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MISSOURI PUBLIC SERVICE COMMISSION

FILE NO. ER-2016-0179

DIRECT TESTIMONY

OF

MICHAEL MOEHN

ON

BEHALF OF

UNION ELECTRIC COMPANY
d/b/a Ameren Missouri

St. Louis, Missouri
July 2016

TABLE OF CONTENTS

DIRECT TESTIMONY

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I. INTRODUCTION

Q. Please state your name and business address.

A. My name is Michael Moehn. My business address is One Ameren Plaza, 1901 Chouteau Avenue, St. Louis, Missouri 63103.

Q. By whom are you employed and in what capacity?

A. I am the President of Union Electric Company d/b/a Ameren Missouri ("Ameren Missouri" or "Company").

Q. Please describe your educational background and employment experience.

A. I graduated from St. Louis University in 1991 with a Bachelor of Science degree in Accounting. I received my Masters in Business Administration in 2000 from Washington University. I am a licensed Certified Public Accountant in the State of Missouri and a member of the American Institute of Certified Public Accountants and the Missouri Society of Certified Public Accountants. I have also completed the Reactor Technology Course for Utility Executives at the Massachusetts Institute of Technology.

I have been with Ameren since 2000. First, I was at Ameren Services Company as the Assistant Controller, then in 2001 as Director of Corporate Modeling and Transaction Support. In 2002, I was promoted to Vice President of Business Services at Ameren Energy Resources Company. In 2004, I was promoted to Vice President of

Corporate Planning. In 2008, I was promoted to Senior Vice President of Corporate Planning and Business Risk Management. In January of 2012, I was named Senior Vice President of Customer Operations for Ameren Illinois, and later that year, I became Senior Vice President of Customer Operations for Ameren Missouri. I assumed my current position as President of Ameren Missouri on April 1, 2014. Prior to my employment at Ameren, I was employed by Price Waterhouse LLP (now PriceWaterhouseCoopers LLP) as Senior Manager in the company's Audit and Business Advisory Services Department.

Q. Please briefly provide a description of Ameren Missouri's operations.

A. Ameren Missouri is Missouri's largest electric utility, operating primarily in the eastern half of Missouri, but also in central Missouri and one area in northwest Missouri, serving more than 1.2 million retail electric customers over a 24,000 square mile service territory. The Company owns a large and diverse fleet of generating plants, including a nuclear plant, several coal-fired plants, natural gas plants, hydroelectric facilities, a landfill gas facility and solar energy facilities. The Company also owns and operates an extensive transmission and distribution network. Ameren Missouri also operates a smaller gas distribution utility, serving approximately 128,000 customers in central Missouri. Schedule MM-1 outlines the Company's operations in more detail.

Ameren Missouri is one of the largest employers in Missouri. Today we employ approximately 3,700 full-time employees and numerous independent contractors. In addition, we are providing pension benefits to approximately 3,900 retired employees and their families. The Company employs a diverse workforce. For the second consecutive year, DiversityInc has ranked Ameren Corporation first in the United States on its 2016 listing of the nation's Top 7 Utilities. Since 2010, Ameren has been recognized among DiversityInc's top utilities for creating an inclusive workplace, supporting the diverse communities it serves and developing strong partnerships with diverse suppliers. Last year, over 13% of the Ameren companies' supplier spending went to diverse suppliers. Ameren Missouri has also been very active in employing veterans returning to the workforce after deployment.

II. PURPOSE

Q. What is the purpose of your direct testimony in this proceeding?

A. The purpose of my direct testimony is to:

(a) Provide the Missouri Public Service Commission ("Commission") with a summary of our request and explain its main drivers;

(b) Discuss the Company's continued efforts to invest in its generation, transmission and distribution systems;

(c) Discuss metrics utilized to gauge the success of the Company's efforts to maintain and improve the reliability of its service and the effectiveness of its operations, and opportunities for improvement in these areas;

(d) Outline the significant efforts we have made to control those costs in our business over which we are able to exert more control, and to discuss the implications of those cost control efforts for our customers and the operation of our business;

(e) Discuss the transformation that is occurring in the electric utility industry, and its implications for our customers, our business, regulators and other stakeholders;

(f) Describe the significant efforts we have made and continue to make to improve communication with our customers; and

(g) Address the need for regulatory modifications, either through Commission action within its existing authority, through legislative action, or through a combination of both approaches, in order to allow the Company and other Missouri electric utilities to address their aging infrastructure, improve reliability and security, modernize the grid to reflect the transformation occurring in our industry, to continue to meet the expectations of the customers we serve, and to position Missouri for long-term growth in the future.

A. Summary of Request and Main Drivers

Q. Please summarize the relief Ameren Missouri is seeking in this case and address the main drivers of this rate case filing.

A. We are seeking a total increase in our annual revenue requirement of approximately $206 million, which represents an increase in our average base rates of approximately 7.8%. The main drivers are:

- the addition of nearly $1.4 billion in new plant-in-service since the true-up cutoff date in our last general rate case through the true-up cutoff date in this case (December 31, 2016), including significantly greater depreciation expense and return on those new investments, as well as higher property taxes arising from those investments and property tax rate increases – this comprises approximately $74 million of the revenue requirement increase;

- the higher transmission charges that we have incurred and must incur in order to serve our load from the Midcontinent Independent System Operator, Inc.'s ("MISO") energy market – this comprises approximately $34 million of the revenue requirement increase;

- the significant loss in revenues caused by the cessation of smelting operations at the New Madrid smelter owned by Noranda Aluminum, Inc.

(“Noranda”) – this comprises approximately $31 million of the revenue requirement increase; and

- the impact of lower customer sales, apart from the sales reduction relating to Noranda – this comprises approximately $20 million of the revenue requirement increase.

B. Investments in Infrastructure and Other Costs

Q. Please elaborate on the nature of the nearly $1.4 billion of capital investments the Company has already made or will place in service prior to December 31, 2016.

A. We continue to make significant investments across all areas of our business – generation, transmission and distribution. The largest five investments were for projects necessitated by North American Electric Reliability Corporation requirements (approximately $57 million), projects at the Callaway Energy Center required by post-Fukushima Nuclear Regulatory Commission (“NRC”) requirements (approximately $48 million), extending the NRC-issued operating license for the Callaway Energy Center for an additional 20 years (approximately $38 million), completing the new coal ash landfill at the Labadie Energy Center (approximately $38 million), and constructing a new 345 kV transmission line near Cape Girardeau ($27 million). The remaining investments consist of a wide array of additions and improvements to our system driven by regulatory requirements and replacement of infrastructure, including investments in cybersecurity, items like upgrading the electrostatic precipitators on Unit 4 at the Labadie Energy Center, replacing substations, and constructing dry cask storage facilities for spent nuclear fuel at the Callaway Energy Center.

Q. Why must the Company make such a significant level of investment in its system?

A. We continue to make significant capital investments in our system for two principal reasons. First, we must invest in our systems in order to provide safe and adequate service to our customers. By their very nature, electric utilities are capital intensive businesses and the extensive infrastructure needed to provide electric service must be continually replaced and upgraded. The need to do so is becoming greater every day given that most of our generation, transmission and distribution assets were built decades ago, coupled with customers' ever-increasing dependence on reliable electric service.

Second, we are continually required to make investments needed to comply with a wide array of governmental requirements, including those related to reliability, safety, and environmental compliance. For decades the trend has been for these requirements to become increasingly stringent, and we do not see that trend changing in the future. Another driver of capital investments is increasingly tighter cyber-security requirements designed to protect the country's utility infrastructure.

