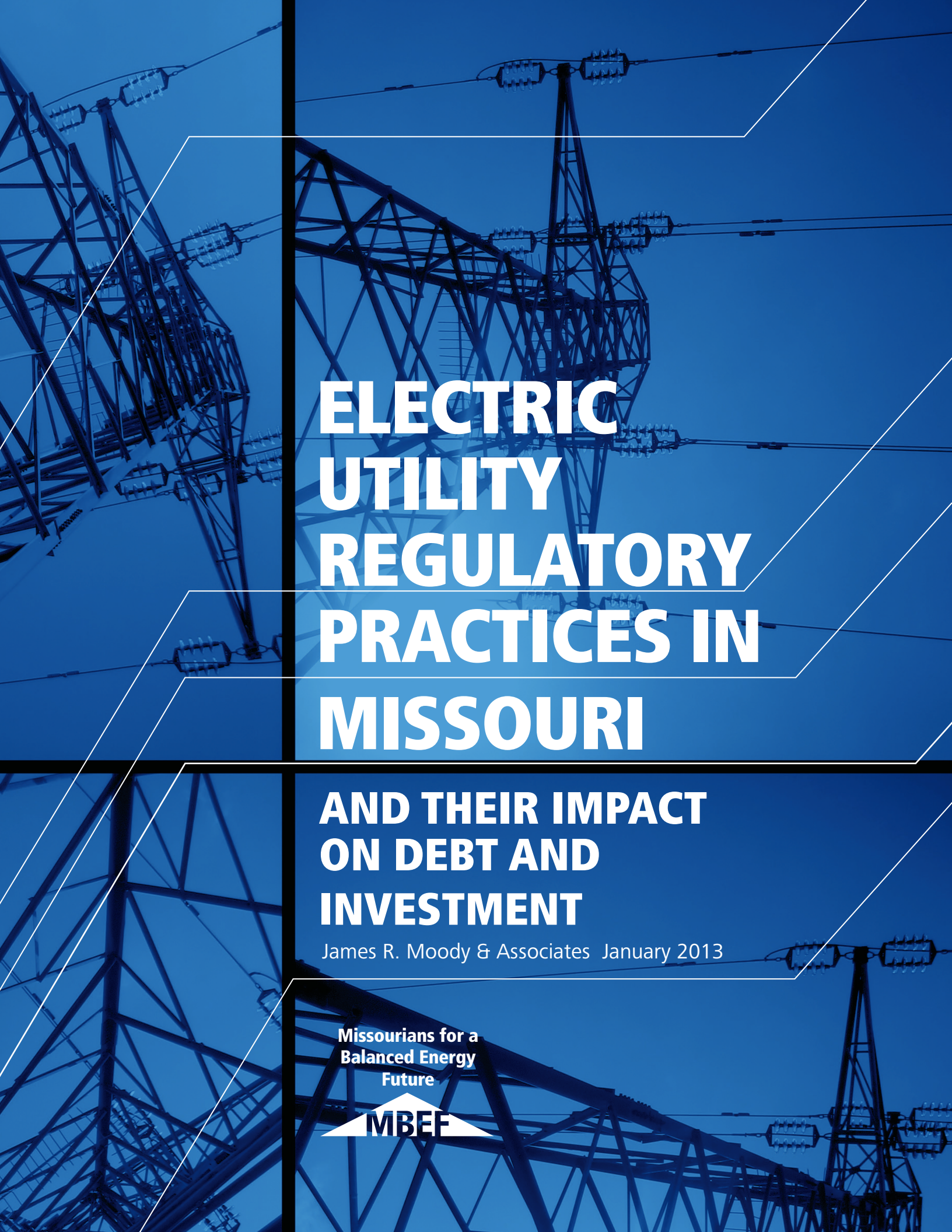

ELECTRIC UTILITY REGULATORY PRACTICES IN MISSOURI

AND THEIR IMPACT ON DEBT AND INVESTMENT

James R. Moody & Associates January 2013

Missourians for a Balanced Energy Future

MBEF

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EXECUTIVE SUMMARY

Challenges Bring Opportunities

The existing electric grid infrastructure for the entire country is aging, and the infrastructure for electric utilities in Missouri is not an exception. Both investor-owned electric utilities and electric cooperatives will need to invest heavily in replacing the aging electric infrastructure and in developing and maintaining the electric grid to meet the rising demands of customers for efficient power.

Investment by electric utilities can be a win-win. Iatan, Missouri, is a small village in Platte County near Kansas City. When Kansas City Power & Light took its existing Iatan 1 Plant (an older, coal-powered generation plant) offline for retrofit and also built Iatan 2 (a new generation facility), the changes more than doubled the generation capacity for the plants, but the new technology reduced carbon emissions overall.

The portion of electric consumption used for heating consumers' homes is declining while overall demand for electricity is increasing. With our newfound dependence on electronic devices, the consumer will no longer stand for a power supply that might interrupt or disable his or her electronic devices. We need only stop and think about how as consumers we are dependent on the constant need to plug in and charge our cell phones, our digital tablets or our laptops. Once, a household may have had a single television for an entire house; now, it is not uncommon for a television to be turned on in virtually every room of the home.

Long term, the consumer should be helped by the continued development of affordable and cleaner electrical power, and a more efficient transmission and distribution grid. Most industry experts anticipate an annual growth in demand for electricity of 1% per year. While that might sound like a small annual increase, it means that every 20 years, an electric utility must find a way to increase its generation capacity by at least 20%. For a company such as Ameren, which has a generation capacity of almost 10,000 MW as a company, a 1% increase in generation required annually would mean building a 100 MW facility every year, year after year.

UTILITY GENERATION CAPACITY

Environmental regulations also will force difficult but prudent decisions about retrofitting generation assets to meet environmental requirements versus simply replacing them. A majority of our state's fossil-fueled plants are more than 40 years old, with many older than 50 years. Our aging generation infrastructure will not last forever.

In addition, the aging electric infrastructure must continue to be able to transmit clean power to the consumer, 24 hours a day, seven days a week. Investment on a timely basis is how the electric provider will best continue to serve the consumer.

While electric utilities work to address these challenges, they also face great future opportunities – and those opportunities will require future investment. In recent months, there has been a great deal of activity around the newly evolving small modular reactor (SMR) nuclear technology. Although this technology has the potential to significantly reduce the market risk, construction timeframes, and capital investment for electrical utilities when compared to large-scale nuclear plants, there will still be a need for significant capital investment by electrical utilities. Technologies such as SMR will be a meaningful part, but only a piece, of massive infrastructure spending in the future by electric utilities.

Why Regulatory Practices Matter for Electric Utilities

In a prior written report, this author referenced one of his favorite posters that hung in the office of a colleague when he started working for Missouri state government. It said, "There is no free lunch, you get what you pay for, and nothing is going to come in the mail." While a funny turn of words, the underlying thought is true.

There is no free lunch for consumers. Consumers want the lowest possible electric rates, but they also want the lights to come on when they hit the switch. Therein lies the friction that permeates the balance among the consumer, the electric utility, and the regulatory process. We will attempt to examine that friction in our discussion.

Utilities must borrow money in order to deliver services to their customers, and

investors want value and lower risk. The need for value for investors is true whether the money comes in the form of debt, for bond investors, or equity, for stock market investors.

If regulated utilities borrow money to serve the consumer, the consumer will ultimately pay for the cost of borrowing. When large amounts of money are borrowed, the consumer will have to pay the interest cost accrued during construction when the power comes into service. Consumers should be interested in their utility borrowing at the most efficient cost. This paper will examine whether that is occurring and whether the Missouri regulatory environment currently encourages efficient borrowing.

Specifically, one cannot discuss the impact of regulation without discussing the Public Service Commission and its processes. The debt rating agencies do not like the regulatory environment in Missouri, and they downgrade the debt ratings of Missouri investor-owned electric utilities because of their dislike of the regulatory environment. The debt rating agencies are not at all subtle about the fact they dislike Missouri's regulatory system. They plainly state this fact in publicly available documents.

This paper is not intended to be a critique of the Missouri Public Service Commission. The Commission is a well-respected entity, administered by good public servants.

One cannot discuss the impact of utility regulation and finances without discussing the publicly available documents that examine the regulatory environment in Missouri. A review of the documents shows that the rating agencies and financial analysts use such terms as "increasing regulatory lag," "declining sales and rising cost environment," and "less credit supportive environment" to characterize the regulatory environment in Missouri.

We will examine whether the regulatory structure that has been in place for nearly 100 years really does serve the consumer and the state best. The world in which we exist has changed, and we will examine whether the regulatory process should also change. The regulatory process that worked in 1913 arguably may not foster the investment incentives and returns required in the 21st century.

Some readers will not like what we say in this paper. To those readers, we offer a simple challenge: Tell us what part of the analysis is wrong!

BACKGROUND

Electricity 101

When starting the discussion about utility regulation and its impact on debt and borrowing, readers might want to acquaint themselves with some basic information about electricity and electric service providers. We have compiled information from a PowerPoint by the Edison Electric Institute that should provide helpful basics to the reader. The Edison Electric Institute is a national trade association for regulated investor-owned utilities.

Nearly all electricity consumers are served by one of three types of electric utility: shareholder-owned, cooperatively owned, and governmentally owned. In Missouri, examples of shareholder-owned utilities include Ameren Missouri, Kansas City Power & Light, and Empire District Electric. Shareholder-owned utilities are typically publicly traded companies on the stock markets.

Examples of cooperatively owned electric utilities would include entities such as Como Electric at the Lake of the Ozarks, Sac Osage Electric Cooperative in southwestern Missouri, and Osage Valley Electric Cooperative in western Missouri. Electric cooperatives were originally designated by the federal government as exclusive service area providers in an attempt to provide utility service in the rural areas of the country. Hence, it is typical that a cooperative might serve a more rural area of the state.

Governmentally owned electric utilities would include organizations such as the municipally owned utilities in Springfield and Columbia. These utilities typically operate as a separate governmental enterprise, supported by the rates that consumers pay for the service.

These Missouri electric utilities have exclusive service area rights. Because they have exclusive service area rights, the consumer's only choice of electric provider occurs when the consumer decides where to live. Once that choice is made, the exclusive service provider normally is already serving that area, and the consumer has no chance to choose a different provider of service. The consumer is "locked in" to his exclusive service area provider.

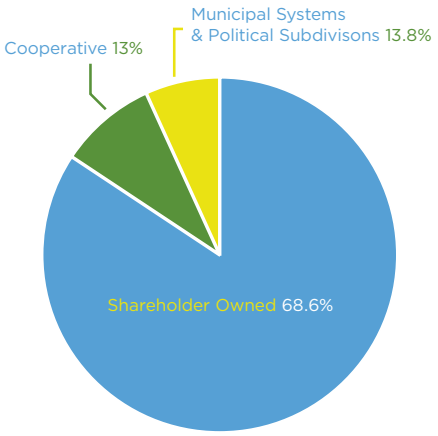
We will frequently refer to exclusive service area providers, and that term should not be taken in any negative context. Since the inception of utilities, it has been recognized that providing service to all consumers in an area typically will require a controlled exclusive service area provider, similar to what is sometimes called a "natural monopoly."

