference between the amount that was actually billed to customers during the update period and the amount that would have been billed to customers by the Company if the current rates (effective July 31, 2011) had been in effect throughout the entire period. Staff's method of computing annualized revenues for each rate class is to multiply update period billing units by current rates. The difference between these computed annualized revenues and the amounts billed during this period under the prior rates provide the amount of the Annualization for Rate Change Adjustment.

Staff Expert/Witness for LPS and LTS classes: Seoung Joun Won

Staff Expert/Witness for all other classes: Curt Wells

g. Weather Normal Variables

Historical Data Used to Calculate Normal Weather Variables - Each year's weather is unique; consequently, usage, hourly loads, revenue, and fuel and purchased power expense need to be adjusted to "normal" weather. Staff used weather observations for the update period of February 1, 2011, through January 31, 2012, from the Lambert - St. Louis International Airport ("STL"), Missouri.

As a measure of "normal" weather, Staff used "climate normals" ("normals") published in July 2011 by the National Climatic Data Center ("NCDC") of the U.S. National Oceanic and Atmospheric Administration ("NOAA") as the authoritative definition of normal weather. According to NOAA, a climate normal is defined, by convention, as the arithmetic mean of a climatological element computed over three consecutive decades[62]. To conform to the NOAA's

[62] Retrieved on April 17, 2012 from NOAA website, http://www.aos.wisc.edu/~sco/normals.html.

three consecutive decade convention for determining normal temperatures, Staff used observed maximum and minimum daily temperatures for the 30-year period of January 1, 1981, through December 31, 2010, on which NOAA bases its calculation of normal.

Inconsistencies and biases in the 30-year time series of daily temperature observations occur if weather instruments are relocated, replaced or recalibrated. Changes in observation procedures or the instrument's environment may also occur during the 30-year period. NOAA specifically identified three major instrument and location changes for STL in 1989, 1996 and 2002 during the 30-year period of 1981 - 2010. NOAA accounted for these anomalies in calculating the normal temperatures it published in July 2011. Staff verified the adjustments for anomalies in the STL time series by direct communication with NCDC and through its own review of the daily observations. NCDC confirmed that the serially-complete monthly minimum and maximum temperature data sets have been adjusted to remove all inconsistencies and biases due to changes in the associated historical database. In addition, NCDC provided a peer-reviewed, published paper[63] to explain the meteorological and statistical soundness of the NCDC's monthly temperature series homogenization procedure for removing documented and undocumented anomalies.

This is the first Ameren Missouri rate case in which Staff has used NOAA's normal weather based on the 30-year period of 1981 – 2010. In Ameren Missouri's previous four electric cases, Staff and Ameren Missouri agreed to adjust temperature data from NOAA in the 30-year period (January 1, 1971 – December 31, 2000) for the St. Louis Lambert Airport weather station based on a merger case and complaint case agreement in Case No. EM-96-149 and Case No. EC-2002-1. The adjustments agreed to were necessary because NOAA's previous normals did not take into account a 1996 instrumentation change. However, NOAA's new normals 1981-2010 published in July 2011 accounted for not only the 1996 instrumentation change but also instrumentation changes in 1989 and 2002.

According to the NCDC calculation, there are three major adjustments to the historical monthly minimum temperature time series for 1981 through 2010. First, in January 2002, a change of the instrument elevation occurred that resulted in monthly average minimum

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[63] Menne, M.J., and C.N. Williams, Jr., (2009) Homogenization of temperature series via pairwise comparisons. *J. Climate*, **22**, 1700-1717.

temperature values around 0.7° F warmer than before, so NCDC adjusted upward the observations from 1981 to 2002. Second, in June 1996, a change occurred that resulted in minimum temperature values around 1.6° F cooler than before, so NCDC adjusted downward the observations from 1981 to 1996. Finally, in March 1989, a change occurred that resulted in minimum temperature values that were around 1.2° F warmer than before, so NCDC adjusted upward the observations from 1981 to 1989. Cumulatively, NCDC identified the average of the correction value of approximately 0.3° F for the time period 1981-1989, approximately -0.9° F for the time period 1989-1996, and approximately 0.7° F for the time period 1996-2002 to the historical monthly minimum temperature time series. NCDC found no anomalies requiring significant adjustment in the maximum temperature time series. Staff presents NCDC's charts of the unadjusted and adjusted minimum and maximum temperatures STL data series in Staff's Appendix 3, Schedule SJW-1 and SJW-2, respectively.

Because Staff uses daily temperature observations to calculate normal weather values, it adjusted the observed daily minimum temperatures so that the monthly average minimum temperature calculated from these adjusted daily values is the same as the NCDC's serially-complete monthly minimum temperature time series. Staff derived the daily mean temperature time series, daily two-day weighted mean temperatures, and normal daily temperatures from these adjusted daily temperatures.

Weather Variables - Because weather fluctuates greatly from day-to-day, the STL temperature variables required to weather-normalize sales are the test-year actual and the 30-year normal two-day weighted daily mean temperatures. The day's daily mean temperature is defined as the simple average of the day's maximum daily temperature and minimum daily temperature. The daily two-day weighted mean temperature is calculated using the previous day's mean daily temperature with a one-third weight and the current day's mean daily temperature with a two-thirds weight.[64]

This was done because yesterday's weather effects how electricity is used today. For example, if yesterday was hot and the air conditioner was on, it is more likely that the air

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[64] To calculate the Dth day's two-day weighted mean temperature ($TWMT_D$), the current day's (D) daily mean temperature (DMT_D) is averaged with the prior day's (D-1) daily mean temperature (DMT_{D-1}), applying a 2/3 weight on the current day and 1/3 weight on the prior day: $TWMT_D = (2/3)\ DMT_D + (1/3)\ DMT_{D-1}$.

conditioner will be left on today. If yesterday was a mild day and today is slightly hotter, air conditioning may not be used or would be turned on later in the day.

Calculation of "Normal Weather" - Staff used the STL daily two-day weighted mean temperature data series to normalize both class usage and hourly net system loads. Staff used a ranking method to calculate normal weather estimates daily normal temperature values, ranging from the temperature that is "normally" the hottest to the temperature that is "normally" the coldest, thus estimating "normal extremes." Staff ranked the two-day weighted temperatures for each year of the 30-year history from hottest to coldest and then calculated the normal daily temperature values by averaging the ranked two-day weighted mean temperatures for each rank, irrespective of the calendar date. This results in the normal extreme being the average of the most extreme temperatures in each year of the 30-year normals period. The second most extreme temperature is based on the average of the second most extreme day of each year, and so forth.

Because actual temperatures do not smoothly move up and down from day to day during the year,[65] Staff assigned these normal temperatures to the days of the update period based on the rankings of the actual temperatures of the update period.

This information was provided to Staff witness Shawn E. Lange for weather normalization of the test year kWh usage and update period hourly loads.

Staff Expert/Witness: Seoung Joun Won

h. Weather Normalization of Usage

In many of the classes of service, electricity consumption is highly responsive to the weather, specifically temperature. As the temperature reaches higher levels, the demand for cooling, air conditioning and fans increases the customers' consumption of electricity. As the weather becomes cold and temperature falls, the demand for additional heating, electric space heating for example, also forces an increase in electricity consumption. Electric air conditioning and space heating is prevalent in Ameren Missouri's service territory, therefore, it follows that Ameren Missouri's electric load is linked with and responsive to temperature.

Ameren Missouri's test year ran from October 1, 2010, through the end of September 2011. In an attempt to capture a more likely forward-looking indictor of non-weather

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[65] For example, in July, a Monday and Tuesday may be hot days but it cools down on Wednesday. However, it is still likely that on the weekend it will be hot again.

electricity usage per customer, Staff determined to use the most recent temperature and load data available and, therefore, based its analysis on an updated period of February 1, 2011, through January 31, 2012.

December 2011 and January 2012 experienced temperatures warmer than normal resulting in electric energy usage below that which would have been expected under normal weather conditions. May through August 2011 experienced temperatures warmer than normal resulting in usage above that which would have been anticipated under normal conditions. The month of February 2012 saw temperatures cooler than normal, which resulted in higher usage of electric energy than would have been anticipated under normal weather conditions. Since the temperatures in the twelve month updated period ending January 31, 2012, used by Staff deviated from normal, and since Staff chose a more recent time period to review than the one used by Ameren Missouri, Staff performed its own weather impact analysis. However, the method and model used by Staff is similar to those used by Ameren Missouri.

Staff's model and methodology contained elements important in the class-level weather normalization process: use of daily load research data to determine non-linear, class-specific responses to changes in temperature with the incorporation of different base usage parameters to account for different days of the week, months of the year and holidays. The results of Staff's analysis were provided to Staff witness Curt Wells to be used in the normalization of revenues for the Res, SGS, LGS and SPS classes.

Staff did not weather-normalize the LPS class. The members of this class are not homogeneous and, consequently, a weather response function created for one member should not be applied to any other member. Staff believes it is both appropriate and necessary to annualize rather than normalize LPS for changes in customer usage and count. Please see *Large Power Annualization* by Staff witness Seoung Joun Won for a more detailed explanation of the annualization adjustments for the LPS class. Applying the weather- normalization process to annualized usage would have introduced statistical error into the product of the analysis.

Weather normalization of usage results for the Res, SGS, LGS and SPS classes were provided to Staff witness Curt Wells.

Staff Expert/Witness: Shawn E. Lange

i. Weather Normalization of Revenue

Staff normalized update period usage data provided by Ameren Missouri for the Res, SGS, LGS, and SPS rate classes for weather by applying weather normalization factors provided by Staff witness Shawn E. Lange for each class for each month. Staff adjusted the billing units by these factors, and applied current rates to determine weather-normalized revenue. The difference between these weather-normalized revenues and the update period revenues determined the amount of the Weather Normalization Adjustment.

Staff Expert/Witness: Curt Wells

j. 365-Days Adjustment to Usage of Weather Sensitive Classes

Staff calculated a normalization adjustment to Ameren Missouri's kWh usage to reflect a calendar year's (i.e., 365 days') worth of usage. Ameren Missouri's customers' usage is measured and rate revenue are collected over a period known as a revenue month, which is the interval over which Ameren Missouri reads customers' meters and issues bills. A bill rendered for a given revenue month may charge for usage in parts of two calendar months. Revenue months take their names from the calendar month in which the customer's bill is rendered. For example, assume a customer's meter was read and usage determined on June 8 and then again on July 8 and that the bill was sent to the customer on July 15. The revenue month for this bill is July even though 22 days of the usage measured for this bill occurred from June 9 through June 30 and it contained only eight days of usage in July.

The length of a revenue month is dependent upon the interval between meter readings and does not necessarily have the same number of days that occur in a given calendar month of the same name; that is, a revenue month may have more than or less than the number of days for the same-named calendar month. For the example given above, the usage is for 30 days (June 9 through July 8), even though the revenue month is July, which has 31 days. When revenue month usage is totaled over the year, the resulting revenue year will include usage from the immediately prior calendar year and assign usage to the next calendar year, meaning a revenue year may contain more than or less than 365 days' usage. Therefore, since the costs and expenses are accounted over a calendar year, Staff calculates an annualization adjustment to bring the revenue year kWh into a 365-days interval. This adjustment is stated in kWh and is referred to as the 365-Days Adjustment.[66]

Staff calculates the 365-Days Adjustment by subtracting the weather-normalized revenue month kWh from the weather-normalized calendar month kWh for the test year; the difference, or the 365-Days Adjustment, may be either positive or negative.

The 365-Days Adjustment for the weather-sensitive classes were provided to Staff witness Curt Wells, who used the 365-Days Adjustment to adjust the revenues of the weather- normalized class revenues months to the twelve months ended January 31, 2012.

Staff Expert/Witness: Shawn E. Lange

k 365-Days Adjustment to Revenue (Weather Sensitive Classes)

As described above, since billing months are an aggregation of bill cycles, they will differ from calendar months in the time period they cover. To adjust revenue for this difference, Staff allocated the kWh days adjustment calculated by Staff witness Mr. Lange proportionately to the appropriate monthly kWh usage for each class and applied current rates to arrive at the 365-Days Adjustment to revenue.

Staff Expert/Witness: Curt Wells

l. Adjustment to Annualize Energy Efficiency Programs' Impact on Test Year Usage

Ameren Missouri is requesting, for the first time, an adjustment to annualize the impact of its energy efficiency programs on test year usage. The Company has updated its analysis[67] using information from its more current tracking reports available for an update period of February 1, 2011, through January 31, 2012, for consistency with the other normalization and annualization adjustments that Staff is making to the usage that revenue requirement is based on. Using its methodology and "class level load shapes," Ameren Missouri estimates the impact on test year sales, due to the updated adjustment amounts to annualize energy efficiency programs, to be 22,795,268 kWh for the residential rate class and 132,875,944 kWh for the remaining rate classes, i.e., SGS, LGS, SPS, and LPS.

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[66] 365-Days adjustments are also known as adjustments to unbilled usage and unbilled revenues on financial statements.

[67] Staff's Data Request No. 0255

Staff supports Ameren Missouri's energy efficiency annualization adjustment in this case and agrees that it should be recalculated for the true-up of the revenues in this case. However, as further explained below, Staff recommends that the Commission order Ameren Missouri to use "end-use load shapes" when calculating an adjustment to annualize energy efficiency programs' impact on test year sales in future general electric rate cases unless it can demonstrate why use of "end-use load shapes" is not feasible and/or cost-effective. An explanation of the adjustment follows.

Any energy efficiency measure installed as a result of the Company's energy efficiency programs during the update period, but not installed on the first day of the update period, will not have the full impact of usage reduction reflected in the test year weather-normalized usage. To realize this, an adjustment is made to annualize the full impact of the energy efficiency measure on update period sales. Because the Company has records for all of its energy efficiency programs' measures installed in the update period, the expected annualized energy savings for each measure, and the installation date for each measure, it is possible to estimate an adjustment to test year usage to annualize the impact of all energy efficiency measures installed during the test year. The Company's proposed adjustment to annualize energy efficiency programs' impact on test year usage is analogous to adjustments typically made by the Company and Staff to produce a level of usage that would have occurred if every customer on the Company's system at the end of the update period had been on the system for the entire test year.

Using tracking reports maintained by the Company and its energy efficiency programs' implementation contractors, the Company assessed the number of each type of energy efficiency measure installed in each month of the test year. For each type of measure installed in a given month of the test year, the Company calculated the actual impact of that type of measure on the test year usage assuming each type of measure was installed "mid-month" and compared that impact to the annualized impact for that type of measure from the tracking reports.

To calculate the impact of each energy efficiency measure type on Ameren Missouri's hourly loads, Ameren Missouri utilized an assumed pattern of consumption for each measure based on "class level load shapes" from the Company's most recent Integrated Resource Plan ("IRP"), Case No. EO-2011-0271. Staff has reviewed the Company's workpapers for its adjustment to update period usage and has met with the Company to better understand the methodology it used. With this type of allocation to the hours, the estimated impact on each hour would be a function of the magnitude of the loads in that hour. For example, this method would allocate more savings from a residential lighting program to the hot summer afternoon hour than it would to the 10:00 pm hour. As a result of its review and meetings with the Company, Staff has determined that the use of "end-use load shapes" that estimate the hourly impact on loads from the Company's most recent IRP could have been used. With this type of allocation to the hours, the estimated impact on each hour would be based on the contribution of that end-use for that hour. For example, this method would allocate more savings from a residential lighting program to the hour ending at 10:00 pm on a summer day than it would to the 4:00 pm hour because that is when the savings from the lighting measures actually occur. Therefore, "end-use load shapes" would likely improve the accuracy of an estimated adjustment to annualize the energy efficiency programs' impact on test year sales, especially on the amount of off-system sales ("OSS") that could be made since the customers are no longer using as much energy.

In response to a request from Staff, the Company recalculated the impact on OSS revenue from using "end-use load shapes" rather than "class level load shapes" for the residential HVAC program impacts. The Company estimated that the impact to OSS revenues is about $2,000, or about 4% of the total OSS revenues associated with the residential HVAC program. If the Company assumed that the same 4% would apply to every energy efficiency program, the Company estimates the total potential difference would be around $200,000.[68]

Ameren Missouri is planning on increasing its energy efficiency programs if the Commission approves its MEEIA filing, which should result in greater energy savings in the future. Therefore, Staff recommends the Commission order Ameren Missouri to use "end-use load shapes" when calculating an adjustment to annualize energy efficiency programs' impact on test year sales in future general electric rate cases unless it can demonstrate why use of "end-use load shapes" is not feasible and/or cost-effective. Staff appreciates the Company's attention to detail in calculating the energy efficiency annualization adjustment that it has proposed in this case. Staff also realizes that using "end-use load shapes" to allocate the energy savings to the hours will require a significant amount of resources but, in theory, it will give a more accurate estimate of the actual impact of the energy efficiency measures.

[68] Ameren Missouri CaseWorks' Data Request No. UE-DSM_ADJ-01

In his direct testimony, Company witness Steven M. Wills identifies two reasons to true-up the adjustment of the energy efficiency programs' annualizations: 1) more current evaluation, measurement and verification ("EMV") reports for its energy efficiency programs will be available, and 2) a different 12-month time period. Staff agrees that the energy efficiency annualization should be trued-up. Staff will review any true-ups to the adjustment prior to making its true-up recommendation on this issue.

Staff was notified by the Company the week that this Staff Report was due that the dates used to determine the amount of impact for the test year adjustment to usage were the dates the Company sent the incentive checks to participating customers. The Energy Efficiency adjustment should have been calculated from the date each measure was installed. Therefore, the Energy Efficiency Adjustment in this Staff report is greater than it should be. Staff will work with the Company to get the correct timing of the installation of the measures and include this correction in its rebuttal testimony.

Staff Expert/Witness: Hojong Kang

m. Demand-Side Management (DSM) Annualization of Revenues

This adjustment annualizes over the update period the level of kWh reductions resulting from those Ameren Missouri's Energy Efficiency programs in effect at the end of the period. Ameren Missouri converted these annualized kWh reductions to a factor and applied it to each kWh billing determinant of each rate class each month prior to the growth adjustment. Staff witness Hojong Kang confirmed these kWh reductions and provided them to Staff witnesses Curt Wells and Seoung Joun Won, who recalculated the factor based on annualized, normalized kWh (after growth for the weather sensitive classes) and applied rates to arrive at the DSM adjustment.

Staff Experts/Witnesses: Curt Wells and Seoung Joun Won

n. Annualization for the addition of Owensville customers

In March of 2012, Ameren Missouri added customers from the Owensville area to its territory. While this addition occurred outside the update period for this case, a separate adjustment has been included in the cost-of-service calculation to estimate the impact of the additional revenues associated with the Owensville customers. As part of the true-up audit, Staff will examine actual data and will more accurately annualize the revenues associated with the

Owensville customers once more complete billing determinants are available. Staff proposes that the usage and revenue of the Owensville customers be annualized by adjusting and conforming each class' Owensville usage to that of the corresponding Ameren Missouri class' usage as part of its true-up.

Staff Experts/Witnesses: Curt Wells and Roberta A. Grissum

o. Customer Growth Annualization

Staff made customer growth adjustments to test year kWh sales and rate revenue to reflect the additions to, and in certain instances, reductions to kWh sales and rate revenue that would have occurred if the number of customers taking service at the end of January 31, 2012, had existed throughout the entire year. Customer growth was calculated for the Res Non-Time-of-Use, SGS Non-Time-of-Use, LGS Non-Time-of-Use, SPS Non-Time-of-Use, and SPS Time-of-Use customer classes. The customer growth annualization takes into account weather and usage normalizations, as well as the adjustments for 365 days and rate changes that occurred during the test year. Other customer classes that did not exhibit growth were left at test year customer levels instead of being annualized at the January 31, 2012, update period levels. These classes include: Res Time-of-Use, SGS Time-of-Use, SGS Unmetered, LGS Time-of-Use, LPS, Outdoor Lighting, and LTS. The Staff will re-examine the level of customer growth through July 31, 2012, during its true-up audit and make adjustments to the cost of service as necessary.

Staff Expert/Witness: Roberta A. Grissum

p. Annualization and Normalization Results

Results of the annualization and normalization adjustments above are located at the Rate Revenue Summary tab of the Staff Accounting Schedules.

Staff Experts/Witnesses: Curt Wells and Roberta A. Grissum

q. Removal of Rate Refunds

Staff made an adjustment to remove the Provision for Rate Refunds recorded by Ameren Missouri from the test year. This item represents the collections or refunds of prior period revenues related to the Company's FAC and is believed to be an ongoing level. Therefore, this must be eliminated to reflect an accurate revenue requirement for ratemaking purposes.

The Company will appropriately consider these collections or refunds of prior period revenues when it rebases the net base fuel costs in the FAC.

Staff Expert/Witness: Roberta A. Grissum

B. Adjustments to Non-Rate Revenues

1. Lake of the Ozarks Shoreline Management Other Revenues

During the test year, the Company recorded other operating revenues associated with annual fees, certified-dock-builder fees, enforcement fees, and processing fees associated with its Lake of the Ozarks shoreline management activities. Staff examined the level that the Company collected for these fees through April 30, 2012, and noted a significant increase in the level collected by the Company. Staff has reflected an adjustment to decrease the cost-of-service calculation in order to reflect the twelve-months-ending April 30, 2012, level of revenues reported by Ameren Missouri for these four fee categories.

Staff Expert/Witness: John P. Cassidy

2. Storm Assistance Revenues

During the test year the Company received revenue associated with storm assistance that it provided to four other electric utilities. Staff normalized storm assistance revenue based upon a five-year average ending April 30, 2012. This storm assistance revenue adjustment increased the cost-of-service calculation by approximately $1.0 million.

Staff Expert/Witness: John P. Cassidy

3. Coal Refinement Projects

The Cross-State Air Pollution Rule ("CSAPR"), which provides for reductions in emissions of pollutants, such as SO_2, and which was scheduled to take effect on January 1, 2012, has been stayed by the United States Court of Appeals pending judicial review. Should it take effect in the future, Ameren Missouri will need to take steps to either reduce the amount of emissions it produces or will need to obtain emission allowances for its level of emissions. To this end, Ameren Missouri has begun implementation of measures at its Rush Island and Sioux Energy Centers to treat its coal to reduce emissions.

a. Rush Island Energy Center

On December 14, 2011, Ameren Missouri was granted approval by the Commission in Case No. EO-2012-0146 to undertake a coal-refinement process at its Rush Island Energy Center. This process involves Ameren Missouri selling its coal to a third party, Buffington Partners, LLC ("BP"), who applies the refinement process and then in turn sells the refined coal back to Ameren Missouri. The coal-refinement process is designed to reduce emissions of NO_X and SO_2, which are generated from burning coal.

In December of 2011, Ameren Missouri began receiving lease revenues and interest income per its contract with BP. In addition, Ameren Missouri purchased a test run of the treated coal in order to produce fly ash for testing related to its use in concrete. This testing process is not yet completed and approved; therefore, as of April 2012; Ameren Missouri was not utilizing the coal-refinement process at its Rush Island Energy Center. However, it continues to receive lease payments and interest income per its contract agreement with BP. Therefore, Staff has included an annualized ongoing amount in its revenue calculation related to these items. Staff will re-examine this issue as part of its true-up analysis to determine if any changes regarding Ameren Missouri's expenses or revenues have taken place in conjunction with the refinement process at the Rush Island Energy Center.

b. Sioux Energy Center

In addition to Ameren Missouri's coal refinement at the Rush Island Energy Center, a similar project is in the beginning stages at the Sioux Energy Center. Due to the variances in the type of boilers at the Sioux facility, Ameren Missouri has contracted with GS RC Sioux, LLC ("LLC"), to provide refinement of the coal for its Sioux Energy Center based on different technology than that of the Rush Island Energy Center refinement process. Currently, Ameren Missouri has not yet submitted its application to the Commission for approval of the coal-refinement process at the Sioux Energy Center. Staff will reexamine this issue through July 31, 2012, as part of its true-up analysis, to determine if any changes have occurred regarding the refinement process at the Sioux Energy Center.

Staff Expert/Witness: Lisa K. Hanneken

4. Off-System Sales ("OSS")

a. Energy

Off-system sales are those sales of electricity made after Ameren Missouri has met all obligations to serve its native load customers (retail and full-requirements wholesale customers). This excess energy is then available to sell to other utilities. By engaging in off-system sales, Ameren Missouri generates profits or net margin, which represents total proceeds from the sales less associated generation or purchased power cost. It is appropriate to include off-system sales in the cost of service because Ameren Missouri's customers are already paying for all the costs associated with the generating facilities that produce electricity, as well as the purchased power that is necessary to meet native load. To the extent that off-system sales are made using these facilities, as well as by purchasing power, the customers should benefit from these sales. Off-system sales represent an efficient utilization of the electric facilities and systems that have been put in place to meet the electricity needs of Ameren Missouri's customers.

Off-system sales revenues were calculated in the production cost model by using the hourly market energy prices that were determined by Staff witness Erin L. Maloney. Staff's adjustment for off-system sales revenue represents the inclusion of additional revenue in order to annualize the off-system sales revenues that were calculated by Staff witness David W. Elliott using the RealTime® production cost model. This was recorded in the Staff's revenue requirement cost-of-service calculation by subtracting Ameren Missouri's test year ending September 30, 2011, per book off-system sales revenues from Staff's annualized level of off-system sales revenues as determined by the production cost model using Staff's hourly market energy prices.

As part of the Second Nonunanimous Stipulation and Agreement in Case No. ER-2010-0036, the Commission approved the reclassification of the sales-for-resale contracts with AEP and Wabash to off-system sales, as well as the reclassification of contracts with Missouri municipalities. Since Staff's model develops the amount of off-system sales and includes these contracts, Staff has made an adjustment to decrease the off-system revenues resulting from reclassifying these contracts. The Staff will continue to examine off-system sales revenues through July 31, 2012, which represents the true-up cut-off date as approved by the Commission as part of this rate proceeding.

Staff Expert/Witness: Lisa K. Hanneken

b. Capacity Sales

When unnecessary to serve its own load, Ameren Missouri is able to sell capacity to other utility companies. Staff also included an adjusted level of capacity sales as part of the cost-of-service calculation in order to reflect actual capacity sales during the twelve months ending April 30, 2012. Staff will re-examine the level of capacity sales as part of its true-up audit.

Staff Expert/Witness: Lisa K. Hanneken

c. Bilateral Sales and Financial Swaps

Staff made two additional revenue adjustments outside the production cost model to account for bilateral energy sales margins and financial swaps. The bilateral-energy-sales-margin adjustment is for revenues received by the Company for sales made by the Company to counterparties other than Midwest Independent Transmission System Operator ("MISO") to increase the revenue of underlying generation assets. Staff calculated this adjustment to be approximately $2.6 million based on data as provided per 4 CSR 240-3.190, Reporting Requirements for Electric Utilities and Rural Electric Cooperatives, and information provided per Staff Data Request No. 0397. The financial-swap-revenue adjustment is for financial energy transactions made by the Company to lock-in sales prices of underlying generation assets. Staff made a revenue adjustment of approximately $866,000 to account for these financial swaps based on data provided as per 4 CSR 240-3.190. Staff will continue to review these adjustments through the true-up period ending July 31, 2012, and will update the adjustments as necessary.

Staff Expert/Witness: Erin L. Maloney

5. Midwest Independent Transmission System Operator (MISO)

a. Day 2 Revenues and Expenses

Ameren Missouri participates in the MISO activities (often referred to as Day 1 activities prior to April 1, 2005, or "pre-Market") and the MISO day-ahead and real-time energy markets (often called MISO Day 2 or "Midwest Markets"). As part of its participation in the MISO Day 2 markets, during the test year the Company received payments from the MISO related to the Revenue Sufficiency Guarantee ("RSG") provision of MISO's tariff. These payments are designed to ensure that companies participating in the MISO Day 2 markets recover start-up[69] and no-load[70] costs in the event that the market price received does not cover these costs. These two components are the fixed costs of running a generation unit. The market price will always cover the Company's offer price for energy, but in some instances it may not cover the fixed costs of running the unit that are also submitted as a part of Ameren Missouri's offer price. When the Company's total offer prices are not covered by the market prices, Ameren Missouri receives RSG payments.

For Ameren Missouri, the RSG payments received from MISO during the test year totaled $12,131,926. The RSG payments are funded by billings to market participants based on their loads. Thus, Ameren Missouri is billed for RSG payments as a Day 2 market expense and these expenses were included in Staff's revenue requirement cost of service. Both Ameren Missouri's and Staff's models will not dispatch a unit to make sales unless the market price is sufficient to cover start-up and no-load costs. However, these models are based on costs, not offer prices, which may be higher than costs. When the offer price is higher than cost, Ameren Missouri does not require revenue from off-system sales to cover the difference between revenues received from the market prices and revenues required to cover the offer prices. On the other hand, if the RSG payments only make-whole payments that cover only the difference between the cost of running the units and the market price received, then the Staff's production cost model results would be consistent with excluding all RSG payments received from MISO by Ameren Missouri. If the RSG payments only covered cost, then there would be no profit received by Ameren Missouri from actually running a generation unit at times when the production cost model would not dispatch the unit. However, RSG payments cover offer prices made by market participants and those offer prices can include adders to costs. To the extent that Ameren Missouri made offers that are above its costs, the RSG payments more than cover costs, they also include a contribution to profit that is not included in Staff's modeling of net production costs. It is Staff's understanding that offer prices of generation from the Company's gas-fired combustion turbine generators include an adder to cost. Therefore, a portion of the RSG payments related to start-up and no-load costs should be eliminated from test year revenue

[69] Start-up costs are the costs associated with bringing a generation unit on-line.

[70] No-load costs are the costs incurred by a generation unit, after start-up, but prior to providing any output.

because they relate to recovery of the Company's costs, but the portion related to the difference between the costs and offer prices should not be removed as this represents profit that the Company receives from its participation in the MISO Day 2 market. It is important not to exclude this profit, as the Company must make RSG payments to other companies through MISO to not only cover their start-up and no-load costs, but to also cover their offers that include a margin for profits.

Currently, Staff is utilizing a 13% margin rate based on the calculations of margins embedded in the RSG make-whole payments performed during true-up phase in the last case, Case No. ER-2011-0028. In addition, Staff has annualized both test year revenue and expense levels for Day 2 items based on data provided for the 12-months ending April 2012. Staff will re-examine this issue, through July 31, 2012, during its true-up audit.