As we look to the near and intermediate terms in the future and beyond, we expect investment needs to continue to increase, because we will have to replace our aging infrastructure and modernize the system to keep pace with the transformation occurring in the electric industry. I will further address these issues later in my testimony, including the significant challenge these investment needs create given the lack of sales growth occurring on our system.

Q. It obviously takes a lot of money to make these kinds of investments. What are some of the other key items upon which electric utilities must spend significant sums of money in order to discharge their service obligations?

A. First and foremost, we must continue to invest in a highly-trained and qualified workforce so we can make sure that we can effectively deliver the essential service we provide. In order to attract and retain that workforce, we must provide competitive salaries, wages and benefits. Over time, that means our employee-related costs, as well as the costs for contractors and the other service providers on whom we rely, are increasing. As I discuss later, we continue to work hard to mitigate those costs, including by controlling headcount whenever we can. However, we cannot do our job and do it well without a sufficient number of good employees, contractors and service providers.

The increases in property taxes and transmission charges, which I made note of earlier, show that we face other pressures in our cost of service, and we expect those pressures to continue as well. Regarding transmission charges, we are proposing a transmission charges (and revenues) tracker to help mitigate those pressures. These transmission charges, which primarily consist of charges arising from the regional transmission organization in which we participate, MISO, are an unavoidable cost that we must incur to access the significant benefits the MISO market provides to us and our customers. Those benefits include the ability to serve our load from a transparent wholesale energy market and to sell our generation into that market, including selling capacity, which in recent years has allowed us to capture tens of millions of dollars of revenues that almost entirely flow back to customers via our fuel adjustment clause.

Ameren Missouri witness Lynn Barnes addresses the transmission charge and revenue tracker in her direct testimony. Other non-energy-related cost of service items that are expected to continue to increase, despite our best efforts to minimize the increases, include the costs of professional services such as required external audit fees, NRC fees, the cost of external services to handle customer call volume, and increases in cybersecurity investments.

C. <u>Reliability, Effectiveness of Operations and Customer Satisfaction</u>

Q. In the face of these investment needs and cost pressures, has the Company been able to provide safe and adequate service to its customers?

A. Yes, overall there is no question that we do a very good job in providing service to our customers, a fact confirmed by reliability, operational and customer satisfaction metrics. I am grateful to our employees for the job they do in delivering that service to our customers. However, customer expectations are consistently increasing and there remains room for improvement. These investment needs and other cost pressures make achieving that improvement more and more difficult, particularly given the transformation occurring in the electric industry; the electric utility regulatory system was developed long ago for an industry that looked very different than it does today. As I discuss further below, we need policies that enable us to make additional investments in our system and that allow us to actively participate in the transformation of the industry that is occurring.

Q. Can you please provide the Commission with some of the relevant reliability, operational effectiveness, and customer satisfaction metrics to which you previously referred?

A. Yes. I will start with reliability metric data. The Commission's infrastructure rules require that we track certain metrics, including: SAIFI (System Average Interruption Frequency Index), SAIDI (System Average Interruption Duration Index), and CAIDI (Customer Average Interruption Duration Index). There is also another common industry metric that we rely upon to assess reliability, $CEMI_3$ (Customers Experiencing Multiple Interruptions).

Q. Please elaborate on what each of these metrics seek to measure.

A. SAIDI measures the average outage duration (in minutes) experienced by all customers served by the distribution system. A SAIDI of 60 would indicate that on average each customer served would have experienced 60 minutes (1 hour) of outage time in the year.

SAIFI measures the average number of outages experienced by all customers served by the distribution system. A SAIFI of 1.0 would indicate that, on average, each customer served would have experienced one power outage in the year.

CAIDI measures the average outage duration (in minutes) experienced by those customers who actually experienced one (1) or more outages. A CAIDI of 60 would indicate that each outage experienced by those customers would average 60 minutes (1 hour) in duration.

$CEMI_3$ measures the percentage of all customers served by the distribution system who experienced three (3) or more outages. A $CEMI_3$ of 10% would indicate that 1 in 10 customers would have experienced 3 or more outages in the year.

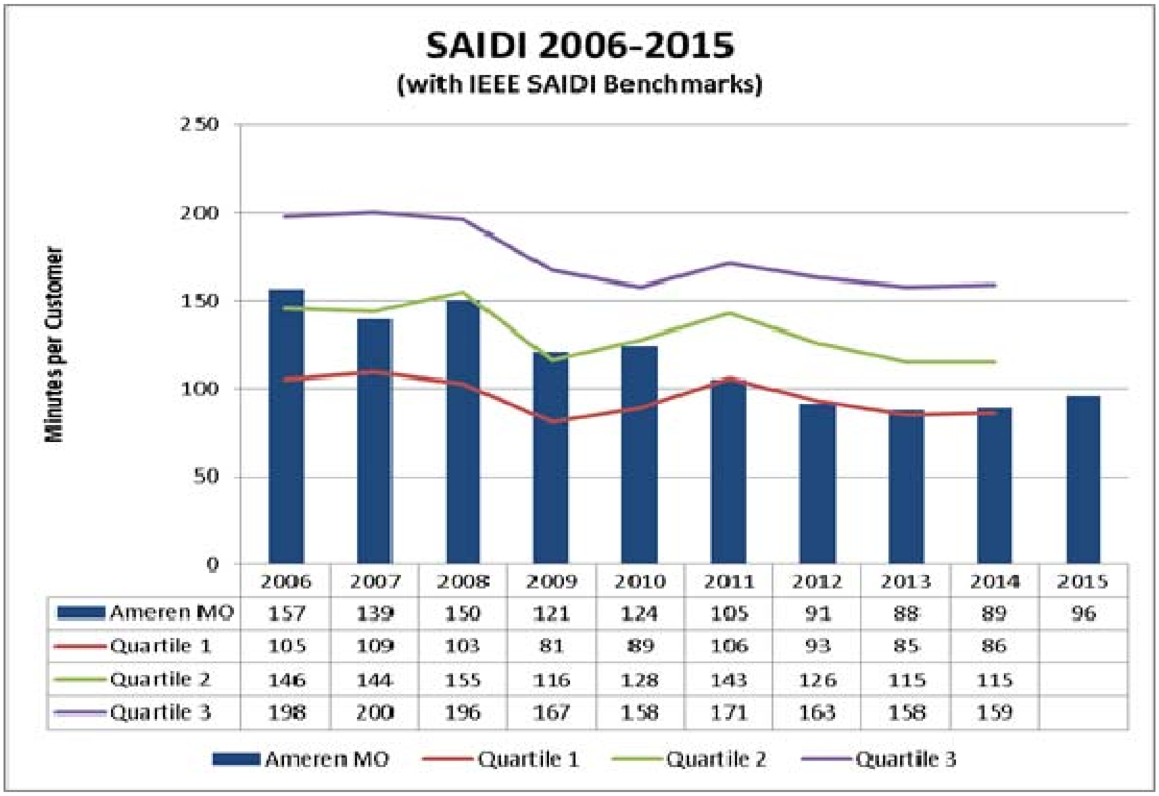
Q. What has Ameren Missouri's recent performance on these metrics been?

A. We have seen improvement in these metrics, as shown in the table below. Lower numbers on each of these metrics reflect better performance. We have worked hard to achieve these results.