Utilities are typically designated as exclusive service area providers and then regulated, because our public policy has determined that an exclusive area service provider is more efficient than multiple entities trying to compete and deliver electricity, gas, water, or sewer. The exclusive provider is the most efficient manner in which to provide these services to the public.

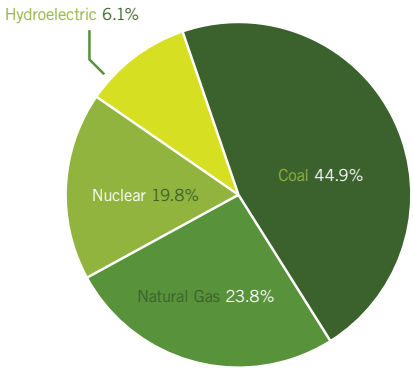
Nationally, 68.6% of consumers are served by investor-owned electrical utilities. Electric cooperatives serve 13% of consumers. Municipal systems and political subdivisions serve 13.8% of consumers. The overall efficiency of generating electricity with reduced impacts on the environment has improved. In fact, since 1990, electrical usage has increased by 38% while sulfur dioxide emissions have declined by 67% and emissions of nitrogen oxides have declined by 68%.

Electricity generated by coal-powered plants constitutes 44.9% of the national fuel mix. (Missouri uses nearly 80% coal-powered electricity.) Natural gas-powered plants account for 23.8% of the fuel mix, and nuclear power plants account for 19.8%. Hydroelectric power accounts for 6.1%.

WHO SERVES THE CONSUMER UTILITIES?



NATIONALLY, HOW IS ELECTRIC POWER GENERATED?



The Edison Electric Institute makes some key points regarding the availability and reliability of electrical service. Those include:

- No individual fuel is capable of meeting all of our nation's electricity demands.
- Maintaining the diversity of available fuel resources helps to ensure that we do not become too dependent on one fuel source.
- Fuel diversity protects consumers from contingencies such as fuel unavailability, price fluctuations, and changes in regulatory practices.
- Fuel price affects the price of electricity.

"Missouri uses nearly 80% coal-powered electricity."

Consumer demand for electricity has grown. The average U.S. home today is nearly 50% larger than the average home size in 1975. The share of electricity consumption used for appliances and consumer electronics has nearly doubled over the past three decades.

The Edison Electric Institute estimates that new investment in the electric system on the order of at least $1.5 trillion will be required from 2010 to 2030.

The Role of the Missouri Public Service Commission

For Missouri investor-owned electric utilities, the governmental entity that controls their services and rates is the Missouri Public Service Commission. Our governmental policy for many public utilities is to designate an exclusive service provider to serve all of a given service area and to then set the terms of service and control the rate of return for the utility through an entity such as the Missouri Public Service Commission.

Here is what the Missouri Public Service Commission says about its regulatory role:

> "The Missouri Public Service Commission regulates investor-owned electric, steam, natural gas, water and sewer and telephone companies. Its mission is to ensure Missouri consumers have access to safe, reliable and reasonably priced utility service while allowing those utility companies under our jurisdiction an opportunity to earn a reasonable rate of return on their investment…The Commission was established in 1913."
>
> "There are five commissioners on the PSC. They are appointed by the Governor."

Source: Missouri PSC website

The 1970s vs. the 2010s

The world, culture, and the economic environment in the decade of the 2010s is much different than the economic environment of the 1970s. Disco music has been

replaced by techno music, soul music replaced by rap and hip-hop music, polyester shirts and leisure suits by Polo and Tommy Hilfiger. Your author recently used the term "leisure suit" in a conversation with a female colleague in her early 40s, and we had to get on the internet to find a picture to explain what a leisure suit looked like.

Oh, and by the way, the internet did not exist in the 1970s, and there were no affordable personal computers, fax machines, iPods, iPads, or cell phones in the 1970s. Landline telephones were still rotary dial in those days. The early 1970s saw Vice President Spiro Agnew and President Richard Nixon resign from their offices.

For those of us who were around for the 1976 presidential campaign, we can still envision the short-lived campaign of incumbent President Gerald Ford with buttons that read "WIN"– which meant "Whip Inflation Now." Why the concern about inflation? Interest rates were going through the roof. Your author in 1981 had a 14% home mortgage, which is hard to comprehend in today's 3% to 4% mortgage lending environment.

Here is a short overview of how we think economic conditions have changed in the past 40 years:

1970s Economic Environment	2010s Economic Environment
Expanding manufacturing environment	Weak manufacturing environment
High inflation (11% in 1974, 13.5% in 1980)	Low inflation (1.6% in 2010, 3.2% in 2011)
Expansion of workforce, women entering workforce	Stable workforce, demand for more educated workforce
6% to 8% unemployment	8% to 10% unemployment
Growing electrical demand	Stable electrical demand
Expanding electric generation, transmission, distribution	Need to replace/upgrade electric generation, transmission, distribution
Manufacturing in Japan competes	China and India major manufacturing competitors

The world for electric utilities has also changed. In the 1970s, manufacturing in the United States was still vibrant and growing, creating a demand for more electricity and expansion of the electric grid. The growth of suburban communities and expansion of the size of houses spurred demand for transmission and generation resources. In Jefferson City, one need only look across the river at the 15-acre ABB plant, constructed about that time to manufacture electric transformers used to deliver power to residential communities created by that economic demand.

The growth in coal-powered electric generation facilities during the 1970s is reflective of the growing demand for electricity and grid expansion. From 1970 to 1980, more

than 7,800 MW of coal-powered electric generation facilities were developed by electric utilities of all types, including two by the Municipal Utilities of Springfield, investment by the University of Missouri-Columbia, Ameren, KCP&L and Empire Electric and Associated Electric at its New Madrid facility.

This snapshot look at the decade of the 1970's also barely misses significant generation investments by the electrical cooperatives through their generation entity, Associated Electric, in 1969, 1981, and after 1981, as well as investment in the same timeframe by the investor-owned utilities.

These facilities are now 30 to 40 years old. They face significant hurdles — their age and the need to upgrade generation technology, and new environmental requirements for coal-powered generation plants. The investment needs for all of the generation entities — whether public utilities, cooperatives, or investor-owned utilities — will be significant and almost staggering.

Here is one example about investment from a recent Missouri Public Service Commission case for Ameren Missouri. Ameren Missouri CEO Warner Baxter noted in his testimony, *"…in our last rate case, we placed the $600 million Sioux scrubber in service, which significantly reduced emissions from the Sioux plant, and improved the quality of air in our service territory."* The Sioux facility is one of four Ameren Missouri coal-powered generation facilities in eastern Missouri. The $600 million investment was for only a scrubber, not for a new plant.

While the world has changed since the 1970s (and since the inception of the Missouri Public Service Commission in 1913), the regulatory process in Missouri has not. Future investment by investor-owned electric utilities will be driven by national and international economic factors and only tangentially by the current but very old regulatory structure. The old regulatory structure, while well-intentioned, will be a hindrance and not a help for investment by electric utilities on behalf of the consumer.

Missouri must recognize that ultimately the consumer pays the bill for borrowing costs. The only question is timing. Inefficiency in the borrowing process will cost consumers more on their bills in the long run.

"…in our last rate case, we placed the $600 million Sioux scrubber in service, which significantly reduced emissions from the Sioux plant, and improved the quality of air in our service territory."

— Warner Baxter, CEO, Ameren MO

THE IMPACT OF REGULATORY LAG

All the Executives Are Saying the Same Thing

After reading this section, the reader might come away saying, "Well, these guys are all CEOs of investor-owned electric utilities, and they are all saying the same thing. Why keep repeating the same thing."

Perhaps an anecdote from days past might help. When the author attended the Harvard Program for Senior Government Executives in the late 1980s, it was not unusual for politicians and dignitaries who were in Boston to stop by the Kennedy School of Government at Harvard. Some came to our classes with entourages. Others would stop by for breakfast or lunch, and we students could voluntarily show up to talk to them if we so desired. The author showed up for breakfast one morning at a meeting with a very young, recently elected United States senator, who was running for president of the United States.

There were about 20 people for breakfast, and so it was very informal. The senator simply walked in by himself and subsequently left by himself when we finished. There was no entourage or security. The senator stayed for about an hour, talked about running for president and answered questions from the group, all of whom worked for some government entity.

After he left, one of our instructors who monitored the session asked for impressions of the senator and his comments. Many who attended thought he came across as a little stiff and not comfortable with the group. One attendee criticized the senator, saying the senator was just giving us his canned campaign responses to questions.

Our instructor made some insightful commentary regarding candidates and their responses to questions. They either have to keep responding with the same answer (arguably their best answer), in which case they are criticized for just repeating the same thing all of the time, or they change their answer frequently, in which case they are criticized for being wishy-washy and not standing up for what they believe in. So they are in a no-win situation.

Some of the discussion from the utility CEOs here might sound repetitive, but all of the CEOs are saying similar things because their companies are being impacted in a similar manner. A consistent message is not necessarily a bad message.

By the way, the United States senator who came to visit was Al Gore.

The Current Regulatory System Is Slow To React

There is an old and often repeated truism that "time is money." In the regulated electric utility business, that truism is particularly true, as Missouri's regulated electric utilities typically in the past decade have not earned anywhere near the rate of return on equity authorized by the Missouri Public Service Commission. While the rate of return on equity authorized by the Public Service Commission is an authorization to earn and not a guaranteed rate of return, if no utility ever meets the rate of return authorized by the Public Service Commission, there must be a systemic reason that underperformance occurs.

If the goal of designating exclusive service area providers is to govern "market conditions," setting a rate of return that is never earned does not appear to be a proper setting of "market conditions."

One of the issues with the current Missouri regulatory system is that it is slow to react to changes in circumstances, because the regulatory system is based on historical costs. If an event occurs that was not included in the historical lookback in setting rates, a new rate case must occur in order to include the cost of the new event in the new regulatory base for rates. This delay in recognizing newly incurred costs creates what is called "regulatory lag."

A few recent examples of costs incurred related to recent natural disasters that disrupted electrical service in Missouri communities may help to provide a better understanding of the oddities of the ratemaking process.

The Joplin tornado occurred in May 2011. Empire District Electric, which is the exclusive service provider for the Joplin area, filed a rate case in July 2012 (more than a year later) that was intended to help the provider recover costs created by responding to the tornado. Empire District Electric will probably receive a new rate to begin

recovering costs going forward in May 2013. The time between May 2011 and May 2013 is what is referred to as a regulatory lag.

In testimony presented to the Missouri Public Service Commission by Brad P. Beecher, on behalf of Empire District Electric, Mr. Beecher noted that because of the tornado, Empire lost 8,000 residential customers and more than 400 commercial customers, and $21.4 million of Empire's own company facilities were destroyed. Among the commercial electric customers lost were a major hospital and five schools in the Joplin School District.

Mr. Beecher noted in his testimony:

> "The reduction in revenues and increase in costs due to the tornado have reduced company earnings levels and cannot be reflected in rates until the Commission authorizes new rates for Empire. This is the first rate case commenced since the tornado."