Staff Expert/Witness: Lisa K. Hanneken

b. Amortization of RSG Resettlement Expenses

Consistent with the Commission's Report and Orders in Case Nos. ER-2008-0318, ER-2010-0036 and ER-2011-0028, relating to MISO resettlement charges, Staff has included an amortization of previously-incurred RSG resettlement expense. However, the amount of Staff's amortization, $272,686 reflects one-half of the $545,372 remaining balance (unamortized portion) of the RSG resettlement cost as of January 2013, the effective date of rates in the current case spread over a 2-year period.

Staff Expert/Witness: Lisa K. Hanneken

c. Transmission Revenue and Expense

Staff is recommending adjustments to the test year level of MISO transmission revenues. These adjustments annualize to a current ongoing level of revenues. The annualization includes changes in revenue distribution and the collection of revenues through Schedule 26, which began June 1, 2011. In addition, the annualization includes Schedule 37 and 38, which began in January 2012 to define charges previously included in Schedule 26. Thus, the test year of 12-months ending September 30, 2011, per books do not reflect a full year of the additional revenues. Staff has annualized the test year's revenue by annualizing data provided for the 12-months ending April 2012, which removes non-recurring expenses and includes a full year of all revenue. In addition to these considerations, Staff has included in its annualization of Schedule 9 revenues MISO's newly effective pricing rates.

Similarly, Staff has annualized the test year expense level related to transmission expense items based on data provided for the 12-months ending April 2012. Staff will continue to review all of Ameren Missouri's transmission transactions as additional information becomes available through the true-up period.

Staff Expert/Witness: Lisa K. Hanneken

d. Ancillary Services Market Revenue and Expense

Ameren Missouri also participates in MISO's "Day-3" market, which has real time and day-ahead energy markets and an Ancillary Services Market ("ASM"). Ameren Missouri entered the ASM to acquire ancillary services for its retail load and to be able to sell the services from its generation. The MISO "Day-3" market was started in January 2009. The Staff has annualized test year ASM revenue and expense levels by using data for the 12-months ending April 2012. Staff will continue to review Ameren Missouri's ASM transactions as additional information becomes available through the true-up period.

Staff Expert/Witness: Lisa K. Hanneken

C. Fuel and Purchased Power Expense

Staff's annualization and normalization of the Company's fuel and purchased-power expense, allows for sufficient funds to serve the Company's native load and enable the Company to make off-system sales. Staff's fuel expense adjustment includes all increases in commodity coal and coal transportation costs based upon contracts in effect through July 31, 2012. Staff's fuel expense adjustment for nuclear fuel is based upon a 6-month average of prices that occurred during the period covering December 1, 2011, through May 31, 2012, as provided by the Company in its response to Staff Data Request Nos. 0073 and 0097. Staff's fuel expense annualization also incorporates a one-year average price of natural gas through January 31, 2012, and a three-year average of fuel oil commodity prices through January 31, 2012, as sponsored by Staff witness Erin L. Maloney. Staff also included in the fuel cost calculation the fixed demand cost of natural gas and a reduction resulting from fly ash activities.

Staff's annualized purchased power expense level reflects a three-year average of day-ahead market energy prices through January 31, 2012, as sponsored by Staff witness Erin L. Maloney.

Staff Expert/Witness: Lisa K. Hanneken

<u>1. Fuel and Purchased-Power Prices</u>

Staff reviewed all of Ameren Missouri's coal commodity and coal transportation contracts. Staff reviewed nuclear, natural gas, and fuel oil prices as reflected in Company fuel reports, workpapers, and responses to Staff data requests. Staff also reviewed three years of market energy prices. Staff's fuel expense adjustments reflect all known increases in commodity coal and coal transportation costs that will be in effect as of July 31, 2012. The Staff's fuel expense adjustments also reflect actual known and measurable nuclear fuel prices through May 31, 2012. Staff will continue to examine all of these fuel cost components through the true-up period ending July 31, 2012, in order to address any significant changes. Staff's purchased power expense adjustments reflect a three-year average of market energy prices through January 31, 2012.

Staff Expert/Witness: Lisa K. Hanneken

a. Coal Prices

i. Accounting Coal Prices

Staff's accounting coal prices are used to compute the fuel costs based on the coal unit generation that is determined by the production cost model. Staff performed a review of all of Ameren Missouri's current accounting coal commodity and coal transportation contracts. Staff's accounting coal prices reflect Ameren Missouri's mine-specific coal commodity and coal rail and barge transportation contracts that will be in effect as of July 31, 2012. Staff also included an ongoing level of cost associated with hedging for the cost of rail transportation fuel surcharges that are tied to the prices of on-highway diesel as reported by the Energy Information Administration, an independent statistical agency of the U.S. Department of Energy. Lastly, Staff included all railcar-related costs as a component of the accounting coal price used in the production cost model.

Staff Expert/Witness: Lisa K. Hanneken

ii. Fly Ash

Staff reduced the amount of expenses in its revenue requirement cost of service to account for the amount received by Ameren Missouri through the sale of its fly ash for concrete production. This amount must be included as a reduction to Staff's production cost model results which are based on the amount of fly ash produced which varies in relationship to the amount of coal burned.

Staff Expert/Witness: Lisa K. Hanneken

b. Nuclear Fuel Prices

Staff used a 6-month average price based upon actual nuclear fuel prices for the period ending May 2012 provided by Company in its response to Staff Data Request Nos. 0073 and 0097. Staff also included costs associated with the disposal of spent nuclear fuel. Staff will re-examine the nuclear fuel prices as part of its true-up audit and make any adjustments deemed appropriate.

Staff Expert/Witness: Lisa K. Hanneken

c. Natural Gas Cost

i. Variable Natural Gas Cost

Staff analyzed natural gas prices over a three-year period using data provided in response to Staff Data Request No. 0073 and data submitted by Ameren Missouri as per the 4 CSR 240-3.190 Reporting Requirements for Electric Utilities and Rural Electric Cooperatives rule. Staff calculated the average system price per month using the three years of monthly data ending January 31, 2012. After reviewing the three-year trend in gas prices, Staff concluded that the twelve months ending January 31, 2012, was the appropriate period to use to reflect the current downward trend in gas prices. These twelve monthly gas prices that occurred in this update period were used as inputs to the production cost model. Staff will continue to review natural gas prices through the true-up period ending July 31, 2012, and will make adjustments as necessary.

Staff Expert/Witness: Erin L. Maloney

ii. Fixed Natural Gas Cost

Staff adjusted expenses to include the fixed demand cost of gas in its revenue requirement cost of service. This amount must be added to the Staff's production cost model results which are based on only the variable commodity cost of gas.

Staff Expert/Witness: Lisa K. Hanneken

d. Oil Prices

Fuel oil plays a very small part in the total fuel costs of Ameren Missouri. It is mainly used for start-up and auxiliary purposes at the generating stations. Staff calculated its recommended fuel oil price from the monthly average fuel oil prices Ameren Missouri provided in response to Staff Data Request No. 0073 for the three-year period ending January 31, 2012. A single fuel oil price was used in the production cost model. Staff will continue to review fuel oil prices through the true-up period ending July 31, 2012, and will make adjustments as necessary.

Staff Expert/Witness: Erin L. Maloney

e. Purchased Power

Staff analyzed hourly power prices for the three-year period ending January 31, 2012, using day-ahead locational marginal prices ("LMP") downloaded from the MISO website (https://www.midwestiso.org/Pages/Home.aspx). Staff developed hourly average market prices by weighting the MISO prices by the actual day-ahead generation sales Ameren Missouri made during each hour in this period. Staff then calculated weighted average monthly prices for each month in the three-year period ending January 31, 2012, and developed factors for each month based on the ratio of a three-year average to the monthly averages for the twelve months ending January 31, 2012. The hourly average day-ahead prices that occurred in the twelve months ending January 31, 2012, were then adjusted by these monthly factors. The resulting 8,760 hourly prices were used as input to the production cost model. Staff will continue to review market energy prices and adjustments through the true-up period ending July 31, 2012, and will update the inputs as necessary.

Staff Expert/Witness: Erin L. Maloney

2. Refunded Entergy Charges

In Case No. ER-2008-0318, Ameren Missouri agreed to the following as reflected and approved by the Commission in its Report and Order:

> The company shall maintain such books and records as are necessary to allow the Staff to identify the amount of refunds, if any, the company may receive in the future arising from the dispute involving the 1999 purchased power service agreement with Entergy Arkansas described in the surrebuttal testimony of Staff witness John P. Cassidy. The company shall also maintain the books and records necessary to identify any costs associated with obtaining any such refunds such as legal expenses associated with efforts to obtain refunds. (page 56., Jan. 27, 2009).

Furthermore, item 30, found on page 10 of the *First Non-Unanimous Stipulation and Agreement* reached in Case No. ER-2010-0036, and approved by this Commission, states the following: "AmerenUE shall continue to adhere to the Commission's Report and Order from Case No. ER-2008-0318 regarding tracking potential refunds of Entergy Charges."

As part of a former purchased power agreement with Entergy that expired in August 2009, Ameren Missouri made payments for pass-through equalization charges that it has since disputed. Ameren Missouri filed an appeal with the Federal Energy Regulatory Commission ("FERC") in order to seek refunds for these payments. Payment for these disputed equalization charges were reflected in rates as part of Ameren Missouri, Case No. ER-2008-0318. In addition, all legal costs that Ameren Missouri incurred to address this matter were included in Ameren Missouri's rates as part of the last three rate case proceedings, Case Nos. ER-2008-0318, ER-2010-0036, and ER-2011-0028. As part of the current rate proceeding, the Staff has included as part of its overall cost of service calculation all legal costs to deal with this ongoing Entergy matter that was incurred by Ameren Missouri during the test year ending September 30, 2011. Because these costs have been included in the determination of rates for Ameren Missouri in previous rate proceedings and have been paid for by Ameren Missouri ratepayers, it is appropriate for those ratepayers to benefit from any future refunds that may occur in relation to these costs. In a supplementary response to Staff Data Request No. 0126.1 provided to Staff, Ameren Missouri indicates that on May 7, 2012, the FERC ordered Entergy to refund to Ameren Missouri all amounts that Entergy improperly collected from Ameren Missouri, with interest, within 30 days of the date of the FERC order. Ameren Missouri asserts that on June 6, 2012, it received a refund of $30.65 million from Entergy, per the FERC order.

Staff proposes that this $30.65 million refund amount should be amortized back to ratepayers over a 3-year period. Therefore, Staff proposes a $10.22 million reduction in the cost of service calculation to appropriately reflect this refund as part of the Commission's determination of rates in this rate case proceeding. Staff will continue to examine this area through the true-up period ending July 31, 2012, to determine if additional adjustments will be necessary to address the refund.

Staff Expert/Witness: Kofi Agyenim Boateng

3. Fuel and Purchased Power Cost Modeling

a. Variable Costs

Staff estimates the variable fuel and purchased power expense for Ameren Missouri for the update period, as defined in the Rate Revenue Section of Staff's Cost of Service Report, ending January 31, 2012, to be $565,800,757 including off-system sales, and $678,856,642 excluding off-system sales. For this rate case, the model was run with and without off-system sales to estimate the level of off-system sales.

The Staff used the RealTime® production cost model to perform an hour-by-hour chronological simulation of Ameren Missouri's generation, power purchases and off-system sales. The production cost model determines the annual variable cost of fuel and purchased power to economically match Ameren Missouri's hourly electric load within the operating constraints of its resources. These results are supplied to Auditing Staff who use this input to annualize fuel expense.

The model operates in a chronological fashion, matching each hour's energy demand before moving to the next hour. The model schedules generating units to dispatch in a least-cost manner based upon fuel cost and purchased power cost while taking into account generation unit operation constraints. The model closely simulates the way a utility should dispatch its generating units and purchased power to match the net system load in a least-cost manner.

Inputs provided by Staff are: fuel prices, spot market purchased power prices and availability, hourly load requirements at transmission, and unit planned and forced outages. For generating unit data, Staff relied on the company's direct testimony, responses to data requests, workpapers provided by Ameren Missouri witness Mark Peters, and data Ameren Missouri supplied in compliance with 4 CSR 240-3.190. The generating unit data includes the capacity of the unit, the unit heat rate curves, the primary and startup fuels, the ramp-up rate, the startup costs, and the fixed operating and maintenance expense. The energy price from Ameren Missouri's wind power contract with Horizon Pioneer Prairie was also an input to the model.

The Staff model was benchmarked by using Ameren Missouri's model inputs. The difference between Staff's model benchmark results and the Ameren Missouri model results, supported by Mark Peters' direct testimony, was 0.62%.

Ameren Missouri recently installed three combustion turbines with a nominal capacity of 4 megawatts (MW) each at the Maryland Heights Renewable Energy Center that use landfill gas as a source of fuel. These units are not included in the Staff fuel model for this filing, but they are expected to be included in Staff's true-up filing in this case once Staff determines that the units meet its declared "fully operational and used for service" requirements.

Staff Expert/Witness: David W. Elliott

b. Planned and Forced Outages

Planned and forced outages are infrequent in occurrence, and variable in duration. In order to capture this variability, the Ameren Missouri generating unit outages were normalized by averaging six years (2006 through 2011) of actual values taken from data Ameren Missouri supplied to comply with 4 CSR 240-3.190.

Staff Expert/Witness: David W. Elliott

c. Capacity Contract Prices and Energy

Capacity contracts are contracts for a specific amount of capacity (megawatts or MW) and a maximum amount of hourly energy (megawatthours or MWh). Prices for the energy from these capacity contracts are based on either a fixed contract price or the generating costs of providing the energy. The capacity contract relevant to this case is the Horizon Pioneer Prairie wind contract.

Actual hourly contract transaction prices were obtained from the Horizon Pioneer Prairie contract provided by Ameren Missouri. The hourly energy was developed by averaging the actual hourly energy in 2010 and 2011 from data Ameren Missouri supplied to comply with 4 CSR 240-3.190 Reporting Requirements for Electric Utilities and Rural Cooperatives.

Staff Expert/Witness: David W. Elliott

d. Normalization of Hourly Load Requirements at Transmission

Due to the presence of air conditioning and the presence of significant electric space heating in Ameren Missouri's service territory, the magnitude and shape of Ameren Missouri's load requirements[71] is directly related to daily temperatures. Actual and normal daily temperatures provided by Staff witness Seoung Joun Won were used in the analysis of the effect of fluctuations in daily temperatures on the load requirements. The actual daily temperatures for the modified year period differed from normal daily temperatures. Therefore, to reflect normal weather, daily peak and average load requirements are each adjusted independently but using the same methodology.

Daily average load is the daily energy divided by twenty-four hours, and the daily peak is the maximum hourly load for the day. Separate regression models are used to estimate both a base component, which is allowed to fluctuate across time, and a weather sensitive component, which measures the response to daily fluctuations in weather for daily average loads and peak loads. Independent regression models are necessary because daily average loads and peak loads respond differently to weather. The model's regression parameters, along with the difference between normal and actual cooling and heating measures, are used to calculate weather adjustments to both the average and peak loads for each day. The adjustments for each day are added respectively to the actual average and to the peak loads of each day. The starting point for allocating the weather-normalized daily peak and average loads to the hours is the actual hourly loads for the year being normalized. A unitized load curve is calculated for each day as a function of the actual peak and average loads for that day. The corresponding weather-normalized daily peak and average loads, along with the unitized load curves, are used to calculate weather-normalized hourly loads for each hour of the year.

This process includes many checks and balances, which are included in the spreadsheets that are used by Staff. In addition, the analyst is required to examine the data at several points in

[71] The hourly electric supply necessary to meet the hourly energy demands of both the Company's customers and the Company's own internal needs should be modeled at the transmission voltage level since Ameren Missouri bids its loads into the Midwest ISO at the transmission voltage level.

the process. For more information, the process is described in greater detail in the document "Weather Normalization of Electric Loads, Part A: Hourly Net System Loads."[72]

After weather-normalizing and annualizing usage for Ameren Missouri's retail customer classes is completed, wholesale usage that has been weather normalized using the same methodology that is used to weather normalize hourly load requirements is added. An adjustment was made to compensate the hourly load requirements at transmission for an annualization adjustment to account for the energy efficiency savings that have taken place due to demand-side programs as well as two additional wholesale customers.

A factor was applied to each hour of the weather-normalized loads to produce an annual sum of the hourly load requirements at transmission that equals the usage, plus losses, and consistent with normalized revenues. Once completed, the hourly normalized load requirements were given to Staff witness David W. Elliott to be used in developing fuel and purchased power expense.

Staff Expert/Witness: Shawn E. Lange

i. Losses

In the MISO market, Ameren Missouri "bids" its load into the associated market at the transmission level, and not at the generator level. Hence, transmission losses are not accounted for when Ameren Missouri bids its loads into the MISO market. In order to model fuel and purchased power costs appropriately, hourly loads utilized in the fuel models that are used to estimate fuel and purchased power expense need to be determined at the transmission level rather than at the generation level, identified as the Load Requirement at Transmission ("LRT"). The LRT needs to include the customers' energy requirements and associated primary and secondary losses ("System Energy Losses").

The basis for calculating energy losses is that LRT equals the sum of Total Sales and System Energy Losses. This can be expressed mathematically as:

LRT = Total Sales + System Energy Losses

[72] "Weather Normalization of Electric Loads, Part A: Hourly Net System Loads" (November 28, 1990), written by Dr. Michael Proctor, Manager of the Economic Analysis Department, Missouri Public Service Commission.

LRT and Total Sales are known, metered values. System Energy Losses (at the transmission level) are not metered values and may be calculated as follows:

System Energy Losses = LRT – Total Sales

The System Energy Loss percentage is the ratio of System Energy Losses at the transmission level to LRT multiplied by 100:

System Energy Loss Percentage = (System Energy Losses ÷ LRT) X 100

LRT is also equal to the sum of Ameren Missouri's net generation and net interchange, considered at the transmission level. Net interchange is the difference between off-system purchases and sales. Net generation is the total energy output of each generating plant minus the energy consumed internally to enable the production of electricity at each plant. The output of each generating plant is monitored continuously, as is the net of off-system purchases and sales.

Staff calculated a loss percentage of 4.49% of LRT for the twelve-month period ending January 2012. Staff Witness Shawn E. Lange used Staff's calculated loss percentage in the development of hourly loads for Staff's fuel model.

Staff Expert/Witness: Alan J. Bax

4. Other Fuel Related Items

a. Westinghouse Credits

During the test year ending September 30, 2011, the Company received credits from Westinghouse as part of a prior settlement of a uranium supply contract dispute. Staff adjusted the cost of service calculation to remove all credits received during the test year related to the Westinghouse credits as the final credit was received in October 2011 as agreed to in the settlement. There are currently no credits being received.

Staff Expert/Witness: Lisa K. Hanneken

b. Fuel Additive - Limestone for Sioux Scrubbers

As a result of the SO_2 scrubbers installed at the Sioux plant, a supply of limestone must be provided to the plant in order to operate the scrubbers. The limestone provided must meet certain standards of quality and be put through a pulverization process in order to be utilized in the scrubbers. Therefore, the Company has contracted with three vendors to obtain a supply of limestone with the proper specifications in order to operate the scrubbers. The Company contracted with a quarry which supplies the correct grade of limestone, a processor which operates the processing facility onsite at the quarry, and a trucking company which has the required equipment to transport the processed limestone to the Sioux facility. There are many variables within each contract including surcharges for different items. Since the last case, in which the limestone was initially treated as an expense item, additional historical data is available, as well as additional data regarding the SO_2 removal rate. Currently, the existing removal rate varies based on numerous variables, but is generally at 88% based on current conditions and regulations. However, in the future, the Company may need to increase the removal rate should the CSAPR go into effect. Currently CSAPR, which provides for reductions in emissions of pollutants, such as SO_2, and was scheduled to take effect January 1, 2012, has been stayed by the United States Court of Appeals pending judicial review.

Staff made adjustments to include only the estimated amount of limestone which would be required to achieve an average of 88% removal rate at the current terms of the contracts to provide the limestone. As a result, Staff is recommending an ongoing level for limestone expense of $3,497,847.

Staff will reexamine this issue as part of its true-up analysis to determine if any changes have occurred.

Staff Expert/Witness: Lisa K. Hanneken

D. Payroll and Benefits

1. Payroll

Staff's annualized payroll was based upon the test year ending September 30, 2011, and was calculated by adjusting actual Missouri electric-related payroll expense for the following: a) all known increases in wage rates that have occurred since the true-up cutoff date in the Company's last rate case b) a reduction in the level of executive and contract employees, which represents a lower number of employees at the end of the test year compared to the average number of employees during the test year, and c) the reduction of payroll expense that resulted from a reduction of employees due to a voluntary separation election plan ("VS-11") that was implemented by the Company during the last quarter of 2011.

After allocating a portion of payroll to construction associated with capital projects, Staff's adjustment for payroll expense was distributed by account, based on the actual payroll distribution experienced by the Company during the test year ending September 30, 2011. Staff's Accounting Schedule 10, Adjustments to Income Statement, reflects approximately 81 adjustments in order to restate test year payroll expense to an annualized level. Staff has also reflected in Accounting Schedule 10, five additional adjustments, consistent with Company's treatment, in order to normalize overtime associated with periodic Callaway nuclear facility refuelings. As part of its true-up audit, Staff will re-examine payroll and employee counts as well as potential additional labor costs associated with cyber security and the proposed methane gas plant in order to determine whether any further adjustments to the cost of service are necessary.

Staff Expert/Witness: Lisa M. Ferguson

2. Payroll Taxes

Staff's annualization for payroll taxes reflects an overall reduction from test year levels of Federal Insurance Contributions Act ("FICA") Old Age Survivors and Disability Insurance ("OASDI"), FICA Medicare, Federal Unemployment Tax Act ("FUTA"), and State Unemployment Tax Act ("SUTA") payroll taxes. This reduction in payroll tax is driven by the reduced levels of employees associated with the VS-11 program and other employee reductions that have occurred. As part of its true-up audit, Staff will re-examine payroll taxes consistent with its analysis of payroll expense in order to determine whether any further adjustments to the cost of service for payroll taxes are necessary.

Staff Expert/Witness: Lisa M. Ferguson

3. Voluntary Separation Election (VS-11)

On October 21, 2011, Ameren Corporation offered a VS-11 to ** ________________

NP

[redacted] ** This program occurred subsequent to the test year; therefore, Staff has normalized and annualized payroll expense, employee benefits, and payroll taxes to include the effects of the VS-11.

Staff Expert/Witness: Lisa M. Ferguson

4. Severance Costs – ER-2012-0166

Subsequent to the test year ending September 30, 2011, Ameren Missouri recorded approximately a $25.8 million accrual on its books to reflect its estimate of the severance costs that would be incurred as a result of the VS-11 program. The Company is seeking to recover this approximately $25.8 million of accrued severance costs through a three-year amortization. However, Staff has calculated that by January 2, 2013, when rates will become effective in this rate proceeding, the Company will already have achieved more than $25.8 million in cost savings associated with the VS-11 program. These cost savings result from reduced levels of payroll, benefits and payroll taxes that are already built into rates but are no longer being incurred by the Company. Staff did not include any severance costs as the Company will achieve more in cost savings than the severance costs associated with offering the program. Staff contends that these severance costs will already be recovered by the Company by the effective date of rates in this proceeding and that no adjustment to address severance costs as part of the cost of service calculation is required.

Staff Expert/Witness: Lisa M. Ferguson

5. Amortization of ER-2010-0036 Severance Costs

As part of the First Non-unanimous Stipulation and Agreement reached and approved by the Commission in Ameren Missouri's Case No. ER-2010-0036, a three-year amortization was established for the severance cost associated with the employee reduction packages that were implemented by the Company during September 2009, the Voluntary Separation Election ("VSE") and the Involuntary Separation Program ("ISP"). This amortization was allowed to continue unchanged based upon the First Non-unanimous Stipulation and Agreement – Miscellaneous Revenue Requirement Items – that was approved by the Commission as part of Ameren Missouri's last rate case, Case No. ER-2011-0028. The amortization of these costs began on the June 21, 2010, the effective date of rates as established by the Commission in Case No. ER-2010-0036 and are scheduled to end on June 20, 2013. Since this amortization is scheduled to expire during June 2013, Staff proposes that the January 2, 2013, unamortized balance of the costs associated with the amortization for the VSE/ISP be reset in order to prevent a significant over-recovery of these costs by Ameren Missouri. At January 2, 2013, the unamortized balance related to this amortization is approximately $587,500. Staff proposes a two-year amortization period or $293,750 annually during a period covering January 3, 2013, through January 2, 2015, in order to better synchronize the end of the amortization with future rate case recovery.

Staff Expert/Witness: Lisa M. Ferguson

6. Accounting Standards Codification ("ASC") 715-30 (formerly FAS 87) Pension Costs

a. Accounting Standards Codification 715-30 Pension Tracker

Staff, Ameren Missouri, and other parties, entered into a Stipulation and Agreement ("the 2007 Agreement") in Case No. ER-2007-0002 that addresses the ongoing ratemaking treatment for annual qualified pension cost under Financial Accounting Standards Board's ("FASB") Accounting Standards Codification ("ASC") Subtopic 715-30, formerly Financial Accounting Standard No. 87 ("FAS 87").

The 2007 Agreement requires Ameren Missouri to fund its annual pension expense and track the difference between its annual pension expense and the level included in rates. The difference between the annual pension cost and the amount included in rates, as accumulated in the tracker, has been included in rate base and amortized over a period of five years as an addition or reduction to pension expense since the 2007 Agreement. Since some of Ameren Missouri's management and administrative functions are provided by Ameren Services employees, all components of Ameren Missouri's pension expense and rate base amounts include costs that are allocated from Ameren Services.

Ameren Missouri has a non-qualified pension plan called the Ameren Supplemental Retirement Plan. It was established to ensure the payment of a competitive level of retirement income in order to attract, retain and motivate selected executives. Information provided in response to Staff Data Request No. 0137 in Case No. GR-2010-0363, in addition to discussions with Company in that case, alerted Staff that Ameren Missouri was not funding the non-qualified portion of its pension expense. Ameren Missouri states that the non-qualified plan is unfunded and that the plan benefit payments are made on a monthly disbursement basis. This information, in addition to a response to Staff Data Request No. 0354 provided by the Company in Case No. ER-2011-0028, led Staff to propose an adjustment to remove $3,099,975 from Ameren Missouri's pension tracker for non-qualified pension expense accruals in excess of amounts paid for the period June 2007 through December 2010. This calculation was reflected on Appendix 3, Schedule KAB-3, attached to the Cost-of-Service Report in Case No. ER-2011-0028. It is Staff's position that the pension tracker should only include amounts associated with qualified pension expense that is "funded" by Ameren Missouri.

Consistent with the 2007 Agreement and similar stipulations agreed to made in subsequent Ameren Missouri rate cases, Staff is proposing to reflect in rate base pension tracker amounts as follows: (1) rate base will be reduced by ($3,669,299), which represents an estimated unamortized regulatory liability at the true-up date of July 31, 2012, for the pension tracker established in Case No. ER-2008-0318; (2) rate base will be increased by $2,760,358, which represents an estimated unamortized regulatory asset at the true-up date of July 31, 2012, for the pension tracker established in Case No. ER-2010-0036; and (3) rate base will be increased by $5,754,100, which represents an estimated unamortized regulatory asset at the true-up date of July 31, 2012, for the pension tracker established in Case No. ER-2011-0028. In this proceeding, Staff recommends increasing rate base by $6,665,875 for an estimated regulatory asset relating to the period March 1, 2011, through July 31, 2012, for the pension tracker authorized in Case No. ER-2011-0028 resulting from the under-collection in rates of Subtopic 715-30 pension expense as compared to the actual expense and funding incurred since March 2011.

For purposes of calculating its rate base and amortization expense values, Staff is proposing to combine all prior trackers established in Case Nos. ER-2008-0318, ER-2010-0036 and ER-2011-0028 and amortize a total combined balance of $11,511,034 over a five-year period. In Ameren Missouri's next rate increase request case, Staff will consider all over/(under) collections in pension expense beginning August 1, 2012, through the end of the test year or true-up period date established in Ameren Missouri's next general rate proceeding.

Staff Expert/Witness: Roberta A. Grissum

b. Annualization

Staff adjusted qualified pension expense to reflect the Plan Year 2012 estimated expense for FASB ASC Subtopic 715-30 provided by Towers Watson[73] for Ameren Missouri's qualified pension plan. Staff used this amount to determine the adjustment necessary to ensure the amount collected in rates is sufficient to recover the estimated pension expense provided by Towers Watson. In this proceeding, Staff is proposing to decrease test year expense by an amount of $2,764,934. This reduction will appear in Staff's income statement. Staff will examine the 2012 Plan Year Actuarial Report to be provided by Company in July 2012 as part of the true-up audit and will make adjustments to the cost of service calculation in order to reflect Ameren Missouri's final 2012 level of pension expense and required actual funding levels in its case.

It should be noted that Staff has not removed any of the pensions and OPEBs cost savings related to the VS-11 offered by Ameren Missouri on October 21, 2011, from the cost-of-service calculation at this time because the Company has asserted that these savings will be reflected in the Plan Year 2012 Actuarial Report to be provided to Staff in July 2012 as part of the true-up audit. Staff submitted Data Request No. 0438 in order to obtain a calculation of the cost savings that will be reflected as part of the Plan Year 2012 Actuarial Report. Staff will evaluate Ameren Missouri's response to this data request once it is received and also continue to review VS-11 Pensions and OPEBs cost savings as part of the true-up audit and propose adjustments to the cost-of-service calculation as deemed appropriate.

Staff also adjusted nonqualified pension expense to reflect the Plan Year 2012 expense provided by Towers Watson for Ameren Missouri's nonqualified pension plan. As stated previously, nonqualified pension costs will not be included in the pension tracker. Staff, however, recommends reducing nonqualified pension expense in its income statement by $198,091 to reflect the Plan Year 2012 expense provided by Towers Watson in

[73] Towers Watson is the actuary hired by Ameren Missouri to evaluate is Pensions and OPEBs plans.