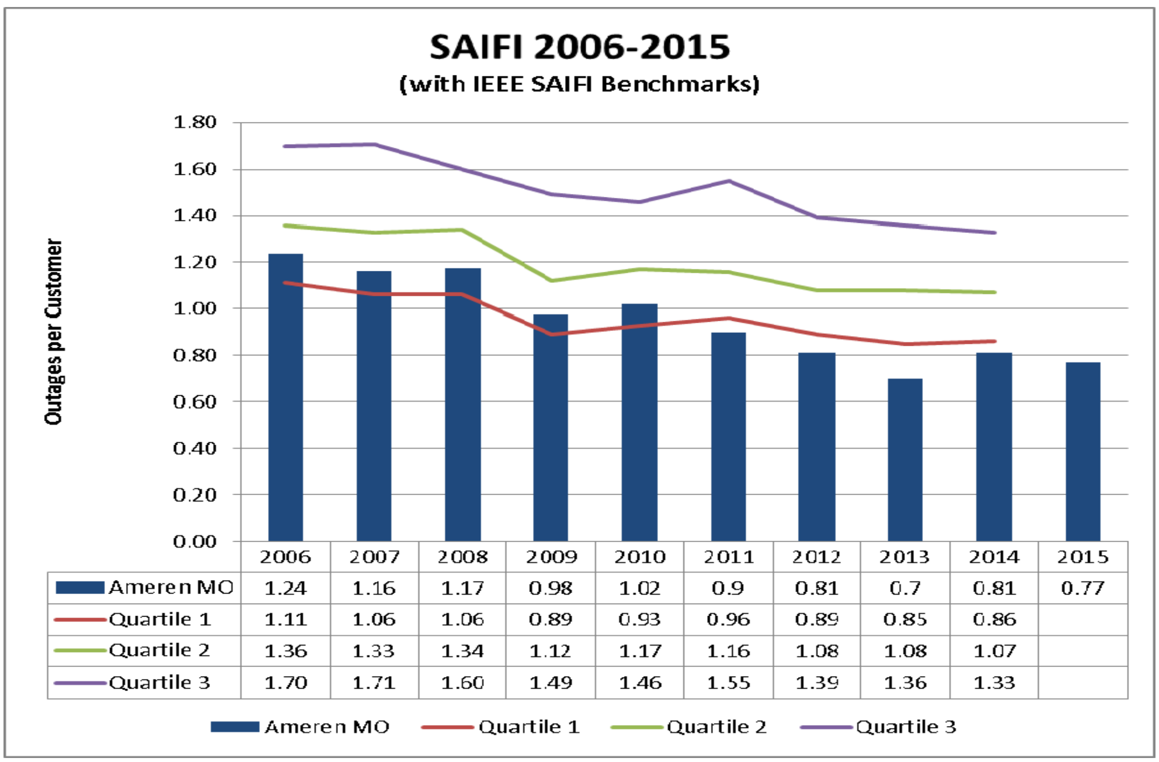
YEAR	**SAIDI**	**SAIFI**	**CAIDI**	**$CEMI_3$**
2006	157	1.24	126	16.9%
2007	139	1.16	120	15.4%
2008	150	1.17	128	15.0%
2009	121	0.98	124	12.0%
2010	124	1.02	122	12.6%
2011	105	0.9	117	10.2%
2012	91	0.81	112	8.8%
2013	88	0.7	127	7.0%
2014	89	0.81	111	8.7%
2015	96	0.77	125	8.2%

Q. How does Ameren Missouri compare to its peers on these metrics?

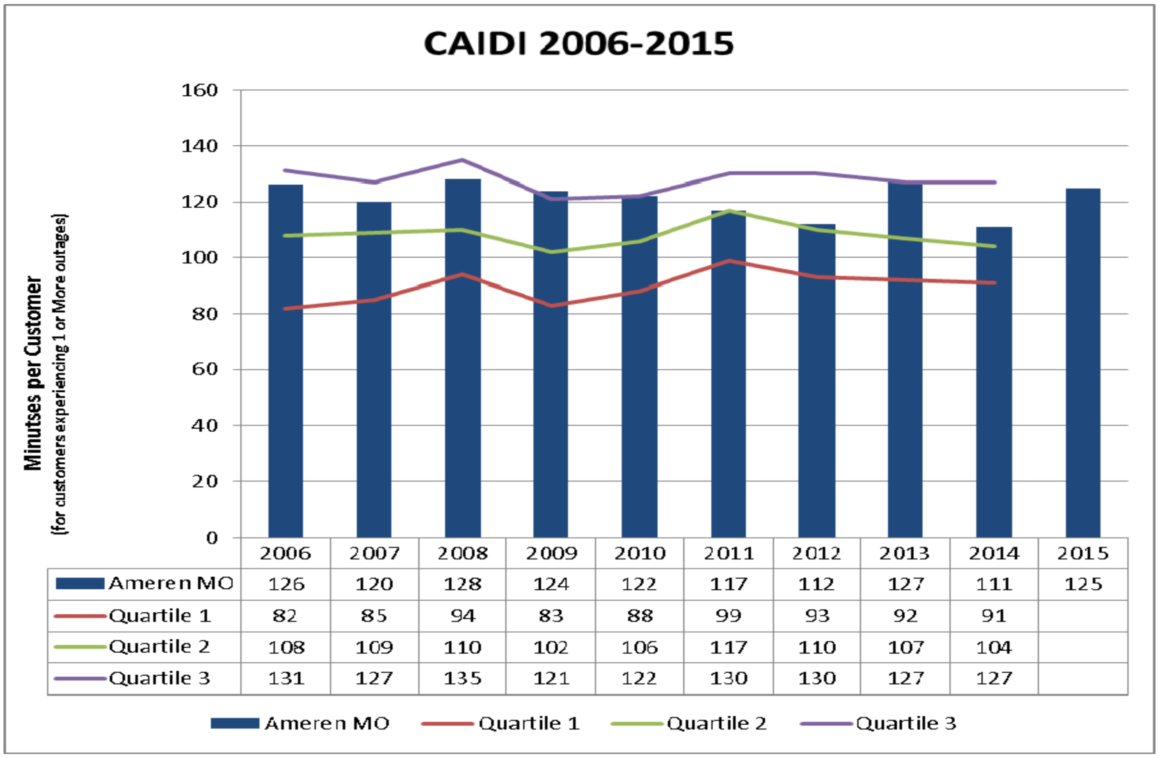
A. According to the available industry benchmarking data on these four metrics, Ameren Missouri is in the second quartile for SAIDI, the top quartile for SAIFI, the third quartile for CAIDI, and the first quartile for $CEMI_3$. These positions relative to our peers can be seen in the following charts:



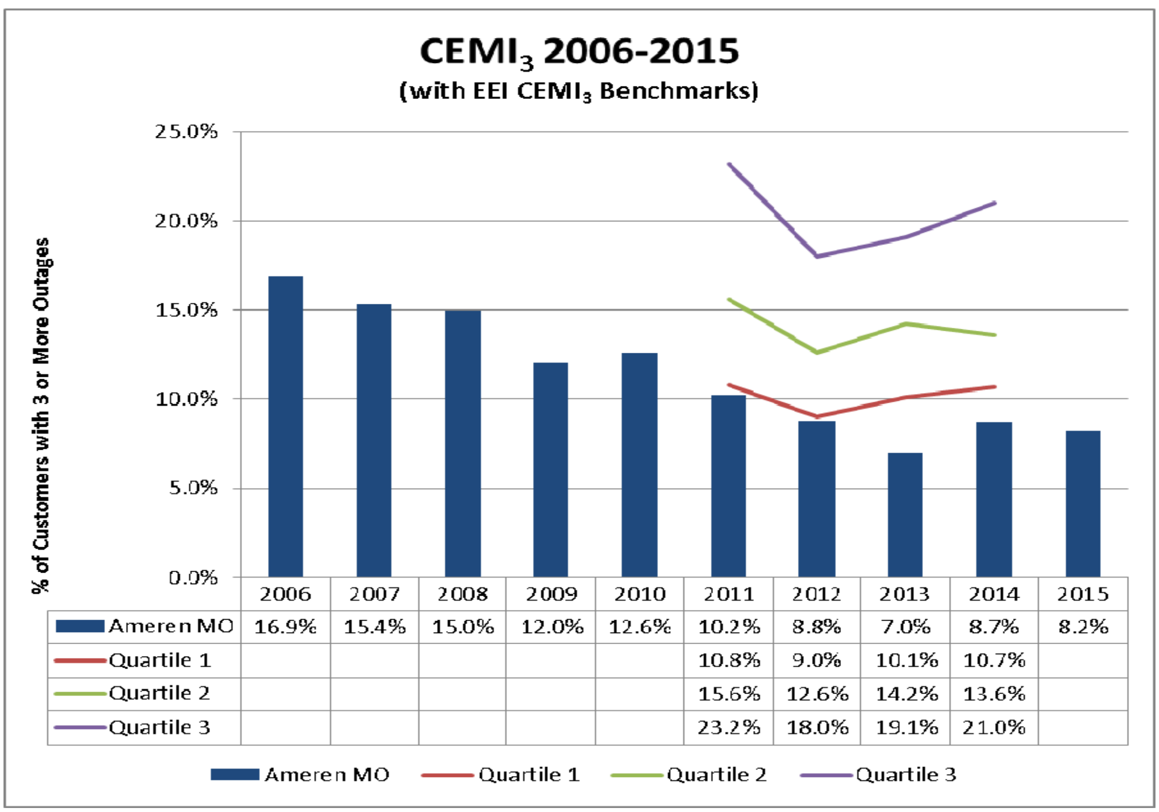
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Ameren MO	157	139	150	121	124	105	91	88	89	96
Quartile 1	105	109	103	81	89	106	93	85	86	
Quartile 2	146	144	155	116	128	143	126	115	115	
Quartile 3	198	200	196	167	158	171	163	158	159	



	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Ameren MO	1.24	1.16	1.17	0.98	1.02	0.9	0.81	0.7	0.81	0.77
Quartile 1	1.11	1.06	1.06	0.89	0.93	0.96	0.89	0.85	0.86	
Quartile 2	1.36	1.33	1.34	1.12	1.17	1.16	1.08	1.08	1.07	
Quartile 3	1.70	1.71	1.60	1.49	1.46	1.55	1.39	1.36	1.33	



	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Ameren MO	126	120	128	124	122	117	112	127	111	125
Quartile 1	82	85	94	83	88	99	93	92	91	
Quartile 2	108	109	110	102	106	117	110	107	104	
Quartile 3	131	127	135	121	122	130	130	127	127	



	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Ameren MO	16.9%	15.4%	15.0%	12.0%	12.6%	10.2%	8.8%	7.0%	8.7%	8.2%
Quartile 1						10.8%	9.0%	10.1%	10.7%	
Quartile 2						15.6%	12.6%	14.2%	13.6%	
Quartile 3						23.2%	18.0%	19.1%	21.0%	

Q. You indicated above that Ameren Missouri's reliability is good, but that there is room for improvement. Please elaborate.

A. While I am pleased that our performance ranges from the top half to the top quarter of our peers on three of these four metrics, looking at these numbers holistically indicates that there are pockets where our reliability is not where we would like it to be. For example, while our $CEMI_3$ metrics compare favorably to our peers, there are still a significant number of customers who experience three or more outages per year. Moreover, when outages do occur, our third quartile position on CAIDI indicates that customers are out of service for longer durations than customers taking service from more than half of our peer electric utilities. Both of those results are symptoms of a grid that is aging, and of a grid that would benefit from modernization. A modernized grid generally allows the utility to identify and correct faults on the system that cause outages more quickly. A modernized grid also allows for faster restoration of service because smart devices used on a modernized grid allow us to locate problems on the system more quickly and can perform automatic switching of many customers in a matter of seconds, as opposed to dispatching a lineman to the field to visually identify the problem and perform the switching manually. I will discuss what is needed to help the Company address that aging infrastructure and to modernize the grid later in my testimony.

Q. Are there other objective data establishing the overall effectiveness of the Company's operations?

A. Yes. For example, our coal-fired units, which play a very important role in our ability to provide quality service at relatively low rates, perform well as compared to their peers. The Company's newest coal units (at its Labadie and Rush Island Energy Centers), which together produce the majority of the energy generated by our coal fleet, have equivalent availability and capacity factors that place them in the first quartile in the industry. At the same time, these units' operations and maintenance costs are also in the first quartile as compared to their peers. These metrics show that our units perform at a high level and at a low cost. Similarly, the Callaway Energy Center, which by itself produces more than 20 percent of the energy we generate, continues to be a strong performer and also plays a very important role in our ability to serve our customers.

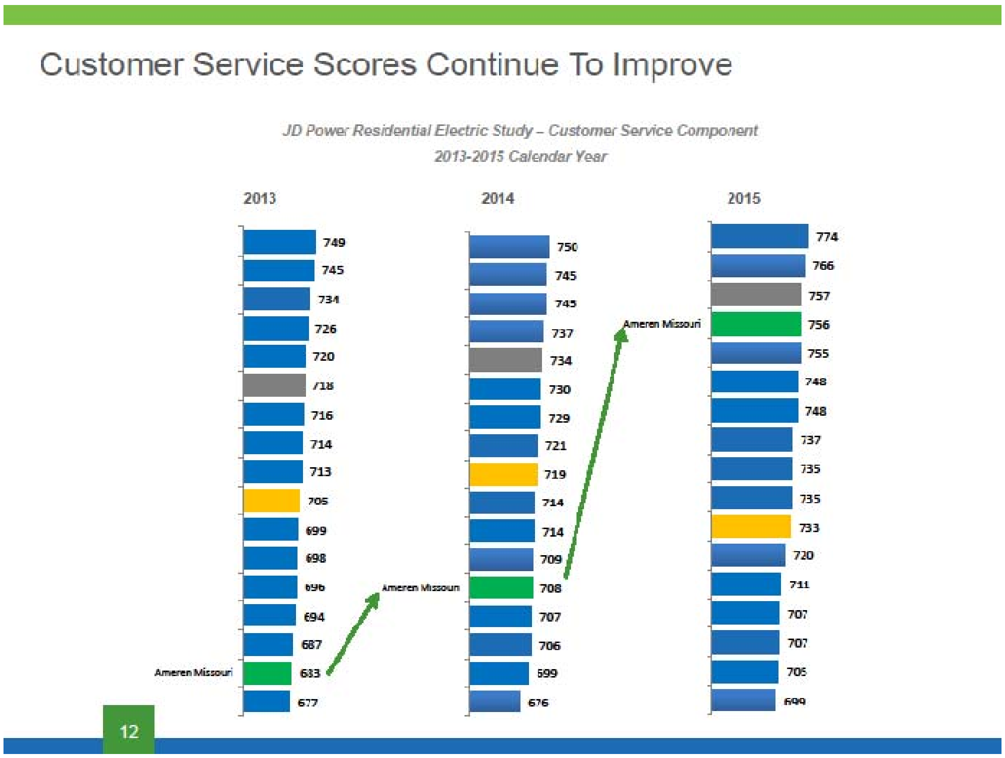
Q. You also mentioned metrics relating to customer satisfaction. Please elaborate on what those metrics show.