Beecher's testimony in the rate case was in July 2012, about 14 months after the tornado. Empire dealt with the losses created by this event in part by suspending its dividend to shareholders for two quarters. So investors in Empire paid for the losses through a loss of dividend, while regulators waited more than a year before the losses could be considered in a rate case, and rates will not be adjusted for almost two years to reflect the costs of the disaster. Long term, investors will notice when dividends for which they planned are not there.

Ameren Missouri had a similar experience when a tornado hit the middle and northern St. Louis County area (that includes the St. Louis Lambert airport) in April 2011. Ameren Missouri incurred approximately $40 million of extraordinary costs related to the tornado. The utility will likely begin to get rate relief recovery in January 2013. The period between April 2011 and January 2013 is another example of regulatory lag.

If either of these natural disasters would have occurred in an area that was serviced by an electrical cooperative, the board of directors of the electrical cooperative could have quickly established a rate adjustment to almost immediately begin the cost-recovery process. The Missouri electrical cooperatives are not regulated by the Missouri Public Service Commission. Rather, they are governed and regulated by a local board of directors.

The regulatory lag timeframes outlined in these examples for the investor-owned

utilities are the norm and not the exception. The regulatory process is paper driven, lawyer and consultant driven, and very slow. A rate case typically takes 11 months to complete from the filing date to the time the rate revision goes into effect.

This paper is not meant to argue that regulation and oversight are not important. But the question to be asked is whether current regulation is best serving the public and the consumer. How does Missouri incentivize investors to invest in Missouri investor-owned utilities when natural disasters may cause the immediate suspension of investors' dividends or cause the company to incur costs that are never fully recaptured?

This is a very difficult question, but one that needs to be examined. While the intent of the regulatory process may be to protect the consumer, we will question whether the regulatory process has simply become a proponent of perpetuating its historic regulatory practices and existence. As government frequently says, "We have always done it that way."

Regulatory Lag in Missouri

In discussing regulatory lag and its impact on the debt rating and attractiveness of investor-owned electric utilities to investors, the testimony of Missouri investor-owned utility executives and regulators in other states is consistent with the views of the rating agencies and the equity research analysts. Regulatory lag is a big problem. Virtually everyone says regulatory lag is a problem, yet the status quo rules – and has ruled for 100 years.

In testimony before the Missouri Public Service Commission in February 2012, KCP&L CEO Terry Bassham made these observations regarding the regulatory environment and his company's ability to make a return on equity:

> "Even with the 4% rate increase under the CEP, KCP&L's average retail rates range between 13% and 23% below the national average…the Company is asking the Commission to allow the Company to earn a fair and reasonable return on its investments. This case is not about increasing profits for the Company. In recent years the Company has not earned its allowed return on equity. Let me be clear that KCP&L is not asking for a guaranteed rate of return.
>
> "The Company is proposing several regulatory mechanisms that will help to improve its ability to address regulatory lag, which will in turn improve the Company's ability to earn a full and fair return…It is important for the Commission to allow the Company the opportunity to earn a fair and reasonable rate of return so that the Company will be in a position to be

"The Company is proposing several regulatory mechanisms that will help to improve its ability to address regulatory lag, which will in turn improve the Company's ability to earn a full and fair return…"

— Terry Bassham, CEO, KCP&L

financially strong as it accesses the capital markets. The utility industry is among the most capital-intensive industries in the world. Failure to attract capital would have significant cost implications to the Company and ultimately to our customers."

Also in 2012 in a separate PSC case, testimony was given by Warner Baxter, CEO of Ameren Missouri, to the Missouri Public Service Commission addressing some of the same issues as Bassham's testimony:

"Ameren Missouri's retail rates are approximately 25% below the national average, well below the Midwest average, and the lowest among all investor-owned utilities in the state…Ameren Missouri has earned below the return that this Commission itself indicated was a fair return to earn in 46 out of 54 months — or nearly 85% of the time…On a weather normalized basis, the Company's under earnings would be even more striking…the Company would never have earned its authorized return over the entire 54-month period, if it had experienced normal weather.

"There are several factors which are driving this result, the most notable of which is the excessive regulatory lag inherent in the Missouri regulatory framework for our operating cost and investments.

"The revenues we collect from customers often 'lag' behind the actual costs we pay, which is especially detrimental to the Company in an environment in which costs are steadily increasing. The impact of steady inflation on many costs, including labor, medical costs, materials and equipment, creates a level of regulatory lag that cannot be offset by other factors…as recently as a few years ago, consistent growth in electricity sales provided some offset to these cost increases, but that is not the case currently, as weather normalized electric loads are stagnant or even declining, creating additional regulatory lag pressures. This is in contrast to some jurisdictions that use projected costs or formula rates in establishing rates in an effort to address this issue"…in Missouri, it typically takes 11 months between the date a rate case is filed and when new rates actually go into effect. This time period is longer than the time period for rate cases in many other jurisdictions and further contributes to excessive regulatory lag…

"The bottom line is that regulatory lag is a misnomer in that recovery of costs incurred to provide services which are not immediately reflected in rates is not merely delayed, but rather, these costs are lost forever."

"In Missouri, it typically takes 11 months between the date a rate case is filed and when new rates actually go into effect. This time period is longer than the time period for rate cases in many other jurisdictions and further contributes to excessive regulatory lag."

— Terry Bassham, CEO, KCP&L

Additional Comments from John Reed

In the same regulatory proceeding that Warner Baxter's comments were entered into the record, John J. Reed, CEO of Concentric Energy Advisors, presented information in the case on behalf of Ameren Missouri. Reed also commented on regulatory lag and earnings attrition:

> "Put simply, earnings attrition is when a utility's earnings systematically fall below authorized levels which are established based on the 'required' cost of capital. The revenue/cost relationship that traditional ratemaking has assumed is that growth in plant investment, operating expenses, capital costs, or a combination of those costs, would at least for a reasonable period of time after rates are set, be offset by revenue growth. Under these circumstances, utilities have a reasonable opportunity to earn their cost of capital. But when growth in plant investment, operating expenses, capital costs, or a combination of those costs is systematically not offset by revenue growth, indeed when it may be combined with revenue declines, the result is reduced cash flows and a shortfall in the utility's earned return on investment, or equity, or both. That is and has been the case for Ameren Missouri, where shortcomings of the traditional ratemaking construct, compounded by the use of historic test year and only limited use of other regulatory mechanisms, has resulted in rates which are out of date and insufficient to recover the costs the moment those rates become effective."

Empire Has Similar Views and Experiences

We earlier noted the testimony of Brad P. Beecher of Empire District Electric regarding the impact of the Joplin tornado on Empire's operations. Beecher also presented his views of regulatory lag and its impact on Empire in the same testimony:

> "Empire's actual earnings have been substantially below the levels authorized by the Commission. For example, the highest return on equity Empire has earned during the last ten years is the 8.4% earned during the calendar year 2006. By comparison, the lowest rate of equity authorized by the Commission for Empire during the last ten years was 10.8%."

"By comparison, the lowest rate of equity authorized by the Commission for Empire during the last ten years was 10.8%."

— Brad P. Beecher, Empire District Electric

Missouri vs. Other States on Regulatory Lag

Independent studies have shown Missouri near the bottom (the bottom meaning the worst) when compared to the other states in the amount of regulatory lag. In Appendix 3 of this report, there is a state-by-state examination of actions taken by each state to address regulatory lag. The only entries for Missouri reflect regulatory actions related to gas utilities, not electric utilities.

The Financial Markets Do Not Like Regulatory Lag

In our discussion later regarding financing the costs of electric company infrastructure and investment, we will show that the financial markets, whether the bond market or the stock market, really do not like regulatory lag and that there is a real cost to the consumer for regulatory lag.

DEBT, DEBT RATINGS, AND BORROWING COSTS

Future Investment by Missouri Electrical Utilities Will Be Needed

Missouri ratepayers serviced by investor-owned regulated utilities and electrical cooperatives have historically benefited from rates for electricity that are well below national averages. This is in part because of our use of older, coal-powered generation facilities that were built in the 1970s or earlier. However, the future may not necessarily hold true to the past, if proper planning and execution to meet future electric needs does not occur.

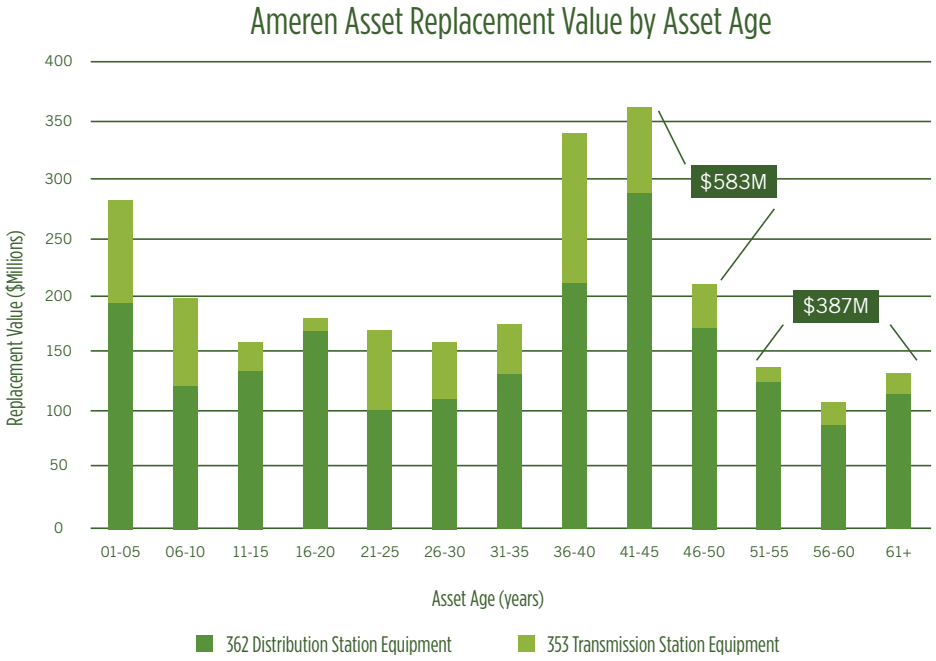
The world of electrical utilities has changed. In the past, electricity generation, transmission and distribution were frequently a part of a "closed system." We say a closed system because the monopoly service provider would control all three aspects of the process: generation, transmission, and distribution. There was little need to go outside of the resources controlled by the monopoly service provider and incur costs in order to provide the services.

Now, the generation of electricity has changed to the point that electricity, once generated, often is a commodity that is sold in the open market and then transmitted and distributed to the consumer. There have been in many instances a separation of generation from transmission and distribution.

The consumer on an ongoing basis might be best served if the traditional exclusive service area provider — whether an investor-owned utility, a cooperative, or a government-owned utility — continues to control generation assets. If the consumers'

electric company does not control its own generation assets, the consumers may be at risk of the electric company buying in the open market at market prices, which will normally be higher than the prices that Missourians have paid in the past.