Ameren Missouri's September 2011 Actuarial Report. In addition, Staff recommends an adjustment of $3,571,998 to increase pension amortization expense from the negative expense level of ($1,269,791) recorded during the test year ending September 30, 2011, to an estimated positive expense level at the true-up date of July 31, 2012, of $2,302,207. This adjustment represents the annualized amortization related to the current pension tracker as well as the annualized amortizations related to previous trackers established in Case Nos. ER-2008-0318, ER-2010-0036 and ER-2011-0028.

Staff Expert/Witness: Roberta A. Grissum

7. Accounting Standards Codification ("ASC") 715-60 (formerly FAS 106) Other Post Retirement Benefit Costs (OPEBs)

a. Accounting Standards Codification 715-60 OPEBs Tracker

The 2007 Agreement also addresses the ratemaking treatment for annual OPEBs cost under the FASB's ASC Subtopic 715-60, formerly Financial Accounting Standard No. 106 ("FAS 106"). As with pension expense, the 2007 Agreement requires Ameren Missouri to fund the annual OPEB expense and establish a tracker. The difference between the annual OPEBs' cost and the amount included in rates, as accumulated in the tracker, has been included in rate base and amortized over a period of five years as an addition or reduction to OPEBs expense.

Consistent with the 2007 Agreement and similar stipulations agreed to in subsequent Ameren Missouri rate cases, Staff is proposing to adjust the rate base trackers as follows: (1) rate base will be reduced by $6,404,972, which represents an estimated unamortized regulatory liability at the true-up ending date of July 31, 2012, for the OPEBs tracker established in Case No. ER-2008-0318; (2) rate base will be reduced by $11,258,563, which represents an estimated unamortized regulatory liability at the true-up ending date of July 31, 2012, for the OPEBs tracker established in Case No. ER-2010-0036; and (3) rate base will be reduced by $14,425,336, which represents an estimated unamortized regulatory liability at the true-up ending date of July 31, 2012, for the OPEBs tracker established in Case No. ER-2011-0028. In this proceeding, Staff is recommends decreasing rate base by $10,944,694 for an estimated regulatory liability recorded during the period March 1, 2011, through July 31, 2012, for the OPEBs tracker established in Case No. ER-2011-0028 which resulted in an over-collection in rates of OPEBs expense as compared to the actual expense and funding incurred since March 2011.

In the same manner as for pension tracker amounts, for calculation of OPEBs rate base and amortization expense purposes Staff recommends combining all prior OPEBs trackers established in Case Nos. ER-2008-0318, ER-2010-0036 and ER-2011-0028 and amortize a total combined balance of $43,033,566 over a five-year period. In Ameren Missouri's next rate increase request proceeding, Staff will consider all over/(under) collections of OPEBs expense beginning August 1, 2012, through the end of the test year and the end of any true-up period established in Ameren Missouri's next general rate proceeding.

Staff Expert/Witness: Roberta A. Grissum

b. Annualization

Staff adjusted OPEBs expense to reflect the Plan Year 2012 estimated expense for FASB ASC Subtopic 715-60 provided by Towers Watson for Ameren Missouri's post-retirement benefit plan. Staff used this estimated amount to determine the adjustment necessary to ensure the amount collected in rates is sufficient to recover the estimated OPEBs expense provided by Towers Watson. In this proceeding, Staff recommends increasing the amount collected in rates by an amount of $78,455. This increase will appear in Staff's income statement. The Staff will examine the 2012 Plan Year Actuarial Report to be provided by Company in July 2012 as part of the true-up audit and will make adjustments to the cost of service calculation in order to reflect Ameren Missouri's final 2012 level of OPEBs expense and required actual funding levels in its case.

In addition, Staff recommends an adjustment of $665,228 to decrease OPEBs tracker amortization expense from the negative expense level of $7,941,485 recorded during the test year ending September 30, 2011, to an estimated negative expense level at the true-up ending date of July 31, 2012, of $8,606,713. This adjustment represents the annualized amortization related to the current OPEBs tracker as well as all amortizations related to previous trackers established in Case Nos. ER-2008-0318, ER-2010-0036 and ER-2011-0028.

Staff Expert/Witness: Roberta A. Grissum

8. Other Employee Benefits

The Company currently offers employees medical, dental, vision, life insurance, long-term disability, and 401k benefits. Staff has reflected in the cost of service the actual

12-months ending September 30, 2011, level of benefits adjusted to remove benefit costs associated with employees that are no longer with the Company due to the VS-11 and other reductions in employee levels. Staff will continue to analyze actual benefit cost information, as well as employee counts as the information becomes available through July 31, 2012. As a result of this continuing analysis, Staff may propose further adjustment to employee benefits as part of the true-up audit.

Staff Expert/Witness: Lisa M. Ferguson

9. Short-Term Incentive Compensation

The Company has three distinct incentive compensation plans that are offered to employees: short-term compensation, long-term compensation, and an exceptional performance bonus program. Some of Ameren Missouri's incentive compensation costs are allocated from Ameren Services Company ("AMS"), as AMS provides various management and administrative functions to Ameren Missouri.

The short-term incentive compensation plan is broken out into five categories, as follows:

- Executive Incentive Plan - Officers level,
- Executive Incentive Plan - Managers and Directors level
- Ameren Manager Incentive Plan
- Ameren Marketing, Trading & Commodities, and
- Ameren Incentive Plan

The Executive Incentive Plan for Officers ("EIP-O") is designed to incentivize officers of the Company to ensure that they are focused on the overall success of the Company's business. These officers are senior level individuals who hold the positions of vice president, senior vice president, president, and chief executive officer. The officers and the personnel with manager and director positions constitute the Ameren Leadership Team ("ALT"), a group that is responsible for the strategy and direction of all the functional areas within Ameren Missouri. Awards at this level are based upon the individual officer's personal performance and the achievement of certain scorecard key performance indicators ("KPIs"), as determined by the Company. Such KPI measures may include Ameren Missouri's earnings, safety, reliability, and/or customer satisfaction. The Company's EIP-O is entirely funded based on earnings-per-share ("EPS") and has been disallowed by Staff.

The Executive Incentive Plan for Managers ("EIP-M") is a plan designed for members of the ALT below the Officers level. Much like the EIP-O, the EIP-M awards are based upon participants' demonstrated leadership and contributions toward the achievement of the Company's business objectives. However, unlike the EIP-O, the EIP-M funding is based twenty-five percent on EPS and seventy-five percent is based on operational performance as measured by KPIs, and individual performance as determined by supervisors through the performance appraisal process. Staff has removed the twenty-five percent of the EIP-M that is EPS-related from its cost of service calculation, and recommends the commission disallow it.

The Ameren Manager Incentive Plan ("AMIP") is designed for management employees and is funded entirely based on achievement of a set of KPIs. Like the EIP, payouts are based on the achievement of the participant's individual performance objectives and his/her contributions to the group's KPI measure. Similar to individual performance for the EIP-M, individual performance is determined by supervisors through the performance appraisal process. Staff has allowed the costs associated with this incentive program.

The Ameren Marketing, Trading & Commodities ("AMTC") plan is similar to the AMIP and is designed to target management employees who perform specific roles within the Company's trading and fuel divisions. This plan has two components: one, the base plan, which is identical to the AMIP, and two, the second component, called the supplemental plan which provides group or position-specific measures for individuals within this group to achieve. The awards under the supplemental plan are converted into units of stock and are held for 22 months for the purpose of promoting employee retention before they are paid out. Staff has included the base plan costs but the restrictive stock has been removed.

The Ameren Incentive Plan ("AIP") is offered only to contract employees and funding is determined by attaining specified KPI goals. It is designed to provide employees with line of sight to critical financial and operational metrics that they can influence. These rewards are based solely on achievement of specified KPIs. Staff has allowed the actual costs associated with this incentive plan.

The Exceptional Performance Bonus Plan ("EPBP"), unlike the short-term compensation plans, is not determined by either meeting a certain level of EPS or KPIs, but are awarded on the basis of outstanding performance of an individual as determined by his or her supervisor and approved by an officer. The process begins when a supervisor submits a recommendation, by completing a Performance Recommendation Form, to an officer that an employee be considered for a bonus on the basis of an exceptional performance. The supervisor who makes this recommendation also recommends the amount of bonus to be awarded. If this recommendation is approved, the employee is eligible for a bonus ranging from $500 to $4,000. However, EPBP awards are not expected to exceed 10% of the employee's annual base pay in any contract year. Staff has allowed the actual costs associated with this incentive plan.

The criteria Staff uses to evaluate employee incentive plans were established in the Commission's Report and Order for *Re Union Electric Co.*, Case No. EC-87-114:

> At a minimum, an acceptable management performance plan should contain goals that improve existing performance, and the benefits of the plan should be ascertainable and reasonably related to the plan. 29 Mo. P.S.C. (N.S.) 313, 325 (1987).

Staff has reviewed Ameren Missouri's incentive compensation plans as described above and recommends that all incentive compensations that are directly tied to EPS be disallowed from the cost of service. This recommendation is consistent with past Commission rulings. In its Report and Order in *Re Kansas City Power & Light Company*, Case No. ER-2006-0314, at page 58, the Commission noted that, among other things, "because maximizing EPS could compromise service to ratepayers, such as by reducing customer service or tree-trimming costs, the ratepayers should not have to bear that expense." Again, in the most recent Ameren Missouri rate case, Case No. ER-2010-0036, the Commission decided that, "Ameren Missouri shall not recover in rates the cost of its long-term compensation plan" for its executive officers as the plan was based on EPS which in the Commission's view "primarily benefit shareholders and not ratepayers."

Staff has made an adjustment to the test year incentive compensation expense consistent with the VS-11 program which called for the elimination of positions within Ameren Missouri and AMS. Please refer to the VS-11 section of this Cost of Service Report for a more complete discussion of the VS-11 program.

In addition to the adjustment in the Operation and Maintenance ("O&M") expenses, and to be consistent with the position that incentive compensation costs relating to EPS should not be borne by ratepayers, Staff has made corresponding reductions in Ameren Missouri's plant in service and reserve balances to eliminate incentive compensation that was capitalized from 2002 through the end of the test year. As part of its true-up audit, Staff will make further adjustments to Ameren Missouri's plant in service and reserve balances to address all additional incentive compensation that is recorded on Ameren Missouri's books through the end of the July 31, 2012, true-up cutoff established by the Commission as part of this rate proceeding.

Staff Expert/Witness: Lisa M. Ferguson

10. Long-Term Incentive Compensation: Restrictive Stock and Performance Share Units

In addition to the other compensation available (base and incentive), Ameren Missouri through its parent company Ameren Corporation, also offers its executives the possibility of restrictive stock awards and performance share units, and these form the Company's long-term compensation plans. Conditions are placed on the receipt of restrictive stock awards related to earnings performance. The performance share units program is based on the market performance of Ameren Corporation's common stock relative to a peer group of other companies' common stock, over a three-year period. Consistent with the Company's treatment of not seeking recovery in retail rates of these long-term incentive plans, Staff has eliminated all costs relating to these plans from its revenue requirement calculation.

Staff Expert/Witness: Lisa M. Ferguson

E. Other Expenses

1. Rate Case Expenses

With respect to rate case expense, Staff examined what other large utilities in Missouri have spent in order to process recent rate cases and then reviewed the actual costs from Ameren Missouri's two previous rate cases (Case Nos. ER-2010-0036 and ER-2011-0028) and compared that to the projected expenses for the current case. Based on this research, Staff has determined that an annual amount of $1,000,000 of rate case expense should be sufficient for Ameren Missouri to process this case to its conclusion.

Staff Expert/Witness: Lisa K. Hanneken

2. Dues and Donations

Staff reviewed the list of membership dues paid and donations made to various organizations that Ameren Missouri charged to its utility accounts during the test year. Staff recommends disallowance of various dues and donations that were included by Ameren Missouri in test year expenses. Staff disallowed these dues and donations because they were not necessary for the provision of safe and adequate service, and thus have no direct benefit to ratepayers. Allowing the Company to recover these expenses through rates causes the ratepayers to involuntarily contribute to these organizations. Examples of items disallowed by Staff are amounts paid to Civic Progress or the St. Louis Earth Day sponsorship.

In *Re: Missouri Public Service, a Division of UtiliCorp United, Inc.*, Case Nos. ER-97-394, et al., Report and Order, 7 Mo.P.S.C.3d 178, 212 (1998), the Commission stated:

> The Commission has traditionally disallowed donations such as these. The Commission finds nothing in the record to indicate any discernible ratepayer benefit results from the payment of these donations. The Commission agrees with the Staff in that membership in the various organizations involved in this issue is not necessary for the provision of safe and adequate service to the MPS ratepayers.

In addition to the above disallowances, Staff removed all costs related to lobbying that were included in the membership dues to the various organizations as well as dues related to the Edison Electric Institute (EEI); these items are discussed in further detail in the following paragraphs.

Staff Expert/Witness: Erin M. Carle

a. Lobbying

As part of its analysis of dues, the Staff determined that some of the organizations use a percentage of member payments to fund government affairs or lobbying activities. Staff traditionally disallows the cost of these activities and therefore has removed the associated amounts from the Company's test year expense level.

Staff Expert/Witness: Erin M. Carle

3. Edison Electric Institute (EEI) Dues

According to information obtained from the EEI's website (www.eei.org), EEI is an association of investor-owned electric utilities and industrial affiliates. From the information concerning EEI reviewed by Staff in this case, it is clear that part of EEI's function is to represent the interests of the electric utility industry in the legislative and regulatory arenas. By necessity, this role includes engagement in lobbying activities by EEI.

In Case No. ER-83-49, a KCPL rate increase case, 26 Mo.P.S.C. 104, 155 (1983), the Commission stated its position respecting EEI dues:

> …In the Company's last rate case, ER-82-66, the Commission reiterated its position that while there may be some possible benefit to the Company's ratepayers from Company's membership in EEI, the dues would be excluded as an expense until the Company could better quantify the benefit accruing to both the Company's ratepayers and shareholders.

This position has been re-affirmed by the Commission in subsequent rate proceedings.

In Re: Kansas City Power & Light Co., Case Nos. EO-85-185 et al., ***Report and Order,*** 28 Mo.P.S.C. (N.S.) 228, 259 (1986), the Commission stated:

> . . . The argument that allocation is not necessary if the benefits lessen the cost of service to the ratepayers by more than the cost of the dues, misses the point.
>
> It is not determinative that the quantification of benefits to the ratepayer is greater that the EEI dues themselves. The determining factor is what proportion of those benefits should be allocated to the ratepayer as opposed to the shareholder. It is obvious that the interests of the electric industry are not consistently the same as those of the ratepayers. The ratepayers should not be required to pay the entire amount of EEI dues if there is benefit accruing to the shareholders from EEI membership as well. The Commission finds this to be the case. The Company has been informed in prior rate cases that it must allocate its quantified benefits from membership in EEI. That has not been done herein. Therefore, no portion of EEI dues will be allowed in this case.

Based on the above guidance, Staff disallowed the entire amount of EEI dues.

Staff Expert/Witness: Erin M. Carle

4. Insurance Expense

Ameren Missouri obtains insurance from third-party insurance providers for protection against the risk of financial loss associated with unanticipated events or occurrences. Insurance policies currently in place at Ameren Missouri cover property, terrorism, crime, boilers and machinery, replacement power, nuclear property, fiduciary liability, directors and officers, marine, nuclear liability, and workers' compensation. Ameren Missouri records all insurance expense in FERC's Uniform System of Accounts 924 and 925. Staff adjusted Ameren Missouri's insurance expenses to annualize those expenses based on the most current premiums charged to the Company as of April 30, 2012. As part of its true-up audit, Staff will re-examine insurance expense in order to determine whether any further adjustments to the cost of service are necessary.

Staff Expert/Witness: Kofi A. Boateng

5. Vegetation Management and Infrastructure Inspection Programs

a. Annual Expense

Staff adjusted the non-labor test year expense level associated with Ameren Missouri's vegetation management and infrastructure inspections programs to reflect the write-off of unamortized balances related to prior vegetation management trackers per the Stipulation and Agreement approved by the Commission in Case No. ER-2011-0028 in the amounts of $1,225,000 and ($2,172,212). These write-offs applied to vegetation management trackers established in Case Nos. ER-2007-0002 and ER-2008-0318, respectively. Staff also proposes an adjustment of $220,518 to reflect a correction to the set-up of the vegetation management tracker established in Case No. ER-2011-0028. Based upon the estimated expense[74] incurred by Ameren Missouri for the twelve-months ending July 31, 2012, Staff recommends the Commission rebase the trackers related to vegetation management and infrastructure inspections to an annualized level of $55,057,826 and $6,807,000, respectively.

Staff will re-examine the actual cost through the end of the true-up period July 31, 2012, to determine if further adjustment is necessary and/or appropriate. Staff recommends the actual amount incurred for the twelve-months ending July 31, 2012, also become the new base amount for tracking following the effective date of rates in Case No. ER-2012-0166.

b. Trackers

Case No. ER-2008-0318

In Case No. ER-2008-0318, the Commission allowed Ameren Missouri to recover the costs incurred, in excess of the amount included in base rates from January 1, 2008, through

[74] Actual data for the period 8/1/2011 – 3/31/2012 and forecasted data for the period 4/1/2012 – 7/31/2012.

September 30, 2008, by Ameren Missouri to comply with the Commission's vegetation management and infrastructure inspection rules. In Case No. ER-2010-0036, this amount was adjusted to account for a change in the amount included in base rates from January 1, 2008, through September 30, 2008. In Case No. ER-2011-0028, Staff recommended the unamortized amount at July 31, 2011, related to Ameren Missouri's previous two rate cases be included in expense, thus ending the vegetation management and infrastructure inspection trackers established in Case Nos. ER-2007-0002 and ER-2008-0318. In doing so, the unamortized amount of expense for the tracking periods January 2008 through February 2009 and October 2008 through January 2010 would be fully reflected in rates during the twelve months ending July 31, 2012. Since the amortization of the regulatory asset related to the tracker established for Case No. ER-2007-0002 will be complete by the end of the true-up period established in this rate proceeding, Staff has removed $1.75 million from the cost-of-service calculation associated with the amortization that was reflected on the Company's books during the test year for this tracker. Since the amortization of the regulatory liability related to the tracker established for Case No. ER-2008-0318 will be complete by the end of the true-up period established in this rate proceeding, the Staff has removed approximately ($944,400) from the cost-of-service calculation associated with the amortization that was reflected on the Company's books during the test year for this tracker.

As part of Case No. ER-2008-0318, the Commission allowed Ameren Missouri to defer the amount of cost the Company estimated it would incur, in excess of the amount that was included in base rates, from October 31, 2008, through February 28, 2009, to comply with the Commission's vegetation management and infrastructure inspection rules. An amount associated with this period was identified in Case No. ER-2010-0036 and was offset against the over-collection associated with the amount included in rates for the period March 1, 2009, through February 28, 2010. This net amount was ordered by the Commission to be amortized over three years. The amount previously identified in Case No. ER-2010-0036 for the period March 1, 2009, through February 28, 2010, was based upon forecasted data and, therefore, Staff was required to replace this forecasted data by actual amounts incurred to recalculate the amortizations related to vegetation management and infrastructure inspection program.

In Case No. ER-2010-0036, the Commission also allowed Ameren Missouri to defer the amount of cost the Company estimated it would incur, in excess of the amount included in base rates in the 2008 rate case, to comply with the Commission's vegetation management and infrastructure inspection rules in the amounts of $54.1 million and $10.7 million, respectively. However, during the twelve-months ended February 28, 2010, the amounts collected in rates significantly exceeded the actual non-labor costs incurred. This over-recovery was netted against the corrected amount deferred during the period October 1, 2008, through February 28, 2009.

Case No. ER-2010-0036

In Case No. ER-2010-0036, the Commission ordered a new base for the tracker including vegetation management and infrastructure inspection cost in the amount of $50.39 million and $7.65 million, respectively. The amounts reflected in rates, a combination of the new base established in Case No. ER-2010-0036 and the previous base established in Case No. ER-2008-0318, were then compared to the actual amount incurred for the twelve-months ending February 28, 2011, to identify any over or under-collection. Consistent with the Commission's prior orders, Staff recommended any over or under-collection be amortized over a three-year period.

Case No. ER-2011-0028

In Case No. ER-2011-0028, the Commission ordered a new base for the tracker including vegetation management and infrastructure inspection cost in the amount of $52.2 million and $7.7 million, respectively. The amounts reflected in rates were compared to the actual amount incurred for the twelve-months ending September 30, 2011, to identify any over or under-collection. Staff has identified a net under-collection for the period March 1, 2011, through the true-up ending date of July 31, 2012, in the amount of $2,465,063. Staff recommends this under-collection be amortized over three years consistent with Commission orders in previous cases. This net under-collection amount represents a $2,896,420 under-collection for vegetation management and a ($431,357) over-collection for infrastructure inspections for the true-up period ending July 31, 2012. The annualized amortization recommended is $965,473 and ($143,786), respectively, for a total annualized amortization of $821,688.

Staff also proposes that any unamortized amount related to the tracker established in Case No. ER-2010-0036 be rolled into the current amortization established in this proceeding and be amortized over a three-year period so that only one tracker remains. The unamortized amount related to the tracker established in Case No. ER-2010-0036 at the true-up ending date of July 31, 2012, is ($1,360,259). Therefore, the total to be amortized is a net amount of $1,104,804 [$2,465,063 + (1,360,259) = $1,104,804] with an annual amortization in the amount of $368,268.

Staff Expert/Witness: Roberta A. Grissum

6. Customer Deposit Interest Expense

See discussion in Section VII.D. Rate Base-Customer Deposits.

Staff Expert/Witness: Erin M. Carle

7. Property Tax Expense

For property assessment purposes, each utility company is required to file with its respective taxing authority a valuation of utility property at the beginning of each assessment year, which is January 1st. Several months later, based on information provided by the utility, the taxing authority will in turn send the company what are known as "assessed values" for every category of the company's property. The taxing authority will issue to the utility company a property tax rate later in the year. The final step in the process is when the taxing authority issues a property tax bill to the company late in each calendar year with a "due date" of December 31. The billed amount of property taxes is based on the property tax rate applied to the previously determined assessed values of the utility's plant-in-service balances as of January 1 of the same year. The Staff developed its property tax rate based on the Company's actual taxes paid as of December 31, 2011, which are paid based on investment as of January 1, 2011. The Staff will continue to review this issue in order to determine whether any further adjustments to the cost of service are necessary.

Staff Expert/Witness: Erin M. Carle

a. Property Tax Appeal/Refund

During the previous rate case, Case No. ER-2011-0028, Ameren Missouri was in the process of appealing approximately $28.9 million of property taxes that had previously been paid during 2010. The Commission's Report and Order for Case No. ER-2011-0028 states that:[75]

> Specific Findings of Fact: The only question before the Commission at this time is whether to order Ameren Missouri in this case to return any tax refund it may receive to its customers. There is no disagreement about Ameren Missouri's duty to track that refund. If Ameren Missouri does receive a tax refund, then the Commission would certainly expect that the company would return that refund to its customers who are ultimately paying the tax bill. It is hard to imagine a circumstance in which such a refund would not be ordered. However, such an order must wait until a future rate case in which that decision will be presented to the Commission.
>
> Any such order the Commission could issue in this case would be ineffective, as this Commission cannot bind a future Commission. At this time, the Commission can only order Ameren Missouri to track any possible refund. A decision about how any such tax refund is to be handled must be left to a future rate case.

Since the last case, Ameren Missouri received approximately a $2.9 million refund of the approximate $28.9 million that it was seeking. Therefore, Staff has determined that the refund amount of $2.9 million granted to Ameren Missouri should be refunded back to Ameren Missouri's customers through a two-year amortization, beginning with the effective date of rates in this rate proceeding. Staff has included an adjustment to reduce the cost of service by approximately $1.45 million in order to reflect this refund over two years.

Staff Expert/Witness: Erin M. Carle

8. Uncollectible Expense

Uncollectible expense is the portion of retail rate revenues that Ameren Missouri is unable to collect from retail customers by reason of bill non-payment. After a certain amount of time has passed, delinquent customer accounts are written off and turned over to a third party

[75] In *Re: Union Electric Company, d/b/a Ameren Missouri,* Case No. ER-2011-0028, *Report and Order,* pp 111-112.

collection agency for recovery. Through the third party collection agency, Ameren Missouri is sometimes successful in collecting a portion of the delinquent amounts owed.

Staff examined the five-years ending September 30, for 2007 through 2011, and found no particular upward or downward trend in this expense. Staff then applied an averaging technique and compared the results to the net write-offs recorded for the test year ending September 30, 2011. Finally, Staff determined the rate of recovery of past write-offs experienced by Ameren Missouri over the past five-years ending September 30 for 2007 through 2011. Based upon this historical data, Ameren Missouri's rate of recovery for charge-offs has declined from approximately 46% for the twelve-months ending September 30, 2007, to a recovery rate for charge-offs of approximately 18% for the twelve-months ending September 30, 2011. Based on this analysis, Staff recommends the annualized level of uncollectibles expense be set equal to the test year level of net write-offs in the amount of $14,763,068. Staff, therefore, proposes an adjustment to uncollectible expense of ($790,732) to reflect this decrease from $15,553,800 recorded during the test year ending September 30, 2011, to the recommended level of $14,763,068.

Staff Expert/Witness: Roberta A. Grissum

9. Advertising Expense

In forming its recommendation of the allowable level of Ameren Missouri's advertising expense, Staff relied on the principles it has consistently applied adhering to the Commission's decision in *Re: Kansas City Power and Light Company*, Case Nos. EO-85-185, et al., 28 Mo.P.S.C. (N.S.) 228, 269-71 (1986). In that case, the Commission adopted an approach that classifies advertisements into five categories and provides rate treatment of recovery or disallowance based upon a specific rationale. The five categories of advertisements recognized by the Commission are as follows:

1. General: informational advertising that is useful in the provision of adequate service;

2. Safety: advertising which conveys the ways to safely use electricity and to avoid accidents;

3. Promotional: advertising used to encourage or promote the use of electricity;

4. Institutional: advertising used to improve the company's public image;

5. Political: advertising associated with political issues.

The Commission utilized these categories of advertisements explaining that a utility's revenue requirement should: 1) always include the reasonable and necessary cost of general and safety advertisements; 2) never include the cost of institutional or political advertisements; and 3) include the cost of promotional advertisements only to the extent that the utility can provide cost-justification for the advertisement (Report and Order in KCPL Case Nos. EO-85-185, et al., 28 Mo.P.S.C. (N.S.) 228, 269-271 (April 23, 1986)).

Accordingly, in the current rate case, Staff recommends adjustments to exclude the costs of institutional, political, and promotional advertising from recovery in rates. Costs for safety advertising and general advertising directed towards the benefit of existing customers were not adjusted by Staff. In addition, Staff has reviewed any advertising-related items that have been allocated from the corporate level. Staff proposes adjustments to remove any allocated items deemed to be institutional and promotional.

Staff Expert/Witness: Lisa M. Ferguson

10. Gross Receipt Tax Expense

See the discussion in Section IX.A. – Rate Revenues, subsection 4.b., Adjustment to Remove Gross Receipts Tax.

Staff Expert/Witness: Robert A. Grissum

11. Test Year Storm Cost

From time to time, Ameren Missouri experiences the effects of storms in its service territory that result in it incurring costs in order to restore service to customers. During the test year ending September 30, 2011, Ameren Missouri recorded approximately $14.1 million of non-labor-related storm preparation and restoration O&M costs. Staff recommends including approximately a $6.98 million normalized level of non-labor-related storm preparation and restoration costs in its case based on a 60-month (5-year) average for all storm costs incurred between May 1, 2007, and April 30, 2012. The Staff further recommends that no storm cost amortization pertaining to any portion of the $14.1 million level of test year non-labor related storm preparation and restoration costs in addition to Staff's recommended $6.98 million test year normalized level is necessary. During the first five months of the test year, from October 1, 2010 through February 28, 2011, the Company experienced non-labor storm costs only in February 2011 for storm preparation and restoration of service. No other storm events occurred during this time period. During February 2011, the Company incurred $7.5 million of non-labor related storm preparation costs. The Company has already attempted to seek recovery for this storm event, through an amortization, during the last Ameren Missouri rate proceeding, Case No. ER-2011-0028. This request was rejected by the Commission. Specifically, the Commission's Report and Order stated the following:

> In Ameren Missouri's last rate case, the Commission allowed Ameren Missouri to recover $6.4 million in its cost of service for storm restoration costs.[39] Based on that amount as well as the amount Ameren Missouri was allowed to recover in the next previous rate case, ER-2008-0318, MIEC's witness, Greg Meyer, correctly calculated that from the beginning of the test year in this case (April 1, 2009) through the end of the true-up period (February 28, 2011), Ameren Missouri has recovered $10.8 million in rates for repairs from major storms. During that same time, Ameren Missouri has incurred $9.4 million in storm costs, including the costs for the February 2011 storm preparations for which Ameren Missouri seeks an additional amortization.
>
> Based on those calculations, it is apparent that there is no basis for allowing Ameren Missouri to amortize $1,037,146 for storm costs relating to its preparation for the February 2011 ice storm.
>
> [39] *In the Matter of Union Electric Company, d/b/a AmerenUE's Tariffs to increase its Annual Revenues for Electric Service, File No. ER-2010-0036, Report and Order, May 28, 2010, Page 68.*

Consistent with this Order, Staff is not recommending any specific recognition of prior Ameren Missouri storm costs incurred during the test year in this case, including the storm costs incurred in February 2011. Staff will continue to evaluate storm restoration costs through the end of the July 31, 2012, true-up cutoff date established by the Commission in this rate proceeding, in order to determine whether any further adjustment to the cost of service are necessary.

In Section IX.E. - Other Expenses, Item 12, subsection a. through d., of this Cost of Service Report, the Staff will describe in detail all storm cost amortizations that Ameren Missouri is already recovering as part of their current rates and Staff's recommendation for ratemaking treatment of each of these amortizations as part of the Commission's determination of rates in the current proceeding.