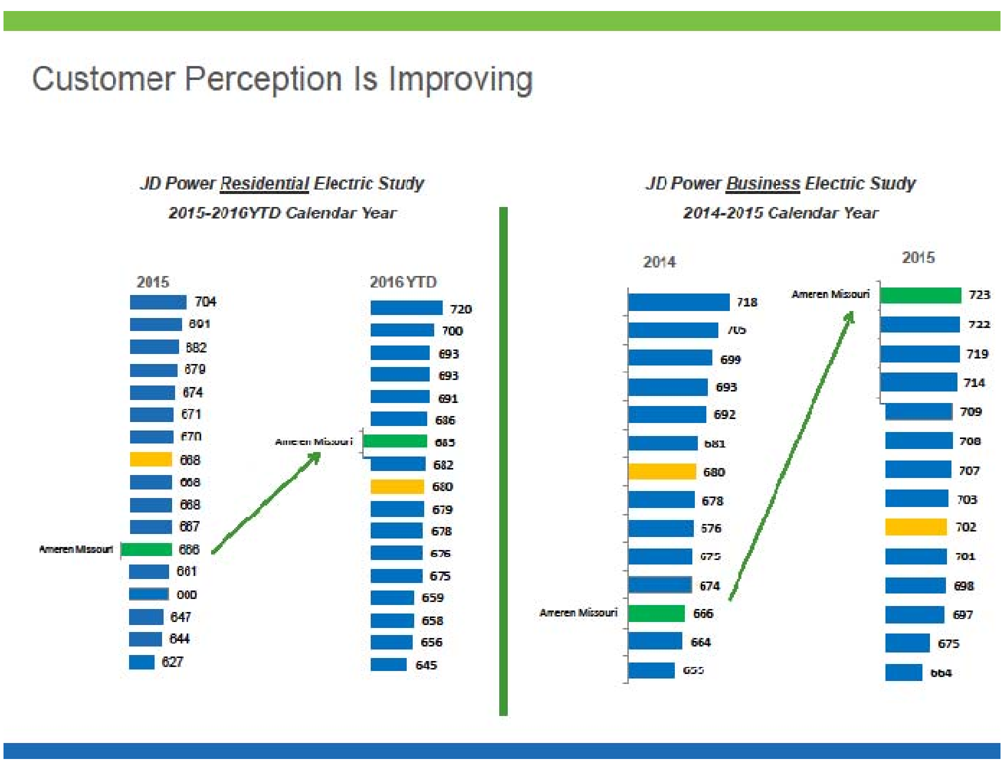
A. In addition to reliability-related metrics, we are routinely evaluated by J.D. Power & Associates on how satisfied our customers are with the service we provide. The numbers show that Ameren Missouri is improving in this area, although we desire to improve even more. Ameren Missouri witness Tara Oglesby addresses the Company's efforts to improve customer satisfaction in her direct testimony.

Q. Does J.D. Power examine specific areas?

A. Yes, J.D. Power looks at seven areas: (a) overall customer satisfaction; (b) power quality and reliability satisfaction; (c) satisfaction with the price of the electric service; (d) billing and payment satisfaction; (e) satisfaction with communications; (f) satisfaction with corporate citizenship; and (g) satisfaction with customer service.

Since 2013, Ameren Missouri has continued to improve its customer satisfaction scores, as shown by the following charts:





While I am pleased that we have shown marked improvement, there is still room for improvement with residential customers and we are working hard to achieve that improvement.

Q. How are you seeking to improve your customers' satisfaction level?

A. We take steps to improve customer satisfaction in a number of ways. For example, we saw an opportunity to improve our customers' satisfaction by converting our former postcard bill to a new full page energy statement containing more information. Implementing the energy statement clearly improved our J.D. Power & Associates residential electric billing and payment scores, with customers indicating that the usefulness of information was improved after the launch of the new bill format.

Another example of our efforts was the 2014 implementation of a new customer service platform called "Customer FIRST Customer NOW!". This platform outlines the principles and expectations we set for our customer service team in executing excellent customer experiences. Each team member receives in-depth training on these principles and we provide on-going feedback through our quality monitoring program and coaching.

We also continually monitor our performance and adherence to these principles through customer feedback. Callers are offered an immediate after-call survey where we monitor our performance on critical satisfaction elements and representative attributes such as listening and friendliness. We evaluate these results regularly for opportunities to provide better service to our customers and meet their needs consistently.

Finally, I believe that a key to improving overall customer satisfaction in most or all of these categories is to improve our communications with our customers. As discussed in detail in the direct testimony of Ameren Missouri witness Julie Catron, we use multiple forms of communication to provide all types of information to our customers, from safety tips to outage updates to information which allows our customers to better understand how we provide reliable service. Customers expect engagement in ways that never existed before. For example, we regularly post updates on our Facebook page and we actively use Twitter and other social media venues. We use these to both pass along information and to respond to inquiries or concerns expressed by our customers. We use LinkedIn to assist in employee recruitment. These are all avenues of communication that did not exist 20 years ago and we have had to learn not only how to use them, but how to use them effectively, meaning in a manner that is expected by and helpful to our customers. These efforts have tangible benefits, which are manifesting themselves in our improved customer satisfaction scores. Improved customer satisfaction, in turn, reduces the number of calls into our call center, which saves us (and ultimately our customers) money.

D. <u>Cost Control</u>

Q. In the Company's last electric rate case, you testified that the Company had reduced non-fuel operations and maintenance expenses by $67 million as of the time the Company filed that case as compared to those expenses reflected in the prior rate case's revenue requirement, and you also testified in your surrebuttal testimony in that case that the reductions were even greater as of the true-up date in that case. Please discuss the control you've exercised over these kinds of costs over the past several years.

A. In summary, we have been able to hold increases in these costs to a minimum. To the extent increases have occurred, they have been in expense categories over which we have limited control and which are driven primarily by external factors. More specifically, the total non-energy[1] related expenses reflected in our revenue requirement in this case are approximately $1.088 billion, which is only approximately 2.9% higher than the level underlying rates set five years ago in File No. ER-2011-0028. What that means is that we have been able to limit the growth of these costs to only about 0.60% per year, which is a rate of growth that is less than half the level of general inflation experienced from 2011 to 2016.[2]

Q. You referenced expenditures over which your level of control is more limited. Please address those kinds of expenditures.

A. There are several noteworthy non-energy-related expenses over which we have limited control - one could argue that we have virtually no control over some of them. Examples include MISO transmission charges, mandated renewable energy standard ("RES") expenses (including for solar rebates) and increases in the property tax rates of the various taxing jurisdictions. In the past five years, transmission charges have increased by approximately $50 million, RES expenses and solar rebates together are up approximately $34 million and property taxes are up approximately $21 million.[3]

Q. Can you cite to some examples of non-energy related expenses over which you have more control and how you have fared in controlling them?

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[1] Since less than two percent of transmission charges are being included in our fuel adjustment clause, we have included such charges in the non-energy-related costs discussed in my testimony, even though the charges are related to the energy we acquire from and sell to the MISO market.

[2] Measured by the change in the Consumer Price Index from February 2011, the true-up cutoff date in the Company's 2011 rate case, to February 2016. That change was approximately 7.1%, or about 1.4% per year.

[3] We have some control over some of these items in that we can choose to an extent how to comply with the RES and how much investment we make (which affects total property taxes). However, the level of control is much less than for some costs, e.g., labor costs.