Investment in new generation facilities will be capital intensive. A new coal-powered plant might cost $3 billion to $4 billion. A new large-scale nuclear plant may cost $10 billion to $11 billion (University of Chicago study). With capital-intensive projects, the investment of these amounts of money will increase pressure for efficient borrowing. Higher interest costs, if incurred unnecessarily, will ultimately drive up the cost of electric service to consumers.



Prudent investment in technologies such as the proposed small modular reactor (SMR) nuclear technology will allow investor-owned utilities and electrical cooperative serving Missouri consumers to control the generation of future electrical power. However, the economics of producing that commodity will be expensive.

Missouri electric utilities can control future generation assets through entities such as the Missouri SMR Alliance, which consists of the Missouri electric cooperatives, all Missouri investor-owned utilities, and the Missouri municipal utilities. The SMR plan would be to generate the electricity with new SMR technology in Missouri and use the SMR-generated power to serve Missouri consumers. This will keep the consumers from being held hostage to their electricity being purchased like a commodity in the open market.

Another factor impacting future costs to consumers will be the cost of upgrading the Missouri infrastructure for transmission and distribution of electricity, which is aging and will need to be replaced. Some may say that the consumer does not want to pay for such upgrades or the consumer will want to hold off as long as possible before making the investment.

Infrastructure replacement and the cost to consumers is a fine balance. A friend recently told the author of a comment by his elderly mother when discussing utility rates. She said, "I don't really want to pay any higher rates, but I sure want the lights to come on when I turn the switch." That is the essence of the discussion we will have on the interrelationship of prudent planning and investment, the regulatory scheme that controls planning and investment, and how the consumer will be impacted by that process.

The Starting Point of Discussing Investment

Let us start with a fairly simple question that is a "jumping off" point for our analysis of utility debt rating issues. As consumers, we all have some knowledge of electric and gas utilities in Missouri, because we are all served by an exclusive service area provider.

The author has always paid his utility bill for his residence in Jefferson City to Ameren. Ameren is our only choice in Jefferson City. Ameren is a governmentally designated exclusive provider for our service area. The author also has a business familiarity with the electrical cooperatives, which were designated by the federal government as the monopoly to provide electrical service in rural Missouri.

If asked before performing any research which entity (Ameren or the electrical cooperatives) would have the more positive debt credit rating, we would have quickly said Ameren. It is the provider to whom we have paid our bills for nearly 40 years, and the lights always come on when we hit the switch.

We would have been wrong in saying Ameren.

The debt rating agencies use a letter rating system, where A ratings are better than B ratings. The Missouri electrical cooperatives are rated AA, while two Missouri investor-owned electric utilities are rated BBB- and the other is rated BBB. This huge disparity in debt rating, we found out, is largely attributable to the regulatory process in Missouri and the ability and process for electric utility providers to adjust rates and earn a rate of return on equity.

This section will explain the difference in the debt ratings between the electrical cooperatives and the investor-owned electrical utilities, and how and why the regulatory process impacts the debt rating.

> **"I don't really want to pay any higher rates, but I sure want the lights to come on when I turn the switch."**
>
> *— Anonymous Consumer*

The Nature of Incurring Debt

Every citizen, either directly or indirectly, incurs debt. Consumers may incur debt directly by making purchases of durable or non-durable goods through installment payments or credit card usage, or they may incur long-term secured debt for major purchases, such as an automobile purchase or the purchase of a home with a mortgage.

Now some consumers may say, "Wait a minute! I don't use credit cards. I always buy with cash. I am debt free!" This might appear to be true, but those consumers will make payments for certain things, such as taxes, wherein a governmental entity has incurred debt and future payments of the debt are an obligation of all taxpayers. A classic example would be general obligation bonds issued by a state, a school district, a city, or a county.

In those instances, the taxing entity has pledged its taxing authority to pay the bond payments, including principal and interest, and the taxpayer is on the hook for his proportionate share of the debt service payment. So the person who thinks he has no outstanding debts is paying for debt when he pays taxes.

A more complex example would be the Missouri Department of Transportation, which has issued road improvement bonds that will be paid with proceeds from the state motor vehicle sales tax. Those bonds will be amortized over 20 years or more, and citizens of Missouri who purchase motor vehicles in the future will be helping to make the principal and interest payments.

While those type of indirect debt payments relate to government entities, there are also non-governmental entities that incur debt on behalf of the consumer. Those entities would include monopoly service providers such as water, natural gas, and electric utilities. When they borrow money, the cost of paying the debt is buried in the rate when the consumer pays his utility bill.

What We All Know About Debt

Consumers know that when we borrow, lower interest rates are better. Let's take an example of the average person with a home mortgage.

With the dropping rates of interest since 2008 for home mortgage loans, it is not uncommon to hear a friend or relative say, "I just refinanced my home mortgage, and my interest rate was reduced from from XX% to YY%, and my monthly payment went down by $ZZ.00." Consumers brag about refinancing at a lower rate. It is a smart thing for a consumer to do. If a consumer is paying too much in interest, the person benefiting is the lender, not the payer.

The same concept exists when an exclusive service area provider, such as an investor-owned utility or an electric cooperative, is borrowing on the consumer's behalf. If the borrowing cost is unnecessarily high, the consumer ends up paying for the higher cost when they pay their bill. So borrowing efficiently at the lowest rate is a good idea for the consumer.

What Is a Bond or a Note?

Bonds and notes are debt instruments. For governmental finance, notes are usually shorter-term instruments, and bonds are longer-term instruments. For corporate entities, notes may denote a greater security for the borrowing. Bonds and notes may be issued by a governmental entity (in the case of public finance) or by a corporation (corporate finance). Bonds and notes may be purchased by insurance companies, bond funds, or individual investors.

Bonds and notes are typically called fixed income instruments. They are considered fixed income because their value is fixed at a given rate of interest upon their issuance, and the given rate is paid for a fixed term. Upon completion of the term, the principal invested by the lender would be returned to the lender. Interest payments are typically made semi-annually.

Things May Get a Little Dry Here

Focusing on the mechanics of how investor-owned utility debt and the debt of electrical cooperatives is rated by the debt rating agencies will be a little dry. The raters of debt are not really exciting people. They are bean counters. But the raters of debt are paid to count beans, and the raters of debt are an important cog in the machinery of borrowing money. The public relies on them to rate the risk of getting the public's money (the principal) returned with interest on a timely basis when they lend their money to an investor-owned utility.

Here's a public finance example of how the debt rating agencies and their raters think. The ratings process is similar whether for public or corporate finance. The debt rating agencies want to examine the risk and every contingency that might impact principal and interest being repaid on a timely basis.

In the late 1980s, the author made his first rating agency trip to New York City to make a presentation to the three major bond rating agencies on behalf of the State of Missouri, which was, and still is, rated AAA by all three bond rating agencies.

A debt rating presentation is a little bit like meeting the father of a girl on a first date. In the date example, the father is trying to find reasons you might not be good enough for his daughter.

In the debt rating process, the debt rating agency is somewhat like the father in the dating example, only with debt the ratings agency is trying to find any reason that the borrowing entity might not repay their debt. Debt raters are suspicious of possible default risk in the worst way.

During the course of our first presentation to one of the three debt rating agencies, the author stated that Missouri was committed, and always had been committed, to paying its debt with interest on a timely basis. There was little to no chance of a default in Missouri on our general obligation debt, because of Missouri's strong constitutional provisions regarding timely payment of debt service.

One of the rating analysts turned to the author and said, with a very serious tone of voice, "Then tell me what happened with those 1865 Civil War Railroad Bonds in Missouri."

Needless to say, a great answer was not given, as the author had no idea what the ratings analyst was talking about. The point of the story is that the ratings agencies will leave no stone unturned in trying to find risk that borrowed money will not be repaid with interest on a timely basis. They are cynics, and they think if unexpected events occur, then the events will be negative and not positive.

The Basics of Corporate Bonds

As mentioned earlier, there is a direct relationship between bond ratings and the cost of borrowing. At a minimum, it is important to be "investment grade." Investment grade is an indication that there is a high likelihood that interest and principal payments will be made on a timely basis.

What are considered "non-investment grade bonds"? These are frequently called high yield or junk bonds. Obviously, an investor, unless sophisticated, should not seek junk bonds as a safe haven for his funds.

In a table that accompanied the Congressional Municipal Bond Fairness Act (HR 6308) introduced in September 2008, it was noted that the historical default rate for corporate AA bonds rated by Standard & Poor's was 1.50%, while the historic default rate for corporate BBB bonds rated by S&P was 10.29%. This illustrates that the bond rating is more than a guess; rather, it is a true indicator of risk. Hence, the greater the risk (and the lower the debt rating), the higher the borrowing costs to reflect the higher risk of default.

What Is the Difference in Borrowing Rates

Interest rates are at historical lows, both for interest on savings accounts and for borrowing money. Therefore, it should be noted that corporations with strong credit

ratings are borrowing at historically low interest rates. However, this situation will not last forever, because inflationary pressure will eventually force the Federal Reserve to alter its monetary policy.

Missouri utilities will be borrowing money to make investments continually in the future. A good question is what is the cost differential for investment when comparing a poor bond rating to a relatively good bond rating. While the market will ultimately determine that answer on a day-to-day basis as bond issuances are priced, history can give us some ideas about the answer.

We examined corporate bond spreads from the week of June 25, 2010, and found that the interest rate for a BBB bond during that week was 51% higher than for an A rated bond (these were non-callable 10-year maturities). (Source: Bondvillage.com.) The AA rate at that time must have been unusual, because the interest rate was higher than the A rate (3.40%).

We then examined the spread for 20-year maturities on January 13, 2013 (Source: Bloomberg). We found that although rates overall were lower than a few years before, there was still a 24% higher interest rate for BBB- rated 20-year bonds than for A rated 20-year bonds. When looking at the AA- rated versus BB- rated yields for the same day, the BBB- rated bonds had a 33.5% higher interest rate.

It is not an intellectual premise that lower corporate debt ratings virtually always result in higher interest rates. It is a fact. How much higher the interest rate will be will vary day to day, but it is virtually always higher. As consumers, we try to lock in lower interest rates, so why should we not want our investor-owned utilities to do the same?

Let us take the 2010 AA and BBB rates from the example above and assume that they apply to an electric utility that needs to borrow $1 billion and issues 30-year bonds. (As noted earlier, the yield curve was very flat at the top, and the 10 and 30-year yields were very close.)

The utility that borrows at the AA rate of 3.4% would have an annual debt service of approximately $53.2 million, or a total repayment over 30 years of $1.596 billion. The BBB rated utility would have annual debt service payments of approximately $64.1 million, or a total repayment over 30 years of $1.923 billion.

In this example, the ratepayers of the BBB rated utility would be paying $327 million more over the 30 years simply because of the difference in credit rating.

Credit ratings are important. They are not some symbolic "letter" rating but rather real indicators that dictate who can borrow funds and at what rates. For investor-owned utilities, if the borrowing cost is higher because of a poor credit rating, the ratepayer ends up paying for the higher borrowing cost.