Staff Expert/Witness: Kofi A. Boateng

a. Storm Assistance Expense

During the test year, Ameren Missouri sent line crews to provide storm assistance to four other utilities. These four utilities paid Ameren Missouri for the labor charges associated with the Ameren Missouri crews that provided the storm restoration assistance. The Company has indicated to Staff that test year O&M labor does not include the labor costs associated with providing storm assistance to these four utilities and, therefore, the test year is understated by $214,594. Staff included an adjustment to increase the cost of service by $214,594 in order to reflect the costs associated with the labor that Ameren Missouri provided. However, Staff has also included a normalized level of revenue associated with the storm assistance that Ameren Missouri provides to other utilities.

Staff Expert/Witness: John P. Cassidy

12. Storm Cost Amortization Expense

a. Storm Cost from ER-2010-0036

In Ameren Missouri's Case No. ER-2010-0036, the Company recorded approximately $10.4 million of non-labor-related storm restoration O&M costs during the twelve-months ending March 31, 2009, test year that was established by the Commission as part of that case. In its Report and Order in that case, the Commission allowed Ameren Missouri to include $6.4 million in its cost of service for storm restoration costs, while the remaining $4 million test year storm cost was to be amortized and recovered over a 5-year period. During the test year ending September 30, 2011, Ameren Missouri recorded a full twelve-month of the annual amortization of $800,000. Therefore, no adjustment is necessary to annualize this storm amortization that was established as part of Case No. ER-2010-00036. Staff recommends that the Company continue to recover $800,000 for this amortization in the determination of rates in the current rate proceeding.

Staff Expert/Witness: Kofi A. Boateng

b. Storm Cost from Case No. ER-2008-0318

As part of an agreement reached in Case No. ER-2008-0318, Ameren Missouri was allowed to recover an amortization of $971,400 annually from March 1, 2009, through February 28, 2014 related to extraordinary storm costs incurred within the test year for that case. During the test year ending September 30, 2011 in the current rate proceeding, the Company recorded a full twelve months of the annual amortization of $971,400. However, since this amortization is scheduled to expire in February 2014, Staff proposes to reset the amortization period for recovery of the amortization balance that exists at January 2, 2013, the effective date of rates in the current rate proceeding, in order to prevent a significant over-recovery of these costs by the Company. At January 2, 2013, the unamortized balance related to the Case No. ER-2008-0318 storm amortization is approximately $1,133,300. Staff recommends a two year amortization period or $566,650 annually during the period covering January 3, 2013 – January 2, 2015, in order to better synchronize the end of the amortization with future rate case recovery.

Staff Expert/Witness: Kofi A. Boateng

c. Storm Cost Accounting Authority Order (AAO) Case Nos. EU-2008-0141 and ER-2008-0318

As a result of Case No. EU-2008-0141, the Commission granted Ameren Missouri an AAO to defer the costs related to the ice storm that occurred on January 13, 2007. As part of Case No. ER-2008-0318, the Commission ruled that the appropriate starting point for the amortization period for the storm costs that were deferred through the AAO should begin in March 2009 and end in February 2014. During the test year ending September 31, 2011, the Company recorded a full twelve months of annual amortization of $4.9 million. However, since this AAO storm cost amortization is also scheduled to expire during February 2014, Staff recommends resetting the amortization period for recovery of the remaining balance of this amortization that exists at January 2, 2013, the effective date of rates in the current rate proceeding, in order to prevent a significant over-recovery of these costs by Ameren Missouri. At January 2, 2013, the unamortized balance related to the ER-2008-0318 storm amortization is approximately $5,730,662. Staff proposes a two year amortization period or $2,865,331 annually during a period covering January 3, 2013 – January 2, 2015, in order to better synchronize the end of the amortization with future rate case recovery.

Staff Expert/Witness: Kofi A. Boateng

d. Storm Cost from Case No. ER-2007-0002

As part of the Stipulation and Agreement that was approved by the Commission in Case No. ER-2007-0002, Ameren Missouri was allowed to recover an amortization of $800,000 annually from July 1, 2007, through June 30, 2012 relating to storm costs in the amount of $4,442,000 incurred in the test year for that case. In the First Non-Unanimous Stipulation and Agreement – Miscellaneous Revenue Requirement Items that was approved by the Commission in Ameren Missouri's last rate case Case No. ER-2011-0028, the parties agreed to reset the unamortized ER-2007-0002 storm cost balance as of July 31, 2011, the effective date of rates established in ER-2011-0028. As part of that agreement, the unamortized balance of $733,333 was rescheduled for two more years of amortization through July 31, 2013, at a $366,667 annual level.

As part of its review in this case, Staff determined that the unamortized balance of the Case No. ER-2007-0002 storm amortization at the effective date of rates in the current rate proceeding (January 2, 2013) will be $213,889. Staff recommends including the entire amount of this unamortized balance in the cost of service calculation because of its relative small remaining balance. However, Staff's recommended treatment for the Case No. ER-2007-0002 storm amortization also requires that there will be no future inclusion in rates for this storm event in any future rate proceeding.

Staff Expert/Witness: Kofi A. Boateng

<u>13. Callaway Refueling Adjustment</u>

Ameren Missouri's Callaway nuclear power plant undergoes a refueling and maintenance outage process approximately every 18 months. While refueling takes place, the Company typically completes numerous maintenance activities, performs inspections and testing and also completes any necessary capital improvements. The Company refueled the Callaway nuclear power plant during the months of October through November of 2011, which was outside the test year ending September 30, 2011. Since the Company refuels the Callaway nuclear power plant on an eighteen-month cycle, the cost of refueling must be normalized to reflect the amount incurred during a twelve-month period. Staff's normalization adjustment adds two thirds of the approximately $31.2 million of non-labor maintenance project costs. All labor-related costs associated with the Callaway refueling are addressed in the Staff's payroll annualization as discussed by Staff witness Lisa M. Ferguson. Staff adjusted expense to include approximately $20.8 million in Staff's cost of service calculation in order to normalize non-labor-related maintenance expenses associated with the Company's refueling of the Callaway nuclear power plant.

Staff Expert/Witness: Lisa K. Hanneken

14. Training Cost

a. Production Training

In the Report and Order as part of Case No. ER-2008-0318, the Commission added $1.41 million to Ameren Missouri's cost of service to fund increased production operations training staff. The Commission also included $360,000 in Ameren Missouri's cost of service to reflect a five-year amortization of $1.8 million to fund training equipment and materials, and external costs related to the training staff. The $1.41 million that was allotted to production operations training staff was fully spent for those employees during the test year and therefore is contained within Staff's payroll and benefits annualizations that are included in the cost of service calculation for this case. Since the time of the Commission's Report and Order in Case No. ER-2008-0318, Ameren Missouri has expended in excess of the $1.8 million for training equipment and materials and external costs due to increased training staff. Some of these costs have been capitalized by the Company. Staff recommends inclusion of a five-year amortization of $360,000, in total, for these costs in the cost of service calculation consistent with the Commission's Report and Order in the above-mentioned case. As a result of including capital cost in the five-year amortization prescribed by the Commission, Staff has removed this cost from plant in service and the associated calculation of depreciation reserve and related depreciation expense. In addition, Staff recommends an adjustment to remove from the cost of service calculation expenses that were recorded during the test year that are already contained within the five-year amortization in order to prevent a double recovery for these costs.

Staff Expert/Witness: Lisa M. Ferguson

b. Distribution Training

In the Report and Order as part of Case No. ER-2010-0036, the Commission added $1.29 million to Ameren Missouri's cost of service to fund increased distribution training staff. The Commission also added $420,000 to Ameren Missouri's cost of service, which represented a five-year amortization of $2.1 million, to fund training equipment and materials, and external costs, due to increased training staff. The $1.29 million that was dedicated to fund distribution training staff was fully spent for those employees during the test year and therefore is contained within Staff's payroll and benefits annualizations that are a component of the cost of service calculation for this case. In order to address the cost incurred for training equipment, materials, and external costs, due to increased distribution training staff, Staff has included a five-year amortization, in total, of the amounts incurred up to $2.1 million consistent with the Commission's Report and Order from the above-mentioned case. ** **

Staff Expert/Witness: Lisa M. Ferguson

c. Heavy Underground Training

In Case No. ER-2011-0028 the Commission added $1.25 million to Ameren Missouri's cost of service to fund Heavy Underground Training. ** **

Staff will continue to review the costs associated with underground training and address this issue as part of the true-up audit and make further adjustments as necessary.

Staff Expert/Witness: Lisa M. Ferguson

15. Lease Expense

During the test year, Ameren Missouri incurred lease expense on various land, buildings, and equipment it uses in the provision of service. Staff reviewed Ameren Missouri's lease expense for the test year ended September 30, 2011. Staff annualized the test year level of expense to reflect a slight decrease in the overall ongoing expense level.

Staff Expert/Witness: Kofi A. Boateng

16. Injuries & Damages

Injuries and damages represent the portion of legal claims against a utility that are not subject to reimbursement under the utility's insurance policy. Staff reviewed the accruals, actual payments, and reserves for Ameren Missouri's provisions of injuries and damages expense. Ameren Missouri's injuries and damages expenses are charged to FERC account 925 based on accrual method of accounting. Rather than an accrual, Staff recommends that the actual payments be used in the determination of the revenue requirement. Therefore, Staff performed an analysis of the twelve-month periods ending in May 31 for the years 2004-2012. Staff's analysis of this data revealed that actual payments, net of insurance settlements, fluctuated from year to year. With this type of fluctuation, reliance on any one year would not be acceptable for determination of an annual level of expense to be included in the cost of service for setting rates. As a result, Staff recommends utilizing the 5-year average of actual payments, net of insurance settlements ending May 31, 2012, as the ongoing expense level. Staff will continue to review the accruals, actual payments and reserves related to injuries and damages as part of the true-up audit in order to determine if additional adjustments to the cost of service are required.

Staff Expert/Witness: Kofi A. Boateng

17. PSC Assessment

On an annual basis, the Company is assessed a fee from the Commission based upon its revenues from the previous calendar year. This assessment is issued to the Company in July of each year and is payable either as one sum or in quarterly installments due in July, October, January, and April. In July of 2012, the Company was assessed a total of $5,301,224 for the fiscal year ending June 30, 2013. Included in this assessment is $327,694 to fund the Office of the Public Counsel ("OPC"). Missouri House of Representatives Bill 7, section 7.185 (i.e., DED's budget bill), approved on June 10, 2011, established that the OPC should be funded through the PSC budget. Therefore, the total assessment amount includes amounts to fund the OPC as well as the PSC. Previously, the OPC was funded through the general revenue fund and therefore was not included in the PSC assessment. Staff has included this most recent total assessment amount as the ongoing annual expense level to include in the cost of service.

Staff Expert/Witness: Erin M. Carle

a. Amortization of PSC Assessment

In July 2011, Ameren Missouri's PSC Assessment for its electric operations increased. This increase occurred subsequent to the February 28, 2011, true-up cut-off established by the Commission as part of the Company's previous rate proceeding, Case No. ER-2011-0028. The Company is seeking permission to defer the amount of this increase and to amortize this increase over two years. The Staff contends that it has properly annualized the PSC assessment as part of this rate proceeding and that no amortization should be included in the cost-of-service calculation to address the July 2011 increase in the PSC assessment as proposed by the Company.

Staff Expert/Witness: Erin M. Carle

18. Corporate Franchise Tax

Franchise tax is a tax that corporations pay in advance for doing business within the state. Franchise tax must be paid if the corporation's assets (in or apportioned to Missouri) exceed one million dollars for franchise taxable years beginning on or after January 1, 2000, or ten million dollars for franchise taxable periods beginning on or after January 1, 2010. The Staff used the actual taxes paid per form MO-1120 that was filed with the state of Missouri on April 12, 2012, as the basis for its determination of the on-going expense level, with all applicable credits applied that Ameren Missouri received.

Staff Expert/Witness: Erin M. Carle

19. Cyber Security Expense

Cyber security is the technology, process, and practices designed to protect networks, computers, programs, and data from attack, damage or unauthorized access. Ameren Missouri has invested in multiple cyber security programs in order to protect the identities of ratepayers, as well as to protect the software and computers that operate their power plants. Ameren Missouri must also comply with multiple mandates at the federal, state, and local level to remain in compliance with cyber security laws. Staff has reviewed the historical data from January of 2007 through May 2012 and has included the test year expense level as an acceptable level of cyber security expense. Staff will continue to evaluate cyber security expense through the end of the July 31, 2012 true-up cutoff date established by the Commission in this rate proceeding, in order to determine whether any future adjustments to the cost of service are necessary.

Staff Expert/Witness: Erin M. Carle

20. Outside Services

During the test year in this case, the twelve-months ending September 30, 2011, Ameren Missouri paid numerous vendors for outside services. Staff has performed an analysis of these costs and has removed $12,000 related to items which have provided no ratepayer benefit.

Staff Expert/Witness: Lisa K. Hanneken

21. Expense associated with Owensville Acquisition

During March 2012, Ameren Missouri purchased the assets of the City of Owensville's electric distribution system. Through this acquisition, Ameren Missouri now serves these customers directly; therefore, all expenses and revenues related to these customers must be recognized. Due to the unavailability of data for the customers' revenues, Staff Witness Curt Wells has included a true-up estimate for these revenues in this direct filing and will update that amount during Staff's true-up analysis when additional data is available. Also, Staff Witness Erin M. Carle will include the rate base associated with this purchase as part of the rate base totals in this case. In addition, Staff increased its cost of service calculation to include $192,327 for additional operating expenses related to providing service to the customers acquired with the purchase of the Owensville system. Staff will continue to examine this issue through the end of the true up period ending July 31, 2012.

Staff Expert/Witness: Lisa K. Hanneken

22. SO_2 Allowance Tracker

In Case No. ER-2007-0002, the Commission established an accounting mechanism to track Ameren Missouri's SO_2 emission allowance sales revenues, net of SO_2 expenses. The Company realizes SO_2 revenues from gains on the sale of SO_2 emission allowances. SO_2 expenses are realized from the premiums paid, net of the discounts received, as a result of SO_2 content variations from the terms of the contacts through which Ameren Missouri purchases its coal supply related to the coal it actually received. Beginning on January 1, 2007, the Company was required to account for all SO_2 premiums, net of any SO_2 discounts, in a regulatory liability account. The Commission also ordered that all gains from SO_2 allowance sales, in excess of $5,000,000, be recorded in this same regulatory liability account. This regulatory liability account, referred to as the SO_2 Tracker, also accumulates interest at Ameren Missouri's short-term borrowing rate. This SO_2 tracker was continued as part of Case No. ER-2008-0318; however, in Case No. ER-2010-0036, the SO_2 tracker was discontinued, and it was agreed that going forward, the cost associated with the SO_2 premiums, net of discounts, and the revenues from gains on the sale of SO_2 emission allowances will be included in Ameren Missouri's Fuel Adjustment Clause. Therefore, tracking of SO_2 -related costs was discontinued on June 21, 2010, the effective date of new rates in Case No. ER-2010-0036.

Prior to June 21, 2010, the SO_2 tracker had a regulatory asset balance of $22,457,622. This amount continues to be reduced through monthly amortizations approved by the Commission. As of Ameren Missouri's last rate case, Case No. ER-2011-0028, the Company had a SO_2 regulatory asset balance of $7,960,483 at July 31, 2011. In a Stipulation and Agreement in that rate case, the parties agreed to amortize this balance over a two-year period to expire by July 31, 2013. Staff is further recommending that the remaining unamortized amount, $2,321,808, not reflected in rates as of the effective date (January 2, 2013) of rates in this current rate proceeding be amortized over a period of two years. Staff recommends this treatment in order to better synchronize the end of the amortization with future rate case recovery.

Staff Expert/Witness: Kofi Agyenim Boateng

23. Maryland Heights Renewable Energy Facility

In May 2009, Ameren Missouri entered into an agreement with Fred Weber, Inc., to install combustion turbines capable of generating electricity by burning methane gas captured from Fred Weber, Inc.'s solid waste landfill at Maryland Heights, Missouri. In December 2010, IESI MO Champ Landfill, LLC acquired the Fred Weber Sanitary Landfill. According to Ameren Missouri, this project is expected to boost the Company's renewable energy capabilities as well as meet state and federal regulatory requirements to generate or procure a specified percentage of retail electric sales through renewable sources. The Maryland Heights Renewable Energy facility, as it is referred to, consists of three gas-fired combustion turbines generator units, generating enough electricity to meet the demands of approximately 10,000 homes. The Company anticipates the facility will become operational to generate power and provide service to customers in July 2012.

At this time, Staff witness Michael Taylor has not received information from Ameren Missouri needed to complete an evaluation of in-service criteria for this facility. Staff expects that this evaluation will be completed as part of it true-up audit. Once this evaluation is complete and it is determined that this facility has met all in-service criteria Staff will include an ongoing level of costs related to the operation and maintenance of the Maryland Heights Energy Center in its cost of service calculation as part of the true-up audit.

Staff Expert/Witness: Kofi Agyenim Boateng

24. Miscellaneous Expenses

During the test year, the Company had numerous miscellaneous costs booked to various FERC USOA expense accounts. After reviewing these expenses, Staff has removed a total of $527,063 from the Company's test year costs for items which provide no ratepayer benefit. These charges include items such as donations, sponsorships of community events, and sponsorships of sporting events among other similar items.

Staff Expert/Witness: Erin M. Carle

25. Taum Sauk Failure

Ameren Missouri has agreed to hold ratepayers harmless for costs associated with the Taum Sauk reservoir failure and all related clean-up activities. Therefore, Staff has eliminated from the cost-of-service calculation nearly $1 million of expense that was incurred by the Company during the test year that related to the reservoir failure and related clean-up activities. In addition, the Company incurred labor expense related to the Taum Sauk failure. This amount will be removed through Staff's annualization of labor costs sponsored by Staff witness Lisa M. Ferguson.

Staff Expert/Witness: Lisa K. Hanneken

26. Renewable Energy Standard

a. Summary

The Missouri Renewable Energy Standard ("RES")[76] was enacted as a voter initiative petition in November 2008. Provisions of the resulting statute and regulations require Ameren Missouri (and the other investor-owned utilities) to meet certain requirements regarding the use of renewable energy. Beginning January 1, 2010, the RES requires Ameren Missouri to provide a rebate ($2.00 per installed watt)[77] to its retail customers for installation of solar electric systems on their premises.[78] Utilization of a Standard Offer Contract ("SOC") for the purchase of Solar Renewable Energy Certificates ("S-RECs") from customer-owned solar electric systems is optional for the utility companies.[79] Ameren Missouri submitted tariff sheets for 2011 and 2012 to provide for a SOC with an annual expenditure limit of two million dollars ($2,000,000). Ameren Missouri filed, and the Commission approved, the 2011 tariff sheets at one hundred dollars ($100) per S-REC and the 2012 tariff at fifty dollars ($50) per S-REC.

For calendar years 2011 through 2013, the RES requires Ameren Missouri to generate or purchase two percent (2%) of its retail sales using renewable energy resources.[80] For each portfolio requirement, Ameren Missouri must derive two percent (2%) of the requirement from solar energy.[81] RECs can be banked for three (3) years and utilized for future compliance purposes.[82] Ameren Missouri filed the required RES Compliance Plans (calendar years 2011 and

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[76] Mo. Rev. Stat. § 393.1020 (2000).

[77] Mo. Rev. Stat. § 393.1030.3 (2000).

[78] The rebate provision has a specific limitation on the size of the system, namely no larger than 25 kilowatts per system.

[79] 4 CSR 240-100 (4)(H)1.

[80] Mo. Rev. Stat. § 393.1030 .1(1) (2000).

[81] Mo. Rev. Stat. § 393.1030.1 (2000).

[82] "An unused credit may exist for up to three years from the date of its creation." Mo. Rev. Stat. § 393.1030.2 (2000)

2012) and RES Compliance Report (calendar year 2011)[83]. Each RES Compliance Plan provides information regarding the utility's plan for the current calendar year and the subsequent two (2) calendar years. The RES Compliance Report is a status report on the utility's compliance for the preceding calendar year. For the 2011 calendar year, Ameren Missouri utilized renewable energy and RECs from Keokuk Hydro-electric Generation Station for the non-solar requirement and S-RECs from various third-party brokers for the solar requirement.[84]

Staff continues to monitor Case No. EO-2012-0351 concerning Ameren Missouri's Renewable Energy Standard Compliance Report for calendar year 2011, and its Renewable Energy Standard Compliance Plan for calendar years 2012-2014. The 2012 RES Compliance Plan and 2011 RES Compliance Report case is currently pending and Staff may have additional testimony in rebuttal or surrebuttal based on any decision made by the Commission.

Staff Expert/Witness: Michael E. Taylor

b. Renewable Energy Standard Costs

As part of the last rate case, Case No. ER-2011-0028, the Commission ordered that:

> Ameren Missouri shall include $885,266 in its rates for ongoing solar rebate expenses. Ameren Missouri shall accumulate in an AAO the amount it has paid for solar rebates from the beginning of the program until new rates become effective in this case. The recovery of those costs and future costs deferred in the AAO will be decided in Ameren Missouri's next rate case.[85]

Commission rule 4 CSR 240-20.100, Electric Utility Renewable Energy Standards Requirements, Section (6), (A) through (D), discusses two alternative cost recovery or pass-through of benefits mechanisms. The first option for recovery is through a Renewable Energy Standard Rate Adjustment Mechanism ("RESRAM"). This mechanism would allow Ameren Missouri to recover prudently-incurred costs relating to compliance with RES requirements. Under the RESRAM, Ameren Missouri can file for RESRAM adjustments either within or outside of a general rate proceeding. Ameren Missouri is not seeking a RESRAM as part of this rate proceeding.

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[83] Ameren Missouri filed its RES Plan for calendar years 2011-2013 in EO-2011-0275, its RES Plan for calendar years 2012-2014 and RES Report for calendar year 2011 in EO-2012-0351.

[84] EO-2012-0351, *Renewable Energy Standard Compliance Report*, pp. 6 - 8.

[85] ER-2011-0028, *Report and Order*, pp. 101.

The second recovery option is specifically discussed in 4 CSR 240-20.100-(6)(D). Under this second option, Ameren Missouri may opt to:

> …recover RES compliance costs without the use of a RESRAM through rates established in a general rate proceeding. In the interval between general rate proceedings, the electric utility may defer the costs in a regulatory asset account and monthly calculate a carrying charge on the balance in that regulatory asset account equal to its short-term cost of borrowing. All questions pertaining to rate recovery of the RES compliance costs in a subsequent general rate proceeding will be reserved to that proceeding, including the prudence of the costs for which rate recovery is sought and the period of time over which any costs allowed rate recovery will be amortized.

Furthermore, the RES compliance retail rate impact on average retail customer rates may not exceed one percent (1%) as detailed in 4 CSR 240-20.100-(5).

Ameren Missouri's direct filed case differs from either of the two options discussed above and proposes a treatment not authorized by rule. Ameren Missouri requests the following rate treatment: (1) Ameren Missouri proposes to include a $6.9 million level of RES costs estimated to be incurred between March 1, 2011, through July 31, 2012 in its cost of service as an ongoing level of expense. This $6.9 million level is net of the $885,266 that was built into permanent rates based upon Ameren Missouri's actual costs through February 28, 2011, in the last Ameren Missouri rate case; (2) Ameren Missouri also proposes to include an additional $3.9 million, which represents a two-year amortization of the $7.8 million of RES costs estimated to be spent between January 1, 2010, the time that Ameren Missouri first incurred RES costs, through July 31, 2012. This level includes the $885,266 that was built into permanent rates in the last rate case; (3) Ameren Missouri also proposes to include the estimated deferred regulatory asset balance of $7.8 million for RES costs as an addition to rate base.

Staff recommends reflecting in the cost of service the level of RES expenditures over the twelve months ending March 31, 2012, as a base level to be included in permanent rates. Staff recommends amortizing the deferred expenditures from January 1, 2010, through March 31, 2012, over three years with no rate base inclusion for the unamortized RES deferred regulatory asset balance. Alternatively, Staff would consider amortizing the RES deferred regulatory asset balance over six years with rate base inclusion for the unamortized balance. Staff further recommends that as part of Ameren Missouri's next general rate proceeding, the level included in permanent rates in this case be netted against any future deferred expenditures that occur beyond the July 31, 2012, true-up cut-off date as established for the current rate proceeding. As part of its true-up audit, Staff will continue to examine RES costs through July 31, 2012, and make additional adjustments as needed to both the Staff proposed level for inclusion in permanent rates as well as the proposed amortization expense level.

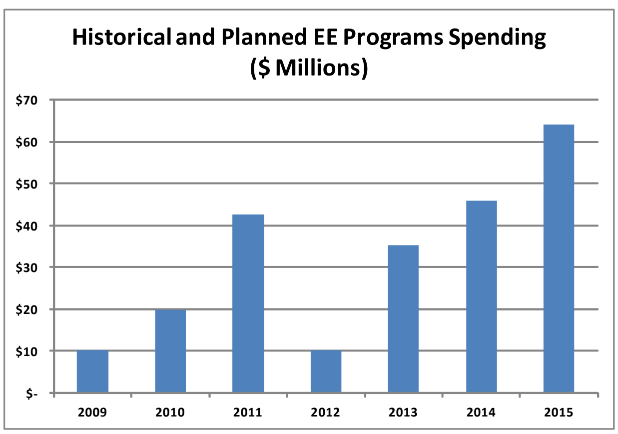
Staff Expert/Witness: John P. Cassidy

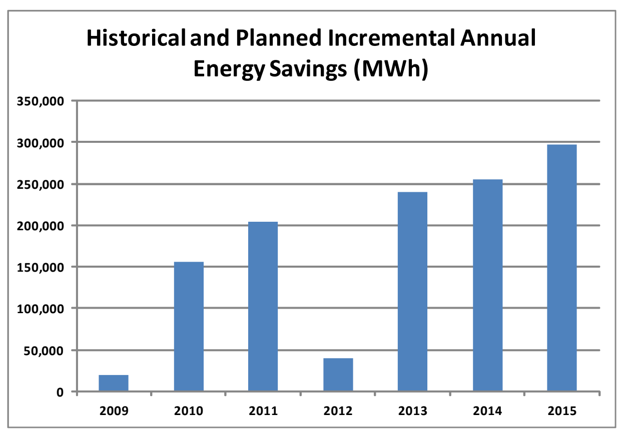
27. MEEIA DSM Programs and Demand-Side Programs Investment Mechanism (DSIM)

a. Request for Approval of DSM Programs

In its MEEIA application in Case No. EO-2012-0142, Ameren Missouri requested approval of eleven DSM programs.[86] Ameren Missouri plans to transition from its current "bridge" DSM programs to its Commission-approved three-year MEEIA DSM programs in early 2013. Ameren Missouri will have independent EM&V performed on each of its MEEIA DSM programs following completion of each program year.

Following is Staff's summary of the historical and planned spending and incremental annual energy MWh savings for Ameren Missouri's "Cycle 1" programs (historic for 2009, 2010 and 2011), "bridge" programs (planned for 2012) and MEEIA programs (planned for 2013, 2014 and 2015).





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[86] See Table 3.4 of the *2013 – 2015 Energy Efficiency Plan* in Case No. EO-2012-0142 for a summary description of each program.

b. Request for Approval of DSIM

In its MEEIA application, Ameren Missouri requested approval of a DSIM tracker which includes the following features and components:

- DSIM rates;
- Cost recovery component;
- Shared net benefits component (relating to the throughput disincentive);
- Performance incentive component; and
- Opt-out provision.

c. Unanimous Stipulation and Agreement Resolving Ameren Missouri's MEEIA Filing

On July 5, 2012, following extensive negotiations, the parties to Case No. EO-2012-0142 filed a *Unanimous Stipulation and Agreement Resolving Ameren Missouri's MEEIA Filing* ("*MEEIA Stipulation and Agreement"*). Staff recommends that the Commission approve the highly confidential *MEEIA Stipulation and Agreement* and include the following annual revenue requirement in this general rate proceeding:

- $49,108,352 – which is one-third of the estimated costs for the eleven MEEIA DSM programs for the three-year program plan; and
- $30,450,000 – which is ninety percent of the annualized value of a three year annuity of 26.34 percent of the estimated pre-tax net shared benefits arising from the three-year program plan.

Both of the above components of annual revenue requirement will be tracked and trued-up in subsequent general electric rate proceedings in accordance with the terms and conditions contained in the *MEEIA Stipulation and Agreement*.

Staff Expert/Witness: John A. Rogers

d. MEEIA DSM Costs Included in Expense

As previously discussed, DSM costs incurred by Ameren Missouri on or after the effective date of the MEEIA DSM tariff sheets will no longer be treated using a regulatory asset and expense-amortization approach. Instead, they will be treated as defined in the *MEEIA Stipulation and Agreement* filed in Case No. EO-2012-0142. Under the *MEEIA Stipulation and Agreement*, a three-year average of projected DSM program costs is to be included in Ameren Missouri's cost of service in this case, as well as Ameren Missouri's share of the projected net benefits associated with its three-year DSM program plan. The program costs, in the amount of $49,108,352, are included as an adjustment to administrative and general expense in Staff's income statement. Ameren Missouri's share of projected net benefits, in the amount of $30.45 million, are included in Staff's case as an adjustment to other power supply expense in Staff's income statement. Both amounts are subject to true-up pursuant to the provisions of the *MEEIA Stipulation and Agreement*, with any under-collections or over-collections of those amounts in rates being charged to or refunded to customers with interest in subsequent Ameren Missouri general rate proceedings.

Staff Expert/Witness: Mark L. Oligschlaeger

<u>28. Low-Income Weatherization Program</u>

The Ameren Missouri low-Income Weatherization Program is not a MEEIA program. Therefore with respect to the Ameren Missouri Low Income Weatherization program, Staff recommends the Commission order:

1) That the Ameren Missouri un-utilized low-income weatherization funds from previous allocations remain in the Missouri State Environmental Improvement and Energy Resource Authority ("EIERA") account for future use by the Ameren Missouri Weatherization Agencies;
2) That Ameren Missouri continue to collect $1.2 million in rates annually, of which $1.14 million will be for low-income weatherization as currently allocated between the Weatherization Agencies, and $60,000 allocated annually to the biennial evaluation of the low-income weatherization program;
3) That the second evaluation of Ameren Missouri's weatherization program include a component that evaluates the impact on the gas service of the weatherization of the Company's low-income customers that are provided both natural gas and electricity from Ameren Missouri; and
4) That the timing of any evaluation subsequent to the second biennial evaluation should be at the discretion of the Company in consultation with the stakeholder group, but not less often than every five years.