A. Yes. We have reduced our overall labor costs and payroll taxes, and have been able to find savings by optimizing steam plant outages and investing in technology to increase efficiencies. In total, from our 2011 rate case to this one, we have been able to reduce the non-energy related expenses over which we are able to exert more control by approximately $35 million, or 3.3%. The non-energy-related expenses over which we have significantly less (or in some cases essentially no) control and other miscellaneous expenses have risen 6.2% over the same period, which, on a net basis, reflects the overall increase of 2.9% over five years that I mentioned above.

Q. As you look to the future, do you believe you can continue to drive costs down?

A. While I sincerely believe that we have been doing our part to operate our business efficiently and to keep our rates as low as we reasonably can, there are limits on how far we can go and still provide safe and adequate service. There are even stricter limits on how far we can go if we are to meet what I think all would agree are ever-increasing customer expectations regarding the quality of their electric service. We also must deliver fair returns to our shareholders and maintain a strong financial footing for our bondholders as we must rely on both of them for the huge sums of capital that we must continue to invest in our system in order to deliver reliable service to our customers. That being said, we are absolutely focused on a continuous improvement mindset and looking to improve operations and reduce costs wherever possible in order to keep rates as low as possible for our customers.

Q. You have mentioned transformation in the electric industry and suggested that this is creating significant investment needs, which will require

regulatory solutions in the future that are different from those employed now. Please elaborate.

A. As the Commission is likely quite aware given discussions in numerous forums in our industry, many factors are rapidly and significantly transforming our industry as compared to what was "business-as-usual" just a decade or less ago. The trade press is full of articles on this transformation, and participants at industry gatherings are regularly discussing the transformation that is occurring. Among the developments driving the transformation, or some which are on the horizon, are:

- Aging infrastructure;
- Little or no sales growth (which I will address later);
- Distributed generation;
- Electric vehicles;
- Energy efficiency;
- Cybersecurity needs;
- Technologies that can enable the construction of a "smart grid", including:
    - Integrated communications allowing for real time information and control;
    - Sensing and measuring technologies to facilitate faster and more effective system and human response;
    - Advanced components such as energy storage and superconductivity;
    - Advanced controls, such as voltage optimization; and

- o Improved interfaces and automated controls for those who manage the distribution system;
- More real-time pricing;
- Net metering changes; and
- Independent System Operator control of distribution networks.

Q. Are these developments simply a matter of discussion among utilities, or do regulators recognize their importance as well?

A. I know that regulators recognize their importance, including this Commission. This is evidenced by statements on behalf of NARUC, which as the Commission knows is the national association that represents state utility commissions.[4] For example, NARUC's former President Lisa Edgar, a Commissioner on the Florida Public Service Commission, delivered remarks to the United States Senate committee just over a year ago where she discussed many of these issues.[5] President Edgar noted that, "[c]oast to coast, change is happening around the electric utility industry." In discussing distributed generation specifically, she stated that when, "combined with smart meters and other advanced resources, distributed generation can revolutionize how some consumers use and consume electricity." She went on to note that the current utility construct would be transformed in ways that we have probably not yet imagined. Commissioner Edgar also specifically noted that state regulators understand the value these technologies can bring, while understanding that there are challenges as well. In

[4] National Association of Regulatory Utility Commissions.

[5] "The State of Technological Innovation Related to the Electric Grid," Testimony of the Honorable Lisa Edgar, President, National Association of Utility Regulatory Commissioners, United States Senate Committee on Energy and Natural Resources, March 17, 2015.

summing up the regulators' role in the face of the transformation that is underway as we speak, Commissioner Edgar stated:

> As State utility regulators, part of our job, more so than in the past, is to help bring some certainty into this fast changing and uncertain dynamic, to ensure safety, reliability, customer affordability, environmental sustainability and financial viability. Our unique reality is that we have to regulate, in the public interest, for consumers, short term and long term, while our systems are in transformation.

Q. Do you share Commissioner Edgar's perspectives?

A. Yes, I do. I also recognize that what they mean is utilities, regulators, and other stakeholders must work together to enable regulated utilities to take advantage of the transformation that is occurring, to the ultimate benefit of their customers, and to allow regulators to do the job that Commissioner Edgar outlined in her remarks. Missouri needs to participate in this transformation, and will benefit from being a leader in that participation. However, as Commissioner Edgar indicated, there are challenges that must be overcome.

These challenges include the financial realities facing utilities as they attempt to maintain and transform the energy delivery systems they have today and satisfy their customers' basic needs and expectations, while also providing fair returns to the shareholders on whom the entire utility system depends. Those financial realities are manifest in the fact that Ameren Missouri's system does have significant needs that are building, despite the fact that the Company has placed in service nearly $4 billion of new investment in its energy delivery system over the past five years.[6] Those financial

[6] The five-year period consists of 2012 through 2016. A portion of the assets to be placed in service in 2016, and that are reflected in this number, are not yet in service, but we fully expect that they will be before the end of this year.

realities are also manifested in the fact that, despite diligently managing its expenses, Ameren Missouri finds itself at this time seeking its seventh rate increase in the past ten years. I do not believe that continuing for the next five or ten years in a cycle of rate cases just a year or a year and a half apart is a path desired by anyone, but under our present system, it is the only path available.

Q. You have suggested that the current regulatory framework presents significant challenges to continuing to invest in your business, to improve reliability and customer satisfaction, and to participate in a desirable manner in the transformation that is occurring. Can you please expand on your concerns regarding the regulatory framework?

A. Yes. Let me start by stating what may be an obvious, albeit very important, observation. Except for implementation of a fuel adjustment clause in the past roughly ten years, regulation of electric utilities in Missouri remains largely unchanged since it began more than 100 years ago. While we are very appreciative and supportive of the fact that the legislature enabled the use of fuel adjustment clauses and of the Commission's willingness to approve them, even that change simply moved Missouri toward other non-restructured states that regulate vertically-integrated electric utilities that had for years used, and that continue to use, fuel adjustment clauses. However, there remain significant differences in regulation in Missouri as compared to many other states. Although this is a circumstance that is beyond the Commission's control, Missouri still cannot reflect construction work-in-progress in rate base. Moreover, except in limited circumstances, the Commission has not historically utilized other mechanisms to address the significant regulatory lag inherent in Missouri's system of regulation, in particular, to address the lag that exists from the huge capital investments we make in our system. For example, the Commission imposes a standard on granting interim rates that is so high that as a practical matter, interim rates have been unavailable. The Commission has also always used only an historic test year approach, which when costs are rising (as they have been and are, without an available offset) means we are always behind. Utilities in jurisdictions that use a forecasted test year[7] are better able to address that problem.

Q. What do you say to those who would argue that the system has worked just fine for the past 100-plus years?

A. I would say that I do not completely agree the system has worked fine over that entire period. Regardless of how it may or may not have worked in the past, it is today, and for the future, a system that needs to be updated to reflect the evolution of the electric utility industry as well as customer needs and expectations for the 21st century. The question is not how the system may or may not have worked in the past, when the industry and customer needs were different; the question is what system is needed to best serve customers in the future.