Capitalized Interest

Once a governmental entity, a business, or a consumer decides to incur debt and begin borrowing, interest charges begin to accrue. This leads to a decision by the governmental entity, the business, or the consumer to either 1) immediately begin to make interest payments on the debt, or 2) to defer the payment of the interest to a future date. Typically, that future date would be the time when the project funded by the debt is placed into service.

There are a number of ready examples of this deferral. For the consumer, it may be the deferral of paying interest on a home construction loan until permanent residential financing is in place and the residence is occupied. For a governmental entity, it might be the entity deferring interest payments until a building is complete. The governmental entity may choose to "roll" the interest cost during construction into a bond issue wherein the bond payment will pay required principal and interest payments. Those payments would include the debt service on the borrowed interest during construction.

For a business such as a utility, the payment of interest on borrowed funds might be also deferred until the asset funded by the borrowing is placed into service. This would be particularly true in a state such as Missouri, where there is a specific prohibition against utilities charging ratepayers for construction projects until the project is placed into service. Since the project benefits the ratepayer and the ratepayer will ultimately pay for the project, it is difficult for the utility to pay the interest cost immediately after borrowing if the ratepayer is not concurrently making payments to the utility for the interest cost.

Capitalized interest is the interest added to the cost of a self-constructed, long-term asset. The interest is added to the cost of the project, as opposed to being paid when the interest is due. Capitalized interest is not free to the consumer, a governmental entity, a business, or a utility. Again, there is no free lunch. In fact, as this process describes, capitalized interest involves borrowing more money and making interest payments on additional money that was borrowed to make interest payments. While this is commonplace in our financial world, in a perfect world no one would do this. The efficient way to minimize cost is to immediately begin making interest payments.

For a consumer served from an exclusive service area utility provider, the only way the consumer benefits from delaying the payment of interest is if, for some reason in the future, the consumer does not use the service when the project is placed into

service. For a customer of a monopoly provider, this might occur for one of a very few reasons, one a somewhat neutral outcome, another not so good. The consumer may move to a different service area and therefore not pay the increased cost. Or the consumer might no longer be with us on this Earth, in which case the consumer obviously would not pay the bill.

Otherwise, if the consumer still lives in the service area, they will pay the higher cost when the project is placed into service, including paying interest on borrowings made to pay interest.

What Ratings Agencies Analyze

Bond investors, and the rating agencies that bond investors look at to rate debt, are interested in two things: timeliness of the repayment of principal with interest and certainty that the payments will be made. Bond investors are not making investments in stocks that may fluctuate with the ups and downs of the stock market. If a consumer purchases a municipal bond upon its initial offering, the consumer knows what rate of interest he will receive for the term of the bond and when his principal will be returned at the maturity of the bond.

Municipal bonds are different from corporate bonds in one major aspect: Governments can pledge their ability to tax and generally are viewed as having slightly better credit attributes than corporations. Corporations generally do not have the ability to tax.

Broad Weighting Factors	Broad Factor Weighting	Rating Sub-Factor	Sub-Factor Weighting
Regulatory Framework	25%		25%
Ability to Recover Costs and Earn Returns	25%		25%
Diversification	10%	Market Position	5%
		Generation and Fuel Diversity	5%
Financial Strength, Liquidity, and Key Financial Metrics	40%	Liquidity	10%
		CFO pre-WC/Deb	7.50%
		CFO pre WC+Interest/ Interest	7.50%
		CFO ore-WC-Dividends/Debt	7.50%
		Debt/Capitalization or	7.50%
		Debt/Regulated Asset Value	

Bond rating agencies analyze corporations and their debt based upon their ability to earn a return on equity and also analyze other factors. In the case of investor-owned utilities, they examine their perception of the regulatory climate and its impact on the ability to recover their costs and generate a return on equity in a timely fashion.

One of the other major rating entities, Moody's Investor Services, has outlined in a chart the criteria that it uses in analyzing the debt position of investor-owned utilities.

Most of the ratings factors that Moody's considers will be impacted by the regulatory framework, and at least 50% of the rating relates to the regulatory framework and the ability to recover costs and earn returns. These lead back to the question of whether Missouri's regulatory approach from 1913 makes sense anymore.

The Weakest Link in Joint Borrowings

Future investments by Missouri utilities in new technologies such as SMR will probably be built with a consortium of electric companies and cooperatives, such as the Missouri SMR Alliance. Already all of the three major investor-owned electric power companies are working with the electric cooperatives and municipal utilities in competing for the federal grants to design and engineer the new SMR technology.

All of these utilities may participate as investors in new SMR technology design and will make investments in the new SMR plants. All will need to borrow money to make the investment in SMR technology.

However, all of these electric utilities do not have the same bond rating. The electric cooperatives, through their generation affiliate Associated Electric, are rated AA. Kansas City Power & Light is rated BBB, while Ameren and Empire District Electric are rated BBB-.

One might ask how the debt borrowed will be evaluated given the disparity in debt ratings. The answer is that the debt rating agencies will most likely look at the entities with the lowest credit ratings — the weakest link. They will evaluate the ability to repay debt not with the strongest credit but the weakest.

It would be in Missouri's best interest to try to find a way to raise the credit ratings of the weakest links.

Missouri's Dual Personality Approach to Debt

For at least the past 30 years, Missouri's governors (including current Gov. Jay Nixon) have rightfully touted Missouri's AAA bond rating. AAA is the highest rating for governmentally issued bonds.

The AAA rating means that Missouri, for its general obligation debt, has the highest rating from the three major municipal bond rating agencies (Moody's, Standard & Poor's, and Fitch). Consequently, the Missouri government will receive the lowest borrowing cost at the time of bond issuance in the municipal finance marketplace. The AAA is testimony to good fiscal management and a willingness to do whatever it takes to repay bonded indebtedness.

It is ironic that in the same state, Missouri has regulatory policies in place that cause the debt of its three largest investor-owned utilities to be rated BBB or BBB-. There is a consistency in the ratings for the three investor-owned utilities, but in this instance, consistency is not a good thing. They are near the bottom of investment -grade debt ratings.

It is not a positive thing that while our government officials ponder difficult decisions to retain the AAA rating at the state-government level, officials from investor-owned electric utilities talk to the Missouri Public Service Commission about struggling to maintain *investment-grade* ratings for their debt. **There is a real disconnect between the actions of government to achieve lower borrowing costs for itself (through the best debt rating) and government regulation that increases borrowing costs to utilities (through very low debt ratings).**

Comments from The Brattle Group Regarding Ratings

The overall view of the utility industry by the rating agencies has been under pressure. In a 2006 report for the Edison Electric Institute, The Brattle Group noted that, as a group, utility ratings by Standard & Poor's have been declining. Their comments were:

> "The fraction of utilities rated BBB+ or above by Standard & Poor's, which was 75% prior to the 1990s, is now only about 40%. As of 2005, nearly 20% of all utilities were below investment grade. The credit rating of independent power producers is significantly worse."

"The fraction of utilities rated BBB+ or above by Standard & Poor's, which was 75% prior to the 1990s, is now only about 40%."

— The Brattle Group

What the Rating Agencies Say

As a lifelong Missourian who has always been served by a Missouri investor-owned utility, I was shocked when I learned that Empire District Electric and Ameren were rated BBB- and that Kansas City Power & Light was rated BBB. This rating is in the lower half of the debt ratings of investor-owned electrical utilities in the country and is barely investment grade.

Standard & Poor's is one of the major debt rating entities in the country. In 2009, S&P put out a ranking of the investor-owned utilities for which it had issued ratings. According to S&P's ratings publication, the ratings are based on the relative business risk. It states, "A Standard and Poor's rating outlook assesses the potential direction

of an issuer's long-term debt over the immediate to longer term."

Based upon these criteria, below are the national cumulative rankings of the investor-owned utilities ranked by Standard & Poor's in 2009:

Rating	Number of Regulated Utilities with Letter Rating	Best to Worst Cumulative Ranking	Missouri Utility
AA	1	1%	
A+	5	3%	
A	13	11%	
A-	24	24%	
BBB+	34	43%	
BBB	63	79%	KCP & L, with negative outlook
BBB-	27	94%	Ameren, Empire
BB+	5	97%	
BB	3	98%	
BB-	3	100%	
Total	178		

Source: Standard & Poor's Issuer Ranking U.S. Regulated Electric Utilities Strongest to Weakest

What does this table tell us? There are 178 investor-owned utilities for which debt is rated by Standard & Poor's. There are 24 of those utilities with debt rated at the A-level or higher level (AA, A+, A or A-). There are another 34 investor-owned electric utilities that are rated BBB+.

The table tells us that 43% of the investor-owned electric utilities in the United States have higher credit ratings than the three largest investor-owned electric utilities in Missouri. Only 11 out of the 178 have lower debt ratings than Ameren and Empire.

The Regulatory Environment Matters

The ratings agencies are not shy about their view of the relationship between state regulatory environments and their debt ratings for investor-owned utilities. They are very straightforward and publish exactly what they are thinking.

Moody's and Standard & Poor's have published research papers that explicitly state their views on state regulatory environments, outlining why they have lowered the

debt rating of investor-owned utilities in states where they view the regulatory system as impeding the utilities' ability to earn a rate of return on investment. (The state-by-state rankings from the Standard & Poor's report are included in Appendix 2B.)

Standard & Poor's Utility Regulatory Assessment	Number of States	
More Credit Supportive	6	
Credit Supportive	21	
Less Credit Supportive	16	(Includes Missouri)
Least Credit Supportive	4	

The takeaway from the table above is that there are 27 states in the country where the regulatory environment is more credit friendly than the regulatory environment in Missouri. There are only four where the regulatory environment is less credit supportive than Missouri.

Missouri also has a less friendly regulatory environment than most of our adjacent states.

Let us look at another independent financial analyst's view of the regulatory environment in Missouri. In a company analysis performed on Ameren Corp. by Bank of America Merrill Lynch dated December 13, 2012, the analyst noted, "With signs of rate fatigue, the use of a historical test year in rate cases, no CWIP, and around $2B of capex planned in Mo. In 2013-15, regulatory lag could weigh on AEE Mo. The company was unsuccessful in the last rate case to implement mechanisms that could reduce regulatory lag…In a flat or declining sales and rising cost environment, we believe regulatory lag could be an issue if none of the aforementioned is remedied, either through regulatory efforts at the MoPSC or legislative efforts.

In the same analysis, Bank of America rated Ameren Corp. as "Underperform," which is a sign to investors to stay away from investing in the company.

Most Missourians may not know that the regulatory environment is not the same for all utilities within Missouri.

Let's examine three types of Missouri utilities: the electric cooperatives, the investor-owned electric utilities (Ameren, Kansas City Power & Light, Empire District Electric) and the largest investor-owned gas utility (Laclede Gas).

The electric cooperatives, through their generation entity Associated Electric, have a AA debt rating, which is a very strong debt rating. That rating is partially attributable to their self-regulation, which is controlled at the individual cooperative level by a local board of directors, that can take the actions necessary to ensure that debt is repaid. The cooperatives are not regulated by the Public Service Commission in Missouri.