There are specific programs designed to help low-income customers with energy conservation. Low-income consumers often live in housing that is energy inefficient with substandard insulation and other deficiencies. These customers would benefit from building-shell energy conservation measures such as weatherization or energy-efficient appliances. The Missouri Low Income Weatherization Assistance Program ("Weatherization Program") is administered by the Missouri Department of Natural Resources ("MDNR") using federal, state, and utility funding. The MDNR Weatherization Program is administered locally by Community Action Agencies or other local agencies ("Weatherization Agencies"). The Ameren Missouri Weatherization Program is administered by the MDNR and the twelve MDNR Weatherization Agencies listed in Appendix 3, Schedule HEW-1. In addition, the areas served by all the MDNR Weatherization Agencies in Missouri, with those receiving funding from Ameren Missouri annotated, are shown in Appendix 3, Schedule HEW-2. Ameren Missouri has chosen to use the Missouri State EIERA[87] to administer its weatherization funds. Ameren Missouri deposits its annual authorized low income weatherization funds for the MDNR and the Weatherization Agencies it supports with the EIERA. Subsequently, the EIERA provides these funds to Ameren Missouri's Weatherization Agencies.

The federal government, through the American Recovery and Reinvestment Act ("ARRA"), provided special funding of $128 million statewide for the MDNR Weatherization Program for the period of April 2009 – March 2012 ("ARRA Period"). The ARRA provided an average of $6,500 of weatherization for households with income at 200% or less of the Federal Policy Guidelines. In the previous three-year period (2006-2008) prior to the ARRA Period, federal funding for the MDNR Weatherization Program was approximately $18 million, and the average amount of weatherization per household was $3,000. The Weatherization Agencies had to utilize the ARRA funding before the March 2012 deadline.

[87] The Missouri State EIERA was established to manage and disburse federal and other weatherization funds for MDNR to the Weatherization Agencies according to MDNR guidelines. Currently, Ameren Missouri and other Missouri jurisdictional utilities utilize the EIERA to manage their weatherization funds. The funds at the EIERA are invested to earn a return until they are distributed so the value of the funds is enhanced.

In the July 13, 2011, *Report and Order*[88] ("Order") in Case No. ER-2011-0028, Ameren Missouri was ordered to continue its annual payments of $1.2 million for funding weatherization of residences of low-income Ameren Missouri electric customers and was authorized to collect $1.2 million in rates annually for the Ameren Missouri low-income weatherization program. For the most recently concluded Program Year 2010-2011, the projected budget has been modified for the period as shown in Appendix 3, Schedule HEW-1. Due to a carryover of funds from the previous year, ** _______ ** was available at EIERA. During the 2011 Program Year, ** ____________ ** was utilized by the Ameren Missouri Weatherization Agencies, so ** ____________ ** was carried over into the 2012 program year. Some of the under-utilization of Ameren Missouri funds is because of the Weatherization Agencies' focus on using the ARRA funding and some restrictions on ARRA funds being combined with Ameren Missouri funds in the weatherization of a residence. At the end of the ARRA period, the Weatherization Agencies anticipate using any surplus Ameren Missouri funds to help provide for a higher level of weatherization activity than before ARRA. The allocation and actual expenditure of each of the Ameren Missouri Weatherization Agencies over the 2011 program year is also shown in Appendix 3, Schedule HEW-1.

In the 2012 program year (November 2011 - October 2012), Ameren Missouri funding of $1.14 million is budgeted to be sent to the Weatherization Agencies for the weatherization of qualifying customers. Combined with the carryover from the previous year, the Ameren Missouri weatherization agencies are provided a total of ** __________ ** to weatherize residences. As of March 31, 2012, ** _______ ** had been expended by the weatherization agencies. Of the $1.2 million Ameren Missouri was ordered to provide for the weatherization program, $60,000 has been allocated for the evaluation of the program for the January-December 2011 time period. The details of the funding and expenditures are in Appendix 3, Schedule HEW-3.

Staff recommends that the Ameren Missouri un-utilized low-income weatherization funds from previous allocations remain in the EIERA account for future use. In addition, in order to have some additional Ameren Missouri funds for weatherization now that ARRA funds

[88] *In the Matter of Union Electric Company d/b/a Ameren Missouri's Tariffs to Increase its Annual Revenues for Electric Service*, Case No. ER-2011-0028, (*Report and Order*, issued July 13, 2011, effective July 23, 2011), pp. 44-47 (Missouri Public Service Commission).

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are no longer available, Staff recommends that Ameren Missouri continue to collect $1.2 million in rates annually, of which $1.14 million will be for low-income weatherization, as currently allocated between the Weatherization Agencies, and $60,000 allocated annually to the biennial evaluation of the low-income weatherization program. Consistent with the provisions of the order, this is intended to provide $120,000 as the maximum funding for each evaluation. In the event an evaluation costs less than $120,000, the remaining funds will serve to reduce the next annual $60,000 withholding. Staff notes the due date of the first evaluation was modified by the Commission Order in Case No. ET-2012-0358 from April 30, 2012, to July 31, 2012.

Ameren Missouri is unique among jurisdictional utilities in having combination customers. Therefore, Staff recommends that the second evaluation include a component that evaluates the impact on the gas service of the weatherization of the Company's low-income customers that are provided both natural gas and electricity from Ameren Missouri. These results would be beneficial not only to Ameren Missouri, but also for Staff, the Office of the Public Counsel and MDNR in understanding the overall impact of weatherization on low-income households. The low-income weatherization program and evaluation should continue to be conducted in consultation with the Ameren Missouri energy efficiency stakeholder group.

Staff does not support the continuous biennial evaluations of the Ameren Missouri Weatherization Program. After the second evaluation, the stakeholder group should compare results of the two evaluations and should determine if there is a significant difference in results. Staff recommends that any subsequent evaluations be at the discretion of the Company in consultation with the stakeholder group but at least every five years. Any funding for evaluation not used should be provided to the Weatherization Agencies for their use in weatherizing additional residences

Staff Expert/Witness: Henry E. Warren

29. Keeping Current Pilot Program

Ameren Missouri's Keeping Current ("KC") Pilot Program went live October 15, 2010. It was approved by the Commission in the Third Non-Unanimous Stipulation and Agreement ("Agreement") in ER-2010-0036 as a two-year pilot program. The program was designed to study assistance to very low-income residential customers with payment of current or future heating or cooling electricity bills on a timely basis and, at the same time, to eliminate arrearages to the Company. The program provided a comprehensive approach including: a) tiered bill credits for heating bills; b) flat rate credit for monthly cooling bills; c) arrearage forgiveness; and d) a requirement for eligible participants to apply for available Low-Income Home Energy Assistance Program ("LIHEAP") and weatherization assistance. The purpose of the comprehensive approach was to assist and evaluate the effects of a more affordable bill for the very low income customer group based on level of poverty, the impact of credits received and the arrearage forgiveness incentive. The KC tariff sheets, which took effect August 7, 2010, stated that program funding would cease effective July 31, 2012, and no further funding would be provided beyond that date unless the term is extended. As set forth in the Agreement, an evaluation of KC would be conducted by an independent, third-party evaluator under contract with a company acceptable to the Company, Commission Staff, the Office of the Public Counsel, Missouri Industrial Energy Consumers (MIEC), AARP, Consumers Council of Missouri, and Missouri Retailers Association (collectively, the Collaborative). In addition, the Agreement allowed the KC pilot to be funded by an annual contribution of $500,000 from the Company and an annual contribution from the Company's ratepayers of approximately $581,000, which is collected through a surcharge added to the customer charge of each customer class.

a. Recommendation

Based on Staff's review of the initial evaluation of the program conducted by the program evaluator (Apprise, Inc.) and of the direct testimony of Company witness Mark F. Mueller, Staff can neither support nor oppose the continuation of the KC pilot program based on the information seen to date. Given that the program is a two-year program that has not yet expired as of the date of this report, and given that Company witness Mark F. Mueller has stated in his direct testimony that the it is not likely that the final evaluation will be available to the Collaborative until September 2012, Staff cannot make a final recommendation in favor of or against the program.

Staff would not be opposed to the continuation of the KC program through September 2012, if a component is added to the pilot to provide cooling bill credits to those customers who participate during the months of June through August. Staff would like to review the effectiveness of this component of the KC program since Staff is unaware of any similar program. The cooling credits component of KC may allow customers who otherwise would not have the benefit of a heating bill credits component the opportunity to receive the monthly cooling bill credits. This benefit would provide very low-income customers education regarding hot weather safety and why the use of air conditioning during the extreme hot weather months may reduce health and safety risks.

Staff's primary concern with the continuation of the KC program at this time is the customer surcharge that partially funds the program. Staff cannot agree to any increase in the surcharge at this time because of the lack of data regarding the program. Staff could agree to allowing the amount to remain the same; however, if the Company or the Collaborative would like to modify the program and the customer surcharge amount at a later date, Staff would not be able to agree unless the surcharge amount were to stay the same or be reduced. Staff would view any increase in the surcharge outside of a rate case to be single-issue ratemaking, which is not allowed. Therefore, it is possible the KC program will continue unchanged until the Company's effective date of rates in its next general rate case.

b. Overall Evaluation to Date

Staff's overall evaluation to date of the KC program is as follows:

- Tiered credits are too complex, and long-term effectiveness is currently unknown;
- The program is too complex to explain and to be understood by customers;
- Eligibility should perhaps be modified to include up to 125% of the Federal Poverty Guidelines, but more data is needed;
- Appears the program does assist with behavior modification for on-time payments;
- Appears arrearage forgiveness could be a good incentive for timely payments;
- Appears program reduces uncollectibles;
- Appears program encourages weatherization;
- Appears the inclusion of LIHEAP energy assistance is beneficial to both the consumer and Company;
- Appears third-party evaluation with interview surveys has increased knowledge of customer and program impact; and
- Uncertain at this time if ratepayers should be subsidizing the program through a surcharge; however, appears cost and benefits could be a wash for ratepayers given the program has the potential to reduce uncollectibles, which otherwise could result in an increase to ratepayers.

c. Qualifying Criteria

The program was designed to help residential very low-income customers whose annual household income is no more than 100% of the Federal Poverty Level ("FPL") as established by the poverty guidelines updated periodically in the Federal Register by the U.S. Department of Health and Human Services under the authority of 42 U.S.C. § 9902 (2). Other eligible customers are those whose household income is up to 135% FPL who use electricity for cooling and are either elderly, disabled, or have a chronic medical condition, or live in households with children five years of age or younger.

d. Credits

- Participant's account must be current within two billing cycles to continue on the program.
- Participants that default on payments for two consecutive months will be removed from the program and not be allowed back into the program for 12 months.
- Participants must have no arrearage that includes current or historical mishandling of their account, i.e., theft, tampering, or diversion.
- Participants receiving electric heating monthly credits must be enrolled in budget billing.
- Monthly heating bill credits will only be applied for those bills where the participant makes an on-time (before delinquent date) payment equal to the amount due, less the pre-determined monthly credit, based on FPL.
- Billing statements will reflect the amount due, the credit and the new payment required.
- Participants must complete a signed release provided by the intake agency to allow the sharing of their customer-specific account information to participate in the program.
- Participants will apply for LIHEAP and weatherization.

The credit amount varies based on "Electric Heating" versus "Non-electric Heating" and based on FPL at the time of enrollment as follows:

Electric Heating Customers Monthly Bill Credit

0-25% FPL	$55.00
26%-50% FPL	$40.00
51%-75% FPL	$25.00
76%-100% FPL	$10.00

Non-Electric Heating Customers Monthly Bill Credit

0-25% FPL	$20.00
26%-50% FPL	$15.00
51%-75% FPL	$10.00
76%-100% FPL	$5.00

e. Arrearages

0-100% FPL - Arrearage forgiveness - Monthly arrearage bill credit amount will be 1/12th of the customer's arrearage amount until arrears are paid. Participant must make an initial payment of at least 1/12th of any arrearage through energy assistance pledge or personal funds. The arrearage reduction agreement will remain in effect as long as the participant remains current.

Participant must remain current within two billing cycles to continue on KC. Participants that default on two consecutive months will be removed from the program and not allowed back into the program for 12 months.

Monthly arrearage bills credits will only apply for those bills where customer makes an on-time (before the delinquent date) payment equal to the amount due less the pre-determined monthly credit, based on FPL. The bill statement will reflect the amount due, the credit and the new payment required.

f. Cooling Credits

Monthly cooling credits participants may not receive "Cooling Bill Credits" concurrently with electric heating bill credits, non-electric heating bill credits or arrearage credits.

Criteria for participants in the monthly cooling credit component of KC are as follows:

Monthly Cooling Bill Credit (June–August Billing Periods)

0-100% FP	$25.00
101%-135% FPL (Seniors, Disabled, Chronically Ill per Doctor's Letter, or Households with Children 5 years or younger)	$25.00

g. Program Administration

The Company's "DollarMore" participating agencies provide the screening and determination of applicants' FPL per federal guidelines. The Company agreed to provide the agencies with a set of participation criteria to assure proper application and acceptance into the program. Intake agencies must obtain a signed release from applicants to allow the sharing of their specific account information to participate in the program. The Company will have a tracking program to track participants in the program for obtaining the data or measurements of the evaluation, and the Company agreed to provide to the Collaborative a semiannual evaluation following program implementation date.

Staff Expert/Witness: Carol Gay Fred

F. Depreciation Expense

1. Depreciation Summary

Staff recommends that for purposes of setting rates in this matter, the Commission reduce Ameren Missouri's rate base by $2,528,567. Staff also recommends that the Commission direct Ameren Missouri to achieve compliance with all applicable depreciation regulations and Commission orders by June 1, 2013, to avoid prosecution of a complaint by Staff. Finally, Staff recommends that the Commission authorize Ameren Missouri to establish a new account numbered as Account 391.003 Enterprise Systems to be depreciated at an ordered depreciation rate of 5%.

In response to Staff Data Requests, Ameren Missouri is unable to provide responsive information that demonstrates it is in compliance with the Commission rules for utility plant recordkeeping. This alerted Staff to the issues that support its recommendations.

Staff's recommendations stem from three issues. First, Ameren Missouri's failure to comply with relevant depreciation regulations is not only, in and of itself, unlawful, but it also impedes the performance of accurate depreciation studies and potentially impairs Ameren Missouri's ability to provide safe and adequate service.

Second, Ameren Missouri has not been recording sufficient details of retirement activities to facilitate future depreciation studies, and as required by the FERC instruction. Ameren Missouri's failure to separately record retirement information as required by the FERC instructions for Account 108 at C also impedes the ability of Ameren Missouri and other parties – including Staff – to perform future depreciation studies.

Third, Ameren Missouri unreasonably delays reflecting retirements on its books. This delayed recording affects several matters, described below, relating to the calculation of average service lives and interim and terminal costs of removal, which ultimately impact the calculation of depreciation rates themselves, and also the level of depreciation expense included in rates. It also affects overall rates by misstating the rate base to which Ameren Missouri's rate of return is applied. In a given case at a given time, these costs could net to the benefit of either shareholders or ratepayers. In this case at this time, the accounts studied benefit shareholders by inappropriately increasing rate base in the amount of $2,528,567. Staff has not quantified the effects of the delayed retirement recordings on net depreciation expense at this time, as doing so would require a full depreciation study.

Also, Ameren Missouri is in the process of implementing a new enterprise software system. Staff recommends a new depreciation asset account be created for the assets associated with this software system, and numbered as Account 391.003 Enterprise Systems with an ordered depreciation rate of 5%.

a. Records Maintenance and Accessibility

Commission Rule 4 CSR 240-20.030 directs electric corporations like Ameren Missouri to comply with the FERC Uniform Systems of Accounts (USOA) for electric companies.[89] In pertinent part, 4 CSR 240-20.030 (3) requires utilities to:

[89] Commission Rule 4 CSR 240-20.030 (4) specifically states that "[t]his rule shall not be construed as waiving any recordkeeping requirement in effect prior to 1994."

(A) Maintain plant records of the year of each unit's retirement as part of the "continuing plant inventory records," as the term is otherwise defined at Part 101 Definitions 8. and paragraph 15,001.8;

. . .

(C) Record electrical plant acquired as an operating unit or system at original cost, estimated if not known, except as otherwise provided by the text of the intangible plant accounts, when implementing the provisions of Part 101 Electric Plant Instructions 2.A. and paragraph 15,052.2.A;

. . .

(F) Use the list of retirement units contained in its property unit catalog when implementing the provisions of Part 101 Electric Plant Instructions 10.A. and paragraph 15,060.10.A;

. . .

(H) Charge original cost less net salvage to account 108., when implementing the provisions of Part 101 Electric Plant Instructions 10.F. and paragraph 15,060.10.F;

(I) Keep its work order system so as to show the nature of each addition to or retirement of electric plant by vintage year, in addition to the other requirements of Part 101 Electric Plant Instructions 11.B. and paragraph 15,061.11.B;

(J) Maintain records which classify, for each plant account, the amounts of the annual additions and retirements so as to show the number and cost of the various record units or retirement units by vintage year, when implementing the provisions of Part 101 Electric Plant Instructions 11.C. and paragraph 15,061.11.C;

(K) Maintain subsidiary records which separate account 108 according to primary plant accounts or subaccounts when implementing the provisions of Part 101 Balance Sheet Account 108.C. and paragraph 15,110.108.C;

(L) Maintain subsidiary records which separate account 111 according to primary plant accounts or subaccounts when implementing the provisions of Part 101 Balance Sheet Accounts 111.C. and paragraph 15,113.111.C; and

(M) Keep mortality records of property and property retirements that will reflect the average life of property which has been retired and will aid in estimating probable service life by actuarial analysis of annual additions and aged retirements when implementing the provisions of Part 101 Income Accounts 403.B. and paragraph 15,404.403.B.

Ameren Missouri is apparently maintaining its Continuing Plant Records and the Company does appear to record electrical plant acquired as an operating unit or system at original cost, in apparent conformity with subsection (A). However, the Company does not use the list of retirement units contained in its property unit catalog, as required by subsection (F). The Company does not adequately maintain records which classify, for each plant account, the amounts of the annual additions and retirements so as to show the number and cost of the various record units or retirement units by vintage year as required by subsection (H). By failing to keep mortality records of property and property retirements on a complete and timely basis, Company records do not reflect the average life of property which has been retired to aid in estimating probable service life by actuarial analysis of annual additions and aged retirements. These failures have the effects of overstating the cost of removal component of depreciation expense and inflating the value of Ameren Missouri's rate base.

The FERC USOA under GENERAL PLANT INSTRUCTIONS states in pertinent part the following:

> No utility shall destroy any such books or records unless the destruction thereof is permitted by rules and regulations of the Commission. (18 CFR Ch. I SUBCHAPTER C—ACCOUNTS, FEDERAL POWER ACT PART 101—UNIFORM SYSTEM OF ACCOUNTS PRESCRIBED FOR PUBLIC UTILITIES AND LICENSEES SUBJECT TO THE PROVISIONS OF THE FEDERAL POWER ACT).
>
> Each transfer of data from one media to another must be verified for accuracy and documented. Software and hardware required to produce readable records must be retained for the same period the media format is used. (18 CFR Ch. I (4–1–11 Edition) PART 125—PRESERVATION OF RECORDS OF PUBLIC UTILITIES AND LICENSEES 125.2, 2. Records. Part C (3)).

In discussions, the Company has offered the Staff the opportunity to review printouts of the old system's data. Upon transition to the current system, Ameren Missouri made printouts of the old system's data and in violation of 18 CFR Ch. I SUBCHAPTER C[90] Ameren Missouri transitioned the old data systems <u>without retirement records</u> to the new electronic systems and disposed of the old system.

[90] Pursuant to Commission rule 4 CSR 240-3.175. Ameren Missouri is required to comply with the FERC USOA.

b. Retirement Recording

The Company does continue to maintain a data set that has been used for actuarial analysis in apparent compliance with 4 CSR 240-20.030-(3)-(M), but that data now appears to be incomplete or inaccurate for certain accounts.

For example, Staff reviewed the retirements made when the new scrubbers were installed at the Sioux Power Station. Ameren Missouri retired plant that was no longer needed after the installation of the scrubbers, or that was in the way for the placement of the scrubbers. In response to a Staff Data Request seeking information related to retirements at Sioux, Ameren Missouri stated that "all assets retirements related to the installation of the scrubber have been recorded," and provided a spreadsheet listing what Ameren Missouri purported to be retirements.

Staff visited the Sioux power Station on June 14, 2012 and found numerous retired items that had not yet been removed from the site. Also, Staff reviewed Ameren Missouri's books to study the accuracy of Ameren Missouri's retirement recordings. Staff focused its review on Account 312, Boilers, with a balance exceeding $550 million. As recorded, the retirements at Sioux involved plant valued at nearly $10 million, but Ameren Missouri did not record any salvage or cost of removal as is required by the Commission (4 CSR 240-3.175) and the FERC-USOA under the Code of Federal Regulations Title 18 Federal Powers Act Part 101. The FERC instructions for Account 108 at C state, in pertinent part, that:

> These subsidiary records shall reflect the current credits and debits to this account in sufficient detail to show separately for each such functional classification:
>
> . . .
>
> (b) The book cost of property retired,
>
> (c) Cost of removal,
>
> (d) Salvage,
>
> . . .

Ameren Missouri's failure to follow the directions stated for USOA account 108 is indicated by its failure to record, separately, the book cost of the property retired, the cost of removal, and the salvage values associated with the Sioux retirements.

In Staff's Data Request No. 0130, the following request was made:

> Please provide the portion of the depreciation accrual in Account 108 attributable to future costs of removal. Please include entries showing how the Company tracks and accounts for net salvage amounts received separately from other components of the depreciation expense. A description of this calculation can be found in the Commission's Third Report and Order, GR-99-315, at page 16.

For the period October 1, 2010, to September 30, 2011, the portion of the depreciation accrual in Account 108 attributable to future interim retirements (costs of removal) totaled $76,209,396. Ameren Missouri's Power Plant Asset Management system tracks the net salvage component of depreciation expense separate from the life component of depreciation expense. Because the Power Plant system tracks this, separate entries are not booked to account for the two separate components of depreciation expense.

However, Ameren Missouri is admittedly unable or unwilling to comply with the details required by its favored method when it states: "Because the Power Plant system tracks this, separate entries are not booked to account for the two separate components of depreciation expense."

In prior depreciation studies, Ameren Missouri has calculated the depreciation rate for a particular asset or group of assets as follows:

$$\text{Depreciation Rate} = \frac{100\% - \%\ \text{Net Salvage}}{\text{Average Service Life (years)}}$$

In this formula, net salvage equals the gross salvage value of the asset minus the cost of removing the asset from service. The net salvage percentage is determined by dividing the net salvage experienced for a period of time by the original cost of the property retired during that same period of time.

Thus, Ameren Missouri's failure to separately record retirement information as required by the FERC instructions for Account 108 at C also impedes the ability of Ameren Missouri and other parties – including Staff – to perform future depreciation studies.

c. Unreasonable Delays in Recording Retirements

Ameren Missouri uses software Power Plan also known as "PowerPlant" for tracking all depreciable assets, and asserts, in response to Staff data requests, that the PowerPlant information - in conjunction with printed out paper records from older software – comprises its continuing property records.[91] These records are Ameren Missouri's basis for its calculation of the rate base used for purposes of setting rates in this case.

Unitization is when the work orders are entered into the CPR with the individual parts being listed with their associated costs so as to better describe and true-up and adjust the project expenses. Work orders are initiated within PowerPlant, with approvals, cost estimates, etc., which get the appropriated locations (division) and accounts assigned. As a work order progresses, the work in progress costs (purchase orders, invoices, estimates) are recorded as open, authorized to accept charges. When the asset is placed in service, the appropriate closing of the work order costs are to be booked within (normally) three months of in-service or added to rate base. A unitization is required to complete the project and complete the work order process before it can be closed. In this system, a unitization includes the recording of any retirements along with cost of removal and salvage. A history of all the steps is retained in the system.

Ideally, all retirements should be booked immediately, but Staff recognizes that some degree of delay is unavoidable in order to mitigate the expense associated with maintaining Ameren Missouri's books. Unitization is when the components of a larger item of plant are consolidated for book keeping purposes. For example, many individual pumps, tubes, valves, and controls are unitized as the Sioux I Boiler.

Unitization is a critical component of accurate and correct record keeping. Without unitization all costs are estimated and future retirements cannot be accurately booked. Unitization should be completed within a few months of a project's completion.

Historically, Staff has included any plant additions that have become used and useful as of a predetermined date in Ameren Missouri's rate base when calculating rates. For example, in Ameren Missouri's last rate case, Staff recommended inclusion of both the Taum Sauk investment and the Sioux Scrubbers in Ameren Missouri's rate base. Staff has not, in the recent past, done an extensive audit of retirements that occur prior to the applicable cutoff date in a rate case.

Ameren Missouri provided Staff a demonstration of the PowerPlant software now in use at Ameren Missouri. Given this demonstration, Staff became aware that Ameren Missouri's

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[91] The Company initiated the use of PowerPlant software 2005 for tracking all depreciable assets. This is package software specifically designed and marketed for use in FERC-regulated utilities. Thus the first full year CPR, work orders, plant records, retirements, salvage and cost of removal are complete starting in 2005.

retirement records from 2005 onward required for a depreciation study are reliable and readily accessible. This was demonstrated by the fact that the unitization of projects in some instances goes back to the implementation of this "new" system in 2005 and the failure to move the old retirement data system into the new system.[92]

This overstatement of retirements inflates rate base and in a depreciation study will make assets appear to have shorter average service lives then they may actually experience. Following the demonstration of the work order process, Staff requested a demonstration of the CPR database. Specifically, Staff requested to see the burner entries for the Labadie Power Station. Upon querying the database, only 33 out of 96 burners were found with the rest having not yet been unitized.

Staff's analysis of the relevant burner information based upon the last version of the CPR Staff had received from Ameren Missouri follows:

Burner Analysis														
Activity Code	Asset ID	Property Unit Code	Work Order	Work Order Description	Asset Location	vintage	2005	2006	2007	2008	2009	2010	2011	Grand Total
Addition	6208337	Non-Unitized	21789	LBD U1 Replace	LB01-Labadie-Unit #1	2008				871,473.31				871,473.31
Addition	8425737	Non-Unitized	21789	LBD U1 Replace	LB01-Labadie-Unit #1	1994				(1,200,000.00)				(1,200,000.00)
Addition	8425744	Non-Unitized	22792	LB4S U4 Coal Burner	LB04-Labadie-Unit #4	2009					668,306.00			668,306.00
Addition	10557379	Non-Unitized	22792	LB4S U4 Coal Burner	LB04-Labadie-Unit #4	1992					(1,200,000.00)			(1,200,000.00)
Retirement	1085527	BOILER,CORNER BURNER	22811	LB3S U3 Coal Burner	LB03-Labadie-Unit #3	2009					705,887.44			705,887.44
Retirement	1085528	BOILER,CORNER BURNER	22811	LB3S U3 Coal Burner	LB03-Labadie-Unit #3	1993					(1,200,000.00)			(1,200,000.00)
Retirement	1085529	BOILER,CORNER BURNER	25726	LB2S - U2 Coal Burner	LB02-Labadie-Unit #2	2010						457,170.82		457,170.82
Retirement	1085534	BOILER,CORNER BURNER	25726	LB2S - U2 Coal Burner	LB02-Labadie-Unit #2	1995						(750,000.00)		(750,000.00)
												Net Total		2,702,837.57

Four work orders representing the burner replacements are shown. Simply stated, rate base is plant in service minus depreciation reserve. In the example above, the apparently arbitrary combination of original cost less net salvage in three out of four cases results in a charge of $1.2 million to the depreciation reserve. The fourth is for $750,000, the net effect of which is to increase rate base by an additional $4.35 million based on net salvage of a yet to be accurately accounted for unitized amount.

[92] During discussions, Staff learned that the Company has completed projects on the books from 2005 that have not yet been unitized.

Remembering: Rate Base = (Plant in Service) minus (negative Depreciation Reserve)

Negative depreciation reserve is an addition to rate base, because a double negative (minus a negative) is a positive.

Consequently at a Rate of Return of 5% this amounts to $675,000 so far and an additional $217,500 of earnings going forward annually. So over the asset life, an estimated additional $3,371,250 of earnings is gained. In addition, were a depreciation study to be conducted using these numbers, the depreciation reserve would appear deficient and the cost of removal inflated, adding yet additional costs on ratepayers. Consequently, in this example, for every dollar the Company adds in plant assets, it gains another $1.61 of inadequately documented costs. Thus, Ameren Missouri has a financial incentive NOT to comply with the Commission's rules on a timely basis.

Based on its analysis of only Account 312 Boilers, Staff has determined that the account is likely overstated by 161%. In another instance of an attempt to verify Ameren Missouri's CPR, Staff verified the retirements of the four 900 horsepower motors used to drive the retired induced draft fans. All four motors had been removed. However, only three of the fans had been removed from the CPR. The three retired fans were each valued at a retirement of $167,958.

Ameren Missouri									
MPSC 0281									
Sioux Scrubber Retirements									
Sub Account	**Utility Account**	**Retirement Unit**	**Month**	**Work Order**	**Asset Id**	**Quantity**	**Cost**	**Asset Description**	**Asset Location**
53-SIOUX	1312000-BOILER PLANT EQUIPMENT	17508:BDS-ST-EA:MOTOR,INDUCED DRAFT FAN	Dec-10	15443	889840	-1	($167,957.97)	MOTOR,INDUCED DRAFT FAN, UNIT #1A 7000 HP 900	SX0100A-Sioux-Unit #1-Item A
53-SIOUX	1312000-BOILER PLANT EQUIPMENT	17508:BDS-ST-EA:MOTOR,INDUCED DRAFT FAN	Dec-10	15443	889841	-1	($167,957.97)	MOTOR,INDUCED DRAFT FAN, UNIT #1B 7000 HP 900	SX0100B-Sioux-Unit #1-Item B
53-SIOUX	1312000-BOILER PLANT EQUIPMENT	17508:BDS-ST-EA:MOTOR,INDUCED DRAFT FAN	Dec-10	15443	889842	-1	($167,957.97)	MOTOR,INDUCED DRAFT FAN, UNIT #2A 7000 HP 900	SX0200A-Sioux-Unit #2-Item A

By failing to retire the fourth fan, rate base is inflated by $167,958. Additionally, there is a likelihood that salvage would have been earned as the result of selling the old motors. Because no adjustments have been made in the years since these motors were retired, there is further overstatement of rate base in the Company's books and records.