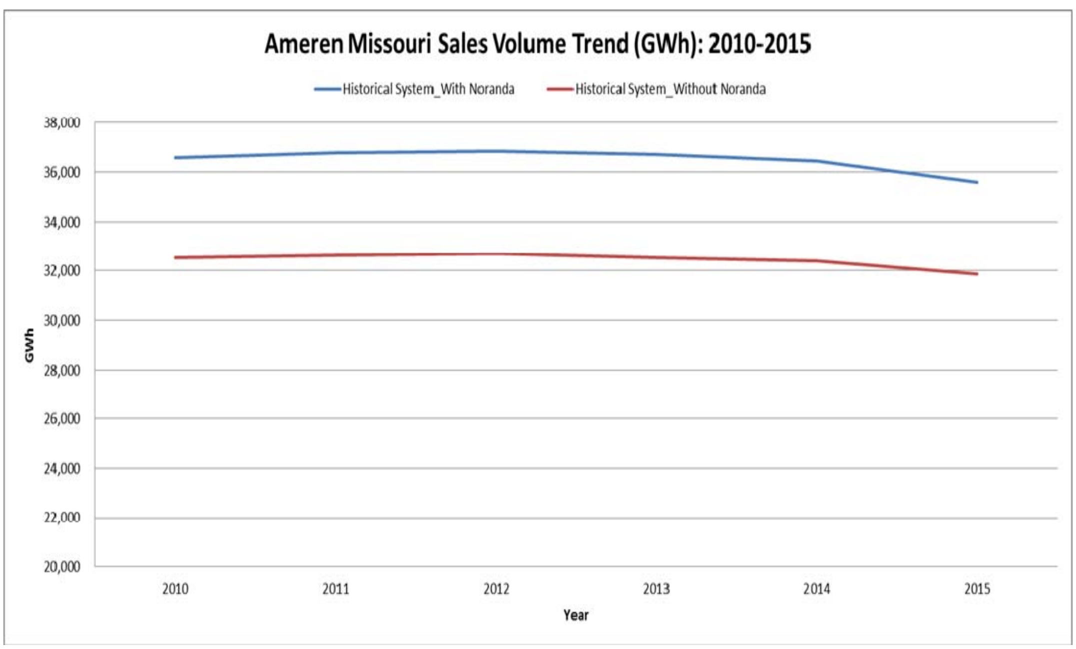
Q. Why do you believe this is the case?

A. Because of the transformation that is already occurring and which I believe will accelerate in the near to intermediate term, the key drivers of which I outlined in the bulleted items listed earlier in my testimony. The last very significant transformation that took place in the electric industry coincided with the build-out of

[7] As I understand it based on counsel's advice, Missouri could use a forecasted test year for non-capital items, but thus far it has consistently chosen not to.

electric infrastructure in the 1950s through the 1980s to 1990s, which in turn coincided with tremendous sales growth. Sales grew for a number of reasons: air conditioning went from a luxury for some to the norm for almost everyone; appliances and electronics became ever more prevalent; homes got bigger and bigger; industry and development grew at faster paces. In addition, the large, central-station generating plants that were built primarily from the 1960s to 1980s continued to be depreciated such that their contribution to rate base on which utilities would earn declined over time. The same can be said of the large build-out that occurred in transmission and distribution infrastructure during that same time frame. This combination of higher revenues from more sales and lower (or slower-growing) cost of service, because new investment needs were not as great, helped utilities cover their cost of service without frequent rate cases.

Virtually all of those factors have completely changed. Load has not been growing, is not growing, and is not expected to grow very much in the future, if at all. The flat to declining sales we have seen are depicted in the following chart:



The data behind this chart reflects that our sales were down through the end of 2015 by nearly 3% below 2010 levels.

Q. What does the absence of sales growth, or declining sales, mean for Ameren Missouri?

A. It means that we have only one lever that we can pull to prevent our revenue requirement from increasing: we have to invest and spend less, absent a means to address regulatory lag. We have to invest less because we lose money on the net investments we make in excess of depreciation expense reflected in our rates from the time those investments start serving customers until new rates that reflect those investments are set in a rate case. We have to spend less – if we can – because every dollar of increase in non-energy, cost-related expenses above the level of those expenses used to last set our rates reduces our returns. In short, in the past some have talked about "positive regulatory lag," but on balance, positive regulatory lag simply does not exist in the electric industry we are operating in today and will not exist in the electric industry in which we will operate in the future.

Q. Don't some suggest that you can time your rate cases in a way to address the investment problem?

A. Yes, that is an argument that has been made, but as a practical matter, it is not accurate. We filed this rate case just two years after we filed our last case – the longest interval between rate cases in the past ten years. We have had rate base investments go into service every single month since the true-up cutoff date in our last rate case, which was December 31, 2014. New rates will not be set in this case until near the end of May of 2017. By the time new rates are set, we will have investments in service on which no return has been earned, and for which our earnings have been reduced by depreciation expense generated by those new assets, for a period ranging from no less than five months (for assets that go into service in December of 2016) to as high as 29 months (for assets that went into service in January of 2015).[8] Because of regulatory lag, those losses, which manifest themselves as lower income and cash flows, are never made up.

Q. Does this create a disincentive to investing in the Company's system?

A. Absolutely. Capital has a cost. We must pay for the equity in our capital structure by providing a fair return for our shareholders, and we must pay for the debt in our capital structure by paying interest to debt holders. We have only one place to obtain funds to pay those capital costs: through rates. If we are incurring the costs by deploying the capital but not receiving funds through rates to pay those costs, we are losing money.

Moreover, as our depreciation expense and property taxes increase because of new assets placed in service, our income declines. There is no doubt that incremental investments under a regulatory construct that fails to address those problems are discouraged.

Q. Is regulatory lag on investments the only area that the current regulatory framework inadequately addresses?

A. No. As I discussed earlier, there are other expense items over which we have little or no control. Even for expenses over which we have theoretical control, as a

[8] We receive no return – no compensation for the capital we have deployed at all – from the moment an investment goes into service until the investment is reflected in new rates because the allowance for funds used during construction ("AFUDC") that we receive <u>during</u> construction stops. Depreciation expense also must be recorded once the investment goes into service.

practical matter, we are reaching or are beyond our ability to continue to cut costs in those areas while also delivering the kind of service our customers expect. We cannot count on "positive" regulatory lag in this area either.

Q. Has the Company included proposals in this rate case filing to attempt to address its concerns with the regulatory framework given the realities of the electric industry of today?

A. To a limited extent, yes. As addressed in the direct testimony of Ms. Barnes, we are requesting that the Commission approve a transmission charge and revenue tracker to allow us to defer the net change in transmission charges and revenues that occurs between rate cases. Given in particular the substantial increases we have seen and are seeing in transmission charges arising from MISO Multi Value Projects ("MVPs"), we expect the deferral to be a deferral to a regulatory asset, but by including transmission revenues, to the extent those revenues increase, they will provide some mitigation to the sums deferred to the regulatory asset. As Ms. Barnes' direct testimony indicates, we will have absorbed tens of millions of dollars in increased transmission charges, almost entirely from MISO, since rates were last set to the time rates will be reset in this case. We can also expect to continue to absorb additional significant increases in transmission charges in the future, despite the fact that we must pay these charges to acquire the energy our customers consume and to make off-system capacity and energy sales that benefit customers through the fuel adjustment clause.

We are seeking to continue our fuel adjustment clause on essentially the same terms as are in effect today, as well as the pension and other post-employment benefits tracker the Commission established for us in 2007. We have included a continuation of a tracker for our renewable energy standard costs, which we have utilized in lieu of establishing a separate rider, as would be allowed by statute.

Q. Why are you not proposing a specific mechanism to address the regulatory lag concerns you have regarding capital investments?