Laclede Gas is an investor-owned gas utility regulated by the Missouri Public Service Commission, but its debt is A rated. A good question would be why does a gas company regulated by the Missouri Public Service Commission have an A debt rating but the three investor-owned electric utilities regulated by the same Missouri Public Service Commission have a BBB rating (Kansas City Power & Light) and a BBB- rating (Ameren and Empire)? Later in this report, we will outline why we think this disparity exists.

Something here does not make sense. Why are Ameren, Empire, and Kansas City Power & Light rated so low when compared to the debt rating of Laclede Gas? Let's look back at what Standard & Poor's has publicly said. S&P considers the regulatory system for investor-owned electric utilities in Missouri to be "less credit supportive." When lumped together with the other states in the "less credit supportive" category, there are only four states where Standard & Poor's considers the regulatory environment to be "less credit supportive" than Missouri's regulatory environment.

THE VIEW OF THE EQUITY MARKETS

The Risk Factors for Owning Utility Stocks Are Rising

In the investment community, the terms "alpha" and "beta" are frequently used. "Alpha" is a measure of investment return. "Beta" is a measure of the risk associated with generating the investment return. A high alpha with a low beta is good. Generally, a high beta or a low alpha is considered a bad thing.

The Brattle Group in 2006 noted the following with regard to utility stocks:

> "The reduced financial stability of the industry is reflected in the 'beta' of utility stocks — a measure of the proportionate riskiness of the stocks compared to the overall market. Value Lines' estimate of the average industry beta has increased from 0.67 in 1995 to 0.87 in 2005, an increase of nearly 30% in a decade."

Edward Jones Analysis of Ameren's Stock

While this paper has focused on issues relating to debt and regulation, regulation also plays a part in the stock market's view of investor-owned electric utilities. People purchasing the stock of an investor-owned electric utility such as Ameren, Empire Electric, or Kansas City Power & Light are the equity owners of the company.

Brokerage companies such as Edward Jones frequently provide potential investors with advice on how they believe that a stock will perform and whether that stock is a potentially good investment. This is independent advice to investors provided by the brokerage firm.

On August 10, 2012, Edward Jones issued a research report on Ameren (traded on the New York Stock Exchange with symbol AEE). It *reduced its rating on the stock* to a Sell, which tells investors that Edward Jones did not consider the stock to be one that an investor should either buy or hold. Rather, Edward Jones believed that the current price and earnings environment make it more advantageous for the investor to sell the stock.

In the "Company Outlook" portion of the analysis, there is a section titled Regulatory Overview. The following are comments the research analyst evaluating the stock made about the regulatory environment for Ameren:

> "We believe the regulatory situation is below average but improving. Despite the fact that Ameren has maintained residential electric rates in both Missouri and Illinois significantly below the national average, Ameren has not operated in a constructive regulatory environment.
>
> "Missouri has historically been a poor regulatory environment with inadequate support for the company and its investors….
>
> "Illinois has historically been a more supportive regulatory environment than Missouri…with new legislation that calls for formulaic ratemaking in that state, we expect more certainty and consistency in the regulatory environment in Illinois."

"We believe the regulatory situation is below average but improving."

— Edward Jones

Later in the research paper, under "Industry Outlook," the analyst noted:

> "Issues facing the sector include the general need for rate increases to recover costs as it invests in utility infrastructure, and sensitivity to long-term interest rates…Concerning rate increases, after a decade with relatively few rate increase filings, we have started seeing an upsurge of requests in the last couple of years. We expect this to accelerate, especially for electric utilities that are investing in existing power plants to comply with more stringent environmental standards."

Dividends Are Important to Investors

Investors in the stock market are called equity investors. An equity investor is different from a bond investor. A bond investor wants a fixed return and the return of his capital with interest fully paid at a future date.

An equity investor is investing as an owner of a company through his stock purchase. An equity investor hopes that the stock purchase will accrue additional value through a higher stock price because of profitability and possibly through an increase in the company's dividend.

Reductions in dividends do not help shareholders, and they reduce the incentive for an investor to invest in a company.

Earlier, we discussed the suspension of the dividend for two quarters by Empire District Electric in response to the Joplin tornado. In testimony in a rate case for Kansas City Power & Light before the Missouri Public Service Commission, Terry Bassham, the CEO of KCP&L, noted the following:

> "In the first quarter of 2009, the Company reduced its dividend to shareholders by 50% to reinvest in facilities needed by our customers. We have continued to pay out dividends at a reduced level since that time."

Bassham's testimony was in February 2012, which means the dividend had been paid at the lower level for three years. A lower dividend will make the stock less attractive to investors.

INVESTMENT, REGULATION, AND THE CONSUMER

The Need for Investment

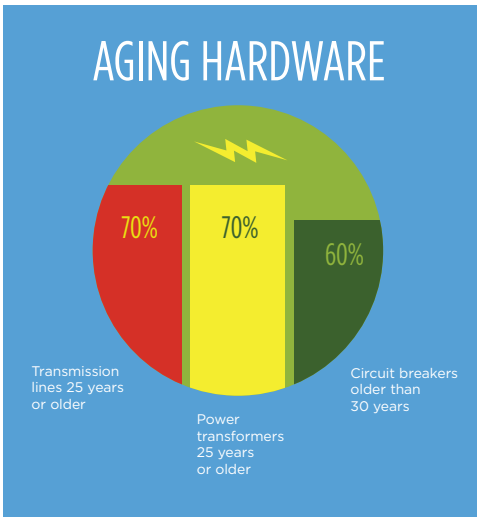
Even those who do not agree with the premise of this paper that regulatory reform might be necessary in Missouri would have to agree with our other premise — that future investment in generation, transmission, and distribution by electric utilities of all types will be necessary. The question in the future will not be "if" for investment but rather "how" and "at what cost." If Missourians want to continue to enhance our standard of living with electronics and comfort at home, new investment by electric utilities will be necessary.

The discussion in Missouri in recent years about the possible expansion of large scale nuclear power has been framed by the discussion of new infrastructure costs and the long construction time for new large-scale nuclear generation. These are important considerations, but only one piece of the larger picture. Too much of that discussion has focused on regulatory practices such as construction work in progress (CWIP) and not enough on the need for utilities to invest and how they invest.

In 2012, the discussion of the generation of electricity has shifted to a tremendous opportunity, the development of SMR technology, which could become one major component of our future electric generation. The Missouri SMR Alliance has the potential to produce competitively priced electricity without some of the environmental issues associated with fossil fuel-powered plants. While shorter in terms of development and with less risk, SMR will still require large investments, and investors will demand a fair return on investment.

New generation will not be the only infrastructure challenge facing investor-owned electric utilities in the future. In its 2006 study for the Edison Electric Institute, The Brattle Group posited the question as follows:

> "The U.S. electricity delivery system, which consists of the transmission grid and the downstream distribution system, is a $360 billion asset. Unfortunately, this power delivery system is characterized by an aging infrastructure and largely reflects technology developed in the 1950s or earlier. According to DOE, 70% of transmission lines are 25 years or older, 70% of power transformers are 25 years or older, and 60% of circuit breakers are more than 30 years old. The strain on this aging system is beginning to show, particularly as market participants and regulators ask it to perform functions (e.g., facilitate competitive regional power markets) for which it was not originally designed."



When the electric transmission and distribution delivery system was developed, the development took place during a period of expanding economic activity and residential development that grew the suburbs. The size of houses also grew, which also increased demand. In other words, new consumers with expanding demand for electricity helped to fund the expanding infrastructure.

In the future, when consumers demand cleaner power on demand from improved generation and distribution, there likely will not be a new generation of consumers with expanding demands to fund the infrastructure. The cost is more likely to be borne by the existing consumer.

Comments from the Illinois Business Roundtable Paper

Our neighbors in Illinois have already had this discussion, and the Illinois Business Roundtable prepared a paper titled *Smart Regulation for an Illinois Smart Grid, Modernizing Illinois' Energy Delivery Network and Its Regulation*. While the entire paper is an excellent analysis, there are some excerpts that very well posit the significant issues in a discussion of electric utility regulation, the need for investment, and the role of the consumer. Here are some excerpts from the paper:

> "20th Century Regulation Thwarts 21st Century Technology

> "Digital society requires better electricity than a 20th century system can provide. The conundrum for utilities is that while they would make the investment in network modernization and the Smart Grid, the bulk of the benefits would flow to their customers and to the larger society. The

problem is attracting capital when the risk falls mainly on the utilities but the rewards flow mainly to others. Failure to minimize the risks and to secure a reasonable degree of certainty of capital recovery necessarily means that the investment will not be made and the benefit will remain unrealized. This has important implications for our electricity system in two ways.

"First, our growing use of digital solid-state technologies, from manufacturing to in-home entertainment, requires increasing level of electricity and power quality. Our lives are increasingly electrified and electronic. Our appliances no longer will tolerate imperfections in the electrical network, which did not matter forty years ago. 21st century digital equipment is sensitive to minute fluctuations in voltage and frequency. An energy delivery network originally designed to serve incandescent light bulbs and standard electric motors is simply no longer adequate or acceptable.

"Second, just as the telecommunications revolution rendered traditional telephone regulation obsolete and counterproductive, digital and solid-state technologies in electricity delivery outstrip antiquated regulatory precepts created for the original electro-mechanical structure…

"Illinois electric utilities must attract substantial capital to improve the delivery network and to deploy the Smart Grid technologies necessary to deliver power with the reliability and quality demanded by the digital economy. To the extent that the in-place regulatory model is an obstacle to attracting that investment capital — or delays deployment — Illinois is increasingly disadvantaged. The Illinois Commerce Commission (ICC) operates under rules that involve time lags and uncertainties that Illinois utilities say inhibit attracting and investing capital in new technology."

While Missouri typically does not seek to emulate Illinois, the situation in Missouri with regard to electrical utility regulation is similar to the situation described in Illinois. Illinois has made the move to modernize its regulatory system; the question is whether Missouri will act in a similar manner.

We know that actions to change the regulatory process in Illinois resulted in higher debt ratings (which means lower borrowing costs) for two Illinois investor-owned electric utilities. There is a proven cause and effect between regulation and debt rating.

If the changes in Illinois were anti-consumer, then Illinois consumers would be up in arms about the changes. We hear that they are not. However, borrowing costs in Illinois for investor-owned electric utilities have gone down, because of the perception of a better regulatory environment by the debt rating agencies.

"Our lives are increasingly electrified and electronic. Our appliances no longer will tolerate imperfections in the electrical network, which did not matter forty years ago."

— Smart Regulation for an Illinois Smart Grid Modernizing Illinois' Energy Delivery Network and its Regulation

In fact, on June 12, 2012, Moody's Investor Services upgraded the corporate credit of Ameren Illinois Corp. from Baa3 to Baa2, and the secured debt from Baa1 to A3. A similar rating upgrade was done at the same time for the credit of Commonwealth Edison, another major Illinois electric utility.