During Staff's site visit visual confirmation was attempted for the following list of items:

MPSC Case No. ER-2012-0166					
Data Request No.: MPSC 0276					
Continuing Plant Inventory Record Account 312					
03/31/2012					
Plant	**53-SIOUX**				
Account	**Unit Of Property**	**Add'l Asset Description**	**Asset Location**	**Vintage**	**Total**
1312000-BOILER PLANT EQUIPMENT	BARGE	BALANCE RECORD	SX00-Sioux Plant Common Area	2002	1,604,625
1312000-BOILER PLANT EQUIPMENT	BARGE	Barge-Personnel Emer Access 18'x80'	SX00-Sioux Plant Common Area	2010	5,498
1312000-BOILER PLANT EQUIPMENT	BOILER,FLAME SCANNERS	BOILER,FLAME SCANNERS	SX01-Sioux Unit 1	2000	133,064
1312000-BOILER PLANT EQUIPMENT	BOILER,FLAME SCANNERS	BOILER,FLAME SCANNERS	SX02-Sioux Unit 2	2002	146,208
1312000-BOILER PLANT EQUIPMENT	COMPACTOR,COAL	COMPACTOR,COAL	SX00-Sioux Plant Common Area	1968	20,059
1312000-BOILER PLANT EQUIPMENT	CRUSHER	Coal Crusher 'A'	SX0000A-Sioux-Common-Item A	1997	531,619
1312000-BOILER PLANT EQUIPMENT	CRUSHER	CRUSHER	SX0000B-Sioux-Common-Item B	1997	531,619
1312000-BOILER PLANT EQUIPMENT	DOZER	DOZER	SX00-Sioux Plant Common Area	1982	300,000
1312000-BOILER PLANT EQUIPMENT	DOZER	DOZER	SX00-Sioux Plant Common Area	1994	519,578
1312000-BOILER PLANT EQUIPMENT	DOZER	DOZER	SX00-Sioux Plant Common Area	1995	722,981
1312000-BOILER PLANT EQUIPMENT	DOZER	Work Order Addition	SX00MEB-Sioux-Common-Mobile Equipment Building	2007	958,873
1312000-BOILER PLANT EQUIPMENT	FRONT LOADER	FRONT LOADER	SX00-Sioux Plant Common Area	1968	34,158
1312000-BOILER PLANT EQUIPMENT	FRONT LOADER	FRONT LOADER	SX00-Sioux Plant Common Area	1969	33,334
1312000-BOILER PLANT EQUIPMENT	FRONT LOADER	FRONT LOADER	SX00-Sioux Plant Common Area	1977	5,599
1312000-BOILER PLANT EQUIPMENT	FRONT LOADER	FRONT LOADER	SX00-Sioux Plant Common Area	1981	7,834
1312000-BOILER PLANT EQUIPMENT	FRONT LOADER	FRONT LOADER	SX00-Sioux Plant Common Area	1984	6,792
1312000-BOILER PLANT EQUIPMENT	FRONT LOADER	FRONT LOADER	SX00-Sioux Plant Common Area	1994	165,095
1312000-BOILER PLANT EQUIPMENT	FRONT LOADER	FRONT LOADER	SX00-Sioux Plant Common Area	1997	28,292
1312000-BOILER PLANT EQUIPMENT	HVAC SYSTEM	HVAC SYSTEM	SX00STH-Sioux-Common-Stacker House	1967	6,112
1312000-BOILER PLANT EQUIPMENT	HVAC SYSTEM	HVAC SYSTEM	SX00MEB-Sioux-Common-Mobile Equipment Building	1984	2,386
1312000-BOILER PLANT EQUIPMENT	HVAC SYSTEM	HVAC SYSTEM	SX00STH-Sioux-Common-Stacker House	1992	1,869
1312000-BOILER PLANT EQUIPMENT	HVAC SYSTEM	HVAC SYSTEM	SX00MEB-Sioux-Common-Mobile Equipment Building	1995	1,478
1312000-BOILER PLANT EQUIPMENT	HVAC SYSTEM	HVAC SYSTEM	SX00STH-Sioux-Common-Stacker House	1997	65,868
1312000-BOILER PLANT EQUIPMENT	METAL DETECTOR	METAL DETECTOR	SX0006A-Sioux-Common-Coal Conveyor #6A	1984	10,275
1312000-BOILER PLANT EQUIPMENT	METAL DETECTOR	METAL DETECTOR	SX0006B-Sioux-Common-Coal Conveyor #6B	1984	10,275
1312000-BOILER PLANT EQUIPMENT	METAL DETECTOR	METAL DETECTOR	SX005A2-Sioux-Common-Conveyor 5A2	1997	30,622
1312000-BOILER PLANT EQUIPMENT	METAL DETECTOR	METAL DETECTOR	SX005A3-Sioux-Common-Conveyor 5A3	1997	33,896
1312000-BOILER PLANT EQUIPMENT	METAL DETECTOR	METAL DETECTOR	SX005B2-Sioux-Common-Conveyor 5B2	1997	30,622
1312000-BOILER PLANT EQUIPMENT	METAL DETECTOR	METAL DETECTOR	SX005B3-Sioux-Common-Conveyor 5B3	1997	33,896
				Total	5,982,526

Staff was only able to confirm the presence of two bulldozers and a front end loader. This may also result in an overstatement of rate base. Of the 29 items sought for verification, seven could not be identified and were missing. This implies that 29% of the CPR consists of property that is no longer used and useful, and that 28% of the dollars listed above are related to nonexistent rate base.

Staff has significant concerns about the validity of Ameren Missouri's current Continuing Property Record for use as accounting documents in future depreciation studies, and recommends the Commission order Ameren Missouri to conduct a depreciation study to demonstrate that its permanent continuous record is a workable system. Staff evaluated Ameren Missouri's plant records with respect to assessing the validity of the historical record for use in depreciation studies. Staff submitted data requests for specific retirement information, and conducted a limited physical inventory check. Staff derived additions and retirement information from the limited information delivered by the Company and only about 70% of the items sought for the physical inventory could be found. A number of retired items were still in place but not in service. The problem is, if an item is removed from service and retired and removed from the CPR (as the Venice Power Station was) for no longer being "used and useful," the Company has no record of account to which it may charge future cost of removal or record any benefit from the sale of old equipment. During Staffs' site visit at the Sioux power station, Staff saw that the "retired" smoke stacks had actually only been partially dismantled, had roofs and doors installed, and were in the process of being repurposed for other uses such as road salt storage and possibly a workshop. Furthermore, if one were to only review the CPR for Sioux, there would be no recognition of the continuing liability for the ultimate cost of removal for these units and systems that have been abandoned in place. Regarding the large fans that were used before the scrubber installation, all four of the very large retired motors that were used to drive the fans are gone, but there currently is no record of what salvage may have been gained.

With respect to rate base, given the limited scope of items audited and the number of instances where rate base was overstated, there exists a significant potential that there are additional misbooked assets and cost of removal charges. This overstatement of rate base results in higher than actual revenue requirements.

d. Conclusion

Ameren Missouri is not in compliance with the Commission Rules at 4 CSR 240-50.030, Uniform System of Accounts.

Non-compliant utility plant record keeping may result in:

1. Inaccurate and inappropriate statement of rate base,
2. Excess return on equity,
3. Erroneous depreciation study results,
4. Inaccurate and inappropriate depreciation accruals,
5. Inaccurate and inappropriate depreciation reserve amounts,
6. Inaccurate and inappropriate collection for net salvage expense,
7. Inaccurate or erroneous information in times of emergency.

This failure to comply with the Commission's rules regarding accounting for utility plant grossly limits the Commission's ability to apply its ratemaking decisions and principles to known and measurable amounts.

Ameren Missouri's inability to accurately record additions and retirements on a timely and accurate manner casts serious doubt on the validity of Ameren Missouri's current CPR for use in determining the appropriate amount of rate base.

Ameren Missouri's inability to retrieve historical retirement records from its current accounting system casts serious doubt on the validity of Ameren Missouri's current CPR for use in conducting a depreciation study.

Staff recommends that for purposes of setting rates in this matter, the Commission reduce Ameren Missouri's rate base by $2,528,567. Staff also recommends that the Commission direct Ameren Missouri to achieve compliance with all applicable depreciation regulations and Commission orders by June 1, 2013, to avoid prosecution of a complaint by Staff. Finally, Staff recommends that the Commission authorize Ameren Missouri to establish a new account numbered as Account 391.003 Enterprise Systems to be depreciated at an ordered depreciation rate of 5%.

Staff Expert/Witness: Guy C. Gilbert

2. Project First (Enterprise System)

During the test year in this case, the twelve-months ending September 30, 2011, Ameren Missouri initiated Project First to replace a number of Ameren Corporation's unsupported and high-risk financial systems, including the general ledger; budgeting; property, plant and equipment; tax compliance; shared services allocations and financial consolidations. The scope of the project also included moving from an unsupported reporting system to a new Oracle reporting system. As part of Project First, Ameren Missouri replaced existing enterprise systems such as their Corporate Budgeting System, Corporate Reporting System, and PowerPlant v9. These systems were replaced by UIPlanner, Internal Management Reporting (IMR), Hyperion Financial Management (HFM) and Powerplant v10.2.

Ameren Missouri recorded the costs associated with its investment in Project First in USOA accounts 303, Intangible Assets and 391.2, Office Furniture and Equipment – Software. As part of this rate proceeding, Staff witness Guy Gilbert recommends that all plant amounts related to Project First be included in USOA account 391.003--Enterprise Systems. Therefore, Staff has determined the amount of plant placed in service during the test year, as well as the estimated amount through July 31, 2012, related to Project First and has made adjustments to remove these costs from USOA accounts 303 and 391.2, the existing accounts in which they were booked, to USOA account 391.003. Similarly, Staff has made corresponding reserve adjustments. In addition, Staff witness Gilbert has develop a new depreciation rate for USOA account 391.003--Enterprise Systems to replace the five year amortization that currently exists for USOA accounts 303 and 391.2. Therefore, Staff made an adjustment to the remove the amortization recorded by the Company during the test year related to Project First.

Staff Expert/Witness: Lisa K. Hanneken

3. Capitalized Depreciation and O&M

Staff made an adjustment to remove a portion of the annualized depreciation expense calculated on transportation and power-operated equipment. This equipment is used by the Company to perform both maintenance and construction activities. A portion of the depreciation calculated on this equipment is capitalized and charged to construction projects. Therefore, this depreciation must be removed from the annualized depreciation expense included in the calculation of net operating income in order to prevent a double recovery. As part of this issue, the Staff reduced the cost-of-service calculation in order to annualize O&M related depreciation.

Staff Expert/Witness: Lisa M. Ferguson

G. Income Tax

Income tax expense, as calculated by Staff, is largely consistent with the methodology used in Ameren Missouri's last rate case, Case No. ER-2011-0028. As in that case, Staff has reflected for income tax expense a tax deduction that was reflected on Ameren Corporation's (the parent of Ameren Missouri) tax return related to the Employee Stock Option Plan ("ESOP") in the cost of service calculation. Staff contends that Ameren Missouri should receive a representative portion of this deduction because it is driven, in part, by the Ameren Missouri employees that participate in the ESOP, and therefore Staff has adjusted the level of income tax expense to reflect this deduction. The Company indicated to Staff that it expects to receive an empowerment zone tax credit. Staff has made an inclusion in the cost of service calculation for income tax expense to address this expected tax credit. Staff will review income tax expense as part of its true-up audit and make additional adjustments as necessary.

Staff Expert/Witness: John P. Cassidy

X. Fuel Adjustment Clause (FAC)

A. Policy

In summary, Staff makes the following recommendations to the Commission regarding Ameren Missouri's Fuel Adjustment Clause ("FAC"):

- The sharing mechanism should be changed to 85% returned to/recovered from Ameren Missouri's customers and 15% kept/absorbed by Ameren Missouri from 95% returned to/recovered from the customers and 5% kept/absorbed by Ameren Missouri.

- Terms in Ameren Missouri's FAC tariff sheets should be changed to standardize them with the terms in the FACs of other investor-owned electric utilities in Missouri. These changes will be discussed in the Staff Class Cost-of-Service/Rate Design Report to be filed on July 19, 2012.

- What is currently "Net Base Fuel Costs" or "NBFC Factor" in Ameren Missouri's FAC tariff sheets should be renamed "Net Base Energy Cost"

("B"), and the associated seasonal factors (presently called "Summer NBFC Rate" and "Winter NBFC Rate") should be eliminated so that there is only one factor, which is applicable for each of the twelve calendar months—the Net Base Energy Cost Factor ("BF").

- Ameren Missouri's costs to serve and revenues from municipal utilities should continue to be included in its FAC, as they are now.

- Ameren Missouri's FAC tariff sheets should be revised to clarify that the only transmission costs that are included in it are those that Ameren Missouri incurs for purchased power and off-system sales ("OSS").

- Ameren Missouri's FAC tariff sheets should be revised to clarify that only Ameren Missouri's hedging gains and losses associated with mitigating volatility in its cost of fuel and SO_2 and NO_X allowances are included in Ameren Missouri's FAC.

- Ameren Missouri's FAC tariff sheets should be revised to clarify that if there is a reduction in the usage of the Large Transmission Class of 40,000,000 kWh or greater, the amount of off-system sales revenues that are excluded from the FAC can be no greater than Ameren Missouri's revenues not recovered due to the reduction in usage of the Large Transmission Class

- Ameren Missouri should provide additional filings that will aid the Staff in performing FAC tariff, prudence and true-up reviews.

Staff Expert/Witness: Lena M. Mantle

1. History

Senate Bill 179[93] ("SB 179") was passed and enacted in 2005. It authorizes investor-owned electric utilities to file applications with the Commission requesting authority to make periodic rate adjustments outside of general rate proceedings for their prudently-incurred fuel and purchased power costs. SB 179 also granted the Commission the authority to approve, modify, or reject the electric utility's request. SB 179 also states that the rate schedules implementing these rate adjustments outside of the rate case may provide the electric utility with incentives to improve the efficiency and cost-effectiveness of its fuel and purchased power procurement activities.

[93] Section 386.266, RSMo. 2010 Cum. Supp.

Prior to the passage of SB 179, fuel and purchased power costs were estimated and included in the determination of the utility's revenue requirement in general rate proceedings. If the electric utility managed its fuel and purchased power procurement activities in a manner that allowed it to reliably serve its customers at a cost lower than what was included in its revenue requirement in the rate case, the savings were retained by the electric utility. If actual fuel and purchased power costs were greater than the cost included in the revenue requirement, the electric utility absorbed the increased cost.

Ameren Missouri, then doing business as AmerenUE, first requested that the Commission authorize it to use a FAC when it filed a general electric rate increase case, Case No. ER-2007-0002, on July 3, 2006. This request was prior to the finalization of the Commission's FAC rules. In its May 22, 2007, *Report and Order* in that case, the Commission concluded:

> After carefully considering the evidence and arguments of the parties, and balancing the interests of ratepayers and shareholders, the Commission concludes that AmerenUE's fuel and purchased power costs are not volatile enough [to] justify the implementation of a fuel adjustment clause at this time.

Ameren Missouri filed another general electric rate increase case on April 4, 2008, docketed as Case No. ER-2008-0318. In its February 2009, *Report and Order* in that case, the Commission authorized Ameren Missouri to implement a FAC. On February 19, 2009, the Commission approved FAC tariff sheets that took effect on March 1, 2009.

On July 24, 2009, less than five months after its original FAC tariff sheets became effective, Ameren Missouri, still then doing business as AmerenUE, filed another general electric rate increase. In its Report and Order in that case—Case No. ER-2010-0036—the Commission concluded AmerenUE should be allowed to continue to implement the FAC the Commission had approved in the prior rate case. Revised tariff sheets, including FAC tariff sheets, became effective in that case on June 21, 2010.

On August 31, 2010, Staff filed in File No. EO-2010-0255 the results of its first prudence audit which covered Ameren Missouri's accumulation periods 1 and 2 (March 1, 2009 through September 30, 2009). In its *Report and Order* issued on April 27, 2011 in that case, the Commission determined that "Ameren Missouri acted imprudently, improperly and unlawfully when it excluded revenues derived from power sales agreements with [American Electric Power

Operating Companies ("AEP")] and [Wabash Valley Power Association ("Wabash")] from off-system sales revenue when calculating the rates charged under its fuel adjustment clause." Ameren Missouri began flowing back revenues from the AEP and Wabash contracts plus accrued interest of approximately $18 million in the twelve-month recovery period beginning with its October 2011 billing month.

On July 30, 2010, just 37 days after the changes to the rates in Ameren Missouri's general rate Case No. ER-2010-0036 became effective; Ameren Missouri filed another rate case docketed as Case No. ER-2011-0028. In that case Ameren Missouri requested, and received, authority to continue its FAC with a few minor changes. The tariff changes from Case No. ER-2011-0028 became effective July 31, 2011.

On December 1, 2010, Ameren Missouri initiated File No. ER-2010-0274 seeking to true-up its first recovery period. As a part of this true-up filing, Ameren Missouri asserted that the NBFC rate[94] in the original FAC tariff sheets was calculated incorrectly; therefore, it was entitled to the additional revenue that would have been collected had the NBFC rate been correctly calculated. In its *Report and Order* issued in this case on June 29, 2011, the Commission authorized Ameren Missouri to include the under-collection amount for that true-up period and for all subsequent true-up filings in which the incorrect calculation had an impact. This positive adjustment to the true-up amount was also included in the twelve-month recovery period beginning October 2011 and, as ordered, subsequent true-up filings included the corrected NBFC rate, as applicable.

On October 28, 2011, Staff filed in File No. EO-2012-0074 its report of the results of its second prudence audit with respect to the revenue margins from Ameren Missouri's contracts to sell energy to AEP and Wabash for the time period of October 1, 2009, through May 31, 2011. In its report, Staff recommended that the Commission order Ameren Missouri to refund the revenue margins with interest from the AEP and Wabash contracts for the time period of October 1, 2009, through June 20, 2010, based on the Commission's decision in Case No. EO-2010-0255. A hearing in that case was held on June 21, 2012.

Staff Expert/Witness: Lena M. Mantle

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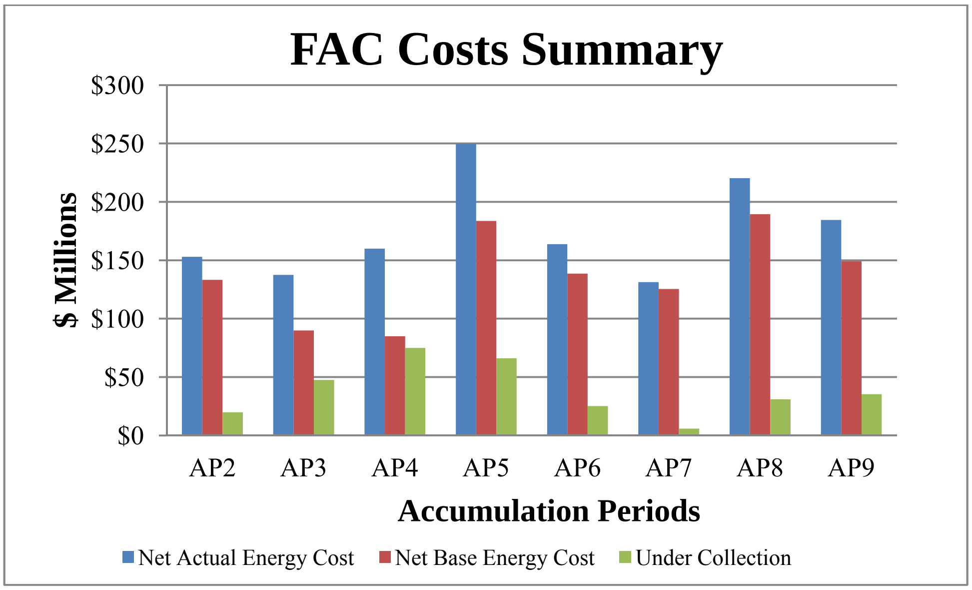
[94] Staff proposes to rename the NBFC rate to "BF" in this case

2. Summary of Ameren Missouri's Fuel and Purchased Power Costs Net Off-System Sales

The graph below shows for each full accumulation period[95] since the Commission authorized Ameren Missouri to use a FAC, a summary of Ameren Missouri's Net Actual Energy Cost, Net Base Energy Cost, and the under-collection of fuel costs through its permanent rates.

Chart 1



The time periods of the Accumulation Periods are as follows:

AP2	Jun 2009 – Sep 2009	AP6	Oct 2010 – Jan 2011
AP3	Oct 2009 – Jan 2010	AP7	Feb 2011 – May 2011
AP4	Feb 2010 – May 2010	AP8	Jun 2011 – Sep 2011
AP5	Jun 2010 – Sep 2010	AP9	Oct 2011 – Jan 2012

At the conclusions of its general electric rate cases, during AP5 and AP8 - Case Nos. ER-2010-0036 and ER-2011-0028, respectively—the net base energy cost factors (then called NBFC rates) in Ameren Missouri's FAC were re-set. Over each of its full accumulation periods, Ameren Missouri under-collected its fuel and purchased power costs in its permanent rates.

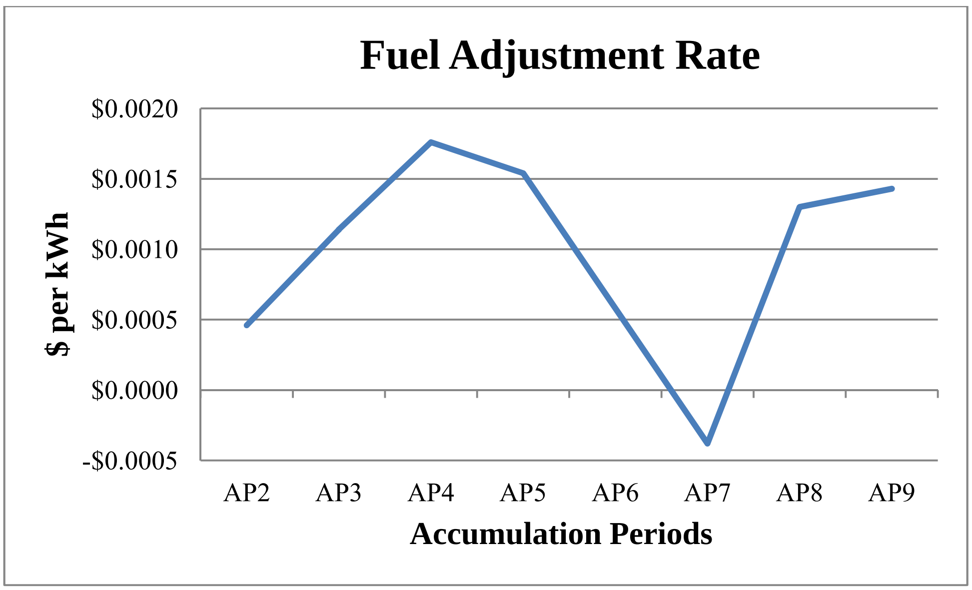
[95] Accumulation Period 1 was not a full accumulation period because it only covered the three calendar months of March 2009 through May 2009. All other accumulation periods cover four calendar months.

Ameren Missouri's net actual total energy costs exceeded the net base energy costs for every full accumulation period.

The bar graph also shows that the range of Ameren Missouri's net actual energy costs ranges from just less than $130 million for AP7 (February 2011 – May 2011), to approximately $250 million for AP5 (June 2010 – September 2010).

The graph below shows the actual Ameren Missouri FAC Fuel Adjustment Rates ("FARs") for accumulation periods 2 through 8.

Chart 2



This graph shows that for AP2 through AP4. The FAR for AP5 was lower than the FAR for AP4. However, this does not indicate that Ameren Missouri's fuel costs decreased after AP4. The previous chart actually shows that the net actual energy costs in AP5 were higher than the net actual energy costs for any other accumulation period. The FAR for AP5 was lower than that for AP4, because the Net Base Energy Cost rate was re-set when revised FAC tariffs sheets became effective during AP5 in Case No. ER-2010-0036. It is likely that if the Net Base Energy Cost rate had been rebased before the beginning of AP5 and if the weather during the summer of 2010 had been "normal" or cooler than "normal," the FPA for AP5 would have been even lower (closer to zero or negative); however, since the summer of 2010 (AP5) was hotter than normal and marginal fuel cost is higher than average fuel cost, the FAR for AP5 was greater than zero. The FAR continued to drop in AP6. The Commission-ordered refunds from the AEP and

Wabash contracts of approximately \$18 million, combined with a small difference between actual and net base energy costs for AP7, resulted in a negative FAR for AP7. The FARs for AP8 and AP9 were slightly below the FAR for AP5.

Staff Expert/Witness: Lena M. Mantle

3. Sharing Mechanism

In determining which sharing mechanism to recommend in this case, Staff took into consideration the following:

1) The comparisons of the actual fuel costs Ameren Missouri did not collect with the 95%/5% mechanism with what Ameren Missouri would not have collected with an 85%/15% sharing mechanism and with what Ameren Missouri would not have collected if Ameren Missouri did not have a FAC during accumulation periods 2 through 9;

2) The variability in Ameren Missouri's OSS margins that are used to off-set fuel costs is greater than the variability in the fuel and purchased power costs Ameren Missouri incurs to meet the load requirements of its customers;

3) A 85%/15% sharing mechanism would provide greater incentive to Ameren Missouri to reduce its fuel and purchased power costs and increase its OSS than the 95%/5% mechanism;

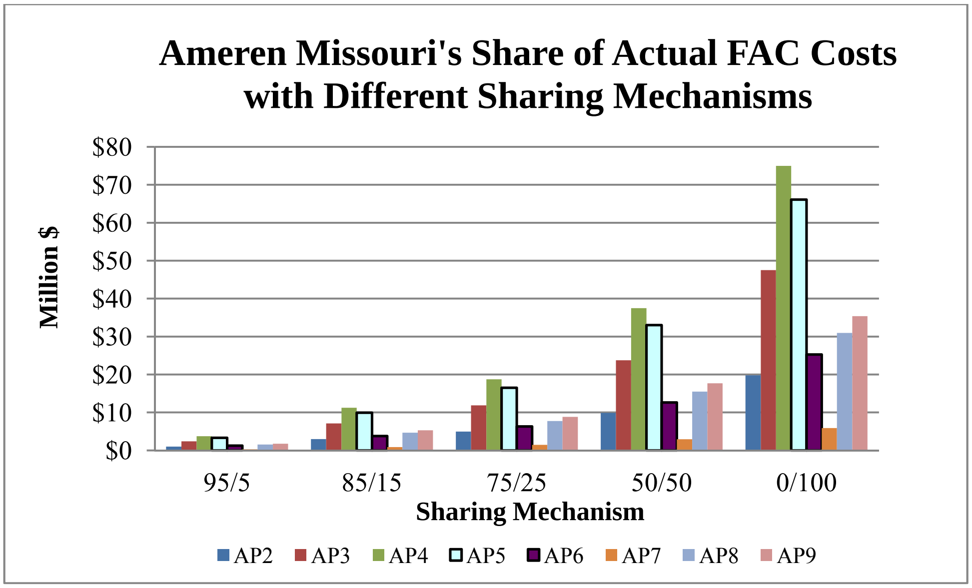
4) A sharing mechanism of 85%/15% would provide Ameren Missouri with more incentive to accurately estimate the net base energy cost factors in general rate cases; and

5) The regulatory lag Ameren Missouri created with respect to the Staff's second prudence review of Ameren Missouri's FAC.

Staff recommends the Commission modify the sharing mechanism of Ameren Missouri's FAC to 85%/15% sharing from 95%/5% sharing. With this modification, Ameren Missouri's retail customers would pay 85% of any increase in fuel and purchased power costs above the net base fuel and purchased power costs included in retail rates ("Net Base Energy Cost") and receive 85% of any decrease. At the same time, Ameren Missouri would absorb 15% of any increase above the Net Base Energy Cost included in retail rates and keep 15% of any decrease. In the paragraphs following, Staff addresses each of the above considerations in detail.

Staff compared what the revenue impacts to Ameren Missouri would have been for various sharing mechanisms to the impact of the 95%/5% sharing mechanism. The graph below shows, for various sharing mechanisms, the costs Ameren Missouri would have absorbed for AP2 through AP9.

Chart 3



The 0/100 (or 0%/100%) sharing mechanism in the chart above shows the amount of net energy cost Ameren Missouri would have absorbed if the Commission had not authorized Ameren Missouri to use a FAC. This $306 million was 21.8% of its total fuel and purchased power costs over the same time period. For the 95%/5% sharing mechanism, where 95 percent of the difference in net fuel and purchased costs was recovered from the customers and 5 percent was absorbed by Ameren Missouri, over the eight accumulation periods, Ameren Missouri has absorbed less than $15.3 million[96] out of its total fuel and purchased power costs of $1,400 million or about 1.1% of its net energy costs. Had the sharing mechanism been the 85%/15% Staff proposes in this case, Ameren Missouri would have absorbed less than $45.9 million[97] or 3.3% of its net energy costs and its customers would have paid $30.6 million less.