A. The Commission recently opened a working docket to consider regulatory policies for electric utilities that, as we understand it, may focus on addressing the kinds of concerns I have expressed in my testimony. The legislature is also scheduling committee hearings to occur prior to the next legislative session to examine utility legislation generally. Ameren Missouri will be an active participant in both of these forums.

To be clear, our industry needs regulatory reform and improvements from one or more of these efforts for the reasons outlined earlier in my testimony. However, we want to be respectful of the activities that are about to occur in these areas, both here at the Commission and in the legislature. We fully intend to actively work through those processes, consistent with the need to achieve timely solutions. In the end, we are hopeful that as a result of those processes, we will be able to invest in our systems in the way that we believe will be most beneficial to our customers, that we will be able to improve our customers' satisfaction and that, overall, we will find ourselves able to participate in the transformation in our industry that is occurring in a positive manner.

Consequently, while we have not outlined a specific regulatory reform at this time, it is our hope that the Commission will recognize that Ameren Missouri, the Commission, and our customers face problems today that need to be addressed. We believe there are tools at the Commission's disposal to do so, including tools to address the disincentive we have to make incremental investments in our system, and we look forward to discussing those in the processes that are underway and, as appropriate, as part of this rate case.

III. SUMMARY

Q. Can you please summarize your testimony?

A. Yes. We would prefer to avoid rate increase requests, but as a company providing an essential service – with an obligation to provide it to all who desire it within our vast service territory – we have an obligation to our customers and to those on whom we depend for capital, to seek approval of an increase in our rates when existing rate revenues simply do not reflect our cost of serving customers. We have continued to manage our costs prudently, but these opportunities are becoming harder to achieve. Moreover, we must reflect the nearly $1.4 billion in investments we have or will make in 2015 and 2016 in rate base.

We have significant challenges before us – relentless cost pressures and aging infrastructure - but we have done a good job of providing reliable service and are improving our customer satisfaction. We will continue to work diligently to improve further.

Our industry is undergoing a rapid and significant transformation. We need new policies to address that transformation so that we can continue to invest to meet our customers' ever-increasing expectations and so that we can continue to help the state of Missouri lead the way on energy-related issues. We look forward to the discussion and it is our hope that through the policy forums that are underway, policy solutions can be found, but we also urge the Commission to implement appropriate policies in this case.

Q. Does this conclude your direct testimony?

A. Yes, it does.

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-2016-0179

AFFIDAVIT OF MICHAEL MOEHN

STATE OF MISSOURI)
) **ss**
CITY OF ST. LOUIS)

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

1. My name is Michael Moehn. I work in the City of St. Louis, Missouri, and I am employed by Union Electric Company d/b/a Ameren Missouri as President and CEO of Ameren Missouri.

2. Attached hereto and made a part hereof for all purposes is my Direct Testimony on behalf of Union Electric Company d/b/a Ameren Missouri consisting of 31 pages and Schedules MM-1, all of which have been prepared in written form for introduction into evidence in the above-referenced docket.

3. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded are true and correct.

[signature]
Michael Moehn

Subscribed and sworn to before me this 30th day of June, 2016.

Beckie J Eaves
Notary Public

My commission expires:
2-21-18

BECKIE J. EAVES
Notary Public - Notary Seal
State of Missouri
Commissioned for St. Louis City
My Commission Expires: February 21, 2018
Commission Number: 14938572

AMEREN MISSOURI FACTS

Ameren Missouri

Founded in 1902, Union Electric—now known as Ameren Missouri—is the state's largest electric utility. Ameren Missouri provides electric service to approximately 1.2 million customers across central and eastern Missouri, including the greater St. Louis area. Ameren Missouri provides electric service to 63 counties and more than 500 towns. More than half (53 percent) of Ameren Missouri's electric customers are located in the St. Louis and St. Louis County area.

ELECTRIC GENERATION

Ameren Missouri's generating capacity is approximately 10,200 megawatts (MW). All capacity numbers shown here reflect anticipated generating capacity at the time of our expected 2015 peak summer electrical demand.

Ameren Missouri Facilities:

Coal-fired Facilities

- Labadie Energy Center
  Franklin County, Mo.
  Capacity: 2,372 MW
  Began Operation: 1970
- Meramec Energy Center
  St. Louis County, Mo.
  Capacity: 831 MW
  Began Operation: 1953
- Rush Island Energy Center
  Jefferson County, Mo.
  Capacity: 1,180 MW
  Began Operation: 1976
- Sioux Energy Center
  St. Charles County, Mo.
  Capacity: 970 MW
  Began Operation: 1967

Nuclear Facility

- Callaway Energy Center
  Callaway County, Mo.
  Capacity: 1,193 MW
  Began Operation: 1984

Combustion Turbines (CTG):

Natural Gas or Oil-fired Facilities

- Audrain Energy Center
  Audrain County, Mo.
  Capacity: 600 MW
  Purchased 2006
- Goose Creek Energy Center
  Piatt County, Ill.
  Capacity: 432 MW
  Purchased 2006
- Kinmundy Energy Center
  Marion County, Ill.
  Capacity: 206 MW
  Purchased 2005 from an affiliate;
  Began Operation: 2001
- Peno Creek Energy Center
  Bowling Green, Mo.
  Capacity: 188 MW
  Began Operation: 2002
- Pinckneyville Energy Center
  Perry County, Ill.
  Capacity: 316 MW
  Purchased 2005 from an affiliate;
  Began Operation: 2000
- Raccoon Creek Energy Center
  Clay County, Ill.
  Capacity: 300 MW
  Purchased 2006
- Venice Energy Center
  Venice, Ill.
  Capacity: 487 MW
  Began Operation: 2005
- Other Ameren Missouri CTG units total approximately 315 megawatts

Hydroelectric Facilities

- Keokuk Energy Center
  Keokuk, Iowa
  Capacity: 140 MW
  Began Operation: 1913
- Osage Energy Center
  Lakeside, Mo.
  Capacity: 240 MW
  Began Operation: 1931
- Taum Sauk Energy Center
  (pumped storage)
  Reynolds County, Mo.
  Capacity: 440 MW
  Began Operation: 1963

Renewable Facility

- Maryland Heights Renewable Energy Center
  Maryland Heights, Mo.
  Capacity: 8 MW
  Began Operation: 2012
- O'Fallon Renewable Energy Center
  O'Fallon, Mo.
  Capacity: 3 MW
  Began Operation: 2014

NATURAL GAS OPERATIONS

Ameren Missouri

Ameren Missouri is the state's second largest distributor of natural gas. Ameren Missouri supplies natural gas service to approximately 130,000 customers. Ameren Missouri serves gas customers in more than 90 communities, including towns in southeast, central and eastern Missouri. The company owns 3,300 miles of natural gas transmission and distribution mains.

RATES AND REGULATION

Ameren Missouri

Electric

Ameren Missouri's average electric rates are the lowest of any investor-owned utility in Missouri. Ameren Missouri's electric operating revenues are subject to regulation by the Missouri Public Service Commission. If certain criteria are met, then Ameren Missouri's electric rates may be adjusted without a traditional rate proceeding.

The Fuel Adjustment Clause (FAC) permits Ameren Missouri to recover, through customer rates, 95% of changes in net energy costs greater than or less than the amount set in base rates without a traditional rate proceeding. Net energy costs, as defined in the FAC, include fuel and purchased power costs, including transportation charges and revenues, net of offsystem sales.

Natural Gas

Ameren Missouri's gas rates may be adjusted without a traditional rate proceeding for changes in the wholesale costs of gas, which are passed through to customers without mark-up from the company (the purchased gas adjustment, or PGA).