THE OPPORTUNITIES AHEAD

Making Missouri Attractive for SMRs

The State of Missouri at times is criticized for being the "40-something state." This criticism, whether justified or not, is reflective that Missouri in many surveys shows up as being ranked 40-something (out of 50 states) in taxes levied by its governments. For many governmental services, Missouri also ranks 40-something in services funded by government. You will frequently hear the critics say, "I would like to see Missouri lead the country in something."

With leadership, vision, and significant investment, Missouri is in a position to be an early adopter of SMR technology and development. The Missouri SMR Alliance has partnered with Westinghouse, the international leader in nuclear technology. All of the investor-owned utilities, as well as the electric cooperatives and the municipal utilities, have bought into the concept of developing at least five jointly owned SMR modules of 225 Mw each. These SMRs would be developed at the Callaway site, the site that currently houses the Callaway Nuclear Plant owned by Ameren Missouri. If Missouri leads in SMR development, we hope to also lead in the manufacturing of the SMR module.

For Missouri to lead in SMR technology, smart planning, and prudent fiscal decisions will be imperative. There will be a tremendous need for borrowing for the development over time of five SMRs. The intent of the Missouri SMR Alliance is to use all of the electricity generated to serve Missouri consumers, whether they are

customers of Ameren Missouri, KCP&L, or Empire Electric (the three investor-owned utilities), the Missouri electrical cooperatives, or the municipal electric utilities. These companies and entities will jointly own the SMRs; their combined customer base ultimately will pay the cost of development and operation of the new SMR modules.

While the Westinghouse SMR technology is still being developed, we know from reputable studies that a single 225 MW module might cost approximately $1 billion or more in current dollars. Since the SMR modules will be developed over many years, and possibly a couple of decades, those dollar costs will increase. It is not unreasonable that total future costs (with potentially five or more 225 MW SMRs developed in Callaway County) may easily approach an aggregate of $10 billion or more by the time of completion, measured in future actual dollars required. Let's look at how that investment might be made.

Let's assume that a new ownership structure is required for this new SMR enterprise, because of the multiple entities that will be investing in and owning the SMR development. Assume that the new entity is incorporated as a limited liability corporation (an LLC), with each owner who invests having proportional ownership of the LLC and its assets. Assume the debt issued for development and construction will be in the name of the new LLC. Since the new LLC has no credit history, it will have to go to the credit rating agencies for a new debt rating.

Assume that the total capital investment is $10 billion, of which half ($5 billion) is debt financed, requiring borrowing by the Missouri SMR Alliance through the new LLC. Assume that the period of debt is 30 years and that the LLC's debt is rated BBB. This debt rating would be lower than the current debt rating of the electric cooperatives (AA), equal to the debt rating of Kansas City Power & Light, and higher than the debt ratings of Ameren and Empire District Electric. Let us also assume that the difference in borrowing costs between AA- rated debt and BBB- rated debt that might be issued by the LLC is 150 basis points (1.5%).

While we cannot speak for what the debt rating agencies will actually do in the ratings process, we believe that these assumptions are a reasonable scenario. In a combined borrowing with multiple entities having different ratings, the debt rating agencies will tend to look at the rating of the weakest credit, not the rating of the strongest credit.

In the scenario above, the Missouri SMR Alliance through the LLC (and their combined customers) would pay approximately $1.2 billion more in interest over 30 years than if the debt had been rated AA (again assuming the 150 basis-point spread between the two debt rating levels).

Let's go back to the basics that we discussed. Weaker debt ratings mean higher borrowing costs for consumers, who ultimately pay the cost of borrowing. This looming scenario with the LLC's combined rating of debt is a known impending problem, and there is a known solution.

If Missouri policymakers know that this situation will occur in the future, and that the low credit rating of the three Missouri investor-owned electric utilities will negatively impact future credit ratings and borrowing costs, they should take action to try and raise the credit ratings of the three investor-owned utilities closer to the ratings of the electrical cooperatives.

An objective look at the ratings of all of the investor-owned electric utilities indicates it is unlikely that the three investor-owned utilities would be raised to the AA rating of the electrical cooperatives. However, raising the rating of the three investor-owned electric utilities to A or A- (in the area of the Laclede Gas rating) would provide a much stronger base for the debt rating of the new LLC — and likely reduce future borrowing costs for the new LLC by hundreds of millions of dollars over the lifecycle of developing and paying off the new SMRs developed by the Alliance.

It would also lower future borrowing costs related to generation, transmission, and distribution replacements for the three investor-owned utilities that are currently rated BBB or lower.

Ultimately, the consumers will pay the price if borrowing costs are higher than necessary. Policymakers should make prudent decisions to help consumers lower the pass-through interest costs in their electric bills.

Addressing Missouri's Contradictory Regulatory Structure

A basic tenet of government is that similarly situated people or entities should receive equal treatment. Our governmental tax structure does this. Our public assistance and programs such as Social Security and Medicare do this. Missouri's regulatory system through the Missouri Public Service Commission does not do this.

When we look at our Ameren electric and gas bill for our home in Jefferson City, there is normally a separate charge add-on for the gas portion of the bill that is for an "infrastructure replacement surcharge." This is an allowable charge for Missouri gas utilities but not for Missouri electric utilities.

An infrastructure replacement surcharge is a charge added to the bill that allows the utility to replace the equipment that helps deliver the gas service to our home. At our home, we have had our gas meter, for instance, replaced by Ameren.

The process for gas infrastructure replacement surcharges generally is that they can be filed with the Public Service Commission semiannually, then reconciled (or "trued up") every four years, with any overcharges subject to refund. It is not a Wild West or unregulated kind of program. It is regulated and settled by the Public Service Commission. But there is no infrastructure replacement surcharge allowed for any Missouri investor-owned electric utilities. So the infrastructure replacement surcharge allowed in Missouri is allowed for gas utilities but not for electric utilities. And for a combined gas and electric company that sends our Ameren bill in Jefferson City, there is a gas infrastructure surcharge allowed but no electric infrastructure surcharge allowed.

Our family also has the good fortune to own a home (which has primarily electric utilities) at the Lake of the Ozarks and which is serviced by Como Electric Cooperative. There are no infrastructure surcharges on the Como Electric bill at the lake. The electric cooperative can simply include the cost of what it needs to do in the rate base, because it is locally governed by a local board and not regulated by the Missouri Public Service Commission.

A similar ratemaking process would occur for a municipal utility, such as City Utilities in Springfield or the City of Columbia utilities. Municipal utilities are not regulated by the Missouri Public Service Commission. These entities can recover their costs from consumers when rate increases are approved by their governing bodies.

Then let us examine infrastructure replacement surcharges for non-gas or electric utilities. Let us examine water utilities. The regulatory process in this area does not make a lot of sense. If a Missouri consumer is served by a St. Louis County water utility, an infrastructure replacement surcharge is allowed. All other water utilities in Missouri are not allowed an infrastructure replacement surcharge. That disparate treatment of water utilities makes no sense.

While completing this report, we were customers of Missouri American Water in Jefferson City during the loss of water service on October 23, 2012. Schools and many businesses closed because of the lack of water service. The cause was the break of a 6-inch water main near the water treatment plant in Jefferson City. The 6-inch water main was 90 years old. We would argue that consumers would have been well served by a mechanism, such as an infrastructure replacement surcharge, that would have replaced the 90-year-old water main before it broke.

Why is the discussion of regulatory reforms such as infrastructure replacement surcharges important when discussing future investment? We know that Laclede Gas (which is allowed an infrastructure replacement surcharge) has an A rating from Standard & Poor's, while the three regulated investor-owned electric utilities (which

also provide gas service) are rated either BBB or BBB-. While we cannot speak for the rating agency's decisions, we do believe that a differentiating factor in the ratings is, in part, the allowance of an infrastructure replacement surcharge for Laclede.

In the world of electric utilities, companies frequently must make decisions on investment between generation, transmission, and distribution. Electricity transmission is generally regulated by the Federal Energy Regulatory Commission (FERC). FERC allows the recapture of the costs of new assets from the date of the rate case filing. The Missouri Public Service Commission, on the other hand, would allow the recapture to begin only once the rate case is settled, which is likely 11 months later.

FERC also allows a higher return on investment than the Missouri Public Service Commission, thereby further encouraging investment in the transmission grid.

Again, two different governmental entities, two different concepts of how and when return on equity is allowed.

If an investor-owned electric utility that performs the three aspects of generation, transmission, and distribution is required to make investment decisions, we believe that the scales are tilted toward investing in transmission rather than generation or distribution. It is a choice that in a perfect world the utility would not have to make. But a shareholder of the investor-owned utility would want the investment to be made where the return is faster and higher.

Why is this important at this time? It is the dead horse that we have to keep beating. We are at a period of time when infrastructure replacement is needed, and the possible development of SMR nuclear technology will require large investments.

Investment will need to be incentivized and rewarded. Our current regulatory and rate of return structure do not encourage it. In addition, our regulatory system at times contradicts itself. Certain charges are allowed for certain types of utilities or services, but not for others. On its face, that makes no sense. There needs to be some light of day shined on these contradictory regulatory structures.

CONCLUSION

Conclusion and Recommendations

The Brattle Group study summarized the challenges facing future investment very well: "...if segments of the industry become unable to finance new investment in a timely or cost-effective manner, the ultimate costs will be borne by the local economies and consumers served by these utilities as well as by utility shareholders."

There is a great deal of insight in these comments. The provision of electric utility service to the consumer is a team effort. The team includes the utility itself, the regulators of the utility, the investment community, the generation community in some cases, and the consumer. The consumer is best served if all parts of the team are working efficiently together.

Some will characterize this regulatory process as the utility versus the consumer. We do not see the perceived friction in the regulatory process in that manner. Some might argue that the consumer and the utility are engaged in some form of battle, if only the consumer had the ability to walk away and find another provider in the marketplace. They do not. The electric utilities are partners with their consumers, for better or for worse, in Missouri.

Thus the consumer is best served if the utility operates and borrows efficiently, because ultimately these costs are passed on to the consumer. Similarly, if the consumer over time will have need of greater investment in generation, transmission, and distribution, the consumer will be best served if the electric utility plans on making that investment at the lowest cost.

One answer may be regulatory reform that more closely rewards investment with fair and timely returns. For those who argue that this might result in higher rates for consumers, we offer the following advice: Borrowed money to pay interest must be paid back in the future, and it is more expensive than paying earlier in the process. As consumers, we try to avoid paying interest on interest. Why would we not want our utilities to act in a similar manner?

We as consumers confront these decisions every day. We try on a daily basis to pay the lowest possible borrowing costs that we can. Our own Missouri government rightfully gloats over the highest debt rating for its debt borrowing, yet the same Missouri government regulates our utilities in a manner that makes their debt instruments barely investment grade and raises their borrowing costs.

Government in Missouri needs to look at itself in a mirror and ask, "Is the regulatory environment we have used for 100 years a good one for consumers in 2013 and going forward? Will our regulatory system promote prudent and timely investment when it is needed?"

The answer for the regulatory process in Missouri is a resounding "No!"

Some critics may say, "If you know so much, smart guy, what should we change?"

That is fair.

We believe that the regulatory environment in Missouri could be enhanced, regulatory lag reduced, and borrowing costs for investor-owned utilities reduced with common-sense changes.