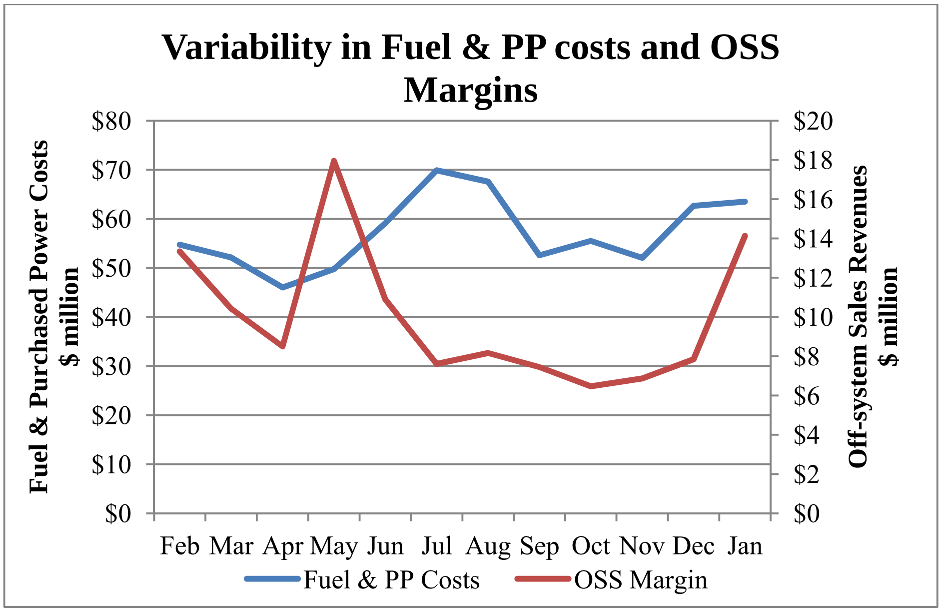
The second consideration is that Ameren Missouri's OSS margins, which are netted against the fuel and purchased power costs that it incurs to meet the load requirements of its

[96] This does not include the revenue margins from the AEP and Wabash contracts that the Commission ordered returned in Case No. EO-2010-0255. If these revenues were included, this percentage would be even lower.

[97] *Id.*

customers, are more volatile than those fuel and purchased power costs. The chart below shows the Staff's estimates for the test year in this case, as modeled to determine fuel and purchased power expense in Staff's revenue requirement for this case,[98] of Ameren Missouri's monthly fuel and purchased power costs and its monthly OSS margins.

Chart 4



As shown in this graph, there is much more volatility in the estimates of Ameren Missouri's OSS revenues than there is in the estimates of Ameren Missouri's fuel and purchased power costs. If Ameren Missouri's FAC sharing mechanism were 85%/15% as Staff proposes, then Ameren Missouri would get to keep three times as much of the OSS margins above that included in the Net Base Energy Costs than it can with the current sharing mechanism of 95%/5%.

The third consideration is that a sharing mechanism of 85%/15% would allow Ameren Missouri to keep more of any fuel and purchased power savings and more of any OSS margins that are above what was included in the retail rates. This would include any fuel savings that result from Ameren Missouri-initiated energy-efficiency programs or fuel savings resulting from federal or state energy efficiency initiatives. In addition, it would give Ameren Missouri more incentive to search out and find additional OSS opportunities.

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[98] With annualized and normalized inputs.

The fourth consideration is that a sharing mechanism of 85%/15% would provide Ameren Missouri with more incentive to accurately estimate the net base energy cost factors in general rate cases. Chart 1 above shows that the net actual energy costs have been higher than the net base energy costs. This may have occurred because of higher fuel costs or because the net base energy costs were set too low. The sharing mechanism proposed by Staff would provide Ameren Missouri more incentive to accurately estimate fuel and purchased power costs and OSS margins that are included in retail rates.

The fifth consideration is that Ameren Missouri used the FAC process in its second FAC prudence review case, Case No. EO-2012-0074, to create regulatory lag that may benefit Ameren Missouri and its shareholders to the detriment of its customers.[99] If the Commission finds in favor of Ameren Missouri in Case No. EO-2012-0074, there is no regulatory lag; however, there is considerable regulatory lag for the ratepayers if the Commission again finds Ameren Missouri should flow the AEP and Wabash revenues back to its customers through its FAC. The customers will have waited longer to have the revenues begin to flow back to them than the regulatory lag Ameren Missouri complains occurs in a rate case[100] for the increased revenues to flow to them.

In making its determination of the appropriate sharing mechanism, Staff recommends the Commission take into consideration how little incentive Ameren Missouri has with its current sharing mechanism to improve the efficiency and cost-effectiveness of its fuel and purchased power procurement activities. SB 179 expressly provides the Commission may include features in a FAC that are designed to improve the efficiency and cost-effectiveness of the utility's fuel

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[99] Staff filed its prudence report regarding the remainder of the AEP and Wabash contracts early in its prudency review process on October 28, 2011, because the Commission had already made a decision during the first prudence audit proceeding regarding the AEP and Wabash revenues and because Staff could find no new evidence regarding Ameren Missouri's treatment of these revenues. Within ten days of the Staff's filing, Ameren Missouri asserted its right for a hearing and also stated that it would request a hearing after the rest of the prudence audit was completed – approximately 130 days later. This allowed Ameren Missouri to keep and use the revenues from the AEP and Wabash contracts during not only the full 180 days, but much longer since the hearing was just held in June 21, 2012. If the same timeline had occurred after the Staff's first report, the hearing would have been held in in late February 2012.

[100] The last revenues that were not flowed through the FAC were received in June 2010. They would have been included in the recovery period that began September 2010. Staff is calculating regulatory lag as the difference between when the customers should have begun receiving the revenues and when the customers actually will, if the Commission finds the revenues should be flowed through the FAC in Case No. EO-2012-0074, which at the earliest would be September 2012.

and purchased power procurement activities. Changing the sharing mechanism of Ameren Missouri's FAC to 85%/15% will increase that incentive.

Staff Expert/Witness: Lena M. Mantle

<u>4. Changes to FAC Tariff Sheet Terminology</u>

The Commission, Staff and the electric utilities have been refining FACs, and the tariff sheets that implement them, since the Commission first authorized Aquila, Inc., n/k/a KCP&L Greater Missouri Operations Company ("GMO"), to use a FAC in Case No. ER-2007-0004. While each utility's FAC operates in the same fashion and are fundamentally the same, each utility has unique FAC tariff sheets with unique acronyms and definitions. Different nomenclature for the same thing is used across the utilities and sometimes even within a single utility's tariff sheets. For example, the dollar amount of the adjustment is only referred to in Ameren Missouri's tariff sheets.

For example, the dollar amount of the adjustment is only referred to:

In Ameren Missouri's tariff sheets as:

<u>Third Subtotal</u>

In GMO's tariff sheets, it is referred to as:

<u>Fuel Adjustment Clause</u>, <u>Fuel and Purchased Power Adjustment</u>, <u>FPA</u>, <u>FAC costs</u>, and just <u>FAC</u>

In The Empire District Electric Company ("Empire") tariff sheets, it is:

<u>FAC</u> and <u>Fuel Adjustment Clause</u>

Staff proposes that the dollar amount of the adjustment be referred to uniformly as the "Fuel and Purchased Power Adjustment" or "FPA." Staff plans to make this same recommendation in the pending GMO rate case, Case No. ER-2012-0175, and the upcoming Empire rate case, Case No. ER-2012-0345.

This is just one of many "clean-up" changes that Staff will propose in its Rate Design Report to be filed in this case on July 19, 2012. Staff has been working with all of the electric utilities, including Ameren Missouri, on these proposals and hopes to come to a consensus on the terminology to be used within the electric utility industry in Missouri. It is not Staff's intent to change the meaning of different phrases in each utility's FAC tariff sheets, but to help avoid and minimize confusion when discussing the FACs of electric utilities in Missouri.

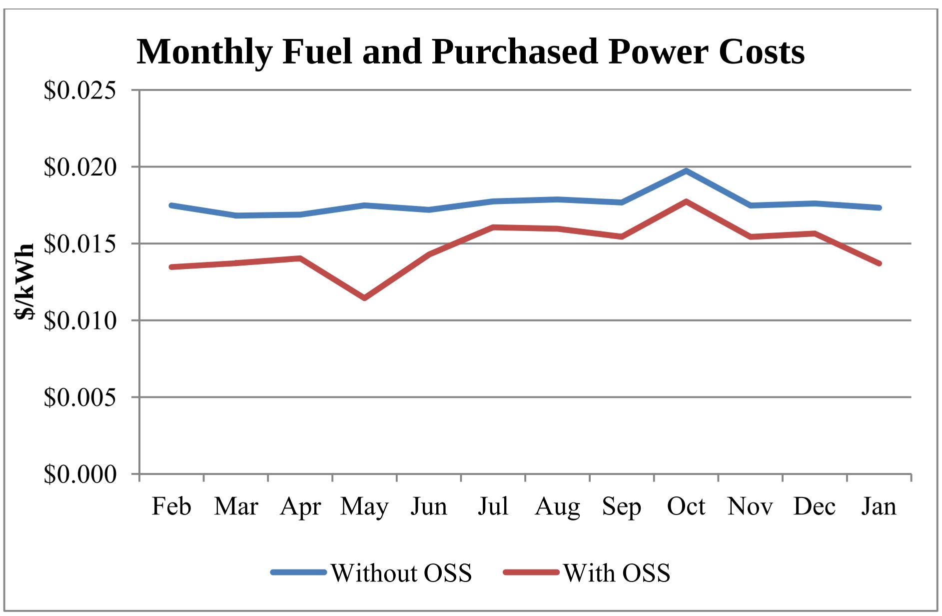
Staff Expert/Witness: Lena M. Mantle

5. Net Base Energy Cost

In Ameren Missouri's current FAC tariff sheets, there are two Net Base Energy Cost Factors[101] – one for the summer months of June, July, August, and September and one for the other eight months of the year. This was because, when the FAC was originally developed for Ameren Missouri, its average cost of energy for the four summer months was higher than the average cost of energy for the other eight months. Staff is recommending elimination of this seasonal difference so that there will be only one Net Base Energy Cost Factor of $0.01586 per kilowatt-hour ($/kWh), which will be used to determine the Net Base Energy Cost for each accumulation period, or portion thereof.

Ameren Missouri's fuel and purchased power $/kWh cost as estimated by Staff's fuel model for the test year in this case is shown below.

Chart 5



[101] These are referred to as "Summer NBFC rate" and "Winter NBFC rate" in the current tariff sheets.

The top line of this graph shows Staff's estimate of Ameren Missouri's monthly normalized and annualized fuel and purchased power costs on a $/kWh basis necessary to meet Ameren Missouri's load requirements. The bottom line on the graph is Staff's estimate of the same fuel and purchased power costs, but offset by OSS revenues. The top line is flatter than the bottom line and shows that Ameren Missouri's normalized fuel costs in the summer months (June through September), expressed in $/kWh, are comparable to the fuel costs in the other eight months of the year.

Fuel cost is the $/kWh multiplied by the load requirements in kWh and the kWh demands of Ameren Missouri's customers are greater in the summer than in the other months of the year. What this shows is that Ameren Missouri meets most of its load requirements using the same generation mix; using mostly coal and nuclear fuel that does not vary much in cost across the year. The increase in fuel cost in October is because a normalized outage of the Callaway nuclear plant was modeled in October, which resulted in the use of more expensive generation to meet Ameren Missouri's load requirements and less generation available to make OSS.

It is noteworthy that Ameren Missouri's estimates of which seasons have a higher Net Base Energy Cost Factor flip-flop in this case from what they are currently. Presently, the summer months have a higher Net Base Energy Cost Factor, but Ameren Missouri is proposing a higher Net Base Energy Cost Factor for the non-summer months. Ameren Missouri's witness Lynn M. Barnes, in her direct testimony in this case, states that Ameren Missouri is supporting a Net Base Energy Cost Factor[102] for the summer months of $0.01527/kWh and a BF of $0.01553/kWh for the other months. The current Net Base Energy Cost Factor for the summer months is $0.01319/kWh, which is higher than the current $0.01213/kWh Net Base Energy Cost Factor for the other months. Also noteworthy is that Ameren Missouri's estimates of the summer and non-summer month Net Base Energy Cost Factors are very close.

Because of the closeness of Ameren Missouri's estimates and the small variation in Staff's estimates, Staff recommends there should only be one Net Base Energy Cost Factor in Ameren Missouri's FAC.

Staff Expert/Witness: Lena M. Mantle

[102] NBFC in Ms. Barnes testimony

6. Inclusion of Ameren Missouri's Municipal Customers in the FAC

Ameren Missouri's FAC currently includes the costs of serving and the revenues from Ameren Missouri's municipal customers. Staff has reviewed Ameren Missouri's revenues from and its costs to serve the municipal customers, and has determined that the revenues exceed the costs. Therefore, Staff is recommending no change regarding the treatment of Ameren Missouri's revenues from and costs to serve its municipal customers.

Staff Expert/Witness: Lena M. Mantle

7. Transmission Costs and Revenues

Staff recommends that Ameren Missouri's FAC continue to only include the transmission costs Ameren Missouri incurs that are necessary for it to serve the load requirements of its customers and those that are necessary for it to make OSS. No other transmission costs or revenues should flow through Ameren Missouri's FAC without Ameren Missouri first proposing that they do so in a general rate proceeding where all parties have an opportunity to make recommendations to the Commission on the appropriateness of doing so. Staff recommends that the Commission clarify that only the transmission costs Ameren Missouri incurs that are necessary for it to serve the load requirements of its customers and those that are necessary for it to make OSS are flowed through its FAC by specifically stating that only these transmission costs and revenues are allowed to flow through Ameren Missouri's FAC. Doing so will avoid potential confusion in future prudence audits. Staff will propose tariff language changes to effectuate this clarification in the Staff's Class Cost-of-Service/Rate Design Report to be filed on July 19, 2012.

Staff Expert/Witness: Lena M. Mantle

8. Hedging Gains and Losses

Staff recommends that Ameren Missouri's FAC continue to include only hedging gains and losses associated with mitigating volatility in its fuel costs and allowances for SO_2 and NO_X emissions. No other hedging gains or losses should flow through Ameren Missouri's FAC without Ameren Missouri first proposing that they do so in a general rate proceeding where all parties have an opportunity to make recommendations to the Commission on the appropriateness of doing so. Staff recommends that the Commission clarify that only hedging gains and losses associated with mitigating volatility in its fuel costs and allowances for SO_2 and NO_X emissions are flowed through its FAC by specifically stating that only these hedging gains and losses are allowed to flow through Ameren Missouri's FAC. Doing so will avoid potential confusion in future prudence audits. Staff will propose tariff language changes to effectuate this clarification in the Staff's Class Cost-of-Service/Rate Design Report to be filed on July 19, 2012.

Staff Expert/Witness: Lena M. Mantle

9. Clarification of Amount of OSS Revenues That May Be Excluded From the FAC

Ameren Missouri's current FAC tariff sheets include a provision that allows Ameren Missouri to keep a certain amount of its OSS revenues if the 12(M) Large Transmission Class usage drops below a specified level. The current tariff language is not clear on the amount of OSSR revenues that Ameren Missouri would keep, i.e., not flow through its FAC. Ameren Missouri's currently effective tariff sheet, MO. P.S.C. Schedule 5, Original Sheet No. 98.18, provides:

> Should the level of monthly billing determinants under Service Classification 12(M) fall below the level of normalized 12(M) monthly billing determinants as established in Case No. ER-2011-0028 an adjustment to OSSR shall be made in accordance with the following levels:
>
> a) A reduction of less than 40,000,000 kWh in a given month - No adjustment will be made to OSSR.
>
> b) A reduction of 40,000,000 kWh or greater in a given month - All Off-System Sales revenues derived from all kWh of energy sold off-system due to the entire reduction shall be excluded from OSSR. (Emphasis added.)

This language clearly states that all OSS revenues due to the entire reduction of the class kWh energy will not flow through Ameren Missouri's FAC, i.e., if the 12(M) billing units decrease by 40,000,000 kWh, the OSS revenues from the sale of 40,000,000 kWh does not pass through the FAC, even if the OSS revenues are greater than the revenue Ameren Missouri would have billed the 12(M) class for using the same kWh.

However, that tariff sheet also contains the definition of the "N" term, which is subtracted from the fuel and purchased power amount, and which follows:

> The positive amount by which, over the course of the Accumulation Period, (a) revenues derived from the off-system sale of power made possible as a result of reductions in the level of 12(M) sales (as addressed in the definition of OSSR above) exceeds (b) the reduction of 12(M) revenues compared to normalized 12(M) revenues as determined in Case No. ER-2011-0028.

This definition seems to state that OSS revenues in excess of the revenues that Ameren Missouri would have billed the 12(M) class, flow through the FAC.

Fortunately, there has not yet been an occurrence where monthly billing determinants under Service Classification 12(M) fell below the level of normalized 12(M) monthly billing determinants established in Case No. ER-2011-0028. However, these terms within the FAC tariff sheets need to be clarified ***before*** such an occurrence. Staff recommends that the tariff sheet be clarified to state that if monthly billing determinants under Service Classification 12(M) fall below the level of normalized 12(M) monthly billing determinants as established in Case No. ER-2012-0166 by 40,000,000 kWh or more, Ameren Missouri does not have to flow through its FAC the portion of its OSS revenues that equals the revenues it did not bill the 12(M) class due to that reduction in usage. Staff will propose tariff language changes to effectuate this clarification in the Staff's Class Cost-of-Service/Rate Design Report to be filed on July 19, 2012.

Staff Expert/Witness: Lena M. Mantle

<u>10. Additional Filing Requirements</u>

Due to the accelerated review process necessary with FACs, just as it did in the last Ameren Missouri rate cases, Case Nos. ER-2010-0036 and ER-2011-0028, Staff is recommending the Commission order Ameren Missouri to do the following to aid the Staff in performing FAC tariff, prudence and true-up reviews:

- As part of the information Ameren Missouri submits when it files a tariff modification to change its Fuel and Purchased Power Adjustment rate, include Ameren Missouri's calculation of the interest included in the proposed rate;

- In addition to the monthly reports required by 4 CSR 240-3.161(5), provide Ameren Missouri's MISO Ancillary Services Market ("AMS") market settlements and revenue neutrality uplift charges;

- Maintain at Ameren Missouri's corporate headquarters or at some other mutually-agreed-upon place within a mutually-agreed-upon time for review, a copy of each and every nuclear fuel, coal and transportation contract Ameren Missouri has that is in or was in effect for the previous four years;

- Within 30 days of the effective date of each and every nuclear fuel, coal and transportation contract Ameren Missouri enters into, provide both notice to the Staff of the contract and opportunity to review the contract at Ameren Missouri's corporate headquarters or at some other mutually-agreed-upon place;

- Maintain at Ameren Missouri's corporate headquarters or provide at some other mutually-agreed-upon place within a mutually-agreed-upon time, a copy for review of each and every natural gas contract Ameren Missouri has that is in effect;

- Within 30 days of the effective date of each and every natural gas contract Ameren Missouri enters into, provide both notice to the Staff of the contract and an opportunity for review of the contract at Ameren Missouri's corporate headquarters or at some other mutually-agreed-upon place;

- Provide a copy of each and every Ameren Missouri hedging policy that is in effect at the time the tariff changes ordered by the Commission in this rate case go into effect for Staff to retain;

- Within 30 days of any change in an Ameren Missouri hedging policy, provide a copy of the changed hedging policy for Staff to retain;

- Provide a copy of Ameren Missouri's internal policy for participating in the MISO ASM, including any Ameren Missouri sales/purchases from that market that is in effect at the time the tariff changes ordered by the Commission in this rate case go into effect for Staff to retain;

- If Ameren Missouri revises any internal policy for participating in the MISO ASM, within 30 days of that revision, provide a copy of the revised policy with the revisions identified for Staff to retain; and

- The monthly as-burned fuel report supplied by Ameren Missouri required by 4 CSR 3.190(1)(B) shall explicitly designate fixed and variable components of the average cost per unit burned including commodity, transportation, emission, tax, fuel blend, and any additional fixed or variable costs associated with the average cost per unit reported (Staff is willing to work with Ameren Missouri on the electronic format of this report).

Staff Expert/Witness: Lena M. Mantle

B. Fuel Adjustment Clause Heat Rate and Efficiency Testing

If an electric utility requests that a Rate Adjustment Mechanism (RAM) such as a FAC be continued or modified, Commission Rule 4 CSR 240-3.161(3)(Q) requires that the electric utility shall file specific information as part of its direct testimony in a general rate proceeding:

> (Q) The results of heat rate tests and/or efficiency tests on all the electric utility's nuclear and non-nuclear steam generators, HRSG, steam turbines and combustion turbines conducted within the previous twenty-four (24) months;

The Commission authorized Ameren Missouri's FAC in Case No. ER-2008-0318. The FAC was continued in Case Nos. ER-2010-0036 and ER-2011-0028. Ameren Missouri has requested the FAC again be continued in the current general rate proceeding, Case No. ER-2012-0166.

Company witness Lynn M. Barnes filed the results of the most recent heat rate/efficiency tests for the Company's generating units. Staff has reviewed the summary results of those tests and compared the results with the summary results from the previous two general rate proceedings, Case Nos. ER-2010-0036 and ER-2011-0028. Detailed results were provided for most generating units.[103] The testing methodologies used by Ameren Missouri were consistent with the testimony of both Staff and Company witnesses in Case No. ER-2008-0318.

In a footnote to Schedule LMB-E1-12 of her testimony, Company witness Lynn M. Barnes states:

> The Company can make available all of the reports during the prior 24 months (some of which were already submitted with the FAC Minimum Filing Requirements in Case No. ER-2010-0036) upon the request of the Commission or any party, but given their voluminous nature, has only provided the most recent reports with this filing. To the extent necessary, the Company requests a waiver of the literal requirement to "file" all such reports.

Heat rate testing results were filed for all units except Venice CTG1 and Viaduct. With the exception of Venice CTG1, all generating units were tested within the previous 24 months (based on the filed data for the current general rate proceeding).

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[103] The detailed results for combustion turbine generators appear to be addressed to a member of Staff, however, that Staff member has not received these documents independently of the current general rate proceeding.

Staff reviewed the heat rate testing results filed in Case No. ER-2011-0028 for the Viaduct unit. Summary data for Venice CTG1 was provided in Case No. ER-2010-0036. Venice CTG1 and Viaduct are relatively small generating units. Venice CTG1 and Viaduct are utilized infrequently and have a negligible effect on the overall generating unit heat rate/efficiency for the Company.

Staff recommends that fuel for the Venice CTG1 should not be included in the FAC due to the lack of heat rate/efficiency testing information required by 4 CSR 240-3.161(3)(Q). Since Staff was able to review the Viaduct heat rate/efficiency test results filed in Case No. ER-2011-0028 and that test was conducted within twenty-four (24) months of the filing of the current general rate proceeding, Staff is not making the same recommendation for Viaduct.

However, Staff recommends that the Commission grant Ameren Missouri a variance from the requirement to file all of its heat rate testing results in this case. In addition, Staff recommends that the Commission order the Company in future rate cases to properly ask for a waiver from 4 CSR 240-3.161(3)(Q), identify what units it is not filing heat rate testing results for, and to identify the case in which heat rate test results can be found.

The heat rate/efficiency testing information and results for all other generating units appear to be reasonable.

Staff Expert/Witness: Michael E. Taylor

C. FAC Adjustments for Updated System Loss Study

System energy losses largely consist of the energy losses that occur in the electrical equipment (e.g., transmission and distribution lines, transformers, etc.) of Ameren Missouri's system between Ameren Missouri's generating sources and the customers' meters. In this case, Case No. ER-2012-0166, Ameren Missouri provided an updated system loss study as part of Ameren Missouri's witness William M. Warwick's workpapers. Staff used the information contained in Ameren Missouri's updated system loss study to develop the following voltage level adjustment factors.[104] These factors are used for adjusting the fuel adjustment rates in the

[104] These factors adjust the fuel adjustment rate to account for energy losses from the customers meter to the AMMO.UE MISO node.

Company's Rider FAC to the fuel adjustment rates applicable to the individual voltage service classifications:

Secondary Voltage Service	1.0575
Primary Voltage Service	1.0252
Large Transmission Voltage Service	0.9917

Staff Expert/Witness David C. Roos

XI. Other Issues

A. Energy Independence and Security Act of 2007 (EISA)

On December 19, 2007, the Energy Independence and Security Act of 2007 ("EISA"), which amended various sections of the Public Utility Regulatory Policies Act of 1978 ("PURPA"), was signed into law. PURPA's purposes are to encourage: 1) conservation of electric energy, 2) efficiency in the use of facilities and resources by electric utilities, and 3) equitable rates to consumers of electricity.[105] EISA established four additional PURPA standards for electric utilities as follows: Integrated Resource Planning (IRP), Rate Design Modifications to Promote Energy Efficiency Investments, Consideration of Smart Grid Investments, and Smart Grid Information.

On December 15, 2008, Staff filed requests for the Commission to open dockets for the purpose of establishing records for consideration and determination as to whether it is appropriate to implement the new standards encompassed within EISA to carry out the above noted purposes. EISA establishes timeframes within which the Commission is to perform this consideration and determination. The Commission should begin consideration within one year after enactment of the standard (i.e., by December 19, 2008) and complete its consideration and determination no later than two years after enactment (i.e., by December 19, 2009). Absent such determination, the Commission should consider in a general rate case for each individual electric utility whether or not it is appropriate to implement such standard to carry out the above noted purposes. Should the Commission decline to implement a PURPA standard for which it

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[105] PURPA Section 101.

determines the standard is appropriate to carry out the above-noted purposes, the Commission is directed to state in writing its reasons.

In response to Staff's request, the Commission opened the following dockets in accordance with the mis-numbering of the four new standards as had occurred in the original EISA legislation:

1) Case No. EW-2009-0290: In the Matter of the Consideration of Adoption of PURPA **Section 111(d)(16)** Smart Grid Investments Standard as Required by Section 532 of the Energy Independence and Security Act of 2007. ("Smart Grid Investment Docket")

2) File No. EW-2009-0291: In the Matter of the Consideration of Adoption of the PURPA **Section 111(d)(16)** Integrated Resource Planning Standard as Required by Section 532 of the Energy Independence and Security Act of 2007. ("IRP – Docket")

3) File No. EW-2009-0292: In the Matter of the Consideration of Adoption of the PURPA **Section 111(d)(17)** Rate Design Modifications to Promote Energy Efficiency Investments Standard as Required by Section 532 of the Energy Independence and Security Act of 2007. ("Rate Design Docket")

4) Case No. EW-2009-0293: In the Matter of the Consideration of Adoption of PURPA **Section 111(d)(17)** Smart Grid Information Standard, as Required by Section 1307 of the Energy Independence and Security Act of 2007. ("Smart Grid Information Docket").

Congress corrected the mis-numbering of the four new EISA standards in Section 408, Technical Corrections, as enacted as part of the American Recovery and Reinvestment Act of 2009.[106] By May 6, 2009, the Commission issued orders correcting the numbering of the four new PURPA standards and re-numbered and consolidated the workshop dockets as follows:

1) File No. EW-2009-0290: In the Matter of the Consideration of Adoption of the PURPA Section 111(d)(16) Integrated Resource Planning Standard as Required by Section 532 of the Energy Independence and Security Act of 2007. ("IRP Docket");

2) File No. EW-2009-0291: In the Matter of the Consideration of Adoption of the PURPA Section 111(d)(17) Rate Design Modifications to Promote Energy

[106] Pub. L. No. 110-140, 121 Stat. 1492 (2007), amended by Section 408 of The American Recovery and Reinvestment Act of 2009 (the EISA, prior to this amendment, is codified at 16 USCS 2621 and 2622 (Cum. Supp. 2008)). PURPA is codified generally in 16 USCS 2601 et seq., but various provisions appear elsewhere in the United States Code.

Efficiency Investments Standard as Required by Section 532 of the Energy Independence and Security Act of 2007. ("Rate Design Docket");

3) File No. EW-2009-0292: In the Matter of the Consideration of Adoption of PURPA Section 111(d)(18), Smart Grid Investments Standard, and PURPA Section 111(d)(19), Smart Grid Information Standard, as Required by Section 1307 of the Energy Independence and Security Act of 2007. ("Smart Grid Docket").

On November 23, 2009, the Commission issued its *Order Finding Consideration / Implementation Of New Federal Standards Through Workshop And Rulemaking Procedures Is Required* in File Nos. EW-2009-0290, EW-2009-0291, and EW-2009-0292. The Commission stated in its order at page 5, "The Commission has satisfied the requirements for consideration of the new EISA standards, and on the basis of the quasi-legislative record created in these workshops, the Commission determines that no comparable standards have been considered that would constitute prior state action and prohibit the Commission from taking any further action in relation to the new EISA standards."

Since there has been no specific determination to date by the Commission, Staff recommends the Commission consider each standard and make its determination with respect to Ameren Missouri in this rate case based on the following discussion.

1. IRP Docket

PURPA Section 111(d)(16), Integrated Resource Planning Standard as required by Section 532 of the Energy Independence and Security Act of 2007, requires state commission consideration of whether to implement the following:

(A) integrate energy efficiency resources into utility, State, and regional plans; and

(B) adopt policies establishing cost-effective energy efficiency as a priority resource.

Staff held several workshops, which culminated in the Commission's promulgation of a rulemaking in File No. EX-2010-0254, *In the Matter of a Proposed Rulemaking Regarding Revision of the Commission's Chapter 22 Electric Utility Resource Planning Rules*. The revised Chapter 22 rules became effective on June 30, 2011, which requires the screening and integration of cost-effective energy efficiency resources to be included in the electric utility resource planning process. After opportunity for input from the public which included comments being submitted by the electric utilities, Office of the Public Counsel, Missouri Department of Natural Resources, Renew Missouri, Great Rivers Environmental Law Center, and Dogwood Energy, LLC, the Commission approved the policy in Chapter 22 of requiring demand-side resources be evaluated on an equivalent basis with supply-side resources subject to compliance with all legal mandates.[107]

In addition, the Commission has a workshop docket, Case No. EW-2010-0187, opened to investigate how to achieve its statutory responsibilities under the Missouri Energy Efficiency Investment Act ("MEEIA"), Section 393.1075, RSMo., within the background of FERC policies that eliminate barriers to demand response and that direct the Midwest Independent Transmission System Operator ("MISO") and the Southwest Power Pool ("SPP") to accommodate state policy regarding retail customer demand-side activity. This docket was opened to explore the best model or models to achieve the requirements of the MEEIA through state demand-side programs, wholesale market opportunities available in MISO or SPP, or possible hybrid approaches, and the implications for resource planning under various approaches. The roles for utilities, aggregators of retail consumers ("ARCs"), customers in all classes, and other stakeholders in designing the appropriate means of achieving Missouri's policy objectives, and for interacting with MISO and SPP are also to be evaluated.

While not specifically making a determination to implement PURPA Section 111(d)(16), the Commission has promulgated rulemakings to address the principles of that section; therefore, Staff suggests there is nothing that remains for the Commission to determine in response to PURPA Section 111(d)(16), and recommends the Commission make such a finding in this rate case.

2. Rate Design Docket

PURPA Section 111(d)(17), Rate Design Modifications to Promote Energy Efficiency Investments Standard as required by Section 532 of the Energy Independence and Security Act of 2007, requires state commissions to consider whether to implement: 1) removing the throughput incentive and disincentives to energy efficiency; 2) providing utility incentives for

[107] 4 CSR 240-22.010(2)(A)

successful management of energy efficiency programs; 3) including the impact of energy efficiency as one of the goals of retail rate design; 4) adopting rate designs that encourage energy efficiency; 5) allowing timely recovery of energy efficiency related costs; and 6) offering energy audits, demand-response programs, publicizing the benefits of home energy efficiency improvements and educating homeowners about Federal and State incentives. Similarly, in 2009, Governor Jeremiah "Jay" Nixon signed Senate Bill 376, the "Missouri Energy Efficiency Investment Act," with a stated policy to "value demand-side investments equal to traditional investments in supply and delivery infrastructure and allow recovery of all reasonable and prudent costs of delivering cost-effective demand-side programs." Section 393.1075.3

The Commission held several workshops, which culminated in the promulgation of a rulemaking in File No. EX-2010-0368, *In the Matter of the Consideration and Implementation of Section 393.1075, The Missouri Energy Efficiency Investment Act*. The rules became effective on May 30, 2011 – Rules 4 CSR 240-20.093, 20.094, 3.163, and 3.164. Ameren Missouri submitted its MEEIA application on January 20, 2012, in Case No. EO-2012-0142 and a *Unanimous Stipulation and Agreement Resolving Ameren missouri's MEEIA Filing* was filed int hat case on July 5, 2012. In this case, the Commission will be determining what mechanisms adequately remove the disincentive to energy efficiency for Ameren Missouri, what incentives will be provided for successful management of energy efficiency programs, and how energy efficiency costs will be recovered.

SB 376 contains a provision which states, "Prior to approving a rate design modification associated with demand-side cost recovery, the commission shall conclude a docket studying the effects thereof and promulgate an appropriate rule." (Section 393.1075.5) The Commission held additional workshops on this provision of SB 376, and on March 20, 2012, Electric Utility Consultants, Inc. ("EUCI"), provided to the Commission, Staff and interested stakeholders, an in-house, specialized training course on Electric Rate Design Modifications Associated with Demand-Side Cost Recovery.

The revised Chapter 22 rules incorporate requirements for rate design analysis. For instance, 4 CSR 240-22.030(5)(C) requires, at a minimum, that load forecast models assess the impact of legal mandates, economic policies, and rate designs on future energy and demand requirements. Likewise, 4 CSR 240-22.050(4)(B) requires the utility to describe and document its demand-side rate planning and design process, and when appropriate, to consider multiple demand-side rate designs for the major classes.

The Commission sets rates in Missouri based on the cost to serve the customer. This gives the customer accurate cost information on which it can determine whether or not it wants to implement energy efficiency measures. Increasing rates to encourage energy efficiency or setting rates lower for customers that implement energy efficiency sends inaccurate costs signals to the customers. Therefore, without getting into a discussion of general ratemaking principles, but for purposes of the Commission's consideration as to whether it should implement PURPA Section 111(d)(17), setting rates based on cost to serve the customer sends the appropriate price signal to the customer to make decisions on energy efficiency. The Commission's revised Chapter 22 rules require the electric utilities to look at all forms of incentivizing energy efficiency including home energy audits and demand-response programs.

As a result of these activities, Staff recommends that the Commission, in this case, make a determination that, although additional activities related to SB 376 are contemplated, no further determination is needed in response to PURPA Section 111(d)(17) for Ameren Missouri.

3. Smart Grid Docket

In response to **PURPA Section 111(d)(18)**, Smart Grid Investments Standard, and **PURPA Section 111(d)(19),** Smart Grid Information Standard, as required by Section 1307 of the Energy Independence and Security Act of 2007, the Commission, on December 29, 2010, issued an order to open File No. EW-2011-0175 as a repository for information concerning the Smart Grid in Missouri.

On January 13, 2011, Staff filed the *Missouri Smart Grid Report* ("Report") in File No. EW-2011-0175. The Report discusses Smart Grid technologies, provides a status update on various Smart Grid opportunities in Missouri and presents issues and concerns related to Smart Grid deployment. It identifies key issues requiring further emphasis, including planning, implementation, cost recovery, cyber security and data privacy, customer acceptance and involvement, and customer savings and benefits. The Report recommends the Commission hold a Smart Grid workshop every six months for information exchange and sharing of best practices and educational opportunities; and also recommends the Commission open a docket to address cost recovery issues.

The Commission has held Smart Grid conferences on June 28, 2010, and November 29, 2011. Panelist and speaker topics included such items as updates on Smart Grid projects in Missouri, customer views, education and engagement, and challenges to deployment.

The information provided in the workshop is provided to the public through the Commission's electronic filing and information system. The Smart Grid was also the most recent subject of the *PSConnection*, a publication of the Commission which is available online, at public hearings, at the State Fair booth, and at all other opportunities where the Commission interacts with the public.

PURPA Section 111(d)(19) requires all electricity purchasers and other interested parties to be provided access to information from their electricity provider related to time-based prices, usage, and sources of power provided by the utility and type of generation, with associated greenhouse gas emissions for each type of generation, to the extent such information is available, on a cost-effective basis. While the Commission has not specifically addressed these issues in the context of PURPA Section 111(d)(19), there have been several forums in which stakeholders have discussed related issues and Staff recommends these issues continue to be addressed as they arise.

Staff recommends the Commission make a determination in this case that it has established the appropriate avenues for monitoring Smart Grid activities and no greater ongoing activity is needed in response to PURPA Section 111(d)(18) and PURPA Section 111(d)(19) in the context of Ameren Missouri.

Staff Expert/Witness: Natelle Dietrich

B. Smart Grid Status

This section provides information on the history and status of Ameren Missouri's Smart Grid deployment and does not address any particular revenue requirements in this rate case. Information for this section was provided by Ameren Missouri through presentations, its website,[108] in workshops and meetings with the Staff, and Ameren Missouri's Smart Grid report dated February, 2012.

[108] http://www.ameren.com/AboutAmeren/Pages/SmartGrid.aspx, information provided.

Ameren Missouri has been "100 percent deployed" with Automated Meter Reading ("AMR") since 2000. In September 2009, Ameren Missouri conducted a study comparing the costs and benefits of AMR versus Advanced Metering Infrastructure ("AMI") and concluded the benefits of AMI do not outweigh the estimated costs. However, Ameren Missouri is closely monitoring other AMI deployments with plans to revisit this issue in the future.

The Company is currently upgrading and modernizing its AMR system with the deployment of new field equipment that will provide increased network capacity for adding additional meters and increased communication flexibility.[109] New field equipment includes Concentrators and Collectors in addition to the existing Cell Masters[110] and Micro Cell Controllers ("MCC").[111] The Concentrator receives wireless radio broadcasts from the electric meters and then transmits digital information to the Collectors. The Collector receives the information from the Concentrators and then transmits bundled digital information in "packets" to a central operating system for processing. Currently there are 3 Collectors, 226 Concentrators, 90 Cell Masters and 8,155 MCCs in the Company's service territory. Additional Cell Masters and Micro Cell Controllers will be added as required to maintain the current MCC and AMR coverage areas.

Ameren Missouri placed in service a plug-in hybrid (diesel fuel and electric powered) bucket truck in the St. Louis metropolitan area in 2011 as part of an Electric Power Research Institute (EPRI) demonstration project. The Company is also participating with St. Louis Clean Cities on a Plug-In Readiness Task Force as a means of monitoring initial discussions on how to create a local market for new Plug-In Hybrid Electric Vehicles ("PHEVs"). The Company has a Chevrolet Volt hybrid automobile that employees are testing and evaluating. An August 2009 technology study concluded that there would be no significant system effects or impacts anticipated on Ameren Missouri's service territory until PHEV penetration approached approximately 150,000 vehicles.[112]

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[109] Ameren's Smart Grid report dated February, 2012.

[110] A wireless high capacity router device that receives and collects wireless data from Micro Cell Controllers and then transmits this data via a leased line to the central operating system.

[111] A small pole mounted data collection device that receives wireless AMR data and transmits this data to a Cell Master.

[112] Ameren Missouri Presentation; "The Smart Grid @ AmerenUE", May 18, 2010, item 84, EFIS File No. EW-2009-0292

Ameren Missouri has focused investments to improve its electric system grid service reliability, operating efficiency, asset optimization, and the energy delivery infrastructure. Ameren Missouri has deployed both mature and new technology solutions on its system. Appendix 3, Schedule RSG-1 contains a more detailed description of the mature and new technology solutions employed by Ameren Missouri.

Staff Expert/Witness: Randy Gross

C. Light Emitting Diode (LED) Street and Area Lighting

In the Company's last rate case, Case No. ER-2011-0028, the Commission in its July 13, 2011, *Report and Order* agreed with Staff that "…LED street lighting is an exciting technology that should be examined and implemented if appropriate. [113]" In its Report and Order, the Commission directed Ameren Missouri to either file an LED street lighting tariff by July 31, 2012, or to provide a status report to Staff by that date, indicating when it will be able to file such a tariff. Based on Staff's recommendation, the Commission emphasized that "…Ameren Missouri does not have to file a tariff until it is appropriate to do so. If its further study of the potential of LED street lighting reveals that such lighting will not be a benefit to its customers, Ameren Missouri may inform the Staff of that conclusion in its status report.[114]"

Ameren Missouri has not filed a LED street lighting tariff and has not provided a status report to Staff. Any Staff recommendations resulting from Ameren Missouri's status report will be included in Staff's rebuttal or surrebuttal testimony in this case.

Staff Expert/Witness: Hojong Kang

D. Pure Power Program - Tariffed as "Voluntary Green Program"

Staff recommends that the Pure Power Program, tariffed as the "Voluntary Green Program" program be terminated. In the alternative, Staff recommends that the Commission de-tariff Ameren Missouri's program and place a notification on all Pure Power marketing and informational material, including all material on any websites associated with Pure Power, that

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[113] *Report and Order*, ER-2011-0028, Page 94.

[114] *Id.*

"Pure Power is a deregulated activity. The Missouri Public Service Commission exercises no authority over this activity."

The Pure Power program is best described as a customer choice mechanism that allows an Ameren Missouri customer to purchase and retire Renewable Energy Certificates (RECs) on the customer's behalf. A REC is the "renewable attribute" of a MWh of energy generated with a "green" fuel source.

The tariffed purpose of Pure Power is: *to provide customers with an option to contribute to the further development of renewable energy technologies (MO. P.S.C. Schedule No. 5, 2nd Revised tariff Sheet 216).* However, by analyzing four years of data, it is clear that only ** _______ ** the monies collected went to green energy producers. (See Appendix 3, Schedule MJE-1) Ameren Missouri[115] retains $1.00 of every $15.00 collected (6.67%) as an administrative fee. Pursuant to contract, a third party, 3Degrees acquires RECs from green energy producers and sells them to Ameren Missouri for a fixed price of $14.00 per-REC.[116] Ameren Missouri is not directly involved in the acquisitions of energy or RECs from green energy producers, and maintains that it is not privy to the details of the transactions between 3Degrees and the green energy producer[117]. Ameren Missouri does not audit 3Degrees' expenditures[118] of the $14. 3Degrees does not provide Ameren Missouri with the REC-specific detailed information regarding REC acquisitions provided in Appendix 3, Schedule MJE-1. 3Degrees only supplies Ameren Missouri with annual "averages" figures which are ultimately relayed to Staff as requested.

This summary information indicates that only ** _______ ** of the $15 per REC that is paid by Ameren Missouri's customers is ultimately used to retire RECs.

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[115] *Response to DR 0306 – AGREEMENT FOR TRADABLE RENEWABLE CERTIFICATES AND RETAIL MARKETING SERVICES*- signed by Ameren Energy Fuels and Services Company, (AFS) on behalf of Ameren Missouri.

[116] The use of RECs for this program does not necessarily address the program's stated purpose *to further develop renewable energy technologies*, in that a REC is indicative of past production in that it does not require development of additional renewable energy production.

[117] Response to DR 373 asserts that Ameren lacks the detail to verify the accuracy of the average per-REC wholesale cost submitted to the Commission as part of Response to DR 351. Response to DR 371 asserts that Ameren lacks the detail to verify the accuracy of the average per-REC advertising expense submitted to the Commission as part of Response to DR 351.

[118] As structured, the Commission lacks any jurisdiction over either 3Degrees or any of the producers – who are the final recipients of the contributions that have been collected pursuant to Ameren Missouri's tariff.

Contributing to the purchase of a REC is not a traditional transaction for service rendered by a utility. This program was first tariffed by Ameren Missouri on June 4, 2007, as part of ER-2007-0002. The concept of RECs has been around (at the federal level) since before 1992. But, RECs were a fairly new concept in Missouri when Pure Power was initially tariffed. Even today, no other Missouri utility utilizes a similar voluntary program. Ameren Illinois has been unsuccessful in its attempt to tariff the same[119] program in Illinois, and a similar program in Florida has been rejected.

The major point of the data shown on Appendix 3, Schedule MJE 1 is to demonstrate that Ameren Missouri and 3Degrees has kept ** ______________ ** of the payments collected for the entire four year period that Ameren Missouri has offered the Pure Power program.

Appendix 3, Schedule MJE-1 shows that (between 2008 & 2011) producers of RECs received as little as ** ____ ** of Pure Power payments, and never more than ** ____ ** of the customers' payments over the four years that data was provided. Appendix 3, Schedule MJE-1 shows that little of the customers' payments go to the tariffed purpose - "*to contribute to the further development of renewable energy technologies*".

Staff has found no evidence that even the portion of the payment that goes towards REC retirement meets the tariffed purpose of the Pure Power Program to further development of renewable energy technologies. Staff has reviewed the following documents that REC producers must sign or abide by, in order to get RECs certified for sale at the federal level:[120]

- Green-E Generator Registration Form and Attestation;
- Green-E Renewable Electricity Certification Program - National Standards Version 1.2; and
- Code of Conduct Certification.

[119] Initially, the contract between Ameren and 3Degrees addressed both Missouri and Illinois, but subsequent versions removed the Illinois references.

[120] Response to Data Request No. 0306 – AGREEMENT FOR TRADABLE RENEWABLE CERTIFICATES AND RETAIL MARKETING SERVICES - Exhibit D – Exhibit F – Exhibit G

Nowhere in any of these documents are there any encumbrances on how REC monies can be spent, once received, even though the tariff language is clear that monies-given will be used *to the further development of renewable energy technologies"*.

Staff also finds Ameren Missouri's Pure Power information on its website problematic. In previous rate cases, Ameren Missouri removed website quotes Staff found to be misleading. However, replacement ads are in the same misleading vein.

Ameren Missouri's website, which is summarized in Appendix 3, Schedule MJE-2, indicates to Pure Power customers that they are getting green energy by subscribing to the program, and is also misleading the customer as to where their charges for green power go. Examples are:

- Ameren Missouri + Renewable Energy = Pure Power
- Pure Power means renewable energy
- Simply purchase RECs today and reap the benefits of renewable energy tomorrow.
- Residential and small business customers can offset 100% of their energy with clean power.

Staff notes that Appendix 3, Schedule MJE-2 is not an all-inclusive list, and that additional ads on the website fail to give a true and honest representation of how Pure Power collections are spent. Staff's position is that ads of this nature lead customers to a false conclusion that they are purchasing green power with their subscriptions

Given the percentage of the customer payment that ultimately goes towards the purchase and retirement of RECs, Ameren Missouri's failure to verify that customers' money goes to the intended purpose, the questionable suitability of RECs as a means to achieve the program's tariffed purpose of furthering the development of renewable energy technologies, and Ameren Missouri's misleading website information, Staff recommends that the program be terminated, or at least de-tariffed and de-regulated. De-tariffing the service eliminates the Commission's responsibility to oversee the execution of this program. If this program is de-tariffed, Ameren Missouri could still be allowed to facilitate the transactions between customers and 3Degrees, but should not be allowed to place the charge for Pure Power on customers' bills, and all revenues and expenses of the program must be treated below the line for ratemaking purposes.

In addition, Ameren Missouri should be required to post on all marketing and informational material regarding Pure Power including promotional material on its website, at a minimum, 12-point print, a notice informing the public that "Pure Power is a deregulated activity. The Missouri Public Service Commission exercises no authority over this activity."

Staff Expert/Witness: Michael J. Ensrud

Appendices

Appendix 1: Staff Credentials

Appendix 2: Support for Staff Cost of Capital Recommendation

Appendix 3: Alphabetical Listing of Testimony Schedules

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Union Electric Company d/b/a Ameren Missouri's Tariffs to Increase Its Revenues for Electric Service	)))	File No. ER-2012-0166

AFFIDAVIT OF ALAN J. BAX

STATE OF MISSOURI	)	
	)	ss.
COUNTY OF COLE	)	

Alan J. Bax, of lawful age, on his oath states: that he has participated in the preparation of the foregoing Staff Report as identified in the individual sections as identified in the Table of Contents of said Report; that he has knowledge of the matters set forth in such Report; and that such matters are true to the best of his knowledge and belief.

Alan J Bax

Alan J. Bax

Subscribed and sworn to before me this 6th day of July, 2012.

D. SUZIE MANKIN
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: December 08, 2012
Commission Number: 08412071

D Suzie Mankin

Notary Public

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Union Electric Company d/b/a Ameren Missouri's Tariffs to Increase Its Revenues for Electric Service	)))	File No. ER-2012-0166

AFFIDAVIT OF KOFI AGYENIM BOATENG

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

Kofi Agyenim Boateng, of lawful age, on his oath states: that he has participated in the preparation of the foregoing Staff Report as identified in the individual sections as identified in the Table of Contents of said Report; that he has knowledge of the matters set forth in such Report; and that such matters are true to the best of his knowledge and belief.

Kofi Agyenim Boateng

Subscribed and sworn to before me this 6th day of July, 2012.

D. SUZIE MANKIN
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: December 08, 2012
Commission Number: 08412071

D Suzie Mankin
Notary Public

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Union Electric Company d/b/a Ameren Missouri's Tariffs to Increase Its Revenues for Electric Service	)))	File No. ER-2012-0166

AFFIDAVIT OF ERIN M. CARLE

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

Erin M. Carle, of lawful age, on her oath states: that she has participated in the preparation of the foregoing Staff Report as identified in the individual sections as identified in the Table of Contents of said Report; that she has knowledge of the matters set forth in such Report; and that such matters are true to the best of her knowledge and belief.

Erin M. Carle

Erin M. Carle

Subscribed and sworn to before me this 6th day of July, 2012.

D Suzie Mankin

Notary Public

D. SUZIE MANKIN
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: December 08, 2012
Commission Number: 08412071

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Union Electric Company d/b/a Ameren Missouri's Tariffs to Increase Its Revenues for Electric Service	)))	File No. ER-2012-0166

AFFIDAVIT OF JOHN P. CASSIDY

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

John P. Cassidy, of lawful age, on his oath states: that he has participated in the preparation of the foregoing Staff Report as identified in the individual sections as identified in the Table of Contents of said Report; that he has knowledge of the matters set forth in such Report; and that such matters are true to the best of his knowledge and belief.

John P. Cassidy

John P. Cassidy

Subscribed and sworn to before me this 6th day of July, 2012.

D. SUZIE MANKIN
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: December 08, 2012
Commission Number: 08412071

D Suzie Mankin

Notary Public

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Union Electric Company d/b/a Ameren Missouri's Tariffs to Increase Its Revenues for Electric Service	)))	File No. ER-2012-0166

AFFIDAVIT OF NATELLE DIETRICH

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

Natelle Dietrich, of lawful age, on her oath states: that she has participated in the preparation of the foregoing Staff Report as identified in the individual sections as identified in the Table of Contents of said Report; that she has knowledge of the matters set forth in such Report; and that such matters are true to the best of her knowledge and belief.

Natelle Dietrich

Natelle Dietrich

Subscribed and sworn to before me this 6th day of July, 2012.

D. SUZIE MANKIN
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: December 08, 2012
Commission Number: 08412071

D. Suzie Mankin

Notary Public

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Union Electric Company d/b/a Ameren Missouri's Tariffs to Increase Its Revenues for Electric Service	)))	File No. ER-2012-0166

AFFIDAVIT OF DAVID W. ELLIOTT

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

David W. Elliott, of lawful age, on his oath states: that he has participated in the preparation of the foregoing Staff Report as identified in the individual sections as identified in the Table of Contents of said Report; that he has knowledge of the matters set forth in such Report; and that such matters are true to the best of his knowledge and belief.

David W. Elliott

David W. Elliott

Subscribed and sworn to before me this 6th day of July, 2012.

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State of Missouri
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AFFIDAVIT OF MICHAEL J. ENSRUD

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

Michael J. Ensrud, of lawful age, on his oath states: that he has participated in the preparation of the foregoing Staff Report as identified in the individual sections as identified in the Table of Contents of said Report; that he has knowledge of the matters set forth in such Report; and that such matters are true to the best of his knowledge and belief.

Michael J. Ensrud

Michael J. Ensrud

Subscribed and sworn to before me this 6th day of July, 2012.

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AFFIDAVIT OF LISA M. FERGUSON

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

Lisa M. Ferguson, of lawful age, on her oath states: that she has participated in the preparation of the foregoing Staff Report as identified in the individual sections as identified in the Table of Contents of said Report; that she has knowledge of the matters set forth in such Report; and that such matters are true to the best of her knowledge and belief.

Lisa M. Ferguson

Lisa M. Ferguson

Subscribed and sworn to before me this 6th day of July, 2012.

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Commissioned for Cole County
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AFFIDAVIT OF CAROL GAY FRED

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

Carol Gay Fred, of lawful age, on her oath states: that she has participated in the preparation of the foregoing Staff Report as identified in the individual sections as identified in the Table of Contents of said Report; that she has knowledge of the matters set forth in such Report; and that such matters are true to the best of her knowledge and belief.

Carol Gay Fred

Carol Gay Fred

Subscribed and sworn to before me this 6th day of July, 2012.

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AFFIDAVIT OF GUY C. GILBERT

STATE OF MISSOURI	)	
	)	ss.
COUNTY OF COLE	)	

Guy C. Gilbert, of lawful age, on his oath states: that he has participated in the preparation of the foregoing Staff Report as identified in the individual sections as identified in the Table of Contents of said Report; that he has knowledge of the matters set forth in such Report; and that such matters are true to the best of his knowledge and belief.

Guy C. Gilbert

Subscribed and sworn to before me this 6th day of July, 2012.

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AFFIDAVIT OF ROBERTA A. GRISSUM

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

Roberta A. Grissum, of lawful age, on her oath states: that she has participated in the preparation of the foregoing Staff Report as identified in the individual sections as identified in the Table of Contents of said Report; that she has knowledge of the matters set forth in such Report; and that such matters are true to the best of her knowledge and belief.

Roberta A. Grissum

Roberta A. Grissum

Subscribed and sworn to before me this 6th day of July, 2012.

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State of Missouri
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AFFIDAVIT OF RANDY S. GROSS

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

Randy S. Gross, of lawful age, on his oath states: that he has participated in the preparation of the foregoing Staff Report as identified in the individual sections as identified in the Table of Contents of said Report; that he has knowledge of the matters set forth in such Report; and that such matters are true to the best of his knowledge and belief.

Randy S. Gross

Subscribed and sworn to before me this 6th day of July, 2012.

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AFFIDAVIT OF LISA K. HANNEKEN

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

Lisa K. Hanneken, of lawful age, on her oath states: that she has participated in the preparation of the foregoing Staff Report as identified in the individual sections as identified in the Table of Contents of said Report; that she has knowledge of the matters set forth in such Report; and that such matters are true to the best of her knowledge and belief.

Lisa K Hanneken
Lisa K. Hanneken

Subscribed and sworn to before me this 6th day of July, 2012.

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State of Missouri
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AFFIDAVIT OF HOJONG KANG

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

Hojong Kang, of lawful age, on his oath states: that he has participated in the preparation of the foregoing Staff Report as identified in the individual sections as identified in the Table of Contents of said Report; that he has knowledge of the matters set forth in such Report; and that such matters are true to the best of his knowledge and belief.

Hojong Kang

Hojong Kang

Subscribed and sworn to before me this 6th day of July, 2012.

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AFFIDAVIT OF ROBIN KLEITHERMES

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

Robin Kliethermes, of lawful age, on her oath states: that she has participated in the preparation of the foregoing Staff Report as identified in the individual sections as identified in the Table of Contents of said Report; that she has knowledge of the matters set forth in such Report; and that such matters are true to the best of her knowledge and belief.

Robin Kliethermes

Robin Kliethermes

Subscribed and sworn to before me this 6th day of July, 2012.

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AFFIDAVIT OF SHAWN E. LANGE

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

Shawn E. lange, of lawful age, on his oath states: that he has participated in the preparation of the foregoing Staff Report as identified in the individual sections as identified in the Table of Contents of said Report; that he has knowledge of the matters set forth in such Report; and that such matters are true to the best of his knowledge and belief.

Shawn E. Lange

Shawn E. Lange

Subscribed and sworn to before me this 6th day of July, 2012.

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AFFIDAVIT OF ERIN L. MALONEY

STATE OF MISSOURI	)	
	)	ss.
COUNTY OF COLE	)	

Erin L. Maloney, of lawful age, on her oath states: that she has participated in the preparation of the foregoing Staff Report as identified in the individual sections as identified in the Table of Contents of said Report; that she has knowledge of the matters set forth in such Report; and that such matters are true to the best of her knowledge and belief.

Erin L. Maloney

Erin L. Maloney

Subscribed and sworn to before me this 6th day of July, 2012.

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AFFIDAVIT OF LENA M. MANTLE

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

Lena M. Mantle, of lawful age, on her oath states: that she has participated in the preparation of the foregoing Staff Report as identified in the individual sections as identified in the Table of Contents of said Report; that she has knowledge of the matters set forth in such Report; and that such matters are true to the best of her knowledge and belief.

Lena M. Mantle

Lena M. Mantle

Subscribed and sworn to before me this 6th day of July, 2012.

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D Suzie Mankin

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AFFIDAVIT OF DAVID MURRAY

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

David Murray, of lawful age, on his oath states: that he has participated in the preparation of the foregoing Staff Report as identified in the individual sections as identified in the Table of Contents of said Report; that he has knowledge of the matters set forth in such Report; and that such matters are true to the best of his knowledge and belief.

David Murray

David Murray

Subscribed and sworn to before me this 6th day of July, 2012.

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AFFIDAVIT OF MARK L. OLIGSCHLAEGER

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

Mark L. Oligschlaeger, of lawful age, on his oath states: that he has participated in the preparation of the foregoing Staff Report as identified in the individual sections as identified in the Table of Contents of said Report; that he has knowledge of the matters set forth in such Report; and that such matters are true to the best of his knowledge and belief.

Mark L. Oligschlaeger

Mark L. Oligschlaeger

Subscribed and sworn to before me this 6th day of July, 2012.

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AFFIDAVIT OF JOHN A. ROGERS

STATE OF MISSOURI	)	
	)	ss.
COUNTY OF COLE	)	

John A. Rogers, of lawful age, on his oath states: that he has participated in the preparation of the foregoing Staff Report as identified in the individual sections as identified in the Table of Contents of said Report; that he has knowledge of the matters set forth in such Report; and that such matters are true to the best of his knowledge and belief.

John A Rogers

John A. Rogers

Subscribed and sworn to before me this 6th day of July, 2012.

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State of Missouri
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AFFIDAVIT OF DAVID C. ROOS

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

David C. Roos, of lawful age, on his oath states: that he has participated in the preparation of the foregoing Staff Report as identified in the individual sections as identified in the Table of Contents of said Report; that he has knowledge of the matters set forth in such Report; and that such matters are true to the best of his knowledge and belief.

David C Roos

David C. Roos

Subscribed and sworn to before me this 6th day of July, 2012.

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State of Missouri
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AFFIDAVIT OF MICHAEL E. TAYLOR

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

Michael E. Taylor, of lawful age, on his oath states: that he has participated in the preparation of the foregoing Staff Report as identified in the individual sections as identified in the Table of Contents of said Report; that he has knowledge of the matters set forth in such Report; and that such matters are true to the best of his knowledge and belief.

Michael E. Taylor

Michael E. Taylor

Subscribed and sworn to before me this 6th day of July, 2012.

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State of Missouri
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AFFIDAVIT OF HENRY E. WARREN, PHD

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

Henry E Warren, PhD, of lawful age, on his oath states: that he has participated in the preparation of the foregoing Staff Report as identified in the individual sections as identified in the Table of Contents of said Report; that he has knowledge of the matters set forth in such Report; and that such matters are true to the best of his knowledge and belief.

Henry E. Warren

Henry E. Warren, PhD

Subscribed and sworn to before me this 6th day of July, 2012.

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State of Missouri
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AFFIDAVIT OF CURT WELLS

STATE OF MISSOURI	)	
	)	ss.
COUNTY OF COLE	)	

Curt Wells, of lawful age, on his oath states: that he has participated in the preparation of the foregoing Staff Report as identified in the individual sections as identified in the Table of Contents of said Report; that he has knowledge of the matters set forth in such Report; and that such matters are true to the best of his knowledge and belief.

Curt Wells

Curt Wells

Subscribed and sworn to before me this 6th day of July, 2012.

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AFFIDAVIT OF SEOUNG JOUN WON, PHD

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

Seoung Joun Won, PhD, of lawful age, on his oath states: that he has participated in the preparation of the foregoing Staff Report as identified in the individual sections as identified in the Table of Contents of said Report; that he has knowledge of the matters set forth in such Report; and that such matters are true to the best of his knowledge and belief.

Seoung Joun Won

Seoung Joun Won, PhD

Subscribed and sworn to before me this 6th day of July, 2012.

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State of Missouri
Commissioned for Cole County
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D Suzie Mankin

Notary Public