The following are our recommended changes to the reulation of investor-owned utilities:

First, when an investor-owned utility makes investments in new assets to service the consumer, the regulatory system needs to recognize the cost of the investment in the regulatory process when the asset is placed in service and is benefiting the customer.

Similarly, costs incurred to replace aging infrastructure should be immediately recognized when placed in service (but only when placed in service).

While this may sound like a common-sense approach, the recommendation is necessary because the current regulatory process does not do this. In the current regulatory process, for investment to be included in the rate base, there needs to be a rate case. A return on investment is delayed/lost while the rate case is being prepared

and adjudicated, a process that may take a couple of years.

This recommendation could be accomplished through a mechanism such as the Infrastructure System Replacement Surcharge (ISRS) that is currently authorized in Missouri statutes for gas utilities and certain water utilities.

Second, if the regulatory process still continues to have investor-owned utilities incur operating costs to serve consumers that are not recognized until a subsequent rate case, implement "cost-trackers" or a similar mechanism that allows the utility an opportunity to capture those costs in a subsequent rate case.

An example would be the costs incurred by Empire District Electric during the Joplin tornado. From our reading of their most recent rate case before the Missouri Public Service Commission, because of the Joplin tornado, they incurred costs that were not contained in their last rate case, and yet these costs were denied in an interim rate action.

We believe this is not a fair treatment of the investor-owned utility and in the long term may have a negative impact on the consumers served.

If implemented, the combination of these two recommendations may lead to a third good result — cutting down on the number and the great expense of rate cases.

Missouri policymakers and regulators need to get serious about Missouri's energy future and recognize how important it will be for financially healthy utilities to make prudent investment decisions that will help consumers in the future. **BBB- debt ratings or lower for our electric utilities will not be good enough when massive borrowing occurs. Those low ratings will add higher interest costs for consumers that could be avoided. The low debt ratings are caused by the regulatory structure in Missouri. The public needs to know this fact, and the regulatory structure needs to change.**

About the Author

James R. Moody is the owner and president of James R. Moody & Associates, a Jefferson City-based lobbying and consulting firm.

Moody spent the first 19 years of his career working in Missouri state government, with the first 14 spent at the Department of Social Services. Moody was Director of the Division of Family Services, Assistant Director for Business Services at the Ellis Fischel Cancer Center, and Executive Deputy Director of the Department of Social Services.

Moody then became Missouri State Budget Director in 1987. In 1989, Moody was appointed the Commissioner of Administration by Gov. John Ashcroft, and he served in that capacity through 1992.

For the past 20 years, Moody has operated James R. Moody & Associates. His consulting work has included providing services related to taxes, transportation issues, budgetary analysis, analysis of the impacts of riverboat gaming, and fiscal analysis of ballot issues. Moody is a frequent expert witness in judicial proceedings relating to ballot issues, fiscal notes, and contested procurement proceedings.

Moody received a Bachelor's Degree in English literature from the University of Notre Dame and a Master's Degree in Public Policy from the Truman School at the University of Missouri.

Moody also attended the Program for Senior Government Executives at the Kennedy School at Harvard University. Moody was awarded a Danforth Fellowship while attending the Kennedy School program.

Moody is a long-time volunteer for the Board of Directors of the Thompson Foundation for Autism at the University of Missouri in Columbia.

APPENDIX

Appendix A

Age of Plants

County	Company	Summer Capacity (Megawatts)	Cumulative Megawatts	Initial Year of Operation
St. Louis City	Anheuser-Busch, Inc.	4.1	4.1	1939
Pike	Ashland, Inc.	8.6	12.7	1943
Pike	Ashland, Inc.	8.6	21.3	1943
St. Louis City	Anheuser-Busch, Inc.	11	32.3	1947
St. Louis City	Anheuser-Busch, Inc.	11	43.3	1948
Cherokee	Empire District Electric Co.	38	81.3	1950
St. Louis	Union Electric Co.	119	200.3	1953
Osage	Central Electric Power Coop	17	217.3	1953
St. Louis	Union Electric Co.	120	337.3	1954
St. Charles	Union Electric Co.	54	391.3	1954
Clay	City of Independence	19	410.3	1954
Clay	City of Independence	19	429.3	1954
Saline	City of Marshall	5.8	435.1	1956
Boone	City of Columbia	16.5	451.6	1957
Greene	City Utilities of Springfield	21	472.6	1957
Greene	City Utilities of Springfield	21	493.6	1957
Henry	Kansas City Power & Light Co.	170	663.6	1958
Jackson	City of Independence	21	684.6	1958
Jackson	City of Independence	21	705.6	1958
St. Louis	Union Electric Co.	261	966.6	1959
Henry	Kansas City Power & Light Co.	164	1130.6	1960
Osage	Central Electric Power Coop	49	1179.6	1960
Greene	City Utilities of Springfield	41	1220.6	1960
Franklin	Union Electric Co.	342	1562.6	1961
Boone	University of Missouri-Columbia	6	1568.6	1961
Jackson	KCP&L Greater Missouri Operation	53.9	1622.5	1962
Henry	Kansas City Power & Light Co.	176	1798.5	1964
Greene	City Utilities of Springfield	56	1854.5	1964
Boone	City of Columbia	22	1876.5	1965
Jackson	City of Independence	51	1927.5	1965
Buchanan	KCP&L Greater Missouri Operation	97.4	2024.9	1966
Randolph	Associated Electric Coop, Inc.	175	2199.9	1966
Jefferson	Union Electric Co.	495	2694.9	1967
Saline	City of Marshall	16	2710.9	1967
St. Charles	Union Electric Co.	498	3208.9	1968
Jackson	KCP&L Greater Missouri Operation	400.6	3609.5	1969

Age of Plants (continued)

County	Company	Summer Capacity (Megawatts)	Cumulative Megawatts	Initial Year of Operation
Randolph	Associated Electric Coop, Inc.	275	3884.5	1969
Jasper	Empire District Electric Co.	193	4077.5	1970
Franklin	Union Electric Co.	605	4682.5	1970
Greene	City Utilities of Springfield	97	4779.5	1970
Franklin	Union Electric Co.	594	5373.5	1971
Franklin	Union Electric Co.	603	5976.5	1972
Pottawator	Westar Energy Inc	580	6556.5	1972
Jackson	KCP&L Greater Missouri Operation	604	7160.5	1973
Linn	Kansas City Power & Light Co.	736	7896.5	1973
Boone	University of Missouri-Columbia	12.2	7908.7	1974
Jefferson	Union Electric Co.	600	8508.7	1976
Greene	City Utilities of Springfield	178	8686.7	1976
St. Louis	Union Electric Co.	581	9267.7	1977
Cherokee	Empire District Electric Co.	682	9949.7	1977
New Madrid	Associated Electric Coop, Inc.	580	10529.7	1977
Pottawator	Westar Energy Inc	720	11249.7	1978
Platte	Kansas City Power & Light Co.	651	11900.7	1980
Pottawator	Westar Energy Inc	730	12630.7	1980
Scott	City of Sikeston	233	12863.7	1981
New Madrid	Associated Electric Coop, Inc.	670	13533.7	1982
Linn	Kansas City Power & Light Co.	720	14253.7	1983
Jasper	Empire District Electric Co.	17	14270.7	1986
Boone	University of Missouri-Columbia	19.2	14289.9	1986
Boone	University of Missouri-Columbia	13.3	14303.2	1988
Jackson	Kansas City Power & Light Co.	563	14866.2	2000

Appendix B

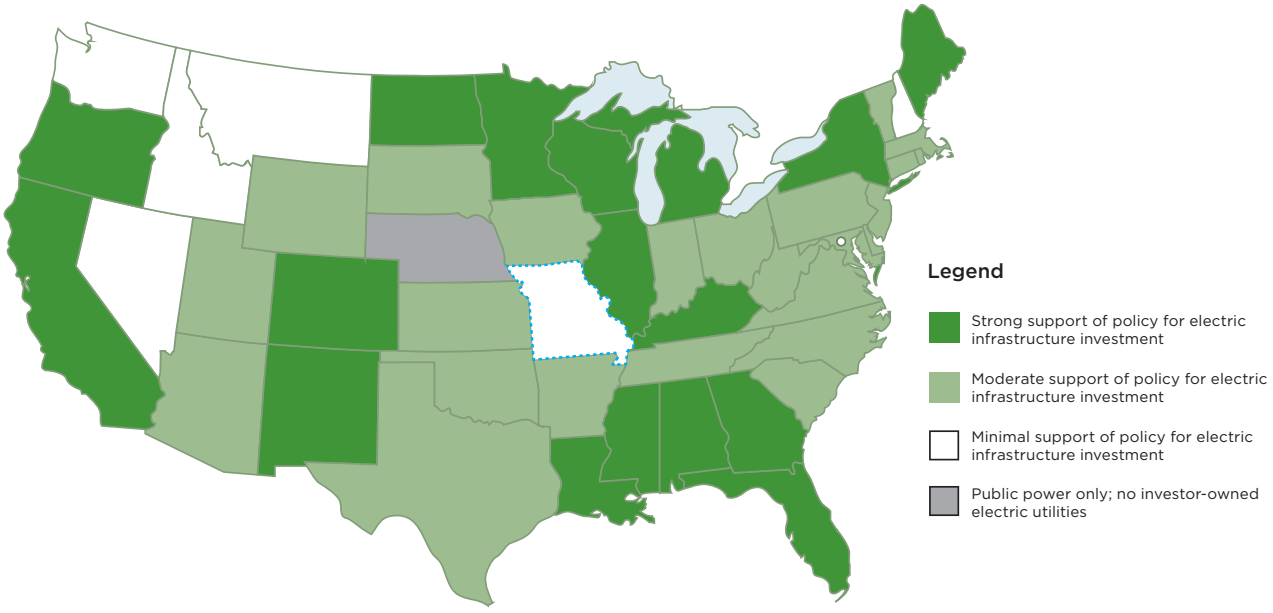
Standard & Poor's Updates Its U.S. Utility Regulatory Assessments

Most Credit Supportive	More Credit Supportive	Credit Supportive	Less Credit Supportive	Least Credit Supportive
	Alabama	Arkansas	Connecticut **	Arizona
	California	Colorado	Hawaii **	Delaware
	Georgia	Florida **	Illinois *	District of Columbia
	Indiana	Idaho	Louisiana	New Mexico
	Iowa	Kansas	Maine	
	South Carolina	Kentucky	Maryland *	
	Wisconsin	Massachusetts	Missouri	
		Michigan	Montana	
		Minnesota	New York	
		Mississippi	Rhode Island	
		Nevada	Texas	
		New Hampshire	Utah	
		New Jersey	Vermont	
		North Carolina	Washington	
		North Dakota	West Virginia	
		Ohio	Wyoming	
		Oklahoma*		
		Oregon		
		Pennsylvania		
		South Dakota		
		Virginia		

* = assessment raised
** = assessment lowered

Appendix C

State-by-State Comparison Chart



Source: Edison Electric Institute, Pacific Economics Group Research, and Ameren analysis.